USI Strategic Year Book 2017

United Service Institution of India

Strategic Year Book 2017

Editor-in-Chief
Lieutenant General P K Singh, PVSM, AVSM (Retd)
Director USI

Editor

Maj Gen BK Sharma, AVSM, SM & Bar (Retd)
Deputy Director (Research)
&

Head Centre for Strategic Studies and Simulation (CS3), USI



United Service Institution of India
New Delhi



Vij Books India Pvt Ltd

New Delhi (India)

United Service Institute of India

Strategic Year Book 2017

Published in 2017

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The United Service Institution of India

Rao Tularam Marg,
Post Bag No. 8
Vasant Vihar P.O.,
New Delhi – 110 057
Phone (O) =91-11-26146756, 26146755

Website: www.usiofindia.org

ISBN: 978-93-86457-14-1

Price: ₹ 1495/-

Published by

Vij Books India Pvt Ltd

(Publishers, Distributors & Importers) 2/19, Ansari Road Delhi – 110 002

Phones: 91-11-43596460, 91-11-47340674

Fax: 91-11-47340674

e-mail: vijbooks@rediffmail.com web : www.vijbooks.com

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Design and layout by

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Editorial Team



Lieutenant General PK Singh, PVSM, AVSM (Retd), Director USI

Editor

Major General BK Sharma, AVSM, SM & Bar (Retd), Deputy Director (Research) and Head Centre for Strategic Studies and Simulation (CS3), USI

Editorial Assistant

Dr Roshan Khanijo, Senior Research Fellow and Research Coordinator, USI

This publication has been conceptualized by the Director, USI and his staff. It incorporates commissioned contributions from recognized subject experts. The USI would like to thank various individuals who contributed their expertise to compilation of this publication. The views expressed herein are of the authors and not of the USI.

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Foreword

ndia is at the cusp of its strategic destiny in a globalized world. The country is witnessing tangible comprehensive national development, proactive diplomacy and enhanced deterrence capability. The South Asian States / Indian Ocean littorals accept India's leadership role and look at it as a potential net security provider. The policy of multi - vector strategic engagement has placed India in a pivotal position to swing the balance of power in the Indo - Pacific region and act as a responsible stakeholder at the global arena. The ongoing comprehensive economic, administrative and defence reforms are hoped to fast - track India's quest for becoming a great power in the comity of nations. However, a buoyant India faces a multitude of vexed internal security challenges and formidable Pakistan-China Strategic Nexus. One of the critical implications of this nexus is the manifestation of full conflict spectrum rooted in 'Collusive Hybrid Threats' in the sub-conventional, conventional and nuclear domains as well as in the cyber, information and outer space. India should also be prepared for contingencies, within and outside the country, that demand rapid response to mitigate humanitarian crises and restore normalcy in the event of grave terrorist strikes or actions by rogue elements against a friendly regime. Presently, our approach to national security threats and crises is somewhat, adhoc, compartmentalized and reactive. India has yet to formulate a comprehensive national security doctrine or to create an institutionalized system of undertaking 360 degree horizon scan of internal and external security environment and continually analyse its impact on India's national interests and expanding strategic objectives in a milieu of uncertainty. There is no tradition of publishing 'Strategic Defence Reviews' or 'White Papers' on security. In India's refining strategic culture there is an imperative need to identity a realistic strategic gap vis a vis our competitors and steadfastly develop leverages and capacities to achieve a favourable strategic balance in South Asia / IOR. To this end, we need to streamline system of policymaking and its time-bound implementation. Concerted efforts are needed to achieve desired synergy and optimization in the instruments of national power. The mantra for India's transition from a balancing to leading power entails developing comprehensive national power; development, diplomacy and deterrence as its three pillars.

The United Service Institution of India (USI) published its flagship Strategic Yearbook 2016 based on the overarching theme of comprehensive national security with contributions from India's noted strategic experts. The publication was widely appreciated by the policymakers, strategic community and academia for its quality, content and relevance in matters of national security.

The USI Yearbook 2017 seeks to provide readers an insight into India's evolving national interest, geopolitical developments in the strategic neighbourhood, conflict spectrum, measures for developing comprehensive national power and defence capability. I am sanguine that this publication will be useful in generating informed debates and cross- fertilization of varied perspectives.

Jai Hind

New Delhi 15 March 2017 Lt Gen PK Singh, PVSM, AVSM (Retd) Director, USI

Introduction

he editorial team is privileged to present to august readers, a continuum of strategic perspectives in five sections, viz, "India's Internal Security Dynamics, India's Strategic Neighbourhood, Conflict Spectrum, India's Comprehensive National Power and India's Defence Capability".

Section I: India's Internal Security Dynamics, commences with an article on "Revisiting India's National Security Interests and Objectives in the Evolving Geo-Strategic Milieu" by Shri Rajiv Sikri, IFS (Retd). The author provides an overview of the world in 2017, articulates India's national security interests and objectives, and suggests a strategy for achieving the same. Changing nature of proxy war in Kashmir is one of the most formidable security challenges for India. Lt Gen Syed Ata Hasnain (Retd), offers an insightful perspective on, "Changing Nature of Asymmetric/ Hybrid War in J&K: Challenges and Prospects". He analyses the causes and effects of asymmetric nature of proxy war and recommends a slew of measures for restoration of normalcy and peace-building in Kashmir. Special emphasis is laid on infusion of new technology and tactics, and on de-radicalisation of local population. The Northeast region is India's gateway to Southeast Asia. A sustained security environment is essential for the success of India's 'Act East Policy'. Lt Gen Anil Kumar Ahuja (Retd), dilates on the, "Implications of Internal Security Environment and Infrastructure Development in the Northeast on the Defence of Northern Borders with China". The article focuses on the internal security challenges, their external linkages, and impact on our military operational effectiveness. He lucidly spells out recommendations for fostering intra/inter-state/centre-state coordination and synergy to improve security environment within and vis-a-vis our northern neighbour. Disruption and dislocation of Daesh from Iraq and Syria inter-alia will manifest in trans-national terrorist strikes. South Asia is vulnerable to Islamist radicalisation and increased foot prints of the ISIS. Dr Adil Rasheed, provides a perspective on the, "Radicalisation in South Asia: Implications for India". He maps the contours of Islamist radicalisation and offers rationale to counter radicalisation narratives. This section is concluded by an article on, "Modernisation of Police Forces for Effective Management of Internal Security Challenge" by Shri Jayanto Narayan Choudhury, IPS (Retd). He discusses the emerging trends in policing in the light of asymmetries. The nature of internal security threats argues strongly in favour of much awaited police reforms and the thrust area being modernisation of India's police forces.

Section II: The section on **India's Strategic Neighbourhood** commences with "Geopolitics of Combating Terrorism in Af - Pak Region" by Maj Gen BK Sharma, (Retd). The author posits that important stakeholders in Afghanistan are working at cross – purposes, thus descending the region deeper into crisis. He argues in favour of shedding off a zero-sum approach and building international cooperation for peace in the conflict – torn country. One of the major drivers of prosperity in Afghanistan is to harness its strategic location as a vital bridge between Central Asia, South Asia, and West Asia. Professor Gulshan Sachdeva, writes on, "India-Iran-Afghanistan Strategic Engagement and Implications for India's Afghanistan and Connect Central Asia Policy". He elucidates the strategic significance of competing energy and transit corridors as harbingers of peace and prosperity in a win- win paradigm. India's stakes in Middle East need no emphasis. Shri RS Kalha, IFS (Retd), reflects on the topic of, "Conflict in the Middle East: Its Implications on India's Security" He discusses the nuances of geopolitics of internal conflicts in the region, its external linkages, and implications for India. The section includes a take by Professor Srikanth Kondapalli, on the contemporary topic, "India's Act East Policy". The article covers the determinants of 'Act East Policy', viz, politico – diplomatic, economic, connectivity, and military in a comprehensive manner. Growing salience

of IOR in India and China's strategic calculus needs no emphasis. *Vice Admiral Shekhar Sinha (Retd)*, in an article on the subject, "Geo Strategic Environment in the IOR: Options for India", examines the evolving geopolitics of the IOR and lays down attainable options for India, devolving around energy, Islam strategic brinkmanship, and balancing by the major IOR states. India's entry into the SCO will be characterized by challenges and opportunities. The article, "India and the Shanghai Cooperation Organisation", by *Shri Phunchok Stobdan*, covers the role of an expanded SCO in fostering regional security and economic integration. As a new entrant, given India's economic heft, it will need to show deftness to contribute towards maintaining a strategic balance in Eurasia as well as balance against Pak-China alignment at the SCO. This section is concluded by an article, "India's Strategic Engagement with USA, Russia and China", by *Shri Ajai Malhotra*, *IFS (Retd)*. The author examines the nuances of vexed nature of India's strategic engagement with the 'Big Three' and articulates how India should expand its convergences with the three powers to its own advantage.

Session III: The section on Conflict Spectrum begins with an article by Lt Gen PC Katoch (Reta), on, "Collusive and Hybrid Threats in the Indian Context". He defines the nature of collusive hybrid threats in the context of 'Pak - China Collusivity', crystal gazes its manifestations across the spectrum of conflicts, and recommends measures for mitigation by India. Professor Kashinath Pandita looks at, "China's Strategic Stakes and Growing Footprints in POK: Implications for India and the Region". His article clearly brings out as to how the CPEC has further consolidated Pakistan-China strategic nexus, and how enhanced deployment of Pakistan military and Chinese presence alters the threat spectrum vis-a-vis India. These days discussions are abuzz on Pakistan's 'Tactical Nuclear Weapons' and development of 'Triad Capability'. Lt Gen Arun Kumar Sahni (Retd), provides an incisive perspective on "Implications of Changes in India's Nuclear Neighbourhood". The article discusses the role of nuclear weapons in China and Pakistan's strategic calculus and how Pakistan seeks to lower the nuclear threshold by nuclear brinkmanship. This section ends with an article on, "Cyber Space, Outer Space and Information Space as the Non-Linear Strategic Frontiers", by Lt Gen Davinder Kumar (Retd). The article underscores the growing salience of cyber space, outer space and information space in the changing nature of war, which is bearing interring to asymmetric and trans group into nonlinear fraction. A nation devoid of these capabilities will be vulnerable to strategic coercion.

Section IV: In the section on India's Comprehensive National Power, Shri Sanjay Singh, IFS (Retd), reflects on "India as a Leading Power - Reality Check". He delves into India's historical past as a nation state, and objectively examines hits and misses in India's strategic course towards its destiny of a great game. Economy is a principle driver of India's comprehensive national power. Shri Mohan Guruswamy carries out an appraisal on, "China and India: The Road Ahead". He broadly examines the trajectory of two economies and identifies asymmetries and competitive edges. On the economic front, Professor Imon Ghosh further dwells upon, "India's Sustainable Economic Growth, Challenges and Prospects". He identifies health, education, infrastructure, energy, agriculture, security, environment etc., as major challenges in optimizing Indian comprehensive economic growth and suggests measures to improve these. Professor Mahendra P Lama, in his article titled, "Integrating Energy Security Dynamics in Four Border Junctions: A Grand Vision for India", highlights a concept of creating a regional energy grid based on four energy centers, with India as a hub. Technology is another critical driver in India's sustained development. Our Prime Minister in his national vision has stressed on the need of 'Digital India' and 'Make in India'. Maj Gen Amarjit Singh (Retd), in his article, "Military Digital Transformation, Digital India: Its Implication for the Indian Military", brings out that, 'Digital India' is a flagship programme, with a vision to transform India into a digitally empowered society and knowledge economy. This paper presents the technological, organisational and cultural influences on the evolution of the programme, its proposed impact on public sector, e-governance capabilities, and the potential for a digital transformation of the public and commercial space in India. He examines how the specific capabilities created under the programme may be leveraged for military purposes. An article titled, "Technological Empowerment in India: How it can be Achieved?", by Maj Gen PK Chakravorty (Retd), posits technology driven revolution in India to improve quality of life and enhancing defence preparedness. Commodore Sujeet Samaddar (Retd), further reflects on implementation of "Make in India: Prospects and Predicaments for the Aerospace and Defence Industry". He covers the evolution of 'Defence Industries' and their transformation from 'License Raj to Make in India'. India is one the largest contributor in peacekeeping and a strong contender for permanent membership in the UNSC. India is also a strong exponent of UN reforms. The article, "Restructuring of UN Peacekeeping Operations to Meet Future Challenges", by Shri Asoke Kumar Mukerji, IFS (Retd), highlights the challenges of UN PKOs in the asymmetric and proxy war situations and recommends slew of measures for making decision by the UNSC and prosecution of peacekeeping operations more effectively. On the subject of UN, Lt Gen Chander Prakash (Retd), in his article, "Building Capacity for Protection of Civilians in UN Peacekeeping Operations", identifies new challenges in the intra-state / inter-state conflict, particularly the involvement of 'Non- State Actors', and recommends measures for enhancing capacity building for peacekeeping operations. This section concludes with an article titled, "Integration and Synergy in India's Instruments of National Power", by Shri Shakti Sinha, LAS (Retd). Laced with rich 'hands on' experience at the very apex level, he carries out a critical appraisal of key instruments of national power, and suggests reforms for better integration and synergy.

Section V: In the last section, India's Defence Capability, Lt Gen GS Katoch (Retd), writes on, "Towards a De-Novo Approach to Perspective Planning - Indian Military's Force Structuring and Development". He highlights the lacunas in the perspective planning process and articulates improvements to make perspective planning more effective for force structuring and development. Towards enhancing India's strategic deterrence, Dr. Roshan Khanijo, in her article, "Role of Ballistic Missile Defence in India's Strategic Deterrence" argues the case for developing BMD capabilities, clearly bringing out the challenges and way ahead. Jointmanship in the military and security set up is one of the major weaknesses. In the article titled, "Building Jointmanship in the Armed Forces", Brig Gurmeet Kanwal, (Retd), highlights the evolution of the current system, its inadequacies and recommends measures for fostering better jointness, including, creating the CDS. In a developing country like India the debate bread vs bullet will continue. The armed forces and security analysts clamour for tangible increase in the defence budget for creating credible deterrence. Shri Amit Conshish, dwells upon, "Reforms for Optimisation of Defence Spending". The article discusses some practical steps for enhancing and optimizing defence budget.

I hope this curtain raiser provides readers a peep into the Strategic Yearbook 2017 and stimulation for an in-depth study. The editorial team will keenly look forward to your valued reviews and comments for improving the future editions.

Jai Hind

New Delhi 10 March 2017 Maj Gen BK Sharma, AVSM, SM & Bar (Retd)

Deputy Director (Research) and

Head Centre for Strategic Studies and Simulation, USI

Section I

India's Internal Security Dynamics

Revisiting India's National Security Interests and Objectives in the Evolving Geo-Strategic Milieu

Shri Rajiv Sikri, IFS (Retd)®

The World in 2017

he world is in flux and beset with uncertainties. The US still remains the most powerful and influential player, but its relative weight has diminished. It is less self-assured, vividly emphasized by US President Donald Trump's call to 'Make America Great Again.' Europe, which once dominated and shaped the world, is no longer a

significant global player, as it grapples with Brexit, rise of right-wing nationalism, and a flood of immigrants. With its dangerous mix of hubris, aggression, arrogance, intimidation and insensitivity, China is the new pretender that relentlessly pursues its 'China Dream' of Asian, and eventually global, domination. Russia has regained much of its self-confidence, and no longer content to remain a mere regional power, and seeks to reclaim the Soviet Union's erstwhile global stature. A more activist and less inhibited Japan is trying to break out of the shackles imposed by its post-World War constitution, and to play a greater role in Asia, more so in keeping with its economic and technological strengths. Meanwhile, the entire region from Pakistan to Morocco remains in upheaval, with rampaging terrorism, fundamentalism, sharp regional rivalries involving Saudi Arabia, Egypt, Turkey, Iran and Israel, as well as many 'failed' and 'failing' states. A more self-confident India under Narendra Modi is seeking to develop a new paradigm for India's domestic growth and foreign policy.

Outside the framework of traditional geopolitics, one sees widespread anti-globalization trends in the US and Europe, such as the rise of nationalism, protectionism and barriers to immigration, which go against the ineluctable logic and compulsions of a more interconnected and interdependent world that has become a reality.

Outside the framework of traditional geopolitics, one sees widespread anti-globalization trends in the US and Europe, such as the rise of nationalism, protectionism and barriers to immigration, which go against the ineluctable logic and compulsions of a more inter-connected and interdependent world that has become a reality, because of dramatic advances in technology and connectivity. While the nation-state remains the basic political unit in the world, that has legitimacy, megacities and regional clusters, which carry considerable economic and political power and influence, cannot be ignored. In this way, both political structures and peoples' loyalties have become blurred and the world increasingly disorderly. Governments no longer have a monopoly over decision-making; they have to share it with an aware and demanding public, empowered by digital connectivity. Climate change is a reality, and new sources of energy are replacing hydrocarbons. Over time, this will bring about a significant change in global power equations.

India's National Security Interests and Objectives

The main direct threats to India's national security emanate from China and Pakistan, whose growing strategic collaboration has increased the severity of these threats. Although, India's military planners have sought to avoid a

[@] Shri Rajiv Sikri, IFS (Retd) is a Distinguished Fellow at the United Service Institution of India, as well as the Vivekananda International Foundation. He is the author of "Challenge and Strategy: Rethinking India's Foreign Policy."

India's Internal Security Dynamics

two-front scenario, India today is confronted with the reality of a combined China-Pakistan front. The signs are many and clear: Chinese soldiers are present in Pakistan-occupied Kashmir and Gilgit-Baltistan in the guise of workers; China-Pakistan defence, nuclear and missile cooperation has strengthened; China gives open support to Pakistan on Kashmir; China is giving cover to Pakistani terrorist activity and terrorists. Finally, and most important from a strategic perspective, the China-Pakistan Economic Corridor (CPEC), which is the most prominent and geopolitically significant project of Xi Jinping's One-Belt-One-Road (OBOR) scheme, makes it abundantly clear that Pakistan will remain pivotal in China's strategy for Asia. There is a much greater likelihood than earlier that in case of a serious conflict between India and China or Pakistan the other country will open a second front against India.

Given the widening power gap between India and Pakistan and the weakened support of its other two traditional foreign backers viz. the US and Saudi Arabia, Pakistan has become more dependent on China. Pakistan's visceral hatred of India and its determination to bleed and weaken India will not go away, unless there is a fundamental change in Pakistan's situation and the psychology of its rulers. That appears unlikely, seeing how Pakistan has done its best to aggravate the situation in Kashmir in the second half of 2016, and continues to use terrorism as an instrument of state policy. Thus, it is vital for India's national security that the China-Pakistan nexus is broken, that Pakistan is isolated internationally as much as possible, and that Pakistan itself is weakened.

Most important from a strategic perspective, the China-Pakistan Economic Corridor (CPEC), which is the most prominent and geopolitically significant project of Xi Jinping's One-Belt-One-Road (OBOR) scheme, makes it abundantly clear that Pakistan will remain pivotal in China's strategy for Asia.

From China, India faces challenges at three levels – globally, regionally, and as a neighbour. At the global level, China is using its economic clout, and its status as a Permanent Member of the United Nations Security Council (UNSC) and a nuclear Non-Proliferation Treaty (NPT)-recognized nuclear power to thwart India's rise in every possible way, be it to block India's bid for Permanent Membership of the UNSC, entry into the Nuclear Suppliers Group (NSG). It is certainly not prepared to treat India as its co-equal in any way.

At the regional level, so far China has successfully followed a low-cost strategy, to use Pakistan as a pawn, to keep India tied down in South Asia, and to prevent India from becoming a serious challenger to China's ambitions to dominate Asia. China is also using its deep pockets, and newfound strategic confidence, to get a firm foothold in India's traditional sphere of influence in South Asia, and the Indian Ocean region. It is playing an excessively active role in Afghanistan, and enticing India's other South Asian neighbours into its economic and military orbit. The weaker the links, the greater the problems and suspicions between India and its South Asian neighbours, the more difficult it would be for India to look beyond its immediate neighbourhood and be a credible competitor to China in Asia. Already, China has steadily expanded its influence in Southeast Asia. It has used its proxies Cambodia and Laos to divide and weaken ASEAN (Association of Southeast Asian Nations). Even though it contemptuously ignored the Permanent Court of Arbitration's judgment on the South China Sea, it has skillfully managed to wean the Philippines away from the US, by showing up the hollowness of US security guarantees to its Asian allies. Other countries like Malaysia, Thailand and perhaps even South Korea are veering towards China. There is some uncertainty surrounding the US 'pivot' to Asia. With Trump trashing the Trans-Pacific Partnership (TPP) which had a strong political objective, China may be expecting that its strategic space in Asia will grow. China has also expanded its naval presence in the Indian Ocean, with a base in Djibouti, a permanent presence in the Arabian Sea under the pretext of tackling piracy, and the quest for bases/port facilities all across the Indian Ocean region.

India has serious bilateral problems too with China. India can expect continued pressure by China on its territorial claim to Arunachal Pradesh. China has poured cold water on any hopes for an early border settlement. It refuses to clarify the Line of Actual Control (LAC). It has gone back on the understandings and agreements arrived at in 2005, when the 'Guiding Principles and Political Parameters for Settling the Boundary Question' were agreed upon. It would appear that China expects the power gap between China and India to widen, and therefore, its interests are better served

by delaying a border settlement. In the face of periodic nibbling on the LAC and psychological pressure being put by China on India, working out a well-thought out strategy to preserve India's territorial integrity has to be given high priority. India should also be alert to the possibility that Chinese leaders might be tempted to launch a major Chinese border incursion, in order to divert attention from domestic troubles. The India-China boundary problem is unlikely to be resolved unless there is agreement between India and China on Tibet. Even though India's capability to create mischief in Tibet is minimal, China remains suspicious of India's intentions. China realises that it is only because India has given refuge to a large number of Tibetan refugees, and hosts the Dalai Lama as well as the Tibetan government-inexile, that the 'Tibetan question' remains a live international issue. The situation will get more complicated with the passing away of the ageing Dalai Lama, and a crisis may break out in India-China relations.

India should also be alert to the possibility that Chinese leaders might be tempted to launch a major Chinese border incursion, in order to divert attention from domestic troubles. The India-China boundary problem is unlikely to be resolved unless there is agreement between India and China on Tibet

India needs stable neighbouring states and a relationship of mutual trust and economic interdependence between India and its South Asian neighbours (apart from Pakistan). As India develops, so also must its neighbours, otherwise the development gap will lead to a flow of economic migrants from neighbouring countries seeking job opportunities into India, through porous, ill-policed borders. This is also essential to combat fundamentalism and terrorism in South Asia. India must have a dominant role in a peaceful South Asia, so that it doesn't remain bogged down in managing relations with its neighbours, but can engage strategically with the rest of the world. To prevent its neighbours from straying away, India will need to deploy considerable resources, attention and imagination.

Strategy

If India is to be a great power, decision-makers as well as the public at large need a change in attitude. Fortunately, India today has a strong and determined leader in Prime Minister Modi, who wants to rid Indians of their traditional 'chalta hai' attitude, and has set into motion, a long and difficult process to leverage India's strengths and overcome its weaknesses.

An effective national security strategy has to combine military capabilities and diplomatic influence, based on economic strength. The various elements of the Modi Government's strategy to build a strong economy are steps in the right direction. Hopefully, digitization, demonetization, GST (Goods and Services Tax), and other anticipated steps will generate surpluses for investment in infrastructure, defence capabilities, health and education, as well as, lay the foundation of a

An effective national security strategy has to combine military capabilities and diplomatic influence, based on economic strength. The various elements of the Modi Government's strategy to build a strong economy are steps in the right direction

modern and vibrant economy. However, India's own resources will have to be supplemented by foreign investments, and technological inputs, for which, India needs attractive policies and efficient infrastructure. Prime Minister Modi's, extensive interactions with leaders and investors across the world, particularly from capital-surplus countries, have certainly created a new interest in and hope about India. Now the follow-up is critical.

Tackling the China-Pakistan threat requires a multi-pronged strategy that is neither defensive nor passive. India should be prepared to fight its battles on its own, without necessarily counting on the support of other countries. That will come, if their stakes in India are large enough and they find that India is able to effectively execute its chosen policies. India should focus on Pakistan in the first instance. The surgical strike in response to Uri, should not remain a one-off event, if Pakistani provocations continue, as indeed they have. India's response need not be the same as it was after Uri; there should be some unpredictability in India's behaviour. In any case, there are limitations to military action, and a need for caution in dealing with a nuclear adversary. The preference should be for more effective long-term non-military options.

India's Internal Security Dynamics

By taking a forthright public position that India will not be satisfied with the status quo on Pakistan-occupied Kashmir and Gilgit-Baltistan, and by raising human rights issues in Baluchistan, India has warned Pakistan that it should not remain complacent about the situation in these regions. This is also a clear indication to China that it should

not assume an obstacle-free clear path for its China-Pakistan Economic Corridor (CPEC) project, which starts from Gilgit-Baltistan and ends in Baluchistan. Prime Minister Modi has given the signal; now it is up to Indian intelligence and foreign policy agencies to flesh out and implement the stated policy. Another prong of our strategy should be to work with Afghanistan, to question the legitimacy of the Durand Line. Pakistan has to be made to understand that if Pakistan follows policies that undermine India's territorial integrity, India can pay back Pakistan in the same coin. A very important move initiated by the Modi Government, is to take steps to fully utilize its entitlements under the Indus Waters Treaty, both on the Western Rivers and the Eastern Rivers. A high-powered committee has been set up to handle this matter. Admittedly, it would take a few years for the proposed projects to fructify, but the intent is clear, and even a small reduction in the flows

A very important move initiated by the Modi Government, is to take steps to fully utilize its entitlements under the Indus Waters Treaty, both on the Western Rivers and the Eastern Rivers. A high-powered committee has been set up to handle this matter.

of the river waters to water-stressed Pakistan, could create serious economic and political difficulties for Pakistan. A complementary step, that India should take, is to work with the Afghan government to build small dams and barrages on the Kabul River that flows into the Indus.

In view of the current power differential between China and India, it would be prudent to try to keep the admittedly uneasy relationship with China stable, even as India works to reduce the current power gap between India and China. India needs friends and partners, even allies, to deal with China. India's strategy has to be to raise the costs for China of its current policies. To start with, India must not lose the psychological war against China. China's weaknesses must be highlighted and exploited. These include its fragile economic model, its failure to build an integrated polity with justice for minorities like the Tibetans and Uighurs, its excessive dependence on foreign trade for its growth, its desire to exploit the Indian market, its irresponsible attitude towards the environment especially in Tibet, its expansionist and hegemonistic policies, its selective approach to fighting terrorism, etc.

It is vitally important for India to curb the expansion of China's sphere of influence in Asia, and the Indian Ocean region. India is rightly working closely on the security front with the US, Japan, pan, Australia and, potentially, Indonesia, all countries that are deeply troubled by China's policies. US President-elect Trump has signalled to have an open mind on Japan acquiring nuclear weapons, and the determination to take measures to reduce US trade deficit with China. If followed through, these could signal serious problems for China. More attention needs to be paid to Russia, which is following policies in Afghanistan and Pakistan that go against India's interests, and is now uncomfortably close, almost like a junior partner, to China.

India is already taking much-needed steps to reduce the military gap with China. The development of the Agni-V missile is strategically very significant, as is the Arihant nuclear submarine programme. A mountain strike corps must be developed quickly. Presumably, there are plans in place to target China's weak spots along the border, and on the seas in case of a conflict. Roads and other infrastructure have to be built, and people settled in the border areas. Cyber capabilities and security must be enhanced on a war footing. Economically, India has to diversify its imports of critical inputs, like active pharmaceutical ingredients and rare earths, to reduce its excessive dependence on China. In the border negotiations, our strategy should be not merely to defend what we possess, but also lay claims to places like Kailash-Mansarovar, that have been linked by faith to India over several millennia.

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Revisiting India's National Security Interests and Objectives in the Evolving Geo-Strategic Milieu

On Tibet, India has rightly shed inhibitions about high-level contacts with the Dalai Lama and visits by him and Indian dignitaries and foreign diplomats (most notably the US Ambassador) to Arunachal Pradesh and Tawang. At the same time, India must plan for a post-Dalai Lama scenario. India needs to be bolder about developing more extensive and formal relations with Taiwan too.

Finally, India must keep a close eye on developments in the Arab world that is wracked by turbulence and instability. India has huge stakes in this region that is the principal source of India's imported oil, and home to over seven million Indian workers. India will have to engage, and strike a delicate balance in its ties, with mutual rivals Saudi Arabia, Iran and Israel, all of which are important to India in different ways. From a long-term geopolitical perspective, however, Iran should be a country that receives special attention, since its weight in the region is steadily increasing, and it is a critical 'swing state', that could tilt the geopolitical balance in the region.

Changing Nature of Asymmetric/Hybrid War in J&K: Challenges & Prospects

Lieutenant General Syed Ata Hasnain, PVSM, UYSM, AVSM, SM, VSM & Bar (Retd)[®]

he proxy war in Jammu & Kashmir (J&K), is now in its 27th year, and has witnessed dynamic change from time to time, only to return to the same, after the failure of the changed strategy. 2016 is a good year to review the changes and the constants, as it has witnessed rapid change, but appears returning to the winter mode when violence usually ebbs. Any discussion of Pakistan's proxy hybrid war must commence with a brief background and description of the pillars on which it rests.

Pakistan's defeated army chose to strategize its retribution for the humiliation of 1971, by deciding to engage India in a long-drawn hybrid conflict, by which it hoped to impose such damage, as to prevent India from rising to her

potential and achieving her aspirations. In the course of the same it aimed to wrest the territory of J&K by bringing about alienation of the populace against Indian rule. The strategy is based on the employment of low levels of violence through sub conventional means, brought on by a steady infiltration of terrorists, to continue the resistance initiated in 1989. It is bolstered by other pillars such as promotion of Islamic radicalism, in order to bring closer affinity with Pakistan, creation of alienation through a subtle use of communication strategy, the infusion of fake currency, arms, explosives and narcotics; all the necessary ingredients to keep popular resistance against India's hold. Promotion of the separatist leadership, psychological warfare cum propaganda to paint Indian presence black, alongside keeping the J&K issue alive in the domain of international community, have also formed the cornerstones of the concept of the hybrid war.

The strategy is based on the employment of low levels of violence through sub conventional means, brought on by a steady infiltration of terrorists, to continue the resistance initiated in 1989.

2016 marks major changes in many areas. First, is the attraction effect of new militancy in South Kashmir, characterized by greater youth power and ideological content. Although, some gains have been made by counter terror operations, it is reported that 60 local youth have been added to the Hizbul ranks. In addition, it is good to remember that while North Kashmir's romance with the foreign terrorist continues, it is the South, which has attained more notoriety, and today is looked upon as the nerve center. The deep state finds this unnerving as the local militant youth has propensity to be far more independent and outside control of the traditional terrorist power equations; usually played out through the United Jihad Council (UJC).

Second, the year witnessed larger infiltration than seen in the last few years apparently signifying that the counter infiltration grid was getting dented. Equally one could also surmise that it could have been due to more focused efforts, at

[®] Lt Gen Syed Ata Hasnain, PVSM, UYSM, AVSM, SM, VSM & Bar has served for almost 40 years in the Indian Army. He was the GOC 15 Corps in the Kashmir Valley. Since retirement he has been associated with the Vivekananda International Foundation, Delhi Policy Group and Institute of Peace and Conflict Studies. He writes for various media houses, and is an active commentator on strategic affairs in television panels. He lectures at 'Rajaratnam School of International Studies (RSIS)' and other international and national institutions.

infiltration by the deep state of Pakistan to enhance the terrorist strength in Kashmir's hinterland. It could also have occurred due to the diversion of attention of the Army towards the hinterland agitation although there are distinct domains for counter infiltration and counter terror operations.

Third, even with the low strength of terrorists the losses in terms of fatal casualties has been very high. The terrorists could conduct fairly frequent forays through the road security (ROP) to cause low profile but high impact strikes against convoys. This is happening so frequently only after 2007, a year when ambushing of convoys was much

more frequent. The two most frequent ambush areas appeared to be Pampore and Handwara. Noticeably, even with low strength the terrorists were willing to risk losses while attempting to achieve greater results.

Fourth, is the sudden porousness of the garrisons in the rear areas. The terrorist attack at Uri did display the relative porousness in the shadow of the LoC (Line of Control). However, it is the Jammu sector, which appears to be the choice of the deep state as far as strikes on military installations is concerned. The reasons are not far to seek. For planning suicide attacks in the Valley there will be two issues to be considered. One, the dilution of the already low strength if currently present Pakistani terrorists are to be employed; two, the amount of time needed to infiltrate and the target areas through reception areas and safe houses in North Kashmir home to Pathankot and extending to Gurdaspur offers ample

The amount of time needed to infiltrate and reach the target areas through reception areas and houses in North Kashmir. Thouses in North Kashmir to Pathankot and extending to Gurdaspur offers ample scope for easier infiltration, as the grid is relatively weaker and the targets are far more.

scope for easier infiltration, as the grid is relatively weaker and the targets are far more. The strike can be executed within 24 to 48 hours after infiltration. This phenomenon too is not new. We faced a similar situation in 1999-2006, when we were taken by surprise by the staying power of the Pakistani suicide attackers. Yet we quickly learnt lessons and while the ability of suicide attackers to pick and choose targets always existed, intelligence and damage control did prevail.

Fifth, the agitation in the streets has returned with a vengeance. Last seen in 2010, in anything near this intensity, in 2016 it surpassed that completely. From 08 July 2016, when Burhan Wani, was killed in an anti-terrorist operation in South Kashmir, the streets first erupted with passion related to the funeral. The spark led to a nearly five month long agitation which was different in nature to that witnessed in 2008-10. Three major changes were most noticeable. One, the agitation was centered more on rural areas which in 2010 had been controlled by the Army's goodwill efforts. The Army could not succeed this time. Two, the agitation at the outset targeted the JK Police personnel to dilute their

morale; policemen's houses in villages were burnt and families ostracized. This had a severe effect on the joint operations of the Army and Police with consequent dilution of the intelligence grid. Three, the leadership of the agitation passed into the hands of the youth and in fact vigilantism of an unseen kind was witnessed and perhaps is still continuing. Government servants were forced into allegiance for the cause of Azadi by a 'hazri' system at the local mosques. Young males were put under pressure by accounting for the number of times they joined the stone throwers. Later, the agitation withered in intensity due to a combination of factors; stamina ran out, the economy being severely affected had its own effect; the move of the seat of government from Srinagar to Jammu took away the political impact the agitators sought.

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The sixth, and last domain which witnessed a change is the activation of the LoC and the Jammu IB (Intelligence Bureau). Pakistan has increasingly felt that the ceasefire of Nov 2006 plays to India's advantage, and has attempted to alter the status of it. With violations being the norm in some selected areas Trans LoC engagements is a way of keeping the J&K conflict in the eyes of the international conflict.

India's Internal Security Dynamics

The other observation which needs to be mentioned is that with better control over the internal security situation within Pakistan and no major options in Afghanistan except to support the low profile presence of the Haggani network Pakistan has had the option of focusing back on J&K through 2016. That is why it chose to energize the hybrid efforts from the levels of 2013-15 when J&K was lower in security priorities. That is the greatest change in the hybrid war situation in 2016.

How is this to be countered and on what broad principles and concepts must our response be based? Much against my conviction that strategy should be long term I am focusing first on 2017, because this hybrid war will last very long, but the base for the next long term response must necessarily be laid through 2017.

The Indian Army must war game its counter infiltration strategy and execution. The run of success post the construction of the LoC fence is now turning negative. The fence is not delivering sufficiently and needs infusion of a fresh round of technology. The thermal imaging equipment on which much of the success was based is old, cumbersome and in need of fast track change.

Rear area security, and especially garrison security, demands a more equitable and balanced distribution of equipment. For the last many years we have put our garrisons to severe risk. The Army needs to dedicate some time to return to basics and perk up its intelligence and perimeter security. Security is not a single agency game. There has to be cooperation with different agencies in the Jammu zone. The convoys cannot secure themselves, nor can we have a situation where all civil traffic stops while military convoys move from Banihal to Srinagar as contemplated by some. It is the surest way of enhancing alienation. We need to accord priority to Pampore and Handwara in particular, ensure deep deployment for ROPs and strengthened density, when the convoys are passing through built up areas. Strengthening intelligence is the key to dissuade any chance of IEDs and ambushes on the highway.

Some traditional hot spots need to be tackled afresh. Khreuh, Tral, Lidder Valley and Kulgam. Return to mid-level cordon and search operations, despite flash mobs collecting at potential encounter sites. There is no need to enhance alienation but the octane value of these operations needs to go up. The operations being conducted by the Rashtriya Rifles Victor Force appears on the right lines.

Northern Command has inducted two additional brigades to Pulwama. The role of these brigades is to first give greater security to the grid, and constrict the erstwhile areas of responsibility of units and sub units. These units can have a slight breather. The brigades in particular will need to operate unconventionally, lending support to the re-occupation of the police grid, giving the JK Police a confidence boost and conducting operations to restore calm and confidence. I have

For the last many years we have put our garrisons to severe risk. The Army needs to dedicate some time to return to basics and perk up its intelligence and perimeter security. Security is not a single agency game. There has to be cooperation with different agencies in the Jammu zone.

often written on the moral aspects of the presence of the Army. Various headquarters and the brass needs to energize the domain of morality ensuring that the Army gives simply no scope for fingers to be pointed at it even in the form of manipulated triggers. This is easier said than done and needs constant talking to officers and troops by senior officers. The image of the soldier at the check points must necessarily attract deep respect for professionalism and humanism.

The tactics to deal with stone throwing mobs will need to change drastically and the pellet guns must be sheathed, if for nothing else, but the psychological message of regret for the blinding of hundreds. Chasing of mobs has to stop. Arrests have to be only done on basis of intelligence and done professionally. Vigilantism has to be tackled through empowerment of parents. The mosque has to be controlled by unconventional means which have to be evolved with help of people themselves. There are not too many supporters of this behavior by young men.

Lastly, the political leadership has to play its role proactively. Representatives of the people must be security and environment to travel to their constituencies and virtually camp there. Governance is an easy thing to

Changing Nature of Asymmetric / Hybrid War in Kashmir: Challenges and Prospects

speak about but unless a revamp of bureaucracy is ensured this will not change. The Unified Command can play a very positive role in this situation which is neither oriented to security nor development. It is a balance of both and the answer too lies in finding that balance.

Unfortunately, the surgical strikes have opened a pandora's box of varied expectations. The LoC has essentially been quiet over the first fortnight of Dec 2016, proving that it can return to its erstwhile status without too much effort. It is

good to have the ceasefire in place and that is what we should work towards. The Trans LoC movement of passengers has continued even through recent hostilities and that again augurs well. The aim is to return Kashmir to full normalcy and marginalize all the separatist events outlined in the famous 'Calendar'. The more normal Kashmir remains, the desire for peace starts to increase. For this, a subtle communication program will need to be drawn up with assistance of local media.

2017 is going to be a very crucial year. Already, it can be seen that separatist leaders are changing tack with a fresh approach towards agitation calendars. The deep state in Pakistan at present, ominously quiet, is likely to be also reworking its strategy with the arrival of a new Army Chief. The Indian security establishment cannot be far behind. It cannot be in response mode and needs to be proactive in its approach. There is much demanding change; the winter offers a window in which this can be worked upon to full readiness by the dawn of summer.

2017 is going to be a very crucial year. Already, it can be seen that separatist leaders are changing tack with a fresh approach towards agitation calendars. The deep state in Pakistan at present, ominously quiet, is likely also reworking its strategy the arrival of a new Army Chief

Implications of Internal Security Environment and Infrastructure Development in the Northeast on the Defence of Northern Borders with China

Lieutenant General AK Ahuja, PVSM, UYSM, AVSM, SM, VSM & Bar (Retd)[®]

Introduction

ortheast, as the eight states of Eastern India (Seven sisters and Sikkim) are collectively referred to, is a strategically significant region of the country on account of the geographic location and complex interplay of internal and external security issues. The states, connected to the rest of the country through a barely 25 – 30 Km wide

neck, the Siliguri Corridor, have borders with Bangladesh, Bhutan, Myanmar, Nepal and China, each with its own peculiarities of relationship. Internally, the state's socio economic development and factors such as ethnicity, tribal rivalry, migrations, quest for control over local resources and a perceived feeling of alienation, have resulted in a fragile internal security environment, resulting in violence and diverse demands by various Insurgent Groups (IGs). Many of the ethnic and socio economic problems have their foot print transcending state boundaries with no stand – alone solutions. In fact, even the interstate boundaries, as they exist are severely disputed, and manifest in clashes and blockades, which severely impact road and rail communication arteries, passing through neighbouring states. The phenomenon has been most notable in the context of Assam, Arunachal Pradesh, Nagaland and Manipur.

Ethnicity, tribal rivalry, migrations, quest for control over local resources and a perceived feeling of alienation, have resulted in a fragile internal security environment, resulting in violence and diverse demands by various Insurgent Groups (IGs).

The disturbed hinterland, primarily along the Brahmaputra Valley forms the core area, where our armed forces have operational and logistic bases for the defence of our borders, particularly the Northern borders with China. An unsettled depth area, susceptible to exploitation by insurgents, on their own or as motivated proxies, has implications on defence preparedness, peace time commitment of troops and mobilization for operations.

Realizing the importance of Northeast, the country has in place dedicated organizations for the development and for addressing concerns of the region. Ministry of Home Affairs (MHA) and Ministry of External Affairs (MEA), address issues of border management with our neighbours. MHA, in particular its Northeastern Division, endeavours to addresses genuine demands of various ethnic groups, for development and for autonomy in managing their affairs, the issues relating to strengthening of security, rehabilitation of people affected by militancy, bringing underground outfits to the main-stream through negotiations, confidence building measures etc. Ministry of Development of North Eastern Region (MDONER) addresses the infrastructural development aspects like roads, rail links, power supply, water supply etc. The Ministry of Defence, working in conjunction with all others, develops military capability and operational

[®] Lt Gen AK Ahuja, PVSM, UYSM, AVSM,SM,VSM & Bar, retired in Aug 2016 as the Deputy Chief (Policy Planning & Force Development) at the HQ Integrated Defence Staff. He also commanded a Corps & a Division in Assam and Arunachal Pradesh. His areas of interest include, tri service force structuring and acquisitions, border and internal security issues of Northeast India, Indo – US defence relations and Indo – Pacific security issues.

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plans for the defence of our borders and to provide support to administration in aspects related to internal security.

It is thus imperative, from the perspective of the national security, to take a comprehensive look at the aspects of internal security and infrastructure development in the hinterland, in the Northeastern states of India and to analyse their impact on the preparedness for the defence of our borders against external aggression.

Aim

The aim of this paper is to analyse the implications of internal security environment and infrastructure development in the hinterland, in the Northeast (India), on the Defence of Northern borders with China.

Preview

The paper is laid out as follows:-

- Overview of Northeastern States.
- Active Insurgencies and Implications on Defence Preparedness.
- Recommendations.

Overview of the North-Eastern States of India

An overview of North-eastern States of India, with respect to their physical size and population is in Table 1 below:

States	Population (as per Census 2011)	Area (Sq Km)	Percentage All India		Person (per Sq Km)	
			Population	Area		
Arunachal Pradesh	1382611	83743	0.11%	2.54%	16.51	
Assam	3,11,69,272	78438	2.57%	2.38%	397.37	
Manipur	2721756	22327	0.22%	0.67%	122.17	
Meghalaya	2964007	22429	0.24%	0.68%	132.15	
Mizoram	1091014	21081	0.09%	0.64%	51.75	
Nagaland	1980602	16579	0.16%	0.50%	119.46	
Sikkim	6,07,688	7096	0.05%	0.21%	85.63	
Tripura	36,17,032	10486	0.29%	0.31%	344.93	
Total NE	4,55,33,982	262179	3.07%	7.97%	173.67	
All India	121,00,00,000	32,87,263			374.17	

Table 1 - North-Eastern States of India¹

North-eastern states have a border of approximately 4096 Km with Bangladesh, 699 Km with Bhutan, approx 1300 Kms (out of a total of 3488Km) with China and 1643 Km with Myanmar. Of primary consideration for this analysis is the 1080 Km Arunachal - China border, which the latter contends to be disputed and the approaches to which lie East of the Siliguri Corridor.

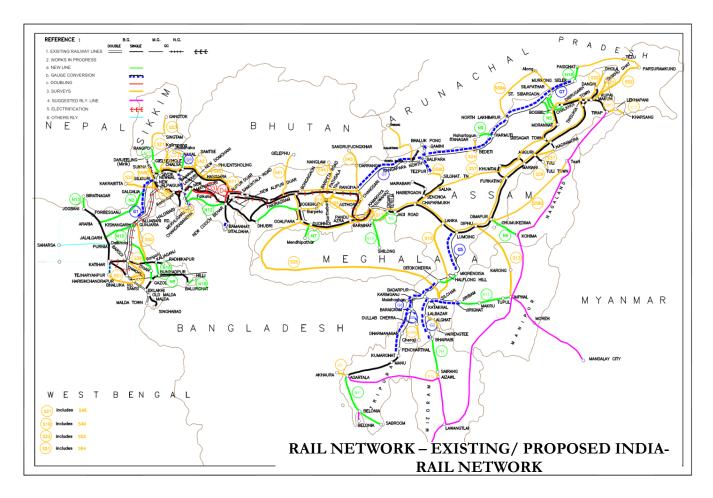
Road and Rail Communications

The West–East rail and road communications linking rest of India with the Northeastern states lie astride Brahmaputra River, with the network to the South of Brahmaputra being better developed than along the Northern bank, a limitation in itself, since all feeder roads and proposed rail links to the Northern borders with China, per force, have to emnate from the North bank arteries. (See Map 1 & 2 below).



Map 1- Road Map of Northeast India

NH 31 (322Kms in Assam) and NH 52 (540 Km in Assam and 310 Km in Arunachal Pradesh) form the primary road axes north of Brahmaputra. Approaches to Bhutan and Northern borders, along all five river valleys of Arunachal Pradesh originate from here. The highway passes through the heart of BTAD (Bodoland Territorial Area Districts) of Assam and along the contested Assam – Arunachal boundary. This results in the connectivity to Bhutan, through Assam and the life line to Arunachal Pradesh, in particular the roads leading to Tawang, through the Kameng Valley and to the state capital Itanagar, becoming susceptible to disruptions. The rail network along the northern bank and astride the foot hills of Arunachal Pradesh, which was hitherto underdeveloped, is being converted to broad gauge and survey for strategic railways, leading northwards, is underway. The issue merits indulgence of the MDONER since the rail network, though not commercially viable for the Railways, would be of strategic significance, both from internal and external security perspective.



Source: Map 2- Rail Map of Northeast India ³

NH 37 forms the primary backbone of the road network South of Brahmaputra, extending from Goalpara to Saikhoa Ghat, east of Tinsukhia in Assam. A series of North – South highways (NH 51, 40, 44, 54,39,61 and 38) emanate from it and extend to Meghalaya, Central Assam, Tripura, Mizoram, Nagaland and Manipur. While an extensive West - East railway connectivity exists till Tinsukia, the Southward connectivity to Agartala, through Central Assam/Barak Valley is being developed to broad gauge line. Mobilization of troops, deployment of long range vectors and move of logistics to forward deployment areas would be dependent on these communication arteries, each of these passing through internally troubled areas.

Trans Brahmaputra Connectivity

A significant infrastructural aspect is the Trans Brahmaputra connectivity. Presently, there are two functional rail and road bridges, at Goalpara and Guwahati/Saraighat and two road bridges, at Tezpur and Brahmakund. Another rail-road bridge at Bogibeel (Dibrugarh) and two road bridges, at Dhola – Sadia and Alubari are under construction. A rail – road bridge at Numaligarh is also at planning stage. Timely completion of these bridges, some already delayed, is imperative from the perspective of defence of our Northern borders, particularly so since a large number of the peace time locations of the troops and depots are located south of Brahmaputra, a situation which is hard to reverse in near term on account of the need to maintain presence of troops in various north-eastern states due to ongoing insurgency and porous borders with Myanmar and Bangladesh.

Active Insurgencies and Implications on Defence Preparedness

An article in the USI India Strategic Year Book 2016⁴ extensively covers the ongoing insurgencies in the Northeast. It is not intended to repeat the contents, since the focus of this paper is on identifying the linkages of internal security to the defence of Sino – Indian border. This part thus summarizes the ongoing insurgency movements and their geographic foot prints, in order to relate to it to the implications for mobilization and employment of armed forces for defence of our Northern borders.

A summary of ongoing insurgency movements is in Table 2 below:-

Table 2 – Ongoing Insurgency Movements In Northeast⁵

Ser	STATE/ INSURGENT GROUP	Primary Area Of Activity	STATUS OF ORGANIZATION / IMPACT
Ass	am		
a	National Democratic Front of Bodoland (NDFB) (S)	Lower and North Assam(BTAD Areas) Footprint: Northern bank of Brahmaputra, Assam -Bhutan border & along approach to Kameng valley (to Tawang)	Terrorist & unlawful organization Entails peace time commitment of troops for Counter insurgency operations, away from designated Key locations (KLPs)
b	United Liberation Front of Assam (ULFA)(I)	Primarily Upper Assam, south of Brahmaputra	Terrorist & unlawful organization Impacts mobilization along NH 37 to Northern borders & trans Brahmaputra movement from Upper Assam & from states of Manipur & Nagaland
С	Kamtapur Liberation Organization (KLO)	Siliguri corridor & Lower Assam	 Terrorist organization Impacts induction of additional resources across Siliguri corridor, into Northeast, from other theatres Also impacts movement towards Bhutan

Implications of Internal Security Environment and Infrastructure Development in the Northeast on the Defence of Northern Borders with China

Ser	STATE/ INSURGENT GROUP	Primary Area Of Activity	STATUS OF ORGANIZATION / IMPACT
d	Karbi National Liberation Army (KNLA)	Areas of Central Assam and Barak	Impacts mobilization along NH 37 and across Brahmaputra from Tezpur.
e	Karbi People's Liberation Tiger (KPLT))	Valley	Disruption of railways, South of
f	Dima HalamDaogah-Action (DHD-A)	(Influence up to NH 37)	Brahmaputra
g	Muslim United Liberation Tigers of Assam (MULTA)	Assam including Chars & Chaporis (Islands in Brahmaputra)	A dormant group helping assimilate illegal migrants and contributing towards population inversion.
Naga	lland		
h	The National Socialist Council of Nagaland (Khaplang) [NSCN/K]	N. I. I.W.	Entails peace time commitment of troops for Counter insurgency
j	National Socialist Council of Nagaland (IsakMuivah) – [NSCN(I/M)	Nagaland, Manipur, Eastern Arunachal Pradesh (<i>Tirap</i> –	operations in Nagaland, Eastern Arunachal Pradesh and Manipur.
k	National Socialist Council of Nagaland (KitoviNeopaokonyak) [NSCN(KN)]	Changlang)	Impacts border security with Myanmar
Mar	nipur		
1	People's Liberation Army(PLA)		Terrorist and unlawful associations
m	United National Liberation Front(UNLF)		Entails peace time commitment of troops for Counter insurgency operations, away from the area of
n	Peoples' Revolutionary Party of Kangleipak (PREPAK)	Manipur	primary responsibilityPrecludes pre- positioning of troops
О	Kangleipak Communist Party (KCP)		North of Brahmaputra
p	KangleiYaol KanbaLup (KYKL)		Instability along Indo - Myanmar Border
q	Manipur Peoples' Liberation Front (MPLF)		
r	Revolutionary Peoples' Front (RPF)		
S	Coordination Committee Cor-com (conglomerate of six valley base UG outfits).		

India's Internal Security Dynamics

SER	STATE/ INSURGENT GROUP	PRIMARY AREA OF ACTIVITY	STATUS OF ORGANIZATION / IMPACT
Tripura			
t	All Tripura Tiger Force (ATTF)	Tripura	 Terrorist and unlawful associations Entails peace time commitment
u	National Liberation Front of Tripura (NLFT)		of troops for Counter insurgency operations, away from the area of primary responsibility (<i>In limited numbers as of now</i>)
Meghalaya			
V	Hynniewtrep National Liberation Council (HNLC)	Meghalaya & Assam Meghalaya border	Unlawful association
W	Garo National Liberation Army (GNLA)	areas	 Terrorist organization Entails peace time commitment of troops for security and local defence of permanent bases/ installations.

Implications on Defence Preparedness

Three Corps of the Eastern Command are deployed for the defence of Northern borders in the Northeast.⁶ Tezpur based 4 Corps is responsible for the Kameng Sector (Western Arunachal). One of the three mountain divisions remains committed for the counter insurgency operations in Lower, Central and Northern Assam. A large number of troops also remain employed for keeping the rail and road communication arteries, North and South of Brahmaputra, open, for the rest of the North-eastern states. The complexities of movement to the Northern borders from the rest of the states get compounded due to limited number of crossing places presently available over the Brahmaputra River. The primary logistics base for the theatre, located at Narangi (near Guwahati) is also located south of Brahmaputra and the bottleneck at the Guwahati/Sarai Ghat bridge over Brahmaputra and the internal security situation, constraints the move of logistic convoys to the area of operations.

In addition, a large number of troops of the Dimapur based 3 Corps, responsible for the defence of borders in the 'RALP' (Rest of Arunachal Pradesh), primarily those from 2 and 57 Mountain Divisions and from the Assam Rifles also remain committed for counter insurgency operations in Upper Assam, Tirap and Changlang Districts of Arunachal, Nagaland, Manipur and to some extent in Tripura. This commitment and the inability to pre locate them North of Brahmaputra, closer to their areas of responsibility is on account of the current internal security environment.

The prevailing situation also adversely impacts the defence related infrastructure development activities. The Inner Line permit Regulations in Arunachal Pradesh, restrictions on employment of labour from other parts of the country, non-availability of adequate local resources of men and material, peculiar regulations for land acquisition, restrictions on setting up of quarries coupled with extortions /kidnappings by members of various insurgent groups, impede infrastructure development and this results in slippage of dates of completion of roads, bridges and other projects, perpetuating the state of under - preparedness along the borders. Civil and military air connectivity, which is critical, considering the nature of terrain existing in the North-eastern states has also remained underdeveloped

due to various impediments. Air force, as part of its MAFI (Modernization of Airfield Infrastructure) has been in the process of developing ALGs and helipads at Walong, Menchuka, Vijaynagar, Tuting, Pasighat, Ziro, Aalo and Tawang.⁷ Timely completion of these would be of help in improving overall connectivity and defence preparedness

Deductions and Recommendations

Deductions

North-eastern states bordering China, Myanmar and Bangladesh, form a critical theatre of operations for India. While the adverse security implications on the defence of borders LC (Line of Control), due to internal security are well appreciated in J&K, the implications on the defence of Northern borders, of similar unstable security environment are not fully realized in the Northeast.⁸ From the preceding analysis, following salient aspects emerge:-

The adverse security implication the defence of borders (Levine of Control), due to internal security are well appreciated in J&K, the implications on the defence of Northern borders, of similar unstable security environment are not fully realized in the Northeast.

- Geography and terrain make North-eastern states an isolated (detached) theatre of operations, which is crucial for the defence of the nation.
- Though the region is isolated from the rest of the country, there is inevitability of interdependence of the states on each other.
- The nature of interdependence is highly complex, with imperative of cooperation on account of even basic connectivity issues (reliance on road and rail connectivity through neighbouring states) on one hand and complex legacy of interstate border disputes, ethnic issues etc on the other.
- ➤ Brahmaputra Valley forms the back bone of connectivity for the Northeast and is the area for locating all military facilities/ infrastructure. The terrain, population centers, existing commitments for internal security tend to shift the peace time deployments and developments south of Brahmaputra or westwards towards lower Assam, diametrically opposite to the areas necessitating deployment for the defence of Sino Indian borders.
- Considering that the insurgency movements in the Northeast have external linkages, at least to the extent of having bases in neighbouring countries (Myanmar, Bangladesh, Bhutan..), the armed forces need to remain involved in countering insurgency. Emphasis however needs to be on synergizing the efforts of state administration, police, Central Armed Police Forces(CAPFs)/Para Military Forces (PMFs), intelligence agencies to minimize involvement of armed forces in addressing the internal security issues.
- Slippages in completion dates, of major infrastructure projects (*roads*, *railways*, *bridges*, *hydroelectric and power projects etc.*), are closely linked to the fragile security environment and insurgent activities. These need to be addressed in tandem and in a synergized manner, between states and various ministries.
- Infrastructure development, particularly, the strategic railways cannot be based on principles of `commercial viability' or on exclusive funding by the Ministry of Defence. These projects merit a `national approach'.

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- Management of areas along interstate borders, Viz Assam Arunachal, Assam Nagaland, Assam Meghalaya, the isolated and largely un-governed islands in Brahmaputra (*Chars and Chaporis*) and the border belts with Bhutan, Myanmar and Bangladesh merit synergized domination, since they tend to become 'safe heavens' for insurgents and illegal migrant, with the support of the former.
- Forward connectivity up to the international borders in Arunachal Pradesh, in particular in the Kameng East, Subansiri, Siyom and Dibang Valleys merits careful calibration between socio economic development and security implications. Each new axis opened requires troops to guard those approaches!

Recommendations

In order to meet the complex challenge of creating and maintaining a stable internal security environment in the Northeast, along with socio economic growth and border infrastructure development, for the defence of our Northern borders, following recommendations are made:-

- a) While continuing efforts to tackle ongoing insurgencies, one needs to build national awareness, on the enormity of challenges in the North-eastern states, which are collectively more complex than the challenges in J&K and have larger long term ramifications for national security.
- b) Strengthening of the institution of `Unified HQ (UHQ)'. Assam has an efficiently functioning UHQ, synergizing efforts of state administration, security forces, intelligence agencies and the armed forces. This needs to be further strengthened with formal inclusion of Arunachal Pradesh, Meghalaya, Nagaland and Tripura. Another UHQ needs to be created at Manipur with inclusion of neighbouring states.
- c) A political interstate coordination umbrella, akin to NEDA (Northeast Democratic Alliance) or the like, could help strengthen the UHQ mechanism for security related issues and also help synergize other developmental and infrastructural development aspects in the entire Northeast region, transcending state boundaries.

One needs to create an umbrella organization at the Centre, for synergized functioning of MoD, MHA, MEA, MDONER and incorporating UHQ in overall decision making, because of the grass root reach and implementation capability that rests with it.

- d) One needs to create an umbrella organization at the Centre, for synergized functioning of MoD (Ministry of Defence), MHA (Ministry of Home Affairs), MEA (Ministry of External Affairs), MDONER (Ministry of Development of North Eastern Region) and incorporating UHQ in overall decision making, because of the grass root reach and implementation capability that rests with it.
- e) Coordinated planning of road and rail projects under various development programs, with primacy being accorded to border defence.
- f) Formalizing inclusion of integral 'security organization' in each major infrastructure development projects (highways, *railways, hydroelectric/ power projects etc.*), preferably incorporating members of groups in cease fire/ autonomous councils, in that geographic area.

Conclusion

It needs to be appreciated that India's 'Act East' policy should begin with our own 'Northeast', (a collective vibrant states), with immense natural resources, growth potential and strategic significance. The region has been infested with legacy insurgency movements, which are on the decline. There is a growing quest for integration with the national

Implications of Internal Security Environment and Infrastructure Development in the Northeast on the Defence of Northern Borders with China

mainstream; in fact the border state of Arunachal is amongst the most patriotic Border States. While the focus of nation's defence preparedness has shifted to the Northern borders, and force accretions in terms of additional divisions and Mountain Corps have taken place, but the internal security environment prevailing in this region has precluded development of infrastructure and military capability to the desired levels.

The challenge is of 'Synergy'; between the states of the Northeast, which are inextricably linked to each other. Also, between various ministries of the government, synergy of approach is required for socio-economic development, infrastructure development and to develop internal & external security imperatives. This will all come about when the long term strategic significance of the Northern borders and connectivity to South East Asia get embedded in the consideration of our security planners.

End Notes

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Radicalisation in South Asia: Implications for India

Dr Adil Rasheed @

he fault-lines of religious divisiveness in South Asia not only manifest in much of the region's highly indented political map, but also run through its historically fractious and deeply scarred collective psyche.

Even global jihadism, which has emerged as the gravest threat to international security since the turn of the millennium- first spewed out of the extremist Af-Pak quagmire of the 1990s. To this day, the most notorious jihadist groups freely operate from this hotbed of terrorism, many directly raised and supported by the Islamic Republic of Pakistan.

Beginnings of Radicalisation in the Subcontinent

This process of jihadist radicalisation in South Asia began with Pakistan-sponsored terrorism in the early 1980s, when 'madrassa' education in that country underwent a major transformation.

The traditional objective of a 'madrassa' (Islamic religious school) is to produce Islamic scholars and jurists. However, under the patronage of the United States and Saudi Arabia, these seminaries were radicalized by the Pakistan military in order to produce young 'mujahideen' (Islamic militants), to fight the 1980s jihad against the Soviet occupation of Afghanistan. Although, ostensibly these religious schools (particularly those on the Af-Pak border)remained practitioners of Deobandi Islam (born out of the Sufi traditions of India), they started imbibing the radical doctrines of Wahhabism – a fundamentalist movement that began in 18th century Arabian Peninsula, leading to the establishment of the Kingdom of Saudi Arabia.

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Not surprisingly, few years after the Soviet withdrawal from Afghanistan, a rabidly extreme militia, indoctrinated and trained in these jihadi madrassas, calling itself the 'Taliban' (a title which literally means 'students') seized power over much of that country's territories. With its creation of this Frankenstein-like monstrosity, Pakistan deemed it could exercise greater 'strategic depth' in Afghanistan. In fact, it decided to replicate the same mode of warfare – proxy war through dispensable, brainwashed zealots – against its arch-enemy India. Thus, turning its attention to the Indian state of Jammu and Kashmir, Pakistan began its radicalisation process in the valley by calling upon its Wahhabi patrons in Saudi Arabia, to help it with funding and logistical support.

[@] Dr Adil Rasheed is Research Fellow at the IDSA, where he is working on the project: 'Ideological Counter-Narratives and Strategic Communication to Combat Jihadist Radicalisation'. He was Senior Research Fellow with the USI from 2014-15 and authored the book 'ISIS Race to Armageddon'. Dr Adil Rasheed was Researcher at the Abu Dhabi-based Emirates Center for Strategic Studies and Research for eight years (2006-2014).

In the early 1980s, many Saudi religious scholars started conducting Islamic conferences in Srinagar and adjoining areas. It is even alleged that Saudi money helped establish the Jhelum Medical College in 1980 that funnelled large sums of foreign exchange money into the Kashmir Valley. Soon Salafi-Wahhabi madrassas started sprouting in various parts of the Jammu and Kashmir (J&K), undermining the Sufi universalism of Kashmiri Muslims.

Meanwhile, the Islamist group Jamaat-i-Islami (founded by the radical Maulana Maududi) also spread its influence in the valley and though the state government was quick to ban its madrassas, many of its teachers got employed in government schools. By mid-1980s, Pakistan had started cross-border smuggling of weapons and money, for its newly established militant outfits, namely the Jammu Kashmir Liberation Front (JKLF) and Hizbul Mujahideen.

New and more dangerous jihadi groups roll ut of the 'jihadi-madrassa actories'such as the Lashkar-e-Taiba and Jaish-e-Muhammad. Ironically, these groups have been as loyal to Pakistan's military establishment, as they have to other transnational jihadist groups, such as Al-Qaeda.

Finally, the so-called 'unpopular' 1987 state election in J&K served as a lame excuse for launching a well-prepared Pak-sponsored insurgency. It is important to note here that many of the Pakistan-backed militant groups in Kashmir had picked up their guns prior to the 1987 elections. Their movement was purely religion-and-ideology-driven and never seriously championed democratic freedoms or secularism. Soon, new and more dangerous jihadi groups rolled out of the 'jihadi-madrassa factories'- such as the Lashkar-e-Taiba and Jaish-e-Muhammad. Ironically, these groups have been as loyal to Pakistan's military establishment, as they have to other transnational jihadist groups, such as Al-Qaeda.

State-Sponsored Jihad Goes Rogue

After 9/11 attacks, the US and its allies invaded Afghanistan to remove the Taliban regime and dismantle Al-Qaeda there. In a remarkable volte-face, Pakistan sided with the international coalition and presented itself as a so-called frontier state in the 'war against terror'.

Pakistan's abrupt role reversal incensed many of its extremist protégés. Suddenly, the Qutbian ideology of Al-Qaeda, that regards all existing Muslim nation-states as 'enemies of Islam' began to resonate with many jihadist organizations in the region. Attempts by the Musharraf regime to exercise greater control over madrasas through 'The Education Sector Reform Action Plan' and 'Voluntary Registration and Regulation Ordinance' in the wake of US-led war in Afghanistan proved highly contentious, and added to an atmosphere of discontent.

Not surprisingly, General Musharraf himself survived two assassination attempts by Islamist radicals. The Frankenstein of jihad had now turned rogue and had let itself loose on the Pakistani populace. After several horrendous terrorist attacks, Pakistan eventually launched a major military offensive named Zarb-e-Asb, in 2014, against various jihadist groups in North Waziristan, namely the Tahrik-e-Taliban Pakistan (TTP), the Islamic Movement of Uzbekistan, the East Turkestan Islamic Movement, Lashkar-e-Jhangvi, Al-Qaeda, Jundallah and the Haqqani network.

However, the country still remains two-faced in its approach toward jihadist terrorism to this day. It continues to support jihadist groups (such as Lashkar-e-Taiba and Jaish-e-Mohammed), that are part of its protracted proxy war against India, even as it struggles to contain the contagion of Islamist terrorism from tearing its own national fabric to shreds.

The Two Faces of Terror

Perhaps, the greatest threat Pakistan's state establishment faces today are from foreign mercenary jihadism and the ISIS (Islamic State in Iraq and Syria). In fact, South Asia itself, is currently confronting two diverse strains of jihadist extremism

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and violence, namely state sponsored-terrorism (mainly Pakistan-backed militant activities), as well as a new form of apocalyptic jihad (practised by the ISIS and Al-Qaeda), that is a threat to global peace and human civilization as we know it.

It would be important to understand here, that the conceptual and methodological deviations in both of these forms of 'modern jihad,' have created divergences not only in their modes of radicalisation and recruitment,but even in their organizational structures and modes of operation. On the one hand, Pakistan-supported jihadism in Jammu and Kashmir seeks to project itself as an 'indigenous and legitimate uprising, or insurgency' of Kashmiri Muslims, seeking secession from a secular country. To maintain this façade of legitimacy, the emphasis is on radicalisation and recruitment of the target population by employing asymmetrical

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techniques like jujitsu warfare. By deliberately hiding behind civilian populations, these jihadist groups conduct acts of violence, to provoke security forces into cracking down on the populace, with the intention of causing a domestic blowback, in order to gain public support for conducting further violence. This hideous form of terrorism confuses and radicalizes a hapless population caught in the crossfire, and has admittedly worked rather effectively in Jammu and Kashmir.

On the other hand, the objectives and modus operandi of transnational jihadist organizations — such as Al-Qaeda and the ISIS — are different. They are in principle opposed to the existence of all nation states. Adhering closely to the ideology of Wahhabi 'takfir' (practice of declaring Muslims with non-Wahhabi beliefs apostate and therefore fit for slaughter) against 'muqallid' (all the orthodox schools of Islamic jurisprudence), Sunni Islam and the 'rafida' beliefs of Shite Islam, they are principally inimical to the religious beliefs of most Muslims in the subcontinent. For this reason, the message of Al-Qaeda and ISIS does not resonate much in South Asia, and these groups often resort to franchise terrorism, by converting local terrorist and criminal gangs to Salafi jihadism, and enrolling them through a formal 'bayah' (swearing of oath) to the head honcho of their transnational jihadist group.

Although, Al-Qaeda under Bin Laden, was soft on 'takfir' in South Asia, and has had decades-long association with many Deobandi jihadist groups in the region such as the Afghan Taliban, the ISIS has managed to create splinters within these indigenous terror outfits, converting many of them to its ultra-radical Salafi-jihadist outlook, and building its own band of affiliates, like the six breakaway factions of the Taliban, who swore their allegiance to ISIS chief, Abu Bakr Al Baghdadi, in 2014.

A New Form of Radicalisation

In addition to the doctrinal difference, between the Hanafi Deobandi School of most of Pak-sponsored jihadists, and the Salafi-jihadist orientation of Al-Qaeda and ISIS, there are several other important differences in the method of radicalisation and recruitment between the two, which spring from their differences in ideological motivations and world view.

The extremist narrative of Pakistan-backed terror groups is always in congruence with and never inimical to Islamabad's broad military and political objectives, and is singularly directed against enemy states, namely, India and Afghanistan. Here religion is dovetailed to meet the needs of the patron state's vested interests. In fact, this narrative supplements the state's political, economic and diplomatic support paradigms.

On the other hand, global jihadist groups like Al-Qaeda and the ISIS, operate independent of any state support as they are ideologically opposed to the concept of modern nation-states both within and outside the Muslim world. Thus, they pose a security threat *in principia* to all countries in South Asia, including Pakistan. Their ultimate objective, is to reinstate a universal Islamist political order on the lines of a pristine utopia, achieved in their imagined religious past, for

which they call for the complete annihilation of the modern nation state system, and with it the globalized capitalist order. It is from this standpoint, that they justify the targeting of various modes of modern international business, commerce, transportation and communications systems. Unlike state-backed terrorist groups, global jihadist organizations pursue an overtly apocalyptic agenda, which is bereft of all reasonable political or militaristic ends. Therefore, in spite of obvious similarities between state-backed jihadists and transnational non-state actors, there is an essential difference in the world view and objectives of these two groups.

This alternate world view of transnational millenarian jihad has evolved out of a 20th century pan-Islamist ideology, developed in the aftermath of the dismemberment of Ottoman Caliphate after World War I. Most Islamist and jihadist organizations harp on a sense of insecurity, the Muslim world felt after

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the abolition of the Caliphate in 1924, festered by several Western invasions, creation of Israel, internecine feuds, civil unrest and anarchy.

In its wake, radical Muslim social and political organizations started disseminating religious ideas and concepts developed by Abul Hasan Al-Mawardi, Taqiuddin Nabhani, Ibn Taimiyya, Syed Qutb, Maulana Mawdudi, Mohammad Farag etc, to radicalize and recruit impressionable minds, with the call for reinstating the Caliphate through the violent overthrow of existing Muslim nation-states. For example, these organizations projected the book Al-Ahkam Al-Sultaniya, by Abul Hasan Al-Mawardi, as a basis for the theoretical reconstruction of an Islamic polity state, and the ideal Caliphate. Similarly, in his book The Economic System of Islam, Taqiuddin Nabhani, detailed the 'inherent structural' problems, and the 'gross immorality', dogging the modern 'debt and speculation driven' financial system, and called for the replacement of the 'exploitative' fractional reserve system of banking, with his 'non-usurious' model of 'Islamic finance'.

The jihadist agenda is to now radicalize the politically naïve, yet educated young minds into adopting this new extremist world view, which is different from the traditional radicalisation techniques and indoctrination methods found in madrassas.

Again, jihadist ideology has drawn a lot from Syed Qutb's, infamous book Milestones (Ma' alim fi al-Tariq), which speaks of the alleged incompatibility of Islam with the ideals of nationalism, capitalism and socialism and seeks the violent overthrow of most Muslim potentates; while Abu Bakr Naji's Management of Savagery explores way of employing barbarity, terrorism, and a protracted state of war, to whittle down Western armies in a protracted war of attrition.

Much of this radical literature, often accompanied with manuals on combat training and other propaganda material (like the ISIS' slick magazine Dabiq, Al Qaeda's Inspire and Hizbut-Tahrir's Khilafah), is easily accessible in the English language on the Internet. Until now, the average youth in the Indian subcontinent has remained largely unaware of this literature, but the jihadist agenda is to now radicalize the politically naïve, yet educated young minds into adopting this new extremist world view, which is different from the traditional radicalisation techniques and indoctrination methods found in madrassas.

It is this new form of radicalisation and terrorism which has spawned lone-wolf operatives, sleeper cells and online purveyors of Jihad around the world, and an early example of this trend in the region was the arrest of ISIS' twittertechie Mehdi Masroor Biswas in India, in late 2014.

Rise of ISIS in the Subcontinent

Although home-grown Islamic extremist outfits Indian Mujahideen and SIMI rose in the aftermath of Ayodhya demolitions of 1992, there were not adherents of global jihad and had no millenarian outlook. At that time, they were

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the offshoots of a communally divisive atmosphere within India, and although they received support from foreign intelligence agencies and terrorist groups, they never travelled to the Middle East or were tutored, in the ideology and the fourth-generation warfare of global jihad.

However, with the coming of the ISIS things have changed. India today confronts a potential crop of educated and techno-savvy Jihadis who have a global and an apocalyptic agenda. Security agencies fear the emergence of this new crop of jihadis, wired up for conducting real time operations at the behest of international terror groups, by employing the most advanced forms of asymmetric warfare. According to an unconfirmed report published in various sections of the Indian media in January 2016, ISIS has reached out to more than 30,000 young Indian techies and many have grabbed the opportunity offered.

It is also reported that the ISIS has already developed close ties with the Salafi Lashkar-e-Toiba (LeT) in Pakistan, and Jamaatul Mujahideen in Bangladesh. In fact, the Afghanistan government even accused former LeT Chief Hafiz Muhammad Saeed, in June 2016, of directing ISIS attacks in Afghanistan. Number of attacks by ISIS affiliates has also increased in the subcontinent in recent times. In July 2016, ISIS gunmen entered an upscale restaurant in Dhaka, and held dozens of people hostage for hours, eventually killing 20 of them. In fact, that country has been rattled by a major wave of Islamist violence, with a number of targeted killings of secularists, atheists and foreigners since 2013.

In 'Is and a simultaneous attacks from the Western and eastern borders of India.

The ISIS threat is also looming large in India. In 'Issue 13' of ISIS's online English-language magazine *Dabiq*, purported head of ISIS in Bangladesh, Sheikh Abu

Ibrahim Al-Hanif, claimed that the group is currently training fighters in Bangladesh and Pakistan, to launch simultaneous attacks from the western and eastern borders of India, in order to create chaos in our country. The mouthpiece also said that Kashmir would soon be overrun by ISIS. Indian jihadi groups like the Indian Mujahedeen (IM) also established links to the group, with many of their members having joined the ranks of ISIS in Syria and Iraq, and some planning their return to India, to enlist more recruits. In fact, the Ansar-ut Tawhid fi Bilad al-Hind (AuT), formed in 2013, by members of IM, ISIS and a Taliban faction, pledged their allegiance to ISIS, in September of that year.

Counter-Radicalisation Recommendations

In light of the above developments, it is important for the Indian government and other countries in South Asia to take serious note of the growing menace of global jihadism in their respective countries, and devise effective measures to combat the rising threat. In their formulation of any counter-terrorism policy, it is also necessary to take into account the collusion and competition between various Deobandi and Salafi jihadist organizations in the Indian subcontinent, as well as the growing Salafi-jihadist subversion of the moderate Sufi Islam practiced by the hitherto peaceable Muslims in the region. For their part, most Islamic institutions like the Darul Uloom of Deoband in India (the headquarters of the Deobandi school), should exhort all religious groups calling for jihad, to categorically renounce the practice of terrorism and give up arms, as such kind of extremism and violence is antithetical to Islamic teachings. In fact, Darul Uloom Deoband (as the pre-eminent religious institution of Sunni Islam), should take the lead and reiterate the stance of one of its greatest scholars and spiritual leaders, Maulana Husain Ahmad Madani, who in his celebrated book Al-Shahab Al-Shaqab, denounced the Wahhabi-jihadist doctrine as a 'aqaid-i-batil' (false belief). This Islamic school and its affiliate organizations should also make sure that they do not receive any financial or ideological support for their mosques and seminaries from countries, or private patrons, espousing Salafi-jihadist beliefs.

It should be noted here, that the Hanafi Darul Uloom of Deoband in India, has since its establishment, worked toward greater communal peace and amity. It voted in favour of a united India at the time of partition and against

Pakistan's creation, and in 2009 issued a historic fatwa calling India dar-al-aman (a land of peace where violence is forbidden).

In the wake of the ongoing threat of violent extremism and radicalisation in South Asia, there is a clear need for India and other states in the region to develop counter-terrorism and counter-radicalisation strategies, that extend beyond conventional security and military paradigms, and tackle the problem in its multifarious aspects, including the religious, political, socio-economic, demographic and at times historical vectors.

Governments of the region need to develop indigenous counter-radicalisation programmes, and evolve strategic communications to disseminate political, liberal, religious and socially resonant, and effective counter-narratives to combat the spread of jihadist radicalisation. As far as possible, specialised wings in think tanks and relevant government departments have to be developed, competent personnel to be groomed, along with development of facilities for implementing the programmes in prisons, seminaries, schools, colleges, etc. Meanwhile, civil society needs to be engaged in playing its crucial role in fighting the growing threat of radicalisation in the region. Its role could prove critical for governments in law enforcement, citizenship teaching, interfaith dialogue, cohesion activities, language tuition, anti-discrimination projects, myth busting, inter-communal housing and integration policies, improving educational attainment, mentoring and developing

There is a clear need for India and other states in the region to depocate counter-terrorism and conventional security and military paradigms, and tackle the problem in its multifarious aspects.

role models. Again, India and other governments of the region need to develop appropriate and effective legislation and processes, to bring extremist organisations of all denominations to the book, including those that spread hate, even if they do not openly engage in violent activities. Such organisations, often function as fronts or breeding grounds for raising radical cadres.

It is also recommended that instances of communal clashes and violence should not be taken lightly, or dismissed as rare occurrences in our multi-religious, sectarian, caste-ist and ethnically divided societies. Serious thought must also be given to preventing violent outbreaks, in times, when transnational non-state actors are increasing their seditious activities in the country. There is also room for improvement in public perception, regarding fairness and impartiality of security agencies and the judicial system in countries of the region. When members of the public or any community start losing faith in any country's law enforcement agencies, the risk of radicalisation increases and some of its members start attacking state institutions itself, and join foreign extremist groups.

Perhaps, the study of various religions and their impact on society, should be studied as a secular academic discipline in various universities of South Asia, so that false religious indoctrination of foreign extremist groups through the Internet can be governed in a preside existing many and earth critical many.

the Internet can be countered in a precise, scientific manner and authorities may not have to depend on biased, opinionated and poorly educated religious scholars, to frame the country's counter-narratives and de-radicalisation policies. The importance of developing a strong counter-radicalisation presence in the cyberworld can also not be understated, particularly in the country's regional languages in which ISIS and Al-Qaeda are gradually spreading their message.

In the end, there is a need to revitalize India's and the region's socio-cultural ethos. And where, countries should not just represent political unions but should emerge as organic, composite entities. In the absence of a strong social fabric and common cultural ethos, security measures - can never prove sufficiently resilient, against the threat of extremism and terrorism.

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Modernisation of Police Forces for Effective Management of Internal Security Challenge

Shri Jayanto Narayan Choudhury,IPS (Retd)®

170 districts, out of 687 in India are terrorism-affected, and 45,000 persons have died in terror incidents since the mid 1980's, including 15,000 civilians and 6000 security personnel. The situation has however improved; in the year 2000 over 3000 people died; in 2015; only 174. Terror is just one facet of the internal security matrix. There are thousands of riots and 'bandhs' happening annually, the triggers ranging from communal or ethnic tensions to political and economic issues—violent mob protests demanding caste-based job reservations, against land acquisition, demanding a separate state even secession, and communal clashes. The primary role of any state is to ensure safety of person and property of

all citizens. In India, police and 'law and order' are a states' responsibility, as defined in Entry 2 of List II of VII Schedule in the Constitution. Today state police forces are 2.2 million strong (including 500, 000 armed police), for a population of 1.2 billion. Deployed in 15,000 police stations, the police cover 3 million sq kms in 29 states and 7 Union Territories. Expenditure on police by states is Rs 75,000 crores (0.75% of state budgets). States often need support from Central Armed Police Forces (CAPFs) and also call upon the army to deal with large-scale disturbances. The Centre spends Rs 40,000 crores on CAPFs (2% of its annual expenditure) that number 1 million personnel.

Terror is just one facet of the internal security matrix. There are thousands of riots and 'bandhs' happening annually, the triggers ranging from communal or ethnic tensions to political and economic issues.

Since 1969-70, the Government of India (GOI) has funded the Modernisation of State Police Forces (MPF Scheme); the current annual allocation is about Rs 8000 crores. The intention was to reduce dependence on the Army and the CAPFs. However, now 80 per cent of these funds are spent by central forces. An Ernst & Young (E&Y) impact assessment observed that while infrastructure has improved, there is a long way to go in this and other areas. Though a component of 'non-plan- expenditure, the 12th and 13th Finance Commissions (FC) had provided funds for police infrastructure. The 14th FC while increasing states' share of tax revenues from 32 to 42 per cent recommended that this scheme be delinked from central support,

An all-India policing template is infeasible. The remote jungles of Abujhmad in Bastar, are a world away from coastal Colaba, Mumbai. Modernisation is a process of change, from older ideas, attitudes, methods and technology to the more recent. Better communications, sophisticated weapons and more vehicles are necessary and this article will address the following:

- ➤ What are the main internal security challenges in the next decade?
- What are the current weaknesses in police capabilities?
- ► How can police improve capacity to manage IS challenges?
- ➤ What is the way forward?

[®] Shri Jayanto Narayan Choudhury retired as DG NSG in May '15 after 37 years in the IPS. Earlier he was DGP of Assam and in the IB. His interests include improving IS systems in conflict areas, and global policing best practices.

Challenges

Improved Counter Terrorism (CT) / Counter Insurgency (COIN) police capability has helped contain violence and caused attrition of militant lethality. Fatalities are now a fraction of earlier levels. However, causal factors relating to inadequate governance, perceived alienation and ethnic aspirations remain unresolved in many areas. The Arab Spring

and recent counter-coup in Turkey reveal the immense power of mass mobilization leveraged by social-media. The mass agitation against foreigners in Assam (1979-83) and more recently protests in the Kashmir Valley in 2016 reflect challenges when local police is under social pressure.

'Fourth-generation-warfare" is a return to decentralized conflict and blurring of lines between combatants and civilians, with states no longer having a monopoly on armed force". Non-state actors supported by elements in Pakistan's power structure will continue the "proxy war". Attempts to aggravate social unrest by spreading disinformation through online communities and social media, and cyber-

mpts to aggravate social unrest by spreading disinformation through online communities and social media, and cyber-attacks against critical infrastructure could be additional forms of attack.

attacks against critical infrastructure could be additional forms of attack. The Stuxnet attack on Iran's nuclear facilities and the heist of USD 81 million from a Bangladeshi bank by hackers indicate the vulnerabilities of an increasingly digitized India. J&K will remain the main battle ground but growing urban centres like 'smart cities' will be targets. Major terror attacks, ('black swans'), will occur infrequently; the aim being to shake India's self-confidence. The 26/11 attack launched from Karachi by a gang of 10 Lashkar-e-Taiba terrorists against multiple targets in Mumbai killed 170 and destroyed property worth hundreds of crores. Preparations and launching of this attack was from beyond India's borders, yet the first response was necessarily by local police. Lathi-wielding ASI Tukaram Omble capturing Kasab at the cost of his own life, and .303 armed policemen firing at AK-toting terrorists at CST Railway station remain the dominating images of courageous response by individual policemen.

After Mumbai, the threat of similar attacks influences resource allocation in Mumbai and mega cities that are potential targets. Also, the 15,000 kms of land borders, and over 7500 kms of coastline are assessed as vulnerable, leading to expansion of Board Guard Force (BGF) and coastal police.

The situation in NER (North Eastern Region) is now more stable. Cooperation with Bangladesh and Bhutan helped, and this is now happening with Myanmar. However, continued deployment of CAPFs and army formations reflect a lack of confidence in the capacity of states' to manage the security situation. This despite attrition in the cadre strength of militant outfits, waning people's support, criminalization, and fragmentation of militancy. At the same time, changing demographics make large scale ethnic clashes a growing concern. In central India, Maoist violence is much lower, but the writ of Left Wing Extremists continues, tying down CAPFs and state resources.

Apart from extremism, India's "demographic dividend" with 50 per cent of the population below 25 years, has potential for violent protest, in the absence of adequate opportunities. Income inequality is a latent fault line; the top 5 per cent in India own 70 per cent of the country's wealth, while the bottom 50 per cent has less than 5 per cent. With economic growth unevenly spread not just between but within states, demands for separate political entities can be expected to add to internal unrest.

Weaknesses

After 1857, the Indian police was re-organized to control this vast sub-continent and diverse population, at minimum cost. "The formation of the 'civil' police forces was intended to lessen a dangerous reliance on the army for internal policing". At Independence, constitutional devolution of policing authority to the states was an acknowledgement of India's federal polity. However state governments were not made accountable for police performance, except under Article 356, and continue to resist any apprehended constitutional encroachment by proposals, like the National Centre

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for Counter-Terrorism. There is little public dialogue or cognitive research on policing policies, processes and outcomes. The ordinary citizen's main expectation is that the police prevent and detect crime, maintain public order and manage traffic. About 8 million cognizable crimes are recorded annually. Over 30 million cases choke Indian courts. 6.5 lakh exhibits await examination in state and regional forensics labs. The conviction rate has drastically dropped ever since the police role was divorced from prosecution. The 140,000 people who die annually in road crashes have failed to attract the attention needed. Not as glamorous as national security, this dismal picture nevertheless affects the everyday quality of life of all citizens and hinders the country's socio-economic development.

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A holistic approach to modern policing, not just focus on the terror threat is needed for effective management of internal security. Recognizing this, the 2nd Administrative Reforms Commission in its report on Public Order (2007) made 51 recommendations that include a clearer definition of the police role, insulating the police from outside pressure and enabling stability of tenure, moving towards specialization with law-and-order being separated from investigation, strengthening intelligence gathering, greater investment in technology to manage mobs and support scientific investigation, better training, and a more "people-friendly" police.

The centre has allocated thousands of crores, particularly since 2001 to support police modernisation. The components covered were construction, mobility, weapons equipment and communications. Category 'A' states where the internal security situation was assessed as "grave", were eligible for 100 per cent grant. Audit observations reveal a) lack of planning capacity b) failure to identify key elements required to upgrade capabilities c) outcomes that have left the police 'half-prepared' –e.g. weapons

without sufficient ammunition.

The fault lies not just with the states. The prolonged approvals process leaves little time till the end of each Financial Year (FY). There is no provision to pay for expert guidance, to assess needs, prepare a perspective plan, for systematic M&E, for "consumables" like ammunition or recruit specialist manpower. Some of the Centre's own ambitious schemes have run into rough weather because of overlooking states' varying capacities. An example is the proposal to digitally connect all 15,000 police stations countrywide. Huge investments were made, first through

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CIPA (Common Integrated Police Application) and now CCTNS (Crime & Criminal Tracking Network System). This has been successful in states already advanced in using IT applications. In others, centrally procured computers lay unopened for years in the original packing.

Police Modernisation

Worldwide, successful responses to internal security turmoil have required strengthening policing systems. A critical component of the Templar Plan in Malaysia was strengthening the rural constabulary. The US did not do so in Vietnam, but faced with a crime wave in their own country, enacted "The Violent Crime Control and Law Enforcement Act", 1994, providing federal funds for 100,000 additional "boots-on-the-ground, greatly increasing funding for research and financing higher education of police officers in institutions like the Kennedy School of Government. While releasing the recent report on US President's Task Force on 21st Century Policing, President Obama, urged even more research and changing the image of a police officer from "warrior" to "guardian". A better technology application is one of six "pillars" recommended, as is improving community relations and training.

A framework for modernising the police in India is suggested below:

- > Build up broad-based advocacy to include 'development of policing systems and capabilities', in the concurrent list of the Constitution.
- > Set up an empowered Task Force at the Centre to work toward systematic implementation of recommendations of the 2nd AR Committee, the Malimath Committee and the Supreme Court directives (2006) in Prakash Singh v Union of India, beginning with Union Territories (UTs) that are directly controlled by GOI
- Review ToR and projects undertaken by the National Centre for Technology Applications for Internal Securityat IIT, Mumbai. In addition to obvious areas like forensics support and less-lethal mob-control technology, explore applications of cutting-edge developments in neuro and behavioural sciences, big data analytics, modelling, and robotics. These needn't be high cost. The 26/11 terrorists used commercially-available technology like Google Earth for target-familiarization, and received guidance by Pakistanbased 'controllers' using VOIP

A modern policing system adequate presence requires on the ground The recommends civil policemen for every 100,000 population. Most conflict-areas in India have less than 25 per cent civil police strength of this benchmark.

- Identify appropriate multi-disciplinary institutions and fund studies of existing structures, policies and processes, and evidence-based research into organizational innovations and behavioural changes needed for modern management
- Establish a National Crime Centre to address policing issues that are inter-state or transnational, to develop predictive policing methods and develop capacity to mentor complex investigations, and new types of crime.
- A modern policing system requires adequate presence on the ground. The UN recommends 220 civil policemen for every 100,000 population. Most conflict-areas in India have less than 25 per cent civil police strength of this benchmark. Similarly, sufficient police stations act as early-warning-systems and help contain the spread of violence.
- Community support is essential. Modern technology is a capacity multiplier of traditional grass-root community institutions, or Village Defence Committees, especially in conflict-areas. Engaging vulnerable communities/ ethnic groups, and working with local leaders can prevent minor issues from escalating.
- Appropriate and adequate skill-development is the backbone for effective modernisation. Rs 1000 crores are currently spent on training 100,000 police personnel annually. This needs to be increased. Crime and Criminal Tracking Network and Systems (CCTNS) network can also be a digital platform for training. Simultaneously, impact evaluation can ascertain whether training design and pedagogical methods are imparting the desired skills.
- Morale and accountability is core to modern policing. The thrust on housing for lower ranks and duty shifts for 24x7 policing are essential. Clear policies and well-defined Standard Operating Procedures (SOPs) repeatedly reinforced to initiate behavioural changes, are as important to public image as oversight of external bodies like State Police Accountability Commissions.

Way Forward

Infrastructure as the hub of police modernisation has had limited results. The six National Micro-Missions established that focus on identified policing challenges have also not scaled up. An alternative systemic-oriented template that can be considered as below:

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- As part of the proposed National Vision being framed by Niti Aayog, reiterate that states' police are the focus of modernisation, with the stated objective as Goal 16 of the UN's SDGs (Sustainable Development Goals): "Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries to prevent violence and combat terrorism and crime".
- This is to be achieved through improving Policing Systems; defined as "all organizations, institutions, resources and people whose primary purpose is to improve policing".
- Goal 16 of the UN's SDGs states: "Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries to prevent violence and combat terrorism and crime".
- Address the seven building blocks of an effective policing systems namely:

 (i) delivery of identified services, (ii) work force adequacy and competencies, (iii) appropriate research capacity into core areas like information systems and technology applications (iv) strengthening mechanisms to improve community engagement, (v) ascertain avenues for sustainable financing, and (vi) review leadership skills/governance policies, structures and processes
- ➤ Invest in diagnosis of existing policing systems, building up planning and implementation capacity, as well objective M&E (Monitoring and Evaluation) mechanisms, evolving a 'dashboard' of modernisation indicators for each state
- Focus initially on states in conflict zones, and vulnerable 'smart cities'. Sign a Memorandum of Understanding (MOU) so that centre and states can work jointly; from diagnosis of weaknesses to achieving defined deliverables in a given time-frame (3-7 years).
- Establish an adequate corpus with central funds, acknowledging modern policing as an imperative for national development. If needed, levy a cess like Swachh Bharat (perhaps Surakshit Bharat), while persuading states to allocate 1per cent of state domestic product on modernizing civil police. Simplify procurement processes and establish a Non-Lapsable-Pool-of-Central-Resources so that planning can be for a longer time horizon
- Evolve a suitable vehicle for effective planning and implementation, perhaps an empowered Project Management Unit for each selected state. Establish a mechanism for regular review by PMO/CCS, since this goes beyond a single ministry

Conclusion

UN Resolution 2151 states, "Good governance and the rule of law at national and international levels are essential for sustained, inclusive and equitable economic growth, sustainable development and the eradication of poverty and hunger." Achieving this requires an internal security eco-system that gives confidence to investors and encourages enterprise, without fear to person or property. Public expenditure on education in India at about 3.5 per cent of GDP, and on defence at 2.5 per cent certainly needs to be increased; expenditure on police by both states and centre, is less than 0.001% of India's Rs 125.000,000 crore (USD 2 trillion) GDP. As seen in Kashmir in 2016, education is adversely affected by an unsettled security environment. Similarly, investors and tourists shy away from conflict areas, affecting

The army needs to focus on its core mission of capable defence against external adversaries, without distraction by repeated employment in managing internal security crises, in aid of civil authority. Transforming the police is essential for India to achieve its destiny as an economic superpower.

efforts to ameliorate the situation through economic development. The army needs to focus on its core mission of capable defence against external adversaries, without distraction by repeated employment in managing internal security crises, in aid of civil authority. Transforming the police is essential for India to achieve its destiny as an economic

Modernisation of Police Forces for Effective Management of Internal Security Challenge

superpower. However, a 'Revolution in Police Affairs' cannot be achieved without proactive participation by all opinionmakers; within and outside government. Policing is too important to be left to the police hierarchy, bureaucracy and political leadership. It must be an all-out national effort.

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Section II

India's Strategic Neighbourhood

Geopolitics of Combating Terrorism in Af-Pak Region

Major General BK Sharma, AVSM, SM & Bar (Retd)

Introduction

fghanistan-Pakistan (Af-Pak) region and its neighbourhood form part of the same strategic space. The 'Old Silk Route' was a conduit of shared prosperity and cross-fertilization of faiths and civilizations between the Indian sub-continent-Central Asia-West Asia and China. On the flipside, from the dawn of history, the region witnessed many invasions into the Indian sub-continent. The region was the scene of 'Great Game' of the 19th century between

the Great Britain and Russia and, later in the eighties, asymmetric conflict between the US- Saudi Arabia - Pakistan axis against the Soviet Union, which legitimised the use of Islamist Jihad as a state policy. Since then the Af-Pak region has infamously come to be known as epicenter of international terrorism, posing a grave risk to regional and global security. On the positive side, Af-Pak forms a strategic bridge between Eurasia and South Asia, connecting the two regions through an emerging network of trade and energy corridors. One Belt One Road (OBOR), Maritime Silk Route (MSR), China Pakistan Economic Corridor (CPEC), International North-South Transport Corridor (INSTC), Chabahar-Zaranj-Delaram-Central Asia Axis, Turkmenistan-Afghanistan-Pakistan-India (TAPI), Iran-Pakistan-India (IPI) and the power grid -Central Asian South Asia (CASA)-1000 are the dream projects that can promote peace and prosperity in the region. However, if we are unable to curb terrorism, the risk of state collapse in Af-Pak and inter/intra-state conflicts in the region will increase. This article highlights a perspective on the ecology of terror, appraisal of security scenario, its internal dynamics and external linkages, and the divisive geopolitics of combating terrorism in the Af-Pak region.

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Ecology of Terror in the Af - Pak Region

Poor in Global Terrorism and HDI Ranking

Afghanistan ranks 02 and Pakistan 03 in the Global Terrorism ranking. Iraq and Syria from where Daesh is proliferating to Af-Pak region are ranked at 1 and 5, whereas, in the neighborhood, India is at 08, China at 23 and Russia at 30.1 Ferghana valley in Central Asia is potentially another bastion of Jihadi terrorism. In terms of Human Development Index, out of 187 countries, Afghanistan ranks 171, Pakistan 147, Uzbekistan 114, Kyrgyzstan 120, and Tajikistan 129.²

[@] Major General BK Sharma, AVSM, SM & Bar (Retd), is the Deputy Director Research and Head of Centerfor Strategic Studies and Simulation at United Service Institution of India (USI), New Delhi. He specialises in Strategic Net Assessments, Scenario Building and Gaming. He conducts strategic games for the National Defence Collage, Higher Command Course of the Army, Navy and Airforce and Academy of India Foreign Service, New Delhi. He has edited Books and "Strategic Perspective", digital magazine for USI of India and also written articles in Indian, and Foreign Journals on strategic affairs. He regularly participates in International Conferences.

India's Strategic Neighbourhood

In the Fragile State ranking, out of 178 countries, Afghanistan ranks 9, Pakistan 14, Uzbekistan 60, Kyrgyzstan 64 and Tajikistan 57.³ They also perform poorly on economic indicators and corruption ranking. These indicators make this region fertile for spread of terrorism.

Terrorist Network in Af-Pak Region:-

- As per General Nicholson's report to the Pentagon, out of 98 US designated groups globally, 20 are located in AF- Pak region. They are adherents of a militant Salafi-Wahabi ideology and seek to establish a Caliphate of Khorasan, the mystical state encompassing the territories of Af-Pak, Indian Sub-continent and Central Asia. Jihadis are following the concept of 'Takfeer', an aggressive form of Jihad that propagates killing of apostate and non-Sunni Muslims.
- There are a number of Islamist radical groups active in the region with their bases in Afghanistan and Pakistan. There are nearly eight factions of Afghan Taliban, Haqqani network, and Islamic State of Khorasan Province (ISKP) active in Afghanistan. Tehrik e Taliban of Pakistan (TTP), Jundullah and Jamaat-ul-Ahrar are fighting the Pakistan Government, whereas, groups like Lashkar e Taiba (LeT), Hizul Mujahideen (HuM), Jaish e Mohamed (JeM), Jamat-ud-Dawa (JuD) are protégé of ISI directed against India. Al Qaeda Indian sub-continent (AQIS) operates- against India and other South Asian countries. Sunni militant groups namely Sipah-e-Sahaba and Lashkar-e-Janghvi indulge in killing of Shia Muslims and other minorities in Pakistan and Afghanistan. Likewise, groups like Islamic Movement of Uzbekistan (IMU) and Hizb e Tehrir (HeT) are active in Central Asia. Jaish al Muhajireen- wal- Ansar is active in Caucasus and East Turkistan Islamic Movement (ETIM) operates in the Xinjiang province of China. Militant groups namely, Jundullah and Baloch resistance groups target Iran.

Jihadist profess a strategy of protracted warfare depicted in the belief "Americans have the Watches, we have the Time". They are apt in all forms of terrorism like, suicide attacks, cyber terrorism, narcoterrorism, and will not hesitate even in nuclear terrorism. Terror is financed through charity, donations, drug trade, extortions, illegal arms trade, and fake currency.

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- Daesh appeared in the region in 2014. As per the former American commander of the international coalition in Afghanistan, Gen. John F. Campbell, the strength of Islamic State in Iraq and Syria (ISIS) in Afghanistan is between 1,000 to 3,000 fighters. It mostly comprises TTP defectors, elements of IMU and other foreign militant groups. According to Gen John W Nicholson, the US NATO (North Atlantic Treaty Organisation) military commander in Afghanistan, the ISKP wants to start a Caliphate from Nangarhar and Kunar provinces with the help of migrant fighters from Iraq and Syria. They are despised for brutalities, deadly bombings against non Sunnis, and burning houses of common people. There are simmering differences between ISKP, Taliban, and Al-Qaeda. In March 2016, President Ashraf Ghani had declared that Afghanistan would be a graveyard for the Islamic state.

Complicity of Pakistan in Cross-border Terrorism

Pakistan's complicity in cross-border terrorism remains unabated. Pakistan is obsessed with foisting a Taliban dominant proxy regime in Afghanistan to accomplish its objectives of gaining strategic depth, mitigate its Durand Line dilemma, expand influence in Central Asia and limit India's growing role in the region. It continues to use Jihadi terrorism as an instrument of state policy and provides safe havens to terrorists on selective basis. Jihadi leaders like Osama bin

Laden, Mullah Omar, Mullah Mansoor and many others were killed in Pakistan. Banned leaders like Al Qaeda head, Al Zawarhi, Jamaat-ud-Dawah Chief, Hafiz Saeed, Jaesh e Mohammad Chief, Masood Azhar, United Jihad Council Chief, Salahuddin, and Lashkar e Tyaba Chief, Zakiur Rehman Lakhvi operate with impunity in Pakistan.

Sane voices of civil society activists like Professor Pervez Hoodbhoy of Quaid Azam University Islamabad point out, "militant jihad has become a part of the culture in the academic institutions ... Mullahs are creating a cult and seizing control over the minds of their worshippers." Unmindful of these warnings, the bigwigs of Pakistan establishments brazenly eulogize Jihadists. Gen Pervez Musharraf, former President of Pakistan in an interview said, "Osama bin Laden, Ayman - Al Zawahari, Haqqanis are our heroes, we trained the Laskar e Tyaba against India."6Sartaj Aziz, an advisor on Foreign Affairs to their Prime Minister further reinforced this thinking in an interview to the BBC, "Pakistan should not engage

'Militant jihad has become a part of the culture in the academic institutions Mullahs are creating a cult and seizing control over the minds of their worshippers'.

in war with those insurgents or militants whose target is not Pakistan". According to noted Pakistani journalist Najam Sethi, "Pakistan's national security state is embroiled in antagonistic relations and proxy wars with neighbors, India and Afghanistan whose blowback is spawning terrorism inside Pakistan. Pakistan's relations with India will not improve until the domestic jihadi groups are dismembered so that Mumbai and Pathankot (Indian airbase) never happen again. Pakistan's relations with Afghanistan will not improve until the Afghan Taliban are disrupted and defeated or compelled to sue for peace. And until Pakistan is at peace with its neighbors, it will not be at peace with itself."8

President Ashraf Ghani during the NATO Summit in 2016 said, "Peace Initiative taken by Afghanistan with

Pakistan is not successful as Pakistan differentiates between good and bad terrorists in practice".9 The SAARC (South Asian Association for Regional Cooperation) summit in 2016 to be hosted in Pakistan was boycotted by Afghanistan, Bangladesh, Bhutan, and India due to Pakistan's complicity in cross-border terrorism. Sheikh Hasina, the President of Bangladesh, categorically stated, "it is over the situation in Pakistan that we decided to pull out from the SAARC summit. Terror from Pakistan has gone everywhere." ¹⁰ Pakistan based terrorist groups were categorically named for regional instability at the 'Heart of Asia' conference held at Amritsar in December 2016.

In the wake of recent series of terrorist strikes in Lashkargarh, Kandahar and Kabul, on 12th January, the US State Department endorsed the statement of Afghanistan's spokesperson, "the terrorists were able to strike targets inside Afghanistan whenever they wanted because Pakistan had allowed them to maintain safe havens in FATA (Federally Administered Tribal Area)." The US spokesperson urged Pakistan to work with Afghanistan and India to curb cross-border terrorism.

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Terrorism Scenario in Af- Pak Region

The security scenario in the Af-Pak region is mired in uncertainties. Pakistan sponsored terrorism has been the major cause of its tensions with India and Afghanistan. Despite Pakistan's much touted 'Zarb-e-Azb' and 'National Action Plan', there has been no respite from terrorist strikes within Pakistan, India or Afghanistan. A series of terrorist attacks against high profile security targets in Punjab and J&K provoked India to undertake surgical strikes against terrorist launch pads across the Line of Control (LoC). The scenario in Afghanistan remains grim.

The recent sensational strikes in Lakshargarh, Tarinkot, Kunduz, Kabul, Faraha and many other places reveal the growing magnitude of terrorist threat in Afghanistan. Reports suggest that Taliban control about 9 districts and are contesting another 43 out of 400. Since 2001, this is the largest swath of territory in the occupation of Taliban.¹¹ The US DoD (Department of Defence) report to the Congress 'Enhancing Security and Stability in Afghanistan', December 2016 suggest that as of end September 2016, the Taliban has been assessed to have control or influence

over approximately 10 per cent of the population and was contesting the Afghan government for control of at least another 20 per cent. The year 2016 witnessed spurt in civilian (31,000) and ANDSF (Afghan National Defence and Security Force) (30,000) causalities

The ANDSF despite critical operational voids and heavy causalities has shown great grit and determination to resist Taliban offensive, albeit with the support of US and NATO forces. In the words of Gen Nicholson, "they were tested and they prevailed". A number of top Jihadi leaders have been eliminated, Taliban offensive stymied and adversity in places like Kunduz restored. However, the capacity building of ANDSF remains a mammoth task that demands unstinted US

The ANDSF despite critical operational voids and heavy causalities has shown great grit and determination to resist Taliban offensive, albeit with the support of US and NATO forces. In the words of Gen Nicholson, "they were tested and they prevailed".

engagement and international support. The US decision to deploy 9800 troops complemented by 6000 from the NATO allies is another welcome development. The combined US military operations codenamed 'Green Sword' led to killing of 500 IS cadres and reduced their strength by 30 percent by destroying two dozen command and control and training facilities, disrupting financial network and reducing their sanctuaries by $2/3^{rd}$, thus reducing their presence from nine districts to three.¹³ The ISKP, however, retains capacity to undertake suicide bombing against soft targets.

The new ANDSF 'Sustainable Security Strategy' adopted in 'Operation Shafaq' entails conduct pro-active offensive operations to fight the enemy, hold communication centers and disrupt enemy network. In order to enhance the operational effectiveness of the ANSF (Afghan National Security Force), the issues of poor leadership, rampant corruption and combat worthiness of the ANSF are being addressed. Special attention is being paid for modernization of 17,000 strong Afghan Special Forces and building Afghan Air Force. Besides, the existing inventory of MI-17 and MI-35 helicopters, the US is fielding A-29 light attack aircraft, MD-530 helicopters and UAVs to make counter-terrorism operations more lethal and effective.¹⁴

Geopolitics Undermines Counter Terrorism Efforts on Af- Pak

It was heartening to note that in July 2016, at the Warsaw Summit, 39 nations pledged \$800 million annually to support ANSF through 2020. The US provides USD 3.5 billion annually which combines close to 4.5 billion dollars for growth and sustenance of ANSF. In October 2016, at Brussels, international donors committed additional \$15.2 billion for peace building in Afghanistan. All stakeholders in their recent declarations at the Heart of Asia', BRICS and SCO summits had vowed to combat terrorism in its manifestations in the form of Comprehensive Convention on International Terrorism under the aegis of the UN, support Afghan led and Afghan owned peace process, facilitate reconciliation efforts under the aegis of Afghan Government, contribute in capacity building of the ANSF, and jointly combat narco terrorism, cyber terrorism, nuclear terrorism, arms trade, and terror financing. There was a general agreement to harmonize the role SCO, BRICS, CSTO, NATO, and the neighboring countries to promote peace in the region. However, in practice, major players are adopting contradictory approaches to deal with Taliban and Pakistan. The level of the US / NATO engagement remains uncertain even though NATO Secretary General, Jens Stoltenberg affirmed that the US led alliance will maintain its presence in Afghanistan for a long time. All eyes are set on how Trump administration deals with Afghanistan

China perceives security in the Af-Pak region from the perspective of mitigating ETIM (East Turkistan Islamic Movement) threat to Xinjiang, OBOR, energy corridors, securing investments in mining and oil exploration projects in Aynek and North Amu Darya. The CPEC has become a strategic rallying point to consolidate Pakistan-China nexus and solicit Russian participation in it. The underlining aim appears to countervail NATO / US presence in Eurasia

and limit India's influence in Afghanistan. China is pursuing its strategic objectives in Afghanistan through bilateral strategic partnership and under multilateral mechanisms such as BRICS, SCO, QCG (Quadrilateral Coordination Group) and Afghanistan, Pakistan and Tajikistan, and now the Russia-Pakistan-China Trilateral Dialogue.

Russia perceives rise of ISKP and escalation of terrorism in Af- Pak region as a threat to Commonwealth of Independent States (CIS) Southern security belt. Russia is also concerned about long-term US presence in Afghanistan. Russia's Ambassador to Afghanistan in an interview to Turkey's Andalou Agency said, "US infrastructure in Afghanistan is a threat as they can deploy 100,000 troops in these bases in less than four weeks". Moscow has for years opposed the Taliban, calling them terrorists, and supported the anti-Taliban 'Northern Alliance'. As per Russian Ambassador in Kabul, Alexander Mantitsky, one of the reasons to open channels with the Taliban is for the security of political offices, consulates in Afghanistan.¹⁷ Zamir Kubalov, Putin's special representative for Afghanistan termed ISIS in

'Russia can take revenge with the US by arming Taliban and directing them against the US thus forcing their withdrawal or leverage its influence with Taliban to extract concessions from the US. Militarily, Russia is in a better position to combat terrorism due to deployment of its troops along Tajikistan-Afghanistan border, air bases in Central Asia, Regional Antiterrorist Centre at Bishkek and with the help of CSTO Rapid Reaction Forces.

Afghanistan a bigger threat than the Taliban. 18 In December 2015, a senior Russian diplomat declared that "the Taliban interest objectively coincides with ours" in the fight against IS and that his country and the Taliban "have channels for exchanging information". Taliban sources also confirmed that the group's representatives met Russians inside Russia and "other" countries several times over the past two years. 19 Russia can take revenge with the US by arming Taliban and directing them against the US thus forcing their withdrawal or leverage its influence with Taliban to extract concessions from the US. Militarily, Russia is in a better position to combat terrorism due to deployment of its troops along Tajikistan-Afghanistan border, air bases in Central Asia, Regional Anti-terrorist Centre at Bishkek and with the help of CSTO Rapid Reaction Forces.

Recently, Iran-Taliban relations have come under debate. Iran is concerned with Sunni encirclement from Syria and Iraq in the West and Daesh and Taliban from Afghanistan in the East. Iran perceives US presence in Afghanistan inimical to its national interests. Iranian Ambassador, Mohd Rena Behrami has confirmed that Iran publicly hosted leaders of Taliban at the recently held Islamic Unity Conference.²⁰ Conspiracy theories in Russia, Iran and China paint the ISIS as an American or Western creation aimed at destabilising their countries. Like Russia, Iran supported the anti-Taliban groups in the 1990s. Tehran also co-operated with the US-led international coalition to topple the Taliban regime in late 2001. But, at the same time, Taliban sources say Iran sent them a message that it was willing to support them against the US.21

State of Reconciliation with the Taliban

Reconciliation talks under the QCG reached a dead-end after the death of Mullah Mansoor and Qatar Peace Process is now in news. It is learnt that three members of Quetta Shura and 2-3 members from Taliban office Doha were invited by ISI, presumably, inspired by the Hizb-e-Islami deal. Afghanistan government too is engaged in direct secret talks with Taliban senior leaders in Qatar. Mulla Abdul Manan Akhund, brother of Mullah Omar, has reportedly met Mohammed Nasoom Stenkazi, the Afghan Intelligence Chief. These talks have, however, remained inconclusive due to intransigence on part of Taliban leadership on the withdrawal of foreign troops.

Russia-China-Pakistan Trilateral on Afghanistan

In a dramatic shift, China, Russia, and Pakistan held secretary-level trilateral talks in Moscow on Dec 27, 2016 to discuss regional stability and restoration of peace in Afghanistan. It was agreed to adopt a flexible approach to remove some segments of Taliban from the UNSC sanctions list and foster peaceful dialogue between Kabul and Taliban.²²

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Afghanistan did not approve of this meeting and expressed displeasure over its absence from the meeting.²³However, Taliban has welcomed this initiative, particularly the Qatar office.

Presently, two broad alignments in Afghanistan are emerging; India-US-Afghanistan-Japan and the second; China-Pakistan-Russia-Iran. Russia's policy shift in engaging with Pakistan entails cooperation on the CPEC, supply of military hardware, signing of \$ 2 Billion gas pipeline, and conduct of joint military training. China has embraced Russian position in Syria. Both China and Russia believe that the US position in Afghanistan has weakened and it is therefore imperative for them to play a bigger role in Afghanistan. Russia could aid Taliban in the Northern areas to oust US and assist in infrastructure development to foist a pro-Russia regime. The US, on the other hand, feels that Russia, China, Pakistan, and Iran's engagement with Taliban is inimical to the US and Afghan interests. Strategic experts opine that another phase of the 'New Great Game' is unraveling in Afghanistan. These developments do not augur well to fight terrorism or to foster stability in Afghanistan. The Jihadi forces must be defeated and Pakistan deterred from indulging in cross-border terrorism. The silver lining in the cloud may be a close cooperation between the Trump administration and Putin to smoothen their vexed relations and cooperate on Afghanistan.

Implications for India

India strongly supports an 'Afghan owned and Afghan led' peace process and encourages the endeavours of the National Unity Government (NUG) for politicoethnic reconciliation with all stakeholders, election and administrative reforms. India has invested \$ 2 billion in the civil infrastructure projects and pledged another \$ 1 billion besides contributing towards ANSF capacity building. India strongly supports a multilateral collaborative approach in restoring peace and stability in Afghanistan. There is need for close cooperation between the SCO, CSTO, and NATO on Afghanistan. Any attempt to remove Taliban from the UN sanction list is contradictory to the Indian efforts to declare Masood Azhar and many other Jihadi leaders in Pakistan as international terrorists under the aegis on UNSC Resolution 1267. Such initiatives are against the spirit of decisions taken at the Heart of Asia,

India strongly supports an 'Afghan owned and Afghan led' peace process and encourages the endeavours of the National Unity Government (NUG) for politico-ethnic reconciliation with all stakeholders, election and administrative reforms.

BRICS, and SCO summits to combat terrorism in a collaborative framework with the NUG of Afghanistan in the lead role and moderate behavior of Pakistan in perpetuating cross border terrorism against India and Afghanistan. India's strategic partnership with Afghanistan, India - Iran - Afghanistan trilateral agreement India-US-Afghanistan dialogue and membership in the SCO bear testimony to India's resolve and commitment.

All stakeholders in the region need to work together with a hope of success to realize the pledge made by the President Ashraf Ghani at the time of assuming office, "history will not be repeated, we have overcome our past. The process of state formation, consolidation and political consensus in Afghanistan is irreversible".

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India-Iran-Afghanistan Strategic Engagement and Implications for India's Afghanistan and Connect Central Asia Policy

Professor Gulshan Sachdeva @

Introduction

he emerging India-Iran-Afghanistan engagement has started to enlarge New Delhi's options in the Eurasian region. In the last one year, security situation in Afghanistan has deteriorated and relations between Kabul and Islamabad are tense. Although Afghanistan has signed a peace agreement with Gulbuddin Hekmatyar's Hezbi-Islami, the overall peace process with the Taliban is in disarray. Continued terrorist attacks in Jammu & Kashmir and Punjab (resulting in surgical strikes by India) have resulted in a new low in relations between India and Pakistan.

Following the death of Islam Karimov and new presidential elections, there is a leadership change in Uzbekistan. Radical forces are spreading their wings in the region as shown by suicide bombing at the Chinese Embassy in Kyrgyzstan. Beijing's engagements through One Belt One Road (OBOR) have raised certain expectations in Islamabad. Kabul is somewhat disappointed as it is still not part of the OBOR. The overall OBOR project, particularly China-Pakistan Economic Corridor (CPEC) however, has raised suspicions in New Delhi. The US has also started a new dialogue with all five Central Asian republics under the C5+1 initiative. The Afghanistan-India-US trilateral dialogue has also made some progress and explored ways to coordinate and align Indian and US assistance activities in

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Afghanistan. Prime Minister Narendra Modi's eight day visit to all five Central Asian States in 2015 has provided a new direction to New Delhi's Connect Central Asia policy in the region. The Russia-Pakistan military exercise has been noted with some unease by few analysts in India. Bilateral high level visits have further strengthened India-Afghanistan strategic partnership. At the international conference on Afghanistan in Brussels, BRICS summit in Goa, and Heart of Asia-Istanbul Process, Ministerial meeting in Amritsar, India was able to articulate its objectives in Afghanistan to the larger international community. Against this backdrop, the Afghanistan-Iran-India trilateral is moving forward with significant outcomes in the form of new investments by India at the Chabahar port. This trilateral strategic engagement will have significant impact on India's relations with Afghanistan and Central Asia in the coming years.

India-Afghanistan ties

Afghanistan's position at the crossroads, between different regions, cements its importance for India. Although its development activities in Afghanistan have only attracted attention in the last few years, India has been active in the country since the late 1960s. Except for a brief period during the Taliban regime, historically the countries have always enjoyed friendly relations. India therefore has a stake in a stable, independent government in Afghanistan, free from

[@] Professor Gulshan Sachdeva is Jean Monnet Chair professor and director, Europe Area Studies Programme, School of International Studies at Jawaharlal Nehru University, New Delhi. He also headed the ADB and the Asia Foundation projects at the Afghanistan Ministry of Foreign Affairs in Kabul (2006-2010).

external interference. It has supported the Afghan government politically and economically, since 2001 - relations codified in a formal Strategic Partnership in 2011. India's broad objectives in Afghanistan include orderly security, successful political and economic transition, and ensuring the safety and security of its assets and personnel. Increasing trade, transit, and energy links with Central Asia through Afghanistan are added objectives.

In the post-Taliban period since 2001, India's economic, political, and strategic linkages with Afghanistan have improved significantly, a result of increasing development assistance, as well as trade and investment cooperation. So far it has provided assistance worth \$2 billion, with projects covering the entire country – mainly in the areas of road construction, power transmission lines, hydroelectricity, agriculture, telecommunications, education, health, and capacity building. Every year about 1500 Afghan students come to India on long or short term educational fellowships. In addition, 500 Afghan officials come to India for different training programmes. Additional \$1 billion assistance was committed by India during president Ghanis' visit to Delhi in September 2016.

As Afghanistan ultimately has to stand on its own feet, trade and connectivity issues will prove more important in the long run than unsustainable foreign-funded development projects. In this connection, linkages with the Indian economy, a

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traditional market for Afghan products is crucial. Even from a very narrow base of \$40 million a year in 2001, bilateral trade in 2015-16 was \$835 million. Under special trade preferences, Kabul has been able to achieve more than \$300 million exports to India. Main import items from Afghanistan are fruits, nuts and asafetida. For many years, India is number one export market for Afghan products. Precisely for this reason, president Ghani is very keen that Pakistan must allow two-way traffic for India-Afghanistan trade. Recently, when Pakistan closed the only land route for Afghan products destined for India, New Delhi helped Afghanistan to airlift fresh fruits to India. This trade is so crucial for Kabul that president Ghani is reported to have even warned Pakistan that if they do not allow Afghan imports and exports to India to cross their territory, Afghan transit route for Pakistan to Central Asia will be closed.

It is difficult to make an exact impact assessment of Indian development activities. Still, close political ties with Kabul, strong goodwill among Afghan citizens and acceptance of India as an important regional player on Afghan

matters indicate that resources have not gone waste. Any positive development on TAPI gas pipeline or proposed investments in the mining sector will further enlarge India's profile. Similar to others, India also faces serious concerns about sustainability of its development efforts in Afghanistan. Indian policymakers, however, have clearly indicated at every forum that New Delhi has no exit strategy in Afghanistan; on the contrary, it seems likely to increase its involvement. Enhanced Indian role is based on the assessment that despite political, security and economic challenges, government in Kabul is not going to collapse; significant international support to Afghanistan will continue; and there is little scope for any negotiated settlement with Taliban in the near future. With US declining interest in Afghanistan and Central Asia, however, New Delhi is already in the process of working new alignments with Russia, Central Asian republics and Iran.

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As immediate Afghan concerns are related to security, India is slowly increasing its defence cooperation. At the moment, about 800 Afghan soldiers are trained at different defence establishments in India every year. These numbers could be increased significantly. Last year, four Mi25 attack helicopters were supplied to Afghanistan. During his visit to New Delhi, Afghanistan's army chief Gen Quadam Shah Shahim reported to have asked more military equipment from India. Although no official announcement has been made, more military equipment from India could be in the pipeline.

India and the Central Asian region

The geopolitical salience of Central Asia for India was never in doubt. Most Indian policy makers and analysts believe that the region is important because of its strategic location, old cultural and civilisational linkages, energy resources as well as trade and other economic opportunities. Focusing on region's location, oil and gas reserves and competition for pipeline routes, many analysts advanced the narrative of a New Great Game in the 1990s. Later, the competition for military bases in Central Asia, as well as regime change through color revolutions added a new dimension to this competition. Despite its rhetoric and sometime intentions, India itself was never really part of any competition for influence in the region. With no direct road transportation access, plus difficult market conditions, the region did not become attractive to Indian private companies. In the 1990s, economic relationships with the region also declined considerably. Politically, Indian officials were more or less comfortable dealing with authoritarian leaders in the region. These leaders were part of the former Soviet elite, with whom India had dealt for decades. They moreover appeared to provide stability and were committed to fight Islamist extremism and terrorism. Unlike the U.S., Europe and many multilateral organizations seeking to spread democracy and market economics in the region, India has been focused primarily on ensuring political stability, since an unstable Central Asia is a serious threat for New Delhi.

India obviously would have welcomed a more democratic Central Asia, but it favoured allowing democratization to happen at its own pace. New Delhi also remained convinced that Russia would retain a predominant political and

economic influence in the region, and generally pursued cooperation with Moscow in Central Asia. Although many in India still believe in the continuation of Russia's overwhelming influence in the region, many scholars have also started considering another possibility in which, over time, China would become a dominant player in the region while becoming increasingly friendly to Russia. As China increases its engagement in the region and creates a larger profile through trade, energy deals, military agreements, the Shanghai Cooperation Organization (SCO), and now the OBOR project, India is watching carefully. Persistent uncertainty in Afghanistan, particularly in the context of difficult India-Pakistan relations, have also added new dimension to India's approach to Central Asia. While the failure of the international project to stabilize Afghanistan poses common security challenges, any positive outcome will open tremendous economic opportunities to both India and Central Asia. So Chinese and Afghanistan factors have increased strategic significance of

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Developing political, economic, and energy partnerships dominated India's "extended neighborhood" policy in the post-Soviet period. Today New Delhi's approach to the region is laid out in the 12 point 'Connect Central Asia' initiative, first announced in 2012. This initiative seeks to strengthen India's political, security, economic, and cultural connections with Central Asia. The aims of this policy are: (1) dealing with the region collectively in a much more pro-active manner; (2) strengthening security and defence dialogues with the region, particularly in the context of U.S. drawdown from Afghanistan and declining interest in Central Asia (3) exploring possibilities for cooperative engagements with Russia, China, and Iran (both bilaterally and collectively) to safeguard and promote Indian interests; and (4) enlarging India's development cooperation footprint in the region. In the meanwhile, India has signed strategic partnerships with Kazakhstan (2009), Uzbekistan (2011), Afghanistan (2011) and Tajikistan (2012). Apart from long standing 'special and privileged' partnership with Russia, New Delhi has also elevated its relations with Mongolia to a 'comprehensive partnership' (2015). The perception of Central Asia's growing strategic significance for India is reflected in Prime Minister Narendra Modi's eight day visit to all five Central Asian States in July 2015. This was the first visit of any Indian prime minister to all the Central Asian countries simultaneously since they became independent in 1991. The visit also provided a new strategic direction to the 'Connect Central Asia' policy.

India-Iran-Afghanistan Strategic Engagement

In the changing circumstances, this new alignment is shaping India's Afghanistan and Central Asia policy. New Delhi shares strong historical and civilisational ties with Tehran. Iran also has been one of India's major sources of energy. In the last 15 years, however, relations with Iran have become increasingly vexed by the simultaneous growth of Indo-American ties and Washington's own Iran obsession. During the earlier Afghan conflict, India and Iran worked together to back the Northern Alliance in Afghanistan, although later they have had diverging opinions about the presence of NATO/American forces. Despite western sanctions, India sought to maintain commercial and energy ties. Still, oil imports from Iran slipped from 16.4 per cent of total Indian oil imports in 2008-09 to 5.2 per cent in 2015. The nuclear agreement between Iran and the international community will definitely boost bilateral ties.

With the removal of sanctions, Indian oil majors will be more likely to purchase Iranian oil and make investments in Iranian oil fields where they have already made discoveries. This will also help India to expand its options in Central

The establishment of an International North South Trade Corridor (INSTC) and participation in the construction of Chabahar port in Iran has been part of an Indian strategy to connect Central Asia while bypassing Pakistan. The 215 kilometer Zeranj-Delaram highway built by India in Afghanistan also connects the Afghan ring road to Chabahar port, allowing India to connect it further with Central Asia in the future.

Asia and Afghanistan. Due to difficult India-Pakistan relations, Iran has been and will continue to be a crucial part of Indian strategy towards this region. The establishment of an International North South Trade Corridor (INSTC) and participation in the construction of Chabahar port in Iran has been part of an Indian strategy to connect Central Asia while bypassing Pakistan. The 215 kilometer Zeranj-Delaram highway built by India in Afghanistan also connects the Afghan ring road to Chabahar port, allowing India to connect it further with Central Asia in the future. The main transport projects being undertaken in this program with Indian involvement is the development of a new port complex at Chabahar on the coast of Iran, from where a road goes north to the border with Afghanistan. It is 72 km from Pakistan's deep-sea Gwadar port, built with the Chinese assistance, and closer to India than Iran's existing port at Bandar Abbas. As per the agreement, India will offer Iran a credit line, invest in the country's petrochemical sector and downstream oil industry, and participate in the construction of a Chabahar-Zahedan railroad. There were also reports that India was planning to construct a 900-km railway line that will connect the Chabahar port with Hajigak region of Afghanistan, where Indian companies were awarded iron ore projects. As an alternative to present TAPI route, India is also exploring the possibility of a new land-sea route through Iran. Afghanistan-India-Iran agreement on converting Chabahar port into a transit hub will also help Kabul to reduce its dependence on Karachi port. If these projects materialize, as expected, they may also put some pressure on Pakistan to open its borders for Indian trade and transit. This is similar to pressure created by the US on Pakistan through Northern Distribution Network (NDN) when NATO logistics supplies were denied by Pakistan.

In the last two decades, India's comic relations with major Asian countries, particularly with China and ASEAN (Association of Southeast Asian Nations) have made significant gains. In an evolving Asian economic architecture, however, India will not be able to play its full potential role if its relations with the Central Asian region remain marginal. As a result, there New Delhi has attempted to develop an economic policy framework for the Eurasia that would allow the whole region, including Pakistan and Afghanistan, to be integrated in a mutually beneficial partnership. This framework will also improve India's energy security, as India may finally gain access to some of the energy resources from Central Asia. It also has the potential to fundamentally reorient India's sea-based continental trade. Simultaneously, it can generate tremendous opportunities for Pakistan, Afghanistan and the Central Asian region. Indians companies could find tremendous investment opportunities in Central Asia, which in turn can transform their small and medium industries as well as agriculture. The growing realization of these opportunities has influenced policy makers not just

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in India, but also in the entire region including some sections in Pakistan. Many developments, viz., Afghanistan's membership to the South Asian Association for Regional Cooperation (SAARC), signing of South Asian Free Trade Area (SAFTA), Regional Economic Cooperation Conferences on Afghanistan (RECCA), Indian and Pakistani entry into the SCO, improvement in Iran-U.S. relations, ground breaking on the Turkmenistan-Afghanistan-Pakistan-India (TAPI) gas pipeline, renewed interest in Iran-Pakistan-India (IPI) gas pipelines, have provided enough inputs to Indian policy makers to shape their evolving "Look West" policy. However, till the time there is a significant improvement in India-Pakistan ties, Iran will continue to play an important role for India.

Conclusion

India-Iran-Afghanistan strategic engagement has the potential to re-energize India's connect Central Asia policy as well as enlarge its options in Afghanistan and the region. Although the strategy has been to bypass Pakistan, it may actually put pressure on Pakistan to recalculate its strategy towards Afghanistan and India. The major challenge to this engagement will come from the Chinese OBOR as all countries in the region including Afghanistan and Iran have positive opinion about the project. Iran may also like to involve China at the Chabahar port. As full-fledged members, India and Pakistan would be participating at the SCO forum soon. Even Iran may join the grouping in the coming years. The geo-economics of

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Chabahar, CPEC/OBOR may perhaps push policy-makers in the region to recalculate their strategies. Despite Indian concerns about the CPEC, China may not view the Chabahar project negatively. More connectivity will help China as Beijing is one of the largest trading partners of almost every country in the region. To be more effective, China may also like to expand CEPC to other countries including India. Therefore New Delhi has to be prepared to synchronize India-Iran-Afghanistan engagement into its larger strategy concerning emerging Asian economic architecture. The emerging geo-economics in the region may overtake geopolitical calculations of all players in the long run.

Conflict in the Middle East: Its Implications on India's Security

Shri RS Kalha, IFS (Retd)@

he Middle-East is home to three of the world's great religions—Islam, Christianity and Judaism. Each of the three religions has a distinct historical background and a competing narrative. In the region, there are five mainstay ethnic groups the Arabs, Jews, Persians, Turks and Kurds. Nevertheless, it is Islam that dominates the region and plays an important part in the political, social and cultural life of the people. Within the larger Islamic fold there exist contradictions, that more often than not, lead to violence and strife that cuts across state boundaries. The great schism between the Shiites and the Sunnis Muslims is almost as old as the religion itself. Latter day contradictions have also developed between Wahhabism and the Islamic Brotherhood. While the deep animosities between the Jew and

the Arab remain; tensions between the Persian and the Arab, which exist just below the surface, often reoccur from time to time. The Kurds are not Arabs, are largely Sunni Muslim and a distinct ethnic group with their own language and culture, but unfortunately due to great power politics, they are the only sizeable group that has never been able to attain statehood. Kurdish grievances thus remain. Kurdish society, as with the Arabs, is dominated by tribal affiliations and tribal customs that often overlap with religious sentiment and customs.

The ramification of the great schism between the Shiite and Sunni Muslims pervades the region. Interestingly, both the Sunnis and the Shiites believe in the Holy Koran and in the five pillars of Islam, and there was nothing religious about the dispute in the beginning. It was a purely political dispute, the core of which

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was an impassioned argument over whether the principle of succession in the nascent Muslim state should be within the Prophet's family or be based on merit, including piety of the person. The majority of Muslims in the early years of the faith chose merit and argued that the Prophet's temporal and spiritual successors should be selected on the basis of their competence, seniority, knowledge and experience. A minority disagreed and said the basis of succession should be from within the family. They believed the temporal and spiritual leadership of Muslim society should remain within the preserve of the descendants of the Prophet forever. They thought Ali —a cousin and the son-in-law of the Prophet — deserved the honour, as he was not only a consistent companion and a staunch follower of the Prophet, but also his closest family member by virtue of birth and marriage. Shia is an abbreviation for Shia't Ali, the party of Ali, and is referenced to those that follow Ali. The Sunnis do not dispute the importance of Ali and do not disparage him in any way; they consider him one of the greatest companions of the Prophet along with the others, including the three other Caliphs who preceded Ali on the seat of power. The battle of Karbala, on 10th October 690AD in which

[@] Shri RS Kalha, IFS (Retd), was the Joint Secretary America and Joint Secretary East Asia, he became Additional Secretary Admarration and Secretary West in the Ministry of External Affairs and served as India's Ambassador to Indonesia and Iraq. India-China Boundary Issues—Quest for Settlement. He is a well-known commentator on West Asian affairs and on the politics of oil.

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the Prophet's grandson Imam Hussein was murdered, is a turning point that led to an irrevocable split. Ever since then this day has been a day of great mourning in the Shiite-Muslim world. The two great shrines of the Shiite Islam are located at Najaf and Karbala, both in present day Iraq. It is not as if there has been perpetual strife between the two

sectarian communities and often they are found living peacefully side by side. It is the political exploitation of this schism that leads to strife, and outside powers have taken advantage of this schism to increase their presence in the Middle-East. Apart from this region being the focal point of politics within Islam, the other dominating factor is that, this region is very rich in oil and gas, and so the target of most great powers of the day, who wish to control this huge asset. It is indeed a geographical oddity that most of the oil bearing areas in the Middle-East are located in areas dominated by the Shiites. Southern Iraq, North-East Saudi Arabia, Bahrain and of course Iran are Shiite areas that come to mind. With the Gulf region holding 27 percent of the world's oil, 57 percent of its proven oil reserves, along with 45 percent of the world's natural gas reserves, makes this region a very strategic and an immensely important area. And as former US Vice-President Dick Cheney, addressing the meeting at the London Institute of Petroleum in 1999 was to remark, 'oil remains fundamentally a government business. While many regions of

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the world offer great oil opportunities, the Middle-East with two thirds of the world's oil and the lowest cost is still where the prize ultimately lies" [emphasis added]!

Therefore, it comes as no surprise that this region is at the core of many great power rivalries. If it was Britain and France before the Second World War, it is Russia and the US at present. In the past, the US has been the dominating power in the region, particularly after the collapse of the Soviet Union and the end of the Cold War and US policy towards the Middle-East, had as its basis, the following aspects. Firstly, the US wants to ensure and secure the safety and security of the state of Israel. Secondly, US wanted to ensure that, there was no impediment to the free flow of oil from the Middle-East, and if it became necessary, then force could also be used. Thirdly, US policy was so designed, that it prevented the emergence of any power or group of powers, that could challenge US primacy in the region. These parameters of policy were defined in various US National Security Directives, such as the Directive No. 45 of 20th August 1990. US policy has been fairly consistent throughout this period. However, the US decision to invade Iraq was a major blunder, the ramifications of which still reverberate throughout the region. When the US decided to pull out in December 2011, it had suffered about 4500 dead and 25,000 soldiers injured. About 100,000 Iraqis had died and 1.5 million had fled abroad and about 1.7 million were internally displaced. The US has spent over a trillion and a half dollars and this huge expenditure has nearly unhinged its domestic economic equilibrium. The US is still counting the costs of its foreign military adventure.

Strategically, the results of the invasion of Iraq in 2003 for the US have been even more disconcerting. With the overthrow of the Sunni led Saddam government it was a foregone conclusion, that any future dispensation would of necessity have a large Shiite component. This is because the Shiites are the largest community in Iraq and in any democratic set-up; they were bound to win; even though voting has largely been on tribal and sectarian lines. The shrewd Shiite clerics based near the holy cities of Najaf and Karbala, waited for their opportunity and watched with obvious satisfaction while the US got rid of Saddam and his Sunni dominated government. They realised that the Sunni leadership was bound to get decimated at the hands of the US, and they knew that the time would soon arrive for the clerical leadership of the Shiites to play the dominant role. The Shiites seminaries in Iraq have close links with their fellow Shiites in Iran. These ties are most evident in the

The Shiites seminaries in Iraq have close links with their fellow Shiites in Iran. These ties are most evident in the network of ayatollahs, their representatives and organizations. The British and before them the Ottomans, always feared such links and therefore consistently followed a policy that encouraged Sunni domination of Iraq's political space.

network of ayatollahs, their representatives and organizations. The British and before them the Ottomans, always feared such links and therefore consistently followed a policy that encouraged Sunni domination of Iraq's political space. All rulers of Iraq right up to Saddam were Sunnis.

With the Sunni leadership decimated, it was but natural that a Shiite led government would take its place. This Shitte led government not only refused to let US troops stay on in Iraq, but has been fairly active in supporting its fellow Shiites in Syria. That Iran has utilised the space provided by Iraq, to reinforce its alliance with Assad of Syria is there for all to see. Politically, the Sunni Arab bloc led by Saudi Arabia, Jordan and the Gulf States finds itself in a bind, for there is no Iraq to bolster their strength as in the past. Iraq prided itself as the eastern gateway of the Arabs [al-bawwabeh al-sharqiyah], the cradle of Arab civilization and had always played a major role in Arab affairs. The loss of Iraq to the Sunni Arab leadership is indeed a tipping point in the history of Inter-Arab relations. Conversely, the strategic gain for Shiite Iran has been enormous.

Iran is an oil and a gas exporting giant that holds 11.1 per cent of the world's proven oil reserves and about 970 b/ cms of gas reserves. About 43 per cent of Iranian government expenditures are met from its oil revenues and therefore

it was commonly assumed by the western powers that if they could significantly curtail Iran's oil and gas exports, Iran could be brought to the table, to negotiate down its nuclear ambitions. Despite UN sanctions, it became obvious that this policy would not succeed. What followed were comprehensive negotiations between Iran and the P-5 UNSC (United Nations Security Council) powers plus Germany. The Joint Comprehensive Plan of Action signed by the P-5+1 powers, including the EU (European Union), and Iran in Vienna on 14 July 2015, or popularly known as the Iran Nuclear deal, signaled two very important and far reaching strategic shifts in the geo-political landscape of the Middle-East. Firstly, it indicated that Iran was once again back within the fold of the international community and could no longer be considered as a rogue state. Secondly, the Western powers took tentative

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steps to engage with Iran as a major contributor in finding solutions, to the bitter conflicts raging the Middle-East; rather than to treat it as a part of the "axis of evil" and therefore ostracize it. However, it must be remembered that there is not an inconsiderable opposition to the deal; particularly in the US and with the election of new US President Donald Trump, the new US President may not show the same enthusiasm as President Obama had done. In addition, while the nuclear deal may perhaps, in all probability, move forward without further serious hindrance; it is not a given, that this will automatically lead to a comprehensive détente between the US and Iran. Meanwhile both Iran and the outside world wait with bated breath to see as what policies President Trump would follow.

When the wafts of the euphemistically called Arab Spring first drifted over Damascus, the opponents of the Assad regime along with the Saudi, Gulf and Western governments were quick to discern that here lay a chance to dethrone him. The crucial point being, that the fall of the Assad regime would land a decisive blow to Iran's political pretentions; cut Hezbollah to size and the more optimistic, even surmised that this would hobble Iran's nuclear ambitions. But in this age of the instant media, such blatant power plays have to be given a veneer of respectability. What better, then to dub this blatant power play, a struggle for 'democracy' and 'human rights', and the opponents of Assad as being members of the 'free' Syrian army, whose major fighting component is an al-Qaida affiliate; the Jubhat al-Nusra, (dubbed by the US in December 2012 as a terrorist organization). It is said that the Russian intervention did indeed help the Assad regime to survive, but it also accelerated great power tension.

Syria is surrounded by five countries. Its borders with Turkey and Jordan are aflame; with Iraq and Lebanon the borders are very porous, with fighters crossing them without any let or hindrance. The only peaceful border, at present, is the one with Israel where peace has been maintained for decades. For all their extreme rhetoric and posturing, both the father and son duo of Hafeez and Bashar Assad, gave Israel no major cause for concern and steadfastly maintained

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peace on the Golan Heights. It was Hafeez Assad who sent Syrian troops to the Gulf, to firstly rally Arab forces opposed to Saddam Hussein of Iraq and secondly to defend the Gulf Emirates and Saudi Arabia. Later Syrian troops helped the US to oust Saddam from Kuwait. Thus, to maintain Israeli security it is much better to have Assad ruling in Damascus, than to see him being replaced by assorted Islamist iihadis.

Today Turkey is aflame with large scale internal disturbances aimed at the autocratic rule of President Erdogan who has introduced soft Islamism. The Kurdish issue refuses to go away. The Jordanian King survives with the help of about 1,000 US troops stationed in Jordan. The daily horrendous massacres witnessed in Iraq as a result of sectarian battles no longer seem to shock anyone. The Sunni rulers of Bahrain survive the Shiite majority largely due to the presence of Saudi troops. Hezbollah from Lebanon have moved from fighting Israel to join Assad in the sectarian battles being fought in Syria. Meanwhile, Saudi and Qatari money and arms flow uninterruptedly to the Syrian rebels. It is estimated that 93,000 people

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have died since the out- break of fighting in Syria and over a million displaced as refugees. Thus the Middle East is aflame with no peace in sight with three distinct struggles going on at present. Apart from the rivalry between Russia and the US, there is palpable tension between the Saudi led Sunni Muslim bloc and the Iran led Shiite bloc.

The Middle East apart from being extremely rich in oil and gas, suffers from an economic meltdown. The IMF estimates that the region's economic growth rate in 2014 was only 3.9 per cent and that of the non-oil rich states at 0.25 percent. The GDP (Gross Domestic Product) of the seven states such as Egypt, Tunisia, Libya, Syria, Jordan, Lebanon and Bahrain in 2014, was estimated to be 35 percent lower than in 2011. Unemployment rates in Libya, Tunisia, Egypt, Yemen and Sudan are over 20 percent. According to a WEF report the unemployment rates of youth under 25 years of age in Gulf States has reached 27 percent. This is twice the global average. The poverty ratio in some states has reached over 50 percent. Thus, this worsening economic scenario, has created considerable tension between the peoples of these states and the authorities. This has led to disorders and it is this poverty that breeds extremism and has intensified regional terrorist issues.

For India, the Middle East and particularly the Gulf is our near abroad and of dynamic and strategic importance. A sentiment of high regard for India has always existed in the region from time immemorial. It is not a matter of policy to have good relations with the Arab Gulf countries, but more than that, it is a vital necessity and a strategic requirement. Contrary to popular belief, trade between the Arabs and the west coast of India existed even before the Arabs converted to Islam. It was the newly converted Arab traders that impressed the people with their behavior of honesty and pious life style and some of them began to settle in India in the 7th Century. It was only when Indo-Arab trade became hostage to piracy, that punitive measures were undertaken that led to the invasion and occupation of Sind by Mohammed bin Qasim in the 8th Century and the advent of Islam into India. In Qasim's army were soldiers from modern day Syria and Iraq. During Ottoman times the Indian rupee was widely used and generally accepted as the currency of trade and commerce. When the British created Iraq, the Indian rupee was the official currency as it was in much of Gulf area. The Indian postal department was running the postal system in the Gulf area almost up to the Second World War. It was only in the mid-fifties that the Indian rupee was de-linked from the Gulf currencies and that too at the initiative of the Indian Finance Ministry authorities.

The Middle East is located just to the west of India, and Dubai in the Gulf is nearer to Mumbai than it is to Cairo or even Amman. Muscat is only 967 miles away from Mumbai. Access to and the ability to import oil unhindered from

the Gulf region is an important facet of state security. It goes without saying that the Indian economy is entirely dependent on energy, imported from the Middle East and that any disruption or volatility in oil prices causes considerable stress to the Indian economy. As a former Commerce Minister of India remarked in 2006, "the Gulf region is a part and parcel of India's economic neighbourhood".

About 3.5 million Indians live and work in the Gulf region. About 30 per cent of UAE's population is of Indian origin. Indians remit about US \$13 billion annually to India. The Gulf region is the 3rd largest destination for Indian exports behind only North America and the EU and account for nearly 16 per cent of India's total exports. India has substantial economic investments and strong cultural links with these countries. Any disruption therefore, particularly for political reasons, would inevitably result in the displacement of Indians living there as it happened in the case of Iraq and Kuwait earlier and more recently in the case of Libya and Yemen.

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Thus, India stands to lose not only its main source of supply of the vital commodity – oil, but any economic disruption might even send the Indian economy into a downward tailspin. On the other hand, should Indians have to evacuate from the Gulf region for any reason, the countries concerned too would be very badly hit. As UAE Minister for Labour remarked in August 2007, 'God forbid anything happens between India and us…our airports would shut down, our streets, our constructions.'

Thus, whatever happens in the Middle East and particularly in the Gulf region is of vital strategic significance to India. It simply cannot be ignored. Shorn of rhetoric, India's vital interests are that, there is no impediment placed in

the free flow of oil to the markets of India and that the well-being and livelihood of the people of Indian origin who are working and living in the Gulf region is not threatened. At present the free flow of oil is ensured by the presence of the US navy whose fifth fleet is based in Bahrain. As and when or if the US navy decides to drawdown its presence in the Gulf region; this would present Indian strategic planners with a major strategic issue. There is no doubt that this geo-strategic vacuum thus created would have to be filled by the Indian navy. As the prestige of India continues to remain high this task would become that much easier. At the same time, there is a sense of great friendliness for the people of India. Any policy outcome that is so designed, must ensure, that this regard and friendliness for the people of India is never dissipated.

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Professor Srikanth Kondapallie

he new government in New Delhi since 2014 has been attempting to introduce certain new policies. One of these include the upgradation of the 1991 Look East policy, into Act East policy, the latter formally announced by Prime Minister Narendra Modi in his speeches at Naypyidaw in November 2014.¹ Although Act East policy was

mentioned by various others before, after the implementation of the Look East policy for over two decades, a mid-course correction towards an action-oriented outlook, regional demands and aspirations and change in the context have all necessitated the new initiatives by India.² With over 7 percent economic growth rates, and prospects for sustaining such growth rates, the new leadership had announced a change in policy from being reactive to one of aspiring to be the "leading power" in global affairs, as suggested in a speech at Singapore in 2015, by India's foreign secretary S. Jaishankar. This necessitates a shift in focus and policy and to provide public goods and services to the neighbourhood and beyond. To cushion such a policy is to invoke the diplomatic, commercial and military resources of the country in a coordinated manner. Many of the visits undertaken by Prime Minister Modi, in the first two years of assuming office since mid-2014, are towards the east and include visits to Japanin September 2014 and November 2016, and one each to Myanmar, Singapore, Fiji, South Korea, Mongolia, Vietnam, Australia and others.

"To promote economic cooperation, cultural ties and develop strategic relationship with countries in the Asia-Pacific region through continuous engagement at bilateral, regional and multilateral levels thereby providing enhanced connectivity to the States of NorthEastern Region with other countries in our neighbourhood".

The key issues in the Act East policy, according to Minister of State Gen. V.K. Singh, in a reply to a query in the lower house of the Indian Parliament, is "to promote economic cooperation, cultural ties and develop strategic relationship with countries in the Asia-Pacific region through continuous engagement at bilateral, regional and multilateral levels thereby providing enhanced connectivity to the States of North Eastern Region with other countries in our neighbourhood". According to the Ministry of Defence, in its annual report of 2016:-

under the 'Act East' policy which places renewed emphasis on engagement with the Asia Pacific, India has been an active participant in various bilateral as well as multilateral fora with a focus on security matters such as the East Asia Summit, ASEAN (Association of Southeast Asian Nations) Defence Ministerial Meeting (ADMM – Plus) and ASEAN Regional Forum (ARF). There is also a need to further improve regional responses to challenges such as transnational crime, terrorism, natural disasters, pandemics, cyber security as well as food and energy security.⁴

anth Kondapalli is Professor in Chinese Studies at Jawaharlal Nehru University. He is Chairman of the Centre for East Asian Studies, SIS, JNU. He was a Visiting Fellow at China Institute of Contemporary International Relations, Beijing in May 2007, an Honorary Professor at Shandong University, Jinan 2016; at Yunnan University of Finance and Economics, Kunming in 2016, and a Non-Resident Senior Fellow at People's University since 2014. He wrote two books (China's Military: The PLA in Transition in 1999 & China's Naval Power in 2001), two monographs, co-edited three volumes (Asian Security & China in 2004; China and its Neighbours in 2010; China's Military and India in 2012); and China and the BRICS – Setting up a Different Kitchen (2016). He received the K.Subramanyam Award, in 2010 for Excellence in Research in Strategic and Security Studies.

Speaking to the gathering of over 30 countries at Singapore meeting on the Indian Ocean on September 1, 2016, Minister of State for External Affairs M.J. Akbar suggested that India occupies a unique position between the

Phoenix Horizon towards its east with high growth rates and the Toxin Horizon of conflict, war and terrorism towards its west. The strategic choice for India then is clear of veering towards the east.⁵

Political and Diplomatic Dimension

India became a sectoral dialogue partner with ASEAN in 1992, elevated this position to a dialogue partner in 1996 and a Summit level partner in 2002 and to the current "strategic partnership" with the ASEAN in 2012. Further, India elevated this position by appointing an ambassador level interaction with the ASEAN region. Also, diplomatic and political relations were further elevated with Japan, South Korea, Mongolia and Australia. Apart from its summit level meetings with Russia, India has similar annual contacts with Japan since the

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1990s. India and Japan further elevated these ties towards a 21st century partnership. Apart from the 2+2 dialogue mechanism (between foreign and defence ministries), which strengthened mutual understanding on a number of issues, both today have been intensifying relations in the field of defence, bilateral economic and technological fields reinforced by comprehensive economic partnership, and other fields. Prime Minister Modi made his first visit abroad to Tokyo in September 2014 outside the South Asian region. Japan is also one of the largest investors in India with over 1300 companies basing their operations in India. Further, Japan is upgrading Indian infrastructure projects by connecting Mumbai with Delhi through a dedicated freight corridor.

South Korea also plays a significant role in the Act East policy of India. Since 2009, relations were upgraded to include maritime cooperation, defence technology transfers and commercial cooperation in the comprehensive economic partnership arrangement. Soon after China's denial of a visa to an Indian Army General hailing from Jammu and Kashmir region in mid-2009, India considered it fit to elevate ties with Seoul by September that year. Prime Minister Modi visited Seoul in June 2015 and South Korean Presidents visited India in quick succession.

At a time when India's energy needs are increasing to support over 7 percent economic growth rates, it is imperative for India to expand its energy basket to include renewable sources such as solar, wind and nuclear power. On the last, it had signed 13 agreements with various countries in the nuclear domain and many in the east, including Japan, South Korea, Australia, Mongolia and others have been cooperative in this regard, although a jarring note is the objections raised by China in the Nuclear Supplies Group and other fora.

The key to the success of both the Look East and Act East policies, however, is the "land bridge" connectivity between India and the Southeast Asian region through Myanmar. Although this link is straddled with a number of problems such

as relations with the military junta till recently, insurgency in the northeast region and others, India had approached this aspect through a multipronged approach. Today, India had evolved strategic partnerships, with a number of countries in the Asia-pacific region, including with the ASEAN, Australia, Japan, Indonesia, Vietnam, Malaysia, South Korea and Singapore. At the multilateral level, besides intensifying relations with ASEAN Regional Forum, and East Asian Summit, India had undertaken, new initiatives such as Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), Asia Cooperation Dialogue, Mekong Ganga Cooperation and Indian Ocean Rim Association ASEAN Defence Ministers' Meeting and others.

The key to the success of both the Look East and Act East policies, however, is the "land bridge" connectivity between India and the Southeast Asian region through Myanmar. In the recent times, the number of visits of high level leadership increased. Former Prime Minister Manmohan Singh visited Myanmar in 2012, followed by other visits by the military and the local leaders from northeast. Prime Minister Modi visited Naypyidaw in November 2014, reciprocated by State Councilor Aug San Suu Kyi in late 2016.⁷

While both India and China joined the ASEAN processes since the 1990s, and both agreed to the ASEAN being the "driver" in all the processes and agreed to the ASEAN conditions of Treaty of Amity and nuclear weapon free zone for the region, China of late has been asserting its position partly due to the sovereignty claims over the contiguous South China Sea, as well as in the leadership contest with the US and Japan over the region. As India has no sovereignty claims in the region and despite the ASEAN's initial negative responses towards Indian nuclear tests in 1998, many in the ASEAN see India as a balancer and provider of security to the region. After the July 12, 2016 Hague Tribunal ruling, China had also changed its position on ASEAN by increasing following a divide and rule policy in the grouping.⁸

Economic Dimension

One of the most concrete results of the Look East policy is the tapping of economic and technological potential, of the rising tiger economies in the East. Apart from Japan, Singapore had emerged as one of the largest investors in India and of late both exhibited increasing understanding on a number of issues. India also considers that in the light of opposition, it was Singapore and Japan which supported India in entering the East Asian Summit process. Singapore's former Prime Minister Goh Chuk Tung once remarked that for the stability of the ASEAN region, India should play

a balancer role like the wings of a jumbo jet. In 2003 Singapore and India signed a defence cooperation treaty. India signed a free trade area with the ASEAN region in 2009, which came into effect in 2010. Trade increased from \$56 billion in 2011 to over \$76 billion in 2015, constituting over 10 percent of Indian external trade and as the 4th largest trading partner for India. Both have a bilateral trade target of over \$200 billion by 2012. In comparison, China which has a free trade with the ASEAN has a bilateral trade of \$365 billion by 2014, although China's investments in the ASEAN account for \$9 billion by 2014 as compared to \$38 billion from India to the region. India has also actively participated in the Regional Comprehensive Economic Partnership and by early 2016 eleven rounds of discussions took place in this format.

The main projects include Kaladan Multi-modal Transit Transport roject, the India-Myanma railand Trilateral Highway Project and Rhi-Tiddim Road Project, Border Haats.

Apart from the institutional contacts with the ASEAN, for enhancing contacts, India has of late emphasised on expanding relations with the immediate neighbours among the BIMSTEC countries. This is seen in making the BIMSTEC constituents as special invitees to the BRICS (Brazil Russia India China South Africa) summit meeting held at Goa in October 2016. Also, India offered a credit line of over \$1 billion for enhancing the infrastructure projects in the BIMSTEC countries.

Connectivity

For further economic integration and providing substance to the Act East policy, India had of late emphasizing on the connectivity with the ASEAN region through road, railway and maritime port links through Northeast region. ¹² The main projects include Kaladan Multi-modal Transit Transport Project, the India-Myanmar-Thailand Trilateral Highway Project and Rhi-Tiddim Road Project, Border Haats. The June 17, 2016 joint statement between India and Thailand noted the progress made in the India-Myanmar-Thailand Trilateral Highway connecting Moreh in Manipur to Mae Sot in Thailand through Myanmar. ¹³

According to the estimates of the Asian Development Bank, on the multi-infrastructure projects coming up in the Asia-Pacific region are numerous. It mentions about the 90-km Imphal-Moreh road constructed at a cost of \$160 million, in addition to a railway project of over 95 km to cost \$400 million. In addition, there are also the Chennai port

elevated expressway and Sagar Island Deepwater port at Kolkata (at \$1.3 billion). In Bangladesh, the new Sonadiya Deepwater Port is expected to cost over \$1 billion. Myanmar has also embarked on several projects, including Tamu-Kalay (127 km rail project costing \$98 million), Kalay-Mandalay (539 km rail project costing \$162 million). In addition, the Myanmar to Thailand road projects involving the different lines of Endu-Kawkareik-Myawaddy-Yagyi-Kalewa-Tamu-Mae Sot project connects from India northeast to Thailand.¹⁴

Military Dimension

The "action" oriented aspect of Act East policy includes, the deployment of the armed forces in the Asia-Pacific region. This has been a significant change in the Indian postures given its traditional policy of independent foreign policy, non-alignment, no military troops or bases abroad. Today, India is actively engaging with the outside world both towards the west and the east, with specific emphasis on the Act East policy. Prime Minister Modi had initiated several programmes including Sagarmala, of enhancing the maritime infrastructure projects across the Indian coasts, "Project Mausam", of connecting to the Indian Ocean littorals in commercial and cultural contacts. These are also part of the overall Make in India, Digital India initiatives, undertaken by the new government since 2014. At one time, India had been a part of the counter-terrorism support operations at Ainee in Tajikistan. In addition to Haiphong & Nha Trang in Vietnam where Indian naval ships could dock, they also have access to Subic Bay & Clark Air Base in the Philippines. With PM Modi's "Indian Ocean diplomacy" in 2014, Indian ships have replenishment facilities at Agaléga Islands in Mauritius, and in northern Mozambique. Recently,

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as well with the construction of the Chabahar port in Iran, India intends to connect to the energy-rich Central Asian Republics. In 2001, the then Group of Ministers considered Indian focus from the Gulf of Aden to the Straits of Malacca's. Further, in 2007, the Indian armed forces have adopted a posture of Indian Ocean as their primary focus while South China Sea and beyond as of secondary importance. In 2015, this posture was acknowledged as the national policy. Act East policy, is thus subservient to this overall national policy of considering Indian Ocean as of utmost importance to the country. India intends to usher in its "leading" role in this region.

Vietnam is considered to be the "central pillar" in India's Act East policy, specifically in defence ties. ¹⁵ Both countries embarked on a comprehensive mutual support with Vietnam providing urban counter-terrorism training to the Indian forces, while India assisting Vietnam in training in Kilo-class submarine operations, Su-30 aircraft and other platforms, in addition to toying the idea of supplying to Vietnam Brahmos cruise missiles, and fast attack craft. Also,

Vietnam granted the Indian naval forces permanent berthing facilities for visiting ships at Haiphong and Nha Trang in Vietnam. During the Prime Minister Modi's visit to Hanoi in late 2016, it was agreed that India will provide Vietnam with a credit line, expanded from the September 2014 figure of \$100 million, to over \$500 million. Vietnam also agreed to provide facilities for satellite link-up facilities for India. In addition to the energy sector cooperation where both the state-owned ONGC Videsh Limited and private sector ESSAR companies have entered drilling operations in South China Sea, bilateral cooperation fields are expanding substantially between India and Vietnam.

Indian armed forces conduct a variety of military engagements with a number of their counterparts in the Asia-Pacific region. These include the participation in Langkawi International Maritime Aerospace Exhibition (LIMA) annual events in Malaysia; International Maritime Defence Expo (IMDEX) Asia at Singapore,

India assisting Vietnam in training in Kilo-class submarine operations, Su-30 aircraft and other platforms, in addition to toying the idea of supplying to Vietnam Brahmos cruise missiles, and fast attack craft. Also, Vietnam granted the Indian naval forces permanent berthing facilities for visiting ships at Haiphong and Nha Trang in Vietnam.

ASEAN Regional Forum Disaster Relief Exercises in Malaysia, International Fleet Review at Sagami Bay, Japan; as a part of the Eastern Fleet Overseas Deployment, Indian naval ships have been deployed to South China Sea in May-June 2015 and participated in the Singapore India Maritime Bilateral Exercise (SIMBEX) events with Singapore, and PASSEX (Passing Exercise) with their counterparts Indonesia, Australia, Thailand and Cambodia. Indian Navy also conducts coordinated patrols – India-Indonesia Coordinated Patrol (CORPAT) with its counterparts in Myanmar, Thailand and Indonesia, in addition to being an "Observer Plus" in the Cobra Gold multilateral exercises. With Australia, Indian navy conducts AUSINDEX exercises since 2015 for enhancing maritime security, cooperation and interoperability. Indian armed forces have been involved in pitching their hard power in the natural disaster relief measures in the Asia-Pacific region. These include dispatching 27 ships and 5,000 personnel for providing relief and evacuation of victims during the Tsunami of 2004-05 in Indonesia, Thailand, Sri Lanka, Maldives and other regions, involvement in "Operation Nargis" in Myanmar of relief measures, and the like.

The annual Malabar Exercises almost uninterruptedly conducted with the United States naval forces since the early 1990s, has become a trilateral event since 2015 with the participation of the Japanese Self Defence Maritime Forces. In September 2007, all the three, in addition to Australia and Singapore joined the exercise in Bay of Bengal but were discontinued with China's demarches. It appears that such multilateral naval exercises could commence in near future.

On November 23, 2015, speaking at the Shangri-La, Prime Minister Modi observed that one of the main drivers of the recently enacted Act East policy include efforts to enforce freedom of navigation on the high seas. This observation comes in the wake of "territorial sea" proponents in the South China Sea that intends to create enclaves and possible restrictions on free trade passages in the

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region.¹⁷ However, while the Obama-Modi joint vision statement of January 2015 called for consolidation of positions in the Indian Ocean and the South China Sea, the latter region is more complicated given the Chinese assertiveness in the region despite the July 12, 2016 judgement by the Permanent Court of Arbitration at The Hague, quashing several sovereignty claims in the region. The United States want India to play a "lynchpin" role and as a "net security provider" in the Indo-Pacific region. While the above details suggest that the Indian armed forces have been active in the Act East policy, sensitivities were expressed on "joint patrolling" in the South China Sea region. This has been part of an ongoing dialogue among several stakeholders in the region.

Conclusions

India's Act East policy has re-invigorated its ties to the Asia-Pacific region. Diplomatic, political, commercial, defence people-to-people and cultural contacts increased between India and its eastern neighbours stretching from Japan and Fiji to Maldives. The number of high-level political visits increased recently, bringing in its wake an increasing understanding on a number of issues of mutual concern. Given the lack of any territorial ambitions on the part of India, and showcasing its economic potential in the recent times with high growth rates, had all attracted India to the East and Southeast Asian countries. Making available its hard power for disaster relief and other humanitarian measures further solidified relations with these two regions. However, the unfolding of Act East policy has its own dissonances, mainly from China whose rise in the last three decades is altering the regional order. Thus, there is a potential for competition or even conflict in overlapping areas – such as South China Sea - between these two Asian giants, in addition to the role of Japan which is also retrieving its lost ground in the recent times. While India-China conflict is muted currently, competition for influence in the region is visible, although both have mutually beneficial economic relations in addition to conflict preventive confidence building measures. On the other hand, India and Japan (and Singapore) have been intensifying cooperation on a range of issues, including on how to counter an aggressive Chinese posture. They support a rule based order, including freedom of navigation in the maritime regions. Primarily intended to protect the burgeoning

economic and trade links with the east, India's Act East policy is also acquiring teeth with the increasing engagement of the Indian armed forces with many of its counterparts in the region.

End Notes

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- 3. "Look East and Act East Policy" Unstarred Question No. 3121 March 16, 2016 accessed at httm?dtl/26554/question+no+3121+look+east+and+act+east+policy
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- For the recent visits of the President to Vietnam in September 2014, PM Modi to Naypyidaw in November 2014 and Foreign Minister Sushma Swaraj to Vietnam, Singapore and Myanmar see Manish Chand, "Act East: India's ASEAN Journey" November 14, 2014 accessed at http://mea.gov.in/in-focus-article.htm?24216/Act+East+Indias+ASEAN+Journey>
- 8. India's position on South China Sea, as articulated in various official statements, include that the sovereignty dispute need to be resolved in a bilateral fashion by the disputants, that to usher in peace and stability in the region crucial for free passage of goods and services, the concerned understandings including the Declaration of the Conduct since 2002 and the relevant multilateral institutions should be given full play, and international law including the 1982 UNCLOS be observed by all parties. After the July 2016 verdict, India suggested to all parties to the dispute that "utmost respect to the UNCLOS" provisions be observed in South China Sea. Given over 55 percent of Indian trade passing through the region, it is natural that India had supported freedom of navigation principle, specifically after the 2009 INS Airavat incident.
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- 10. "ASEAN-India Relations" accessed at < http://mea.gov.in/aseanindia/20-years.htm>
- 11. See "Address by Secretary (East) at the Inaugural Session of the International Relations Conference on 'India's Look East Act East Policy: A Bridge to the Asian Neighbourhood" December 13, 2014 accessed at "
- 12. See Namrata Goswami, "Looking "East" Through India's North East - Identifying Policy "Challenges" and Outlining the "Responses" IDSA Occasional Paper No. 2 (June 2009)

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Geo-Strategic Environment in the IOR: Options for India

Vice Admiral Shekhar Sinha, PVSM, AVSM, NM & Bar (Retd)@

"Indian Ocean region is more than just a stimulating geography. It is an idea because it provides an insightful visual impression of Islam, and combines the centrality of Islam with global energy politics and the importance of world navies, in order to show us a multi layered, multipolar world above and beyond the headlines in Iraq and Afghanistan; it is also an idea because it allows us to see the world whole, within a very new and yet old framework, complete with its own traditions and characteristics, without having to drift into bland nostrums about globalisation."

Robert Kaplan in 'Monsoon'

he articulation by Robert Kaplan lays down the canvas on which the events in the Indian Ocean and the littorals seem to be unfolding with the passage of time. The geo-economics and geo politics are shaping the geo strategic environment in the Indian Ocean Region (IOR). Though, a lot has to do with new elephant in the room, i.e., China, it is only fair to look at the

politics of oil and Islam in the region adjoining Indian Ocean, which places her as the floating epicentre of geo strategy in the world.

Oil Islam and Rewriting of Political Boundaries

With the find of oil in Russia and shale oil in the US, the relevance of Gulf oil began to shrink. The two competitors of Cold War days from being importers of oil, became exporters. The export of hydrocarbons from the gulf declined. The OPEC (Organization of the Petroleum Exporting Countries) and Russia not inclined to reducing oil production and Iran regaining its major exporter status post

Two of the major energy hungry countries China and India, continue to be heavily dependent on the gulf oil. With the GDP growth rate of these countries on northward trajectory, both competition and confrontation are possibilities.

nuclear deal with the US, lead to free fall of oil prices. However, Japan and South Korea, two of the major allies of the US continue to be major importers which necessitates US Naval presence in the gulf, albeit, at a reduced scale. Two of the major energy hungry countries China and India, continue to be heavily dependent on the gulf oil. With the GDP growth rate of these countries on northward trajectory, both competition and confrontation are possibilities.

The Arab spring, war on terror in Afghanistan, Pakistan based terrorist organisations unleashing state supported terror in Afghanistan and Jammu and Kashmir, the situation in Yemen and the rise of Daesh or ISIS in Iraq and Syria, are some of the events which have brought radicalisation of Islam at the centre stage. US support to anti Assad rebels, Russian entry into Syria and Turkey intensifying attack on the Kurds in the same region has made the security situation in the adjacent land mass of IOR very complex, and has the possibility of spilling into the littorals. It seems that many groups of people in the Islamic countries are engaged in redrawing their political boundaries, a colonial legacy, driven by their ethnicity. The US appears to have stretched itself too far and for too long in this region leading to

[@] Vice Admiral Shekhar Sinha, PVSM, AVSM, NM & Bar (Retd) was the Former Commander in Chief Western Naval Command and Chief of Integrated Defence Staff. He is a Strategic Analyst.

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President Obama's strategy, to withdraw from Afghanistan and rebalance or pivot to Asia. This was primarily to address two compulsions. Firstly, the American casualties in Afghanistan, was turning the public opinion within the US against the Obama administration and it was under severe pressure to act. Second, for the first time since the collapse of Soviet Union, the unipolar supremacy of the US in the world is being challenged by China, which the US needs to contain. The containment required the rebalancing of US naval combatants towards Indo Pacific.

Regional Geopolitics

China continues to expand its strategic outreach with very assertive foreign policy using its strong economy, and simultaneously building its military might. In the South China Sea it has reclaimed 17 times more territory than all littoral islands put together. The Philippines steered case at the tribunal of the *Permanent Court of Arbitration* (PCA) gave a verdict which demolished the Chinese historic claim of 9 dash line. To utter dismay of the world, China rejected compliance of the verdict. The South China Sea is likely to remain a zone of competition and contention. The recently held Central Committee of the Communist Party of China (CCP) plenary declared President Xi Ping the core leader of China (other two in the past being

China has used its economic muscle to create staging posts in Sri Lanka, Maldives and Gwadar.

Mao and Deng xao Ping), which will help him in positioning his own followers in the Politburo Standing Committee next year, 2017, when five of seven members are due for change. Therefore, world is unlikely to see a law abiding China. These are indicators of unfolding stories of IOR where China has emerged.

Chinese Malacca Dilemma and its growing energy needs in pursuit of prosperity lead to laying of hydrocarbon carrying pipelines from CAR to China. The effort not being adequate to address future needs, China has used its economic muscle to create staging posts in Sri Lanka, Maldives and Gwadar. Sanguine of the fact that it had a long logistics tail from Chinese mainland to the gulf it has also created a naval base at Djibouti, a first outside mainland and Gwadar is in the making. This makes amply evident that Chinese naval combatants are in the IOR for a long haul.

India's core security challenge remains unresolved, land borders with China and its deep collusion with Pakistan, with whom India has been at loggerheads since 1947. China's growing influence on India's neighbours in the IOR has hardened India's attitude towards China. This has been accentuated by Chinese funded China Pakistan Economic Corridor (CPEC) from Kashgar to Gwadar which passes through parts of J & K, Gilgit Baltistan, which is Pakistan Occupied Kashmir (POK) at present. Despite India's efforts for better trade ties with China and Confidence Building Measures (CBM) at land borders, the bilateral relations have taken a nosedive since China blocked India's entry into NSG, and not designating Masood Azhar of Jaish e Muhammad as a terrorist at UN Security Council's ISIL and Al Qaida Sanctions Committee.

The overthrow of Nasheed government in Maldives has had visible tilt in favour of China. The current government has been encouraging China to get its foothold in the IOR. A land bill enacted by the parliament permits a country to buy an island if it can invest over \$ 1 bn and reclaim at least 70 per cent additional land around the island. This is tailor made for China given their expertise and appetite for reclamation. In the passage of the bill surprising is the fact, that those 7 MPs of the opposition, the party of Nasheed, also voted in favour to effect a constitutional amendment. Chinese money power was abundantly at play. This is likely to result in China getting hold of islands on which runways would be built/ extended under the pretext to accommodate tourist traffic. There are indications that China MCC 20 Group Corporation has submitted EOI to Maldivian Government for development of seven airports in various atolls. There are reports that under the

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pretext of providing air safety, air route surveillance long range radars (mainly reversed engineered Israeli extended range type) would be installed which will bring Indian Southern peninsula under constant surveillance. This could be of very significant strategic advantage to China in the Indian backyard.

The Maldivian President Yameen, has also sold an island to Saudi Arabia without due diligence of tendering. The construction of resorts is likely to be awarded to a Chinese company. The Supreme Court of Maldives has signed a partnership agreement with Saudi Judicial System (if there is one!) under which exchange of legal procedures are on the cards. In a recent judgement Maldivian Supreme Court has awarded "stone to death" punishment, clearly in line with Sharia Laws, a first in Maldives. It is also learnt that Pakistan is being invited for defence related procurement. Maldives has highest percentage of youth joining ISIS. Clearly, youth radicalisation is not on the increase but tacitly being supported by Saudi.

These developments in this tiny island, which is barely 90 nautical miles from Minicoy, needs urgent attention and immediate factoring in India's IOR strategy.

Election of Donald Trump creates many uncertainties to the manner in which geopolitics of the Indo-Pacific will shape in next four years. While the divisions within the US and the Republican Party will shape the domestic policies, it will have profound impact on the stature of the US in the world. Should there be great division in the internal politics, US may become more inward looking and could be on a declining path both economically and possibly militarily. This will see China's increased aggressive and assertive behaviour which has already caused turbulence in the South China Sea. Some projects which could accelerate in the absence of US domination are stark.

The Maritime Silk Road of China, is in the making. Gwadar port in Pakistan has been operationalised on 13 Nov 2016. Further, Sri Lanka has offered equity to China in recently contracted Colombo port, in lieu of interest payments of previous loans, which will provide them with greater utilisation rights of this port even for military purposes in the future.

Malaysian government has contracted a Chinese company to develop Malacca port. The reasons of development are unexplained by the Malaysian government considering that Singapore port already exists in the vicinity and is a thriving hub. Also, in the Straits of Malacca, Malaysia already has port of Kelang with fully developed inland infrastructure for hinterland connectivity. Questions have been asked, within Malaysia, regarding the necessity and timing of awarding this contract. The analysts have pointed out that this port could become a Chinese Navy stronghold in the future which will provide China significant control on the traffic through these narrow straits. India's manoeuvre space in the IOR could shrink significantly.

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Election campaign rhetoric of Trump may not coincide with the geopolitical realities, and therefore total abandonment of Indo Asia Pacific by the US is unlikely. The likely decline in US presence will provide opportunity to the countries in this region to strengthen the existing regional and sub regional forums, which make them less dependent on US's uncertain political posture. These are ASEAN (Association of Southeast Asian Nations), BIMSTEC (The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) plus, ARF (ASEAN Regional Forum), BBIM etc., which not only provide options for increased commercial activity, but also the ability for taking a collective stand on Chinese assertiveness.

Much will depend on the new incumbents in the US administration, such as NSA (National Security Agency), Secretary of State and Defence, who will have the responsibility of shaping the geopolitics under Trump leadership. The equation of the US with Russia and China as well as extent of its future commitments to allies in the IOR for

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maintaining world order will shape the geopolitical canvas. As far as trade is concerned, it is near certain that TPP (*Trans-Pacific Partnership*)is dead. This will result in increased Chinese trade through the region and therefore, legitimising her naval presence. Indian commerce too has an opportunity to expand. Given these realities India also has an opportunity

to emerge as a net security provider to the littorals in the region who would like to see IOR as a region where rule of law would protect their interests.

Chinese assertive behaviour and its growing foothold in IOR will embolden Pakistan to great extent, given their "stronger than iron friendship". CPEC (China Pakistan Economic Corridor) has made China a much bigger stakeholder in affairs of Pakistan's economy. Gwadar port could turn into full-fledged Chinese operational base under the legitimacy of protection of trade and SLOCs (Sea lines of communication).

Pakistan has already commenced co-production of JF 17 fighter aircraft. Chinese are also supplying 8 diesel submarines. Emboldened Pakistan operating out of Gwadar, will have continuous surveillance ability on the mouth of Gulf of Oman wherein lies India's energy and trade transit routes.

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The political support to Pakistan by China in various world for has ensured protection to UN declared terrorists from possible prosecution. Also, Chinese stubborn approach to Indian membership to NSG (*National Security Guard*) in the recent past has amply demonstrated the Chinese approach to India.

China has chosen to condemn terror deaths on every occasion but does not name the terror organisations, or the terrorists operating out of Pakistan. Often there as on is attributed to having a firm control of the ISI (Islamic State of Iraq) on Pakistan based terror organisations who could otherwise spell trouble in Xinjiang province through their associates in ETIM (East Turkestan Islamic Movement). These would result in continuing tensions in J&K.

Unresolved borders of India with China and Pakistan will be an important factor in strategizing Indian stand in the IOR. Chinese emergence in this ocean, her adoption of Pakistan as proxy state and relative decline of the US economic and military relevance in the Indo Pacific post Trump are important developments which necessitate strengthening India's maritime power, both commercial and military.

Indian Options

Neither the US nor China are resident nations of IOR, therefore there are vulnerabilities for both the countries. India's bilateral relations with the US have witnessed relative upswing in past few years and is likely, to be on a steady course. Therefore, the government's drive towards Make in India, will present itself as an opportunity in defence manufacturing and capability building. The capability development should be such that it effectively exploits the Chinese vulnerability in the IOR. This would augur well to deal with the Chinese from a position of relative strength.

China will continue to assert itself particularly if US policies become more inward looking. Pakistan, under Chinese tutelage, would become even more active in its proxy war against India. It is unlikely that the two border disputes will soon get resolved. It will show up in the Arabian Sea.

Indian government's effort towards creation of jobs and making India economically stronger will also drive the formulation of policies in the maritime domain. China is the largest trading partner and possibly will remain so given the trade deficit between two countries. Should the US pivot to Indo Pacific relatively unwind, India would pivot towards Japan and possibly Vietnam to maintain some balance with China in the maritime domain. There are two more options with India if the Chinese assertiveness turns into aggressive approach either on the land borders or in the IOR and that

is a policy shift on Tibet and Taiwan. Supporting Tibetan cause and establishing diplomatic ties with Taiwan could open new channels of bilateral relations with China's neighbours and irritation to the Chinese.

There is a window of approximately 4 years, i.e., Trump's Presidency, in which the world will rearrange itself with the new US foreign policy. India should accelerate her economy, by becoming a manufacturing state from an importing state. During this period defence related manufacturing could lead to capability building, necessary, to deal with China from a position of relative strength. Indian approach to China in the IOR would have to be one of engagement and less of resistance.

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Prudent stands in consonance with United Nations Convention on the Law of the Sea (UNCLOS) will ensure support of comity of nations to India which could restrain China from aggressive provocation.

India's deepening relations with the US, Russia, Japan, South Korea and Vietnam needs to be taken to next higher level by technology transfer, institutionalised arrangements of SLOC, and non-traditional security and sharing of Maritime Domain Awareness networks, will compel China to treat India with respect. India must also develop a network in the IOR (such as BIMSTEC plus) based on shared culture, comity and commerce which has historically positioned the country to maritime prominence. A strong security and economic relationship would be to India's interest.

Chinese too are aware of their logistics vulnerabilities in the IOR. Despite measures to reduce Malacca dependence, Chinese will continue to import at least 50 per cent of their hydrocarbon which will traverse over the Indian Ocean. This vulnerability of China needs to be exploited by creating adequate capabilities. To derive leverage from our large trade volume with China, it will be desirable to regulate the volume of trade being made conditional to resolving of thorny issues between the two countries. This approach could lead to balanced Chinese approach towards India. It is expected that China would also have considerable influence on Pakistan's behaviour.

India's bilateral relations with Russia need to be kept on firm ground. Chinese ambitions of trade with Central Asian Republics and the larger Eurasian landmass are unlikely to find favours with Russia. Therefore, the time could be ripe for reinvigorating ties with Russia and Iran in order to explore larger maritime driven trade opportunities with Eurasia. This could limit China's trade outreach. Accelerating operationalisation of Chabahar port will be an important milestone.

India's resurgence to maritime prominence in the IOR could be here if we cease this opportunity.

India and the Shanghai Cooperation Organisation

Shri Phunchok Stobdan[®]

Introduction

he accession process for India to the Shanghai Cooperation Organization (SCO), which is an economic and regional bloc, formally had begun at the Ufa summit in July 2015. The Tashkent summit in June 2016 finally given a go ahead for initiating the process after India signed the base document called the 'Memorandum of Obligations', that required new applicants to approve all the relevant mandatory conventions and draft documents (supposedly about 30 of them) that exist within the SCO framework. No details are available in public as to what those 'additional documents' contain. It seems that the terms of reference of these documents cannot be renegotiated. The case of India's membership is being sent to respective Parliament of each member state for ratification. It is possible that the final accession will take place in 2017, when the SCO Summit will be held in Astana. As of now the status of India is still of an "Acceding Member" of SCO.

Having said that, India's membership in the SCO remains elusive. Plausibly, among the documents to be signed include the clause 'good neighbourhood' behaviour that India and Pakistan must agree to undertake before they expect full membership into SCO. In other words, the onus is on India and Pakistan to adhere to the SCO's expectations. It all appears that SCO is demanding the equivalent of a 'peace treaty' between the neighbouring countries that would eventually culminate in India (and Pakistan) acceding to the SCO.

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India's Interests in SCO

India's interest in joining the SCO is linked to its interests in Central Asia, which are of course deeper than the exigencies of contemporary international politics. India has a non-transactional interest in Central Asia, an emotional connection to the region with deep historical roots. It is also a known fact that India had always been threatened in the form of invasions from Central Asia or the northwest, that frequently checked India's political evolution. The northwest continues to be a critical focus of India's threat perceptions, except the threat is now embodied by terrorism.

India's position in Eurasia has weakened over time in large part due to the creation of Pakistan, which has limited the nation's reach into the region, and events in this part of the world whether the Afghan struggle, or the spread of the Islamic State (IS), continue to pose a threat to India's security.

[®] Shri P. Stobdan, (Retd) is a distinguished academician, diplomat, author and foreign policy expert. He has been India's Ambassador Extraordinary and Plenipotentiary to the Republic of Kyrgyzstan. He earlier served in the National Security Council Secretariat (NSCS). He was the Director of the Centre for Strategic Studies in Jammu & Kashmir. He is the Founding President of the Ladakh International Centre, Leh and is currently with the IDSA, New Delhi. He is also a Distinguished Fellow at the United Service Institution of India (USI).

India is an aspiring global power because of which its diplomatic engagement with Central Asia has also become necessary, regardless of economic interests.

India's philosophy with regards to joining the SCO seems clear: it is to have a presence. It is essentially borne out of a basic dilemma, that not having a presence in Eurasia, is inconsistent with India's broader strategy of the need to counter the perceived security threats. But establishing a presence is very difficult because there are few options for engagement. Hence the SCO gives India an opportunity to be present in the region as there's no other appropriate multilateral platform available.

India hopes that its entry into SCO as a full member will provide it an opportunity to have extended cooperation with member countries in areas of energy, defence, security and counter-terrorism. This is apart from seeking greater expansion in economic activities and developing better people-to-people ties with the countries of this region.

India has been an observer at the bloc since 2005 and applied for a full membership in 2014. However, its entry has been delayed because of the failure to set criteria, rules, procedures and a timeline for expansion of the regional grouping. Russia traditionally pushed India's case for full membership, but China wanted Pakistan's entry as well. Only Mongolia was welcomed as a member but was hesitant to join. UN sanctions obstructed Iran's entry.

However, the delay in India's entry, appeared closely linked to the ongoing global rebalancing games being played from Eurasia to the 'Indo-Pacific'. It is not unrelated to the deepening of Indo-US military ties, and the country's bid to join the coveted NSG (Nuclear Suppliers Group) club.

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The China-led Eurasian grouping – which is intended both as a counterweight to the US-led global order and a key link in Beijing's new plans for connectivity-appeared unsure of India's full commitment to the SCO's raison d'etre and charter. The insistence on paperwork appeared merely a pretext for China to keep the SCO as its exclusive domain, one in which the inclusion of India was not a priority - or even a requirement. Though delaying India's entry meant doing the same for Pakistan and Iran, Beijing had other windows of opportunity to deal with Islamabad and Tehran.

However, both Russia and China, in the recent years, have shown keen interest in backing India's accession to the SCO. In July 2015, Russian President Vladimir Putin stated that the accession of the two South Asian states would increase the SCO's "political and economic potential" and enhance its "capabilities to react to modern threats and challenges."

Similarly, Chinese President Xi Jinping welcomed India's membership in May 2015. In fact, things seemed to change in September 2013 when Chinese President Xi Jinping unveiled the 'One Belt, One Road' (OBOR) initiative – a plan to integrate Eurasia via economic and infrastructure connectivity. Since then, the need to push China's connectivity and market integration has spurred renewed interest in the SCO's expansion. Thus, India featured high in Xi's calculus. Pakistan, of course, fell in a separate basket for China.

In 2015, President Xi announced interest in channelling the Silk Road Fund to strengthen investment cooperation with other SCO members - "focusing on large infrastructure projects, resources exploitation, industry and finance". Of course, the accession issue cannot be disconnected from broader world politics. Russia's standoff with the West may have factored in getting India and Pakistan inside the Russian and Chinese-led multilateral body. The Ukraine crisis and the ensuing fallout with the West probably forced Russia to seek greater synergy between Russia's Eurasian Economic Union (EAEU) and China's OBOR schemes. Security concerns in the region also pushed the idea of expanding the SCO. Challenges from the US drawdown from Afghanistan since 2014, IS's increasing footprints and the spate of terrorist incidents in China's Xinjiang province were other compelling factors.

Russia still views the SCO's utility in ideological terms as a counterpoise to the West. But the grouping's key driver, China, treats it as a vehicle for expanding its geopolitical and geo-economic interests. Roping India into the SCO was needed to provide fresh vitality, greater voice and prestige to the grouping, which had hitherto remained China-centric.

India's Stakes in the SCO

It's an open question however whether joining SCO as a full member will be fully beneficial for India. In fact, informed Indian commentators don't quite understand why India should join a Chinese-led organization as a junior partner when the benefits are not well defined.

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utility in ideological terms as

In fact, there was an overwhelming impression that SCO was floated by China only for containing separatism in Xinjiang. And, the organization had also come about only when both Russia and China were losing popularity vis-à-vis the US and that it over the time has dangerously become an anti-US forum.

Despite its high visibility, the SCO's progress has remained spotty – both in terms of its efficacy and profile. For years, the group's achievements were seen as an index of China's bilateral initiatives, and its outside image was that of a 'club of autocrats', kept afloat by Chinese funding. But for India, the SCO has been about increasing its political, economic and security stakes in Central Asia. Entry to the SCO would create new opportunities for India to reconnect with Eurasia after a century of disruption. From a regional perspective, India has always preferred that Russia play the leading role in Central Asia, but with its economy in turmoil and a renewed westward focus, Moscow's grip is loosening. After Moscow's standoff with the West, Russia sought strategic convergence with China which appears more out of its compulsion.

There are however, undercurrents of fear in Moscow about China, as Russia also, refuse to be considered as a junior partner of China. Despite still controlling the airspace and military situation on the ground in Central Asia, Russia has seen its influence decline, as Chinese investments pours in. Bringing India into the SCO as a counterweight to China is one way Russia can ameliorate the consequences of its weakening hand. Together, these factors may have prompted Russia to push for Indian accession. At the same time, the Central Asian states are wary of the new Sino-Russian understanding in Eurasia. Kazakhstan and even Uzbekistan are seeking to diversify their foreign policy. Beyond India's interests in Central Asia, accession to the SCO is also a part of India's strategy, to engage China in a way that offsets initiatives elsewhere, and to contain China's cooperation with the United States.

India could hypothetically, learn from the SCO structures that share key information and intelligence on the movement of terrorists and drugtrafficking, and other negative trend of developments in the region.

Regional Security Concerns

India shares direct security concerns with the region. In fact, India's SCO aspirations are directly linked to fighting terrorism, and containing threats posed by IS and the Taliban. There is not enough information about the operations and accomplishments of the SCO's Regional Anti-Terrorist Structure (RATS) or SCO's annual military exercises and how they are influencing the situation on the ground. India could hypothetically, learn from the SCO structures that share key information and intelligence on the movement of terrorists and drug—trafficking, and other negative trend of

developments in the region. Joining the SCO may thus prove useful in that type of scenario. Participation in the SCO's counter-terror exercises could benefit Indian armed forces as well.

India also stands to gain information on drug control, cyber security threats, public information, mass media, educational, environmental, disaster management and water related issues of Eurasia - an area that we know little about.

Connectivity

One of the biggest challenges for India has been how best it can deepen physical connectivity with the landlocked belt of Central Asia. Currently, India is operating at a competitive disadvantage because of the extra costs and time spent in transit for tradable goods. Besides, China's OBOR and CPEC (China Pakistan Economic Corridor) seems to have put India in a quandary. Rhetoric aside, a set of projects envisaged under OBOR and CPEC could transform the region flanking north of India into new economic hub having implications for India.

Russia and Central Asia have reconciled their own transport connectivity plans with that of OBOR to transform the region into a major hub of the transcontinental transportation network. Afghanistan too supports the CPEC.

Clearly, India cannot stay outside the infrastructure and connectivity which is being built at such a scale. Therefore, India's connectivity policy measures in principle, to elaborate the imperatives of reconnecting and reengaging with Central Asia, to enable people, goods, investments and cultural and scientific ideas to move across the two regions. Of course, the SCO could play an intersecting role between South and Central Asia especially for implementing trans-regional economic connectivity projects. Apart from trade facilitation, India sees a wider benefit from improved regional connectivity to create opportunities for productivity enhancement of goods and services, to increase ICT (Information and Communication Technology) networks; energy networks; people-to-people networks; and promotion of knowledge-based economies.

India had pursued several viable transit options, for example, India-Iranthe Turkmenistan Trilateral MoU on transit for trade (April 1995), the India, Iran and Russia INSTC (International North-South Transport Corridor) project (May 2002), India-Iran-Afghanistan Chabahar Port Agreement (May 2016).

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Russia INSTC (International North-South Transport Corridor) project (May 2002), India-Iran-Afghanistan Chabahar Port Agreement (May 2016). However, so far, no viable and easy transport passage, land-linking arrangements, and important transit services points have been found relatively suitable. Some of these are essentially regionally disconnected options - their sustainability would depend on the commercial viability and profitability for Indian investors and business firms.

Some expert-level studies, after using a gravity model of trade framework, indicated both the complementary aspects and the huge untapped potential for increasing trade between India and Central Asian countries. However, the problems of distance apart, transiting through politically troublesome Pakistan-Afghanistan region falls short of realizing these potentials.

It is intrinsically clear that any viable future long-distance transport grids, including energy pipelines from resource rich Siberia and Central Asia to India, would not be realized without seeking at some stage, a reconciliation with China's OBOR plan. It is possible that by joining the SCO, India will be able to widen the scope of collaborating with the Russian (EAEU) and the Chinese (OBOR) built transport networks. The SCO has taken some regional initiatives to open new routes for transport operations and services, especially the progress also made in addressing non-physical barriers through the 'Intergovernmental Agreements' on road, railway networks and transit facilitation. The SCO could provide new innovative ideas for developing networks of alternative and sustainable cross-border infrastructure networks. The countries and regional groupings are leveraging Asia's finance to attract private sector investment in infrastructure building. The AIIB (Asian Infrastructure Investment Bona) and NDB are new vehicles to fund a more holistic and integrated approach to regional connectivity projects. By joining the SCO, India can also think more sharply on how to respond to OBOR and find ways to join both the Russian and Chinese built transport network. In fact, India could consult Central Asian states to coordinate on the various connectivity projects. By committing investment to develop the Chabahar port, India has indicated its seriousness to boost regional connectivity. In fact, the Chabahar announcement and the inauguration of the Salma Dam in Afghanistan also signalled India's strong commitment to the regional integration process.

Hopefully, the Chabahar port will not only provide India access to Central Asian, Caspian, Iranian and Western Siberian gas fields, but will also pave the way for India to tap the vast deposits of high value rare earth minerals in Central Asia and Afghanistan. To exploit the opportunities under the SCO process, India cannot take any position other than a cooperative one. India should certainly join the SCO with a fresh mind without any ambiguity. At the same time, it should be mindful of the geopolitical calculations underpinning these connectivity projects. While, India wants to cooperate with the EAEU, but it has expressed reservations about China's connectivity plans. India particularly resented the CPEC passing through PoK and this is a potential problem.

Energy Cooperation

SCO membership will also provide India an avenue to secure its energy interests and invest in oilfields with an eye of getting its way on the pipeline routes. The SCO has been talking about forming an "energy club". India's efforts to

secure energy from Central Asia are influenced by numerous factors: politics about gas, Russia's confrontation with the West, and other larger geostrategic issues. The SCO is a platform for discussing these subjects, but is only relevant in a limited sense. Turkmenistan is neither a member of BRICS nor the SCO, but the country is critical for India's energy calculation.

So far, a few path-breaking developments have occurred on energy front for India. First, during Prime Minister Modi's tour of Central Asia in July 2015, Kazakhstan signed a new contract to renew uranium supply to India. This deal weakens China's monopoly on the Kazakhstan's uranium exports. Second, the

ONGC Videsh Ltd.'s drilling operations in the Satpayev block in Kazakhstan in July 2015 may herald the opening of the region's oil and gas sector to Indian exploration companies.

launch of ONGC Videsh Ltd.'s drilling operations in the Satpayev block in Kazakhstan in July 2015 may herald the opening of the region's oil and gas sector to Indian exploration companies. This would create skilled jobs for Indian expats and a new stream of foreign exchange. India has been optimistic about the actual progress on the Turkmenistan-Afghanistan-Pakistan-India pipeline, which has faced ongoing delays in the face of Indian strategic concerns about reliance on Pakistan and the deteriorating security environment in Afghanistan.

Enhancing energy security, connectivity, and trade are considered as cornerstones of India's Central Asia policy. As India's energy demands increase, it will find itself at the center of important geopolitical and energy relationships that might even impact the development in SCO. Russia may be attempting to nudge India toward cooperation, especially in terms of working on the energy pipeline. Russian influence can surely benefit India in this regard; if Moscow wants to deny Central Asian oil and gas to Europe, it must help find new markets for these energy products. A potential rapprochement between Iran and its critics could help open a new path that avoids the instability of Afghanistan, connecting Turkmenistan, Iran, and India by pipeline and ocean tanker.

Geopolitical Challenges

The SCO is mainly welded on Sino–Russian entente, however, it is a different matter, if dynamics of Eurasia will take a different turn (having implications for the SCO) in the changed scenario of Trump's coming to power in the United States.

The SCO member states, especially China would be worried about Russia's possible reorientation; shifting away from its current focus on Eurasia to fully joining the Western dynamics. Surely, the Chinese should be concerned about the future of SCO and OBOR through which China lured these states into its fold.

But as of now, India's prospects in the SCO will be linked to ongoing global rebalancing games and the deepening

of Indo-US military ties. Indo-US ties have deepened further since the Ufa summit in 2015. Given the range of military and technological cooperation agreements signed, bilateral ties will only grow to unprecedented levels. However, from India's perspective, closer ties with Washington ought not to prevent it from boosting ties with Russia and China, for which India already has multiple avenues for engagement, such as BRICS and the EAEU. However, what is now clear is that the Indo-US entente is likely to grow beyond the military sphere to committing themselves to promoting shared values and interests in the Asian region. This could contradict the SCO's aspiration of becoming a counterpoise to Western dominance. India's objective lies not in playing the interests of the US and China against each other

India's prospects in the SCO will be linked to ongoing global rebalancing games and the deepening of Indo-US military ties. Indo-US ties have deepened further since the Ufa summit in 2015.

but in building strong relations with both powers, as well as Russia. Once Iran joins the SCO, perhaps India will be in a better position to play a balancing role.

The SCO is likely to face many conflicting interests, from regional and global issues to combating international terrorism, and India's position may sometimes be at odds with that of other members. China by its own assertion stands committed to fight against the "three evils" - terrorism, separatism and religious extremism - through the SCO. It has promised not to make use of internal conflict as a tool to sabotage the security of others and opposes applying double standards on terrorism. However, in practice Beijing's double-speak on terrorism has been quite evident.

It has used the SCO to fight only those cases of terror that fit with its own definition of terrorism. On the one hand, China describes Uyghur activism in Xinjiang as an act of terror and wants others to support its fight against the East Turkestan Islamic Movement. But on the other hand, it refuses to oppose some terrorist groups that attack other countries.

Beijing has been using Pakistan and its instruments of terror to expand its own geopolitical interests. China has repeated blocked India's bid to get Jaish-e-Mohammed chief Masood Azhar and Lashkar-e-Tayyaba commander Zakiur-Rehman Lakhvi banned by the UN. Such double-speak on terrorism may limit India's participation in the regional security grouping. Whereas; China is serious about using the SCO to garner support for its case on the South China Sea dispute. The SCO could possibly side with the Chinese stance. China will expect India to be in consonance with the SCO's position, no matter how difficult that may be. Not doing so would surely be dubbed as an unconstructive role on India's part.

Impact on Indo-Pakistan Relations

There are all types of speculation about how China, Russia and Central Asian states wish to play their role in managing India-Pakistan affairs.

Russia and others still contemplate SCO making a pivoting point to beget a gradual thawing of Indo-Pak tension. Russia, under Putin but also in the Soviet era, has never given up the desire to mediate an India-Pakistan rapprochement. These efforts extend back to the 1966 Tashkent Agreement, when the Soviet Prime Minister Alexei Kosygin mediated to end the 1965 war between India and Pakistan. In fact, Putin had said that the SCO could become an "additional venue for finding compromises and solutions on disputed issues." Russia has not stated explicitly that it hopes to mediate the dispute, but Moscow's intention is evident in the quiet diplomacy it has been conducting with Pakistan. Russia has supplied certain military equipment including Sukhoi Su-35 helicopters to Pakistan. Besides, the Russian military also

India's Strategic Neighbourhood

held a joint military drill in Pakistan despite annoyance being expressed by New Delhi. These are viewed as a departure from Russia's traditional lean toward India. Moscow wants Pakistan on board, and this must have played a role in its thinking on the SCO accessions. Of course, from Moscow's point of view the Afghan factor and the spread of extremism by IS in Central Asia are cited as critical justifications for bringing Pakistan into the organization.

An interesting and frequently overlooked fact is that even Kazakhstan President Nursultan Nazarbayev, for example, has initiated several efforts to improve South Asian relations.

Moscow's point of view the Afghan factor and the spread of extremism by IS in Central Asia are cited as critical justifications for bringing Pakistan into the organization.

Similarly statements also came from Chinese leaders who believed that "India and Pakistan's admission in SCO" will bring "improvement in their bilateral relations." The Indian policy on outside mediation in South Asian affairs has usually been characterized by unconditional opposition; therefor any interjection by SCO into the India-Pakistan dispute is unlikely to be successful. However, the SCO does facilitate large-scale diplomatic and security interactions at different levels. It also, provides a rare opportunity for the militaries of member states to engage in joint military drills where they coordinate on operational details and share intelligence. It is possible that both Pakistan and India will share several multilateral tables; the anti-terrorism structure, the military exercises etc. under the SCO framework.

At the same time, it is fair to assume that there is little prospect of the SCO breaking the Sino-Pak strategic nexus.

Pakistan's current hostile approach towards India, especially the use of terror as an instrument of policy could create complications for any cooperation that is not in the interests of Pakistan. Islamabad could act to willfully destabilize regional projects under SCO, particularly if there no end to establish peace in Afghanistan – installing the Taliban in Kabul – as per its plan. In the face of this uncertainty, the SCO's value as a forum for coordinating regional projects involving India will persist.

There is every possibility that Pakistan supported by China could introduce the Kashmir issue onto the SCO platform. India needs to be more watchful about duplicitous moves that Pakistan and China could play in SCO.

Pakistan is likely to carry its anti-India rhetoric to the platform while China will continue to use Pakistan to blunt India's influence in Eurasia should it join the club. There is every possibility that Pakistan supported by China could introduce

the Kashmir issue onto the SCO platform. India needs to be more watchful about duplicitous moves that Pakistan and China could play in SCO. The differences it seems will only enlarge and for India navigating the evolving contradictions in SCO may remain less than a smooth one.

Other Challenges

There is a potential risk that India and Pakistan will be blamed for the SCO's ineffectiveness. In fact, there have been misgivings expressed by some members that India's accession along with Pakistan could impact the SCO's effectiveness. They voiced concerns that India and Pakistan would inevitably bring their conflicting issues into the SCO platform. They especially expressed concerns getting mired in South Asian conflicts, with the failure of the South Asian Association for Regional Cooperation (SAARC) often used as an alibi. Even Uzbekistan's president, Islam Karimov, said during the Ufa summit that the inclusion of India and Pakistan into the grouping would change the very character of the SCO.

However, since, Russia continues to be the predominant security actor and China the predominant economic partner, it is possible that they can cooperate to make the South Asian issue irrelevant in Central Asia. Besides, India's ability to assert in the SCO will be limited in the absence of a direct physical access with Central Asia.

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Despite enthusiasm, the real significance of this may be obscured by other regional priorities and trends, for example the integration of the Eurasian Economic Union (EEU) with China's Silk Road Economic Belt (SREB), Russia's continuing economic travails, the growth of the Islamic State (IS), situation in Afghanistan, the fate of an agreement on Iran's nuclear program, etc. This is a tricky balancing act, and one made no easier by China's (BRI) and its plan to build a \$46 billion CPEC through Pakistan-controlled Kashmir, officially resented by India.

However, the SCO has provided a sense of regional security or regime security in Central Asia. The recent peaceful transition of power in Uzbekistan after the demise of President Islam Karimov is a case in point.

It is unclear from India's standpoint how well the SCO institutions are functioning and how these institutions are affecting the regional security dynamics. Despite the uncertainty, it is reasonable to predict at least some benefits in the

security sphere. At the moment, India has functional bilateral relationships on security issues with most Central Asian countries, as well as Russia, but a collective approach would be new.

At the same time, the Forum has been often used to voice rhetoric against the West. The SCO as a group – composing of former communists, autocrats and semi-democrats have little respect for issues like human rights, ethnic groups and religions. However, the SCO has provided a sense of regional security or regime security in Central Asia. The recent peaceful transition of power in Uzbekistan after the demise of President Islam Karimov is a case in point. So far, India has escaped taking political positions because political transitions both in Uzbekistan and Turkmenistan have been smooth and devoid of major controversy and violence.

The Kazakh President Nursultan Nazarbayev too is aging but he may also be preparing for a clear succession plan. At the same time, political situation in Central Asia remains in limbo. Because, so far, only Kyrgyzstan has switched to a parliamentary democracy in 2010, the country's democratic institutions and rule of law remain underdeveloped. With an unstable coalition government in place, there are many social and political challenges which are left unaddressed, including ethnic tensions in the south.

There is every possibility that the region will eventually face a new period of instability, given the rising appeal of political Islam and the threat posed by extremist forces present in Afghanistan.

A major shift toward political Islam seems in fact already underway behind the façade of authoritarianism propped up by China and Russia. This is most evident in Tajikistan and southern Kyrgyzstan. The entrenchment of the Islamic Movement of Uzbekistan (IMU) and recruiting by the IS are also growing concerns. Beyond political Islam, ethnic and socio-economic pressures could also challenge the sitting rulers. In Kazakhstan and Turkmenistan, for example, the unequal distribution of oil-generated wealth has been generating public discontent since 2011. So far, Russia and China have succeeded in insulating the Central Asian regimes from failure, although, they came close to the brink in Uzbekistan after the 2005 Andijan crisis, and Kazakhstan after the 2011 Zhanaozen event.

Nonetheless, India too would be worried about the uncertainty looming in Central Asia. The contradiction between the SCO's authoritarianism and Indian democracy is one that will surface eventually. However, if the issue does surface, it won't be because of any ideological slant in India's foreign policy. Unlike the United States, India doesn't advocate democracy or anti-authoritarianism. The contradiction will become important if there are political transitions or regime changes within Central Asia in future where India's position becomes critical. It is however unclear how the SCO will respond to a regime change event or whether India's reaction will be aligned with the SCO's stance.

India too would be worried about the uncertainty looming in Central Asia. The contradiction between the SCO's authoritarianism and Indian democracy is one that will surface eventually.

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The emergence of democracies would present a huge opportunity because Central Asian Muslims are largely unsympathetic to fundamentalism and as such entertain no hostility toward India.

As for the United States, it has played a more low-key role in Central Asia since 9/11. Surely, Washington did not appreciate the countries in the region falling under the Russian-led Eurasian Economic Union (EEU). So far, Russian and Chinese influence combinedly worked under the SCO to ensure that role of the United States and other Western powers interested in shaping the internal political dynamics in Central Asia are effectively countered.

China particularly made it sure that its Belt and Road Initiative, to develop transport connectivity passing across the Eurasian continent, becomes more effective than the "new Silk Road" strategy once envisaged by the United States to make Central Asia, including Afghanistan, a crossroads of global commerce.

At the same time, any potential US-China and US-Russia contention in region has been curtailed because Russia on its part has been too preoccupied with the issue in Europe. Whereas, China appeared unwilling to enter into a confrontation with the United States in this part of the world, unlike in the Asia-Pacific. For one, China is talking about a convergence of interests with the United States in Afghanistan, and for another, China knows very well that direct confrontation with the United States would have an impact on China's own western regions. Xinjiang, for example, shares a border with Afghanistan, and China will follow a strategy of avoiding conflict to limit any risks of an outside power exploiting discontent in the region.

Conclusion

The SCO is not seen as important to Indian foreign policy as the BRICS grouping and other multilateral forums. There is much less exuberance shown in public about India's prospects in the SCO.

The SCO is already of limited effectiveness and is simply being kept alive by China to advance its diplomatic purposes in Eurasia. Once Beijing has accomplished its economic goals of energy and transportation connectivity, among other issues, the SCO won't have much independent relevance. This is evident in the fate of the much-discussed SCO development bank, which has been stalled while China's other projects, notably the BRICS bank and the AIIB, have been prioritized.

To be sure, the SCO will inherently remain a fragile regional grouping. Russia and China are important, but the positions of the Central Asian states fluctuate regularly in line with their interests.

India needs to build its own leverages with these countries to be an effective member of the SCO. But more importantly, India will do well if it is able to avoid becoming a focal point of criticism

India needs to build its own leverages with these countries to be an effective member of the SCO. But more importantly, India will do well if it is able to avoid becoming a focal point of criticism. The true limiting factors controlling what India can get out of SCO membership are India's light pockets compared with China's deep ones plus the constraints of geography. If India manages anything concrete within the SCO, it will be very, very small.

There are also issues relating to the structure, staffing, and languages used within the SCO. Predominance of Russian and Chinese languages would create difficulties for navigating through the SCO.

But, India certainly has advantages: it is liked in the region and seen as a reliable partner and a critical country. But on the ground, India is not seen as a forthcoming power, and this perception will continue as long as Central Asian states compare India with China.

On its part, India can bring mutually beneficial partnerships. India could bring to the SCO table its technoeconomic expertise, markets and financial commitment.

India's experience in dealing with multi-cultural settings is an attraction among sections in Central Asia and the countries are appreciative of Indian efforts towards the civilian reconstruction process in Afghanistan.

In the meantime, India will benefit from maintaining a regional presence, tracking regional terrorism, and securing its energy interests, expanding trade, transport, digital and people to people contacts.

For India, there is no diplomatic risk if nothing else substantive comes out of membership in the long run. For India, the limited immediate benefits of joining SCO will be more than compensated for by improved diplomatic access to Central Asia.

India's Strategic Engagement with USA, Russia and China

Shri Ajai Malhotra, IFS (Retd) @

or India's strategic engagement to effectively address its security concerns it must pragmatically promote its linkages with all major world powers, especially USA and Russia, as well as the European Union, while deftly managing its ties with China. Central to this context is the recognition, that China is currently India's main strategic competitor, even as both China and Russia separately visualize USA as their primary strategic rival. India has for long viewed a nuclear armed China as its leading strategic opponent, even explaining the conduct of its May 1998

nuclear weapons tests in the framework of such an assessment. Even though its economy is expanding at a healthy pace, India will need considerable time and legroom to grow in order to catch up with China. In the meanwhile, India has to keep conflict with China at bay, while sensibly extending its foreign policy space through a nimble handling of countries and issues.

It is in this setting that the challenges and prospects of India's strategic engagement with USA, Russia and China are to be explored. These have come into sharper focus with the election of Donald Trump as the 45th President of USA, with anticipated shifts in America's foreign policy introducing new uncertainties in key strategic calculations across the world. These are set to up-end some of the out-of-date foreign policy narratives and antiquated security analysis of the past.

With USA's current strategic pre-eminence expected to remain intact at least till the middle of the 21st Century, it is natural that India would be interested in partnering more closely with it.

Partnering with USA – the Pre-eminent Power

USA is presently the pre-eminent power with a sustainable global reach, in defence, security and financial terms. While it would obviously like to maintain its pre-eminence for as long as possible, it views India's rise positively, even more so against the backdrop of the growing challenge to its own dominance being posed by China. With USA's current strategic pre-eminence expected to remain intact at least till the middle of the 21st Century, it is natural that India would be interested in partnering more closely with it. India's broad-based ties with USA are characterized by a growing convergence of interests and, unlike China, it does not feel threatened by USA's strategic and military re-balancing towards the Indo-Pacific. Moreover, unlike China and Russia, India does not feel threatened by American efforts to promote freedom or democratic values worldwide. Indeed, as a deep-rooted democracy, India welcomes a more inclusive and democratic world order and its effort is primarily focused on enhancing its own global standing, rather than reducing that of USA.

India does have defence and security related concerns arising out of USA's policies, but they have a different focus. India would like USA to more effectively pressure Pakistan to desist from aiding, abetting, sponsoring and providing safe

Shri Ajai Malhotra, IFS, retired as India's Ambassador to the Russian Federation. His present responsibilities include Distinguished Fellow & Senior Adviser (Climate Change) at The Energy and Resources Institute (TERI) and Independent Director of ONGC Limited and ONGC Videsh Limited.

haven to anti-Indian and other terrorist groups. It would also like USA to stop enhancing Pakistani defence capabilities, especially by providing it with sophisticated weaponry.

Addressing the USA-Russia Conundrum

USA-Russia ties have touched a low not seen since the height of the Cold War. With Putin's return as President in May 2012, they re-entered a particularly turbulent phase that could be attributed to prejudices on both sides dating back to the Cold War, amplified by USA's experience in dealing with Putin during his two earlier Presidential terms.

For Russia, partnership with Europe, and not Asia, was its preferred choice. However, despite the end of the Cold War, USA has been unwilling to accept Russia as an integral part of a democratic Europe. US was not ready to countenance Putin's October 2011 proposal to work for a Common Economic Space from Lisbon to Vladivostok, which it saw as an unacceptable Russian attempt to undermine the long-standing Trans-Atlantic alliance and open the path to a more dominant Russia in Europe. Pulling in the opposite direction, Western leaders instead launched in

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mid-2013 a Trans-Atlantic Trade and Investment Partnership as a companion to the Trans-Pacific Partnership that links USA-friendly Pacific Rim countries, but keeps out Russia.

Following the dismantling of the Soviet Union, a rising China has gradually replaced Russia as the primary challenger to US ascendancy. Indeed, USA's re-balancing to the Indo-Pacific under President Obama marked a recognition of China's arrival as a powerful regional player and aspiring world power. While USA's re-balancing reflected an important change in perception it continued, however, to treat Russia as a prime villain whom it needed to continue to block. This may have been partly because Russia is the only country whose nuclear weaponry presently matches that of USA and partly because of Obama's larger anti-Putin agenda. As a result, the main focus of USA over the last few years has been on weakening, subduing and neutralizing Russia. Under Obama, USA's larger aim has also been to use Western sanctions over Ukraine to undermine Putin's domestic support and create conditions leading to his replacement by a more pliant Russian leader. However, this effort floundered and Putin's popularity across Russia has remained high.

Russia has serious concerns over USA's stance on security issues of immediate and direct interest to it. Thus, it views with considerable apprehension, North Atlantic Treaty Organization (NATO's) eastward expansion plans into the former Soviet Republics beyond the Baltics, as well as USA's backing of Georgia and Ukraine, especially the crossing of a red line by seeking to make Ukraine a NATO member.

Towards a Polycentric World?

While India and Russia favour a polycentric world, they differ in their perception of the current two main pillars of such a world - USA and China. Russia would like a more evenly balanced world, emanating from a diminution in USA's global dominance, even more so since Western sanctions are directed against it. Russia's strong sponsorship of BRICS (Brazil Russia India China South Africa) and China's promotion of Shanghai Cooperation Organization (SCO) derive from this context. However, both China and Russia would like to avoid a direct confrontation with USA and remain deeply interested in being on good working terms with it.

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China's ascendance does not threaten Russia which is also not averse to China's growing international voice since both share a polycentric world vision. Instead, China and Russia regard America's foreign and security policies as being hostile to their vital interests, viewing its encouragement of freedom and democracy, for example, as a selective attempt to undermine countries like theirs that USA feels may challenge it in the future.

Russia's enhanced assertiveness in recent years, despite dipping to the third slot in the ranking of major world powers, is evidenced by its swift and decisive action in Georgia in 2008, its consistent stance as regards President Bashar Al-Assad, the crisis in Syria since 2011, and its handling of the Ukrainian crisis since late 2013. It is revealing that despite USA currently being the pre-eminent power,

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possessing a dominating global reach, it has not been able to dictate events and outcomes and been largely unsuccessful in bringing developments in Afghanistan, Iraq, Libya, Syria and elsewhere to a satisfactory conclusion. Russia, on the other hand, while essentially a major regional power and despite its limitations in terms of economic clout, has a far superior record. It has seen to it that Abkhazia and South Ossetia have remained independent of Georgia, that a regime friendly to it has continued in power in Syria, and has comfortably re-absorbed Crimea while seeing that developments in Ukraine are kept under control in a way that does not harm Russia's national interests.

Despite its sanctions on Russia over Ukraine, USA realizes that several security crises - Afghanistan, Iran, Syria, Ukraine - are better handled with Russia's cooperation as well as that of China. Issue-based cooperation between Russia and the West has delivered tangible, positive results. For example, Putin's interceding with Assad over the elimination and removal of chemical weapons from Syria, helped save face for Obama and averted a military intervention by USA in Syria in September 2013. Russia also contributed to the P5+1/E3+3 agreement with Iran on curbing the Iranian nuclear weapons programme. The Minsk-2 agreement on Ukraine too has been an outcome of the cooperation between Russia and other Normandy Group members.

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USA and China - the Rising Challenger

China's economic growth over the last few decades has enabled it to expand its political footprint, enhance its military clout and secure massive foreign investments. It has also become more influential, ambitious, combative, confident and overbearing.

USA-China ties have emerged as the world's most important geopolitical relationship during the first half of the 21st century. USA's private sector trade and investment in China has played an extremely important contributory role in enabling China's rise. Both countries are highly interdependent due to their strong trade and investment ties. Nevertheless, there are also serious bilateral concerns on the financial and economic front.

Thus, USA has in the past projected that the value of the Chinese currency was being manipulated to benefit Chinese exporters. In turn China, which is the largest public holder of USA debt, has demanded that USA ensure the safety of China's dollar assets.

Recent years have seen more stress points emerging in the Asia-Pacific region and a reduction in trust between USA and China. While they do not share a border and have no territorial dispute, China views USA's defence strategy in the Pacific as provocative, if not threatening. It is concerned by USA's re-balancing strategy and has interpreted it as reflecting a desire to contain China. Besides USA backing Japan, Vietnam, and the Philippines over their territorial

disputes with China in the East, and South China Seas, there are major differences between the two countries over USA's stance on human rights, Taiwan, Tibet, etc. Sino-US rivalry can also be seen in the competitive effort by both sides to take charge of the Asia-Pacific trade architecture in the face of the continuing impasse over the WTO Doha Development Agenda.

The Growing China-Russia Partnership

China-Russia relations have improved radically in this Century. Their border dispute has been comprehensively settled and an elaborate institutionalized mechanism for regular multi-level exchanges is in place. China is one of Russia's

top trading partners and investors. In 2012, Putin described China's economic growth as "by no means a threat, but a challenge that carries colossal potential for business cooperation" and offers a "chance to catch the Chinese wind in the sails of our economy". Still, Russia is acutely conscious of potential complications from rising Chinese immigration into its under-populated Siberian and Far East regions, Russian defence Intellectual Property Rights (IPR) violations by China, and the lop-sided nature of Russia-China bilateral trade. Russia is also aware that China could again become an adversary in changed circumstances and bears this in mind while selling sophisticated weapons to it.

China does not want to go as far as having an alliance with Russia or come closer to it at the cost of harming its complex ties with USA, which have emerged as the most important geopolitical relationship at this stage of the 21st Century.

A closer relationship with Russia secures a peaceful northern border for China, enabling it to better focus on its security challenges from USA and its allies on its Pacific Ocean front; it also offers Russia a protected rear while it its being confronted by NATO. Yet, China does

on its Pacific Ocean front; it also offers Russia a protected rear while it its being confronted by NATO. Yet, China does not want to go as far as having an alliance with Russia or come closer to it at the cost of harming its complex ties with USA, which have emerged as the most important geopolitical relationship at this stage of the 21st Century.

The India-China Relationship

Despite differences with it, India must be alert and safeguard its interests if China continues, in parallel, to project an unhelpful attitude towards it and seeks to keep India tied down in South Asia. Thus, even if one does not focus on the presence of Chinese troops over the past few years in disputed border areas claimed by India, China has developed a habit of challenging Indian efforts to upgrade its grossly inadequate border infrastructure. It also regularly finds new ways to irritate India as regards the status of the Indian state of Arunachal Pradesh, despite being aware of India's strong sensitivities in the matter. If our ties are to be properly managed, China needs to display greater consideration for India's core interests and concerns. China's rising presence in India's neighbourhood, both in South Asia and its growing

maritime ambitions in the Indian Ocean, are a cause of unease especially as its intentions remain unclear. Moreover, while provision of economic aid can still be understood, China's supply of arms to India's neighbours is worrying. Of particular concern is China's persistent strengthening of Pakistan's defence capabilities, which has major strategic implications for India.

Both China's "string of pearls" strategy,re-packaged now as a "Maritime Silk Route", and the China-Pakistan Economic Corridor (CPEC) are problematic. China needs to provide far more specifics about what underlies its Maritime Silk Route proposal. The China-Pakistan Economic Corridor conveniently glosses over the fact that it unacceptably traverses India's Shaksgam Valley (illegally ceded by Pakistan to China) and passes through the Khunjerab Pass into the Pakistan-occupied part of

The a-Pakistan Economic Corridor conveniently glosses over the fact that it unacceptably Shaksgam traverses India's Valley (illegally ceded by Pakistan to China) and passes through the Khunjerab Pass.

the Indian State of Jammu & Kashmir before heading into Pakistan and onwards to the port of Gwadar.

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China's stance against UN Security Council (UNSC) expansion in both permanent and non-permanent categories, seeking to preserve its status as the sole Asian permanent member on the UNSC, is another point of divergence. There has been a consistent lack of support by China for India's aspirations to be a permanent member of the UNSC.

China is constructing hydropower dams on the Brahmaputra River, without adequately responding to India's serious concerns about their impact on downstream flood management, agriculture, fishing and ecology, water flows and fresh water availability in north-eastern India. China has deliberately stood in the way of India's membership of the Nuclear Suppliers Group. It has repeatedly blocked the designation of Jaish-e-Mohammed head, Masood Azhar, as a terrorist under the 1267 Sanctions Committee of the UNSC.

In contrast, India has been careful to seek balanced and productive relations with China. It has also not directly injected itself into China's ongoing maritime territorial disputes with its neighbours in the East China Sea and South China Sea. Instead, India has largely limited itself to affirming the importance of safeguarding maritime security, and ensuring freedom of navigation and over-flight throughout the disputed areas.

Despite many Chinese irritants, India should not let differences stand in the way of trying to enhance its ties with China, including via promoting bilateral trade, economic, cultural and other linkages. India should diligently work with China to get their common border defined and settled. India will itself have to manage and resolve its border dispute with China as no country can do so on its behalf. China has shown little interest in working towards exchanging maps identifying the Line of Actual Control (LAC) between it and India. India should continue to press China to progress the peaceful resolution of their territorial dispute.

Understanding a Trump Presidency

Against this backdrop, a Trump Presidency has opened fresh vistas for strategic engagement amongst major world powers and is already throwing up new challenges and opportunities. India needs to be sensitive to changing equations amongst the major world powers, and ensure through pragmatic and nimble

diplomacy, that its own security is positively benefited by such developments.

Trump can be expected to try and implement many of his ideas enunciated during the Presidential election campaign, perhaps even a few of the more radical ones. He will resolutely advance his notions as to where USA's national interests lie, especially in foreign trade and economic affairs, having repeatedly voiced protectionist promises and an 'America First' policy during campaigning. Trump appears to approach decision-making and deal-cutting instinctively, and will not hesitate to take on the liberal, Inside-the-Washington-Beltway think-tanks, or the international media while doing so.

Trump Presidency has opened fresh vistas for strategic engagement amongst major world powers and is already throwing up new challenges and opportunities.

Domestically, Trump is set, *inter alia*, to focus on rebuilding urban infrastructure, seriously overhauling the tax code, pushing out illegal immigrants from USA, and repealing and replacing Obama care.

Despite major uncertainties, since there is no Trump service with the Government, or Armed Forces to draw upon, there is one certainty underlying Trump's foreign policy, which is that nothing should be regarded as sacrosanct. Indeed, in the context of 'America First', many policy options may get revisited and, if needed, changed.

Still, at least three fundamental propositions characterize Trump's foreign policy approach: (a) USA is far too deeply involved in tackling the problems of the world and must give first priority to addressing its own concerns; (b) Existing trade agreements are lop-sided and detrimental to USA, and they need to renegotiate North American Free Trade Agreement (NAFTA); and (c) Illegal immigrants are harmful to USA and a radically different approach is needed

to make them exit the country and to discourage fresh arrivals. Ideas in the focus of a Trump administration include: (i) Greater burden sharing by European members of NATO; (ii) Japan and ROK (Republic of Korea) doing likewise and giving thought to developing their own nuclear weapons; (iii) USA rethinking its 'One China' policy and threatening imposition of anti-dumping and countervailing duties to prod China to balance its huge trade deficit with USA; (iv) USA reforming the UN and revisiting its adherence to the Paris Agreement on Climate Change; and (v) USA shifting its Embassy in Israel from Tel Aviv to Jerusalem.

Trump and India-USA Relations

Trump has voiced considerable goodwill towards India during his election campaign. He can be expected to build upon Obama's robust backing of India, relations with which the latter described as a "defining partnership" of the 21st Century. Moreover, India has generally found it easier to work and deal with the Republicans, who will now occupy not only the White House but also command a majority in both Houses of the US Congress.

There are concerns that India's IT exports to USA may get affected in case the H1B visa policy is reviewed with the aim of securing more jobs for Americans. However, in overall terms, a Trump Presidency would almost certainly further boost India-USA relations, which are already characterized by a growing convergence of interests and concerns. A further consolidation of India's broad-based, bi-partisan and non-controversial ties with USA can be expected under Trump.

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Trump and Putin: Turning the Page

For Trump there is no automaticity about treating Russia as USA's primary adversary, as Obama had been doing. He is instead looking-out for a new and more far-sighted relationship with Russia. Trump does not want to simultaneously pick a fight with both Russia and China, which would be foolish. His priority would be to try and bring back ties with Russia to a more even keel.

However, Trump is unlikely to quickly withdraw sanctions on Russia introduced in response to developments in Ukraine in 2013. Yet, he would be open to seriously considering doing so if he can cut a grand bargain with Russia that, *inter alia*, matches his expectations for nuclear weapons reduction, addresses cooperation on Syria/Iraq to activate a common front against the Islamic State, and incorporates confidence building measures on core European security issues. The challenge before Trump in making a deal for improving ties with Russia is that it will generate controversy, in USA and within the EU (European Union). NATO itself may get strained if Trump adopts a Russia line that lacks European endorsement and inadequately address such concerns as Ukraine and the Crimea and the alleged Russian threat to the Baltic states.

Looking Ahead: India-USA-Russia-China

India's ties with Russia and USA are not a zero-sum game and it must develop strong strategic linkages with both. India's special and privileged strategic partnership with Russia must continue. India is clear that its growing engagement with USA, and indeed with a number of major countries, would not be at the cost of its deep-rooted friendship with Russia. Any dilution of it would weaken a vital building block of India's foreign policy and negatively impact its security scenario by drawing Russia even closer to China, while providing an opening to Pakistan. Equally, India must consolidate and boost its ties with the US. The freeze in USA-Russia relations that developed during the latter Obama years is not in India's interest. Western sanctions seeking to punish Russia over Ukraine have pushed Russia towards China at a time when China too was deeply interested in promoting closer linkages with Russia. Obama's antagonism towards Russia and aversion for Putin has aggravated matters. Trump is astute enough to appreciate that a more cozy Russia-China

India's Extended Neighbourhood

partnership should have been of greater concern to USA, against whom it may well get directed. It would also cause unease for India which, in turn, must nudge USA/EU and Russia back towards a more normal relationship. Improved Russia-USA ties meet India's interest and it is hoped that Trump, as President, will re-engage and promote common interests with Russia and bring back a greater normalcy to their bilateral ties.

In conclusion, India's security and foreign policy concerns must be viewed through the prism of this evolving geopolitical landscape and the implications of the new Trump Presidency. While India may not currently be in a position to provide significant geopolitical leadership, it is sufficiently muscular not to have to be a camp follower or regional balancing entity for others. India must maintain strong relations with USA and Russia as it pursues greater economic well-being. Given its overriding stress on all-round economic growth, India must partner all countries prepared to sincerely contribute to its economic development. It should not antagonize China by its actions, which should be sensitive yet clear, leaving no scope for misunderstandings. India's interests also lie in drawing closer in the Asia-Pacific to countries like Australia, Indonesia, Japan, Mongolia, Republic of Korea and Vietnam. Its multi directional foreign policy and security strategy must generate the developmental space it sorely needs. Seeking friendship with all and projecting animosity towards none must guide India for the foreseeable future.

In conclusion, India's security and foreign policy concerns must be viewed through the prism of this evolving geopolitical landscape and the implications of the new Trump Presidency. While India may not currently be in a position to provide significant geopolitical leadership, it is sufficiently muscular not to have to be a camp follower or regional balancing entity for others.

Section III

Conflict Spectrum

Collusive and Hybrid Threats in the Indian Context

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

Nature of Conflict and Hybrid Warfare

♦ he nature of conflict remains dynamic with multiple forms and explanations. 'Unconventional Warfare', is generally referred to as opposite of the conventional; employing clandestine means aimed at acquiescence and capitulation. Then there is 'Asymmetric Warfare', that involves strategies and tactics of 'Unconventional Warfare'. The term Asymmetric Warfare, is frequently used also to describe 'Guerrilla Warfare', Insurgency, Terrorism and countering the latter two. For those who doubt terrorism as a strategy, Colin Gray, notes, "the (Provisional) IRA has bombed and shot its political wing, Sinn Fein, into government in Northern Ireland. [and] Jewish terrorists bombed and shot the state of Israel into existence, as they rendered Britain's mandate over Palestine unsustainably costly."

The concept of 'Unrestricted Warfare' defined by Qiao Liang and Wang Xiangsui, two PLA Colonels, recommend multiple means to conquer enemy: 'military means' – atomic, conventional, biochemical, ecological, space, electronic, Guerrilla and terrorism; 'trans-military means' – diplomatic, networks, intelligence, psychological, smuggling, drugs, virtual, and; 'non-military means' - financial, trade, resources, economic aid, regulatory, sanctions, media, and ideological. Western strategists responded to this concept with 'Hybrid Warfare' that essentially blends - 'Conventional Warfare', 'Irregular Warfare', 'Cyber Warfare' and 'Electronic Warfare', with 'Irregular Warfare' covering all other means mentioned in Unrestricted Warfare. Hybrid Warfare is as old as warfare itself, albeit, it is the preferred form of warfare now, having added more means and technology having empowered it more.

'Hybrid Warfare' that essentially blends 'Conventional Warfare', Warfare', **Irregular** 'Cyber Warfare' and 'Electronic Warfare', with **Trregular** Warfare' covering other means mentioned in Unrestricted Warfare.

Collusively in Indian Context

Collusive threat to India emanates from the China-Pakistan nexus, with their strategic aims coalescing. Pakistan wants to capture J&K and balkanize India as revenge for the loss of East Pakistan. China is in illegal possession of 5180 sq kms of Shaksgam and 38,000 sq kms of Aksai Chin, and eyes more including 90,000 sq kms of Arunachal Pradesh. China wants a 'Multi-Polar World but China-centric Uni-Polar Asia. Hence, China wants to restrict India to within South Asia. India feels there is adequate space for both India and China to grow economically, but China goes strictly by what Zbiginew Brezinsky, wrote in his book 'The Grand Chess Board' in 1997 - "China and India are destined by geography to be rivals. With venerable culture and vast population, are likely to compete with each other for resources and influence". The potency of the China-Pakistan collusivity is more because India has an adverse strategic asymmetry vis-à-vis the China-Pakistan; considering the four broad divisions of conflict (nuclear, conventional, sub-conventional

[®] Lt Gen PC Katoch, PVSM, UYSM, AVSM,SC (Retd) has over 1040 published articles on international affairs, geopolitics, military-security, technical and topical issues. He has presented papers abroad, and has authored two books on Special Forces and NCW, and is presently doing research on Hybrid Warfare.

Conflict Spectrum

and cyberspace), China has full spectrum capability, India and Pakistan are still developing cyber warfare capabilities, but while China and Pakistan have advanced sub-conventional capabilities, India is lagging behind having not developed the pro-active component for employment at strategic level. Besides, China has invested heavily in force development (cyber, information and electromagnetic warfare included) plus what it terms as 'Assassin's Mace Weapons', and Pakistan's collusivity with China can make many of these technologies accessible to Pakistan.

China-Pakistan Nexus

The China-Pakistan nexus dates back to 1960s when Chou-en-Lai suggested to Ayub Khan, that Pakistan should prepare for prolonged conflict with India instead of short - term wars. He advised Pakistan to raise a Militia Force to act "behind enemy (Indian) lines". In 1963, when Pakistan illegally ceded Shaksgam Valley to China, began the massive military, nuclear, missile knowhow assistance from China to Pakistan. In 1966, when a Pakistani military delegation visited Beijing, Chou en Lai, while discussing India raised his clenched fist and said, "This is capable of delivering a forceful blow, but if you cut off one finger, the fist loses its power, not by one-fifth, but by fifty percent. If you wipe out a couple of hundred thousand of the enemy spread over a long front, its impact is not as great as wiping out an entire battalion or a brigade – the enemy's morale is dealt a devastating blow. We know this from practical experience." China under Deng Xiaoping proliferated nuclear technology to Pakistan and North Korea, based on strategy that if they nuked the

China has full spectrum capability, India and Pakistan are still developing cyber warfare capabilities, but while China and Pakistan have advanced sub-conventional capabilities, India is lagging behind having not developed the pro-active component for employment at strategic level.

West without Chinese fingerprints, it would be good for China. This is scripted in the book 'Nuclear Express: A Political History of the Bomb and its Proliferation', authored by Danny B Stillman & Thomas Reed. China raised hosts of objections when the book appeared but when the authors responded their findings were based on discussions with Chinese nuclear scientists, all objections were withdrawn.

China, Pakistan Sub-Conventional Muscle

During Mao Tse Tung's time, China spawned Maoist movements in Nepal, Burma, Cambodia, Japan and Peru. China was training Taliban in Xinjiang, before US invasion of Afghanistan. When the Royal Bhutan Army routed ULFA from Bhutan, China provided sanctuary to ULFA; providing arms, training, money. Paresh Barua of ULFA was lodged at Ruli, in China, after he was pushed out from Bangladesh. China is providing support and weapons to insurgents in northeast India. Sophisticated weapons and communication equipment are being smuggled into India. In May 2015, Chinese intelligence brought nine militant groups of northeast India under the new umbrella organization 'United National Liberation Front of West, South, East Asia' (UNLFWSEA), jointly headed by the NSCN-K (National Socialist Council of Nagaland – Khaplang) and ULFA (United Liberation Front of Assam). China has supplied assault rifles,

machine guns, anti-tank rockets, QW-1 SAMs, armoured vehicles and missile fitted helicopters to United State Wa Army (USWA) lodged in the Shan Province of Myanmar; USWA controls the 'Golden Triangle' that continues to flood narcotics into our northeastern region.

Pakistan's ISI is linked with some 15 regional and international terrorist organizations including ISIS, Al Qaeda, Taliban, LeT (*Lashkar-e-Taiba*), JeM (*Jaish-e-Mohammed*), LeJ (Lashkar-e-Jhangv), HuM (*Harkat-ul-Mujahideen*), Sipah-e-Sahiba, IM (Indian Mujahideen), SIMI (Students *Islamic Movement* of India), Muslim militant groups in our northeast, PFI (Popular Front of India) etc. Stratfor had warned in 2008 that ISI (Islamic State of Iraq) was forging alliance with Indian Maoists. It was the ISI, that arranged training in IEDs (Improvised Explosive Device) / explosive

Chinese intelligence brought nine militant groups of northeast India under the new umbrella organization 'United National Liberation Front of West, South, East Asia' (UNLFWSEA), jointly headed by the NSCN (K) and ULFA. for Maoists with LTTE (Liberation Tigers of Tamil Eelam). As early as 2005, ammunition with Maoists was found to bear Pakistan Ordnance Factory markings. In 2008, reports also emerged of 500 Maoists having been trained by SIMI. Al Qaeda and ISI in Kerala were behind the establishment of PFI, who though armed and trained are presently dormant. ISI sponsored terrorist attacks have repeatedly targeted India, including attack on Parliament, 26/11 Mumbai terrorist attacks, during 2016 at the Pathankot IAF airbase, and Uri besides many others. The so-called non-state actors in Pakistan enjoy the protective umbrella of the ISI. Radical terrorist-mullahs like Hafiz Saeed and Masood Azhar are defacto foreign policy spokespersons of Pakistan and act as advisors to the Pakistani military. The AQIS (Al-Qaeda in the Indian Subcontinent) chief South Asia is Pakistani national Asim Umar, who recently gave a call urging Muslims in India to undertake 'lone wolf' attacks, to target senior IPS and IAS officers. China provides tacit support to Pakistan's anti-India jihad policy. China has blatantly and repeated protected Masood Azhar, from being branded terrorist by the UN.

Over the years, the China-Pakistan sub-conventional nexus has fully matured and is giving strategic dividends. China has deep links with Taliban. Pakistan has adequate grip on both Taliban through Sirajuddin Haqqani, chief of Haqqani Network. ISIS (Islamic State in Iraq and Syria) in Af-Pak (Afghanistan-Pakistan) is the creation of Pakistan's ISI and most importantly, Pakistani proxies also are Chinese proxies. The appearance of PLA troops on some Pakistani posts on the LoC does not bode well. Pakistan has helped cover up Chinese genocide on Muslims in Xinjiang. China has trained Uighurs through Pakistan and deployed them in Syria to fight alongside Iraqi government forces. It may not be long before Uighur terrorists are infiltrated into J&K. Recent intelligence inputs indicate the LeT is training 400 Uighurs to undertake terrorist attacks. Mixing regulars with insurgents-terrorists has been Pakistan's form since 1947. In 2012-2013, Pakistan trained 20 Mujahid battalions to operate as and in conjunction with Taliban. The Taliban capture of parts of Kunduz in September 2015 and the present Taliban offensive in Kunduz and other regions in Afghanistan, pressure the Afghan government to acquiesce more to China-Pakistan. Pakistan also links its proxy war in Afghanistan to Kashmir, for which there is no basis.

The China Pakistan Economic Corridor (CPEC)

The CPEC, together with Gwadar as future Chinese SSBN base, has emerged as the new centre of gravity of the China-Pakistan nexus. On 13 November 2016, first convoy of trucks laden with Chinese goods traversing the CPEC Kashgar

in China, arrived at Gwadar, and was further seen off in a Chinese ship from Gwadar to Middle East, and Africa. Gwadar has been developed in record time by a Chinese company with China bearing total development costs. No Pakistani can enter Gwadar Port (guarded by PLA) without valid ID card. Pakistan is responsible for the security of the CPEC, with all costs to be borne by Pakistan. Pakistan has raised additional forces, for specifically guarding the CPEC, with major portion of this force deployed in Baluchistan. What China would never admit is that the CPEC is China's Strategic Highway to the Indian Ocean. China keeps harping for India to join the CPEC but on the question of land access for India to Afghanistan and Central Asia, responds that CPEC is only bilateral arrangement with Pakistan.

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China has a history of creating 'depth' to whatever she considers vital for her in strategic terms must be acknowledged. Immediately, on ousting the Kuomintang regime, Mao Tse Tung announced, "Tibet is the palm of China and Ladakh, Nepal, Sikkim, Bhutan and NEFA (North-East Frontier Agency) are its fingers". China annexed Tibet and Xinjiang and Inner Mongolia were captured to give buffer to the mainland. China captured 38,000 sq kms of Aksai Chin to give depth to its Western Highway. Going by the same analogy, what would be the Chinese strategy for providing 'depth' to the CPEC running north-south through Pakistan which itself is obsessed about strategic depth. Moreover, the CPEC is running through Gilgit-Baltistan that is afflicted with public dissatisfaction and shifting it west is not possible because of the highly volatile FATA (Federally Administered Tribal Areas) region. Besides, most of the CPEC can't avoid Baluchistan where insurgency simmers because of Pakistani genocide.

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Above is the very reason why Pakistan's proxy on both India and Afghanistan has aggravated post PLA's strategic lodgment in Gilgit-Baltistan and development of the CPEC. Pakistani objective of carving out more Afghan territory as strategic depth (implying influence at sub-conventional level) is in sync with China's strategic designs. Pakistan's growing hostility towards India suits China similarly. Playing the 'victim of terror' card too is essential for Pakistan since it evokes sympathy and helps deflects from the proxy wars waged on Afghanistan and India; directly by Pakistan and indirectly by China. Terror attacks in Baluchistan suits both China and Pakistani for subduing Baluch population and attempts to disrupt the CPEC. The CPEC appears to have become the basis for exporting more terror.

Pakistan's proxy war on both India and Afghanistan has aggravated post PLA's strategic lodgment in Gilgit-Baltistan and development of the CPEC.

Manifestation of Threat

Collusive and hybrid threats (both overt and covert) from China and Pakistan span the entire spectrum of conflict. Without direct military involvement, these translate into heightened terror attacks pan India for: exploiting our fault-lines; aimed at creating communal unrest; targeting important installations including shore-based and off-shore, and; activating regions that are comparatively peaceful. Actually all this has been ongoing. With designs on Arunachal, China would aim to destabilize our northeast using the UNLFWSEA (United National Liberation Front of Western South East Asia) and Pak-linked Muslim terrorist organizations. Information operations are aimed to build world opinion in favour of Pakistan and against India.

Considerable Chinese cyber warfare capability shared with Pakistan, may target India's critical networks; command and control systems, strategic forces assets, air defence, and civil support structures like the railways, civil aviation, power grids, banking sector etc. Mix of covert cyber and electromagnetic attack can be even more deadly. In its recent military reorganization, China has combined electronic warfare, cyber warfare and space warfare under the Strategic Support Force, in addition to intelligence and technical reconnaissance. China has helped Pakistan miniaturize her nukes and will provide her export version of her armed drones. We may witness introduction of shoulder fired air defence weaponry and even CBRN (Chemical, Biological, Radiological Nuclear) attacks in our hinterland through China-Pakistan-based terrorists or their indigenous proxies where it may be difficult to nail the origin, or simply denied by China-backed Pakistan. In October 2016, Jalil Abbas Jilani, Pakistan's ambassador to US brazenly lied to Americans that Pakistan is targeting all terrorists without discrimination; despite public appearances in Pakistan of UN and US-designated terrorists.

Direct China-Pakistan military collusive threat manifestation would go simultaneous with ongoing above mentioned activities. This may begin with coercive muscle flexing astride our borders with both China and Pakistan, as well as at sea. Military intervention leading to conflict, whatever duration, could be led either by Pakistan or China, or alternatively full-fledged conflict with both. Either China or Pakistan may take advantage of an adverse situation for India brought on by the other. It could also be a collusive design to bring India on its knees and grab maximum territory of whatever the aggressors have been aiming for. In such eventuality, the use of TNWs cannot be ruled out. Some western scholars are of the view that China may use TNWs forcing India to give up territory.

Triggers

The triggers could be flagration of a border incident, a major / CBRN terrorist attack in India or even a situation deliberately created by China or Pakistan or both. There is also possibility of a terrorist organization like LeT, or the AQIS, or even radical Pakistani military officers getting hold of a WMD (Weapon of Mass Destruction) to target India. In September 2014, a group of Pakistani serving and veteran naval officers attempted to gain control of Pakistani Navy frigate PNS 'Zulfiqar' nith the aim of steering it to sea and attack India.

Threat Mitigation

Mitigation from collusive and hybrid China-Pakistan threats must aim to weaken and break the nexus itself. This would need a multifaceted and multi-layered approach synergizing political, diplomatic, economic and military measures; optimizing diplomacy, information operations, military and economics (DIME). The push for recognizing and condemning Pakistan globally for generating terrorism must continue. India would need to grow its, including military capacity rapidly. The Pakistani military by design wages proxy war on both India and Afghanistan. This sandwiches Pakistan in a 'dual front'. Application of deniable sub-conventional pressure, from both sides would perhaps stretch the Pakistani military beyond capabilities given its existing commitments including guarding the CPEC.

Also, India's economic rise and military modernization would draw Pakistan into an equitable arm race her economy can ill-afford. At the same time, India should optimise its diplomacy (incorporating military-diplomacy), keeping in mind

the internal fault-lines and vulnerabilities of China. Through strategic partnerships, India should individually and collectively undertake capacity building to create deterrence against China's aggressive moves and the China-Pakistan

nexus; capacity to reach into mainland China through the five domains of conflict. At the same time our political and economic engagement with China should continue.

Conclusion

By all indications, China is in great hurry to become a 'Great Power', is using and will continue to use Pakistan against India. 53 per cent of China's defence budget allocated towards internal threats indicates internal fault-lines of China. China's second child policy doesn't appear to be taking off with middle-income group finding it too costly to raise second child. The Chinese economy too is showing signs of slowdown. China's military reorganization is slated for completion by 2020, beyond which China may indulge in more adventurism. India must, therefore, go full speed to mitigate collusive and hybrid threats posed by the China-Pakistan nexus.

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China's Strategic Stakes and Growing Footprints in POK: Implications for India and the Region

Professor Kashinath Pandita ®

Prefatory

On October 31, 1947, when Pakistan-backed raiders had entered Kashmir, two officers of the Gilgit Scouts, Major W A Brown and Captain A S Mathieson, and Subedar Major Babar Khan, a relative of the Mir of Hunza, leading a company of Gilgit Scouts staged a *coup* in Gilgit. Major Brown and a number of Poonchi Muslim soldiers who had killed their Sikh colleagues in the 6 Jammu & Kashmir Light Infantry, located at Bunji, 50 kms away from Gilgit, planned the coup under the code name Datta Khel,¹ and forced Brigadier Ghansara Singh, the Governor appointed by the ruler of J&K State, to surrender. He was made a prisoner. Pakistan flag was hoisted in Gilgit and, thereafter, Pakistani regulars and irregulars launched attacks on other towns and cities of the region like Skardu, Dras, Kargil and Leh.² Indian forces repulsed them later on at all places except Skardu.³

A question may be asked, what was the attitude or reaction of the British government to an act of sedition on the part of a British military officer who was put in charge of the Gilgit Scouts, raised jointly by the Maharaja of Jammu and Kashmir and the British Indian government. On learning about Brown's coup in Gilgit, Sir George Cunningham, the Governor of North-West Frontier Province, instructed him to restore order, giving Pakistan de facto control of the region. The 1948 British Gazette made the entry that the King-Emperor awarded the "Most Exalted Order of the British Empire to Brown, Major (acting) William Alexander, Special List (ex-Indian Army)". However, justifying his act of sedition in Gilgit, in his book The Gilgit Rebellion, Major Brown writes, "As a liberal member of the world's paragon of democracy, I considered that the whole of Kashmir, including Gilgit Province, unquestionably go to Pakistan in view of the fact that the population was

With the signing of ceasefire agreement by the two warring countries, under persuasions from the Security Council, at the stroke of midnight on December 31, 1948, the strategic areas of Gilgit and Baltistan (GB) passed into the hands of Pakistan.

predominantly Muslim. Partisan, traitor, revolutionary, I may have been, but that evening my sentiments dictated that if the Maharaja acceded to India, then I would forego all the allegiance to him".⁵

With the signing of ceasefire agreement by the two warring countries, under persuasions from the Security Council, at the stroke of midnight on December 31, 1948, the strategic areas of Gilgit and Baltistan (GB) passed into the hands of Pakistan. From Indian point of view the ceasefire was a temporary measure, but there goes the saying that nothing is more permanent than what is temporary.

Making of Northern Areas

In 1963, Pakistan illegally ceded a part of Hunza-Gilgit called Raskam, and the Shaksgam Valley of Baltistan region to China, pending settlement of a dispute over Kashmir. This ceded area is also known as the Trans-Karakoram Tract.

[@] Prof Kashinath Pandita is the former Director of the Centre of Central Asian Studies, Kashmir University, India.

Pakistan divided occupied territory into the Northern Areas (72,971 km) to its north and the Pakistani State of "Azad Kashmir" (13,297 km) to the east. The nomenclature "Northern Areas", was first used by the United Nations to refer to the northern areas of the princely State of Jammu and Kashmir. Gilgit-Baltistan (GB) has been split into five districts: Gilgit, Baltistan, Diamir, Ghizer and Ghanche. A population of 1.5 million, inhabits a vast area of 72,495 square kilometres. Sparsely populated as the area is, the ethnic groups are varied – Bastes, Vashkuns, Mughals, Kashmiris, Pathans, Ladakhis and Turks, speaking a multiplicity of languages, including Balti, Shina, Brushaski, Khawer, Wakhi, Turki, Tibeti, Pushto and Urdu. On 28 April 1949, an agreement, called 'Karachi Agreement', was signed between the Government of Pakistan and the then Government of "Azad Kashmir" (AK), governing the relations between Pakistan

and AK. It set down the division of powers between the two governments, as well as the All Jammu and Kashmir Muslim Conference. AK (later on AJK) leaders who signed the Karachi Agreement were Mushtaq Ahmed Gurmani, Pakistan's 'Minister without Portfolio', in-charge of the Ministry of Kashmir Affairs, Sardar Muhammad Ibrahim Khan, the president of Azad Kashmir, and Chaudhry Ghulam Abbas, Head of All Jammu and Kashmir Muslim Conference⁷. The Muslim Conference was not formally represented in Gilgit-Baltistan nor was there any signatory from that region to the Karachi Agreement. Through it, Pakistan ceded all control over Gilgit-Baltistan (later on called "Northern Areas") to Pakistan's Ministry of Kashmir Affairs. Obviously, through this act Pakistan wanted to legitimize its rule over Gilgit-Baltistan.⁸

The Karachi Agreement is highly unpopular in Gilgit-Baltistan, because Gilgit-Baltistan was not a party to it even while its fate was being decided upon.⁹ Karachi Agreement remained a secret document and was reported for the first time by Pakistan press, in the context of AJK High Court hearing a petition on the legal status of Gilgit-Baltistan in 1993.

The Karachi Agreement is highly unpopular in Gilgit-Baltistan, because Gilgit-Baltistan was not a party to it even while its fate was being decided upon. Karachi Agreement remained a secret document and was reported for the first time by Pakistan press, in the context of AJK High Court hearing a petition on the legal status of Gilgit-Baltistan in 1993.

Status

What is the status of Gilgit-Baltistan? Gilgit nationalists often say that their region has no political status whatsoever; it is neither independent nor self-governed nor integrated. Its position under the control of Pakistan is undefined.

The territory of present-day GB became a separate administrative unit in Pakistan in 1970 under the name "Northern Areas". It was formed by the amalgamation of the former Gilgit Agency, the Baltistan district and several

small former princely states, the larger of which being Hunza and Nagar.¹⁰ In 2009, it was granted limited autonomy, and renamed Gilgit-Baltistan, via the Self-Governance Order signed by Pakistan president Asif Ali Zardari, which also aimed to empower the people of Gilgit-Baltistan.

However, scholars are of the view that real power rests with the governor, and not chief minister or elected assembly. "In Pakistan-controlled Kashmir, residents see experiment with autonomy as 'illusion', wrote Christian Science Monitor, on 28 November 2011. The 24-year old Major Brown might have seen himself as the "paragon of democracy" but the territory he brought under Pakistan's control hasn't seen any democracy since. In April 1949, the region was dissociated from Pakistan-occupied AJK, re-named as 'The Northern Areas of Pakistan', and put under the direct control of a joint secretary in the Federal Ministry of Kashmir Affairs and Northern Areas Affairs. The Pakistani government has rejected calls from ultra-nationalists and the right wing for

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integration of GB with Pakistan on the ground that it would jeopardise its demands for the whole Kashmir issue to be resolved according to UN resolutions.¹²

Enter China: The KKH

We need not go deep into the fable of Sino-Pak friendship which is essentially grounded in the Maoist axiom, that "enemy's enemy is a friend". Much has been written on that subject, and we shall remain content with some banter, like Chinese Foreign Minister Wang Yi declaring that China and Pakistan are "as close as lips and teeth," owing to their geographical links. China's government has also labeled Pakistan its "irreplaceable all-weather friend." The two countries often boast of their "iron brotherhood." In 2010, Pakistan's then-prime minister, Syed Yousuf Raza Gilani, waxed poetic about the relationship, describing it as "taller than the mountains, deeper than the oceans, stronger than steel, and sweeter than honey," wrote Syndicate of May 26, 2016.

Under the so-called Sino-Pakistan 'boundary agreement' of 1963, Pakistan illegally ceded 5,180 sq km of Shaksgam, territory of the State of Jammu and Kashmir to China. This facilitated China to build the Karakorum Highway providing overland link which is proposed to be turned into Beijing – Gwadar link under China Pakistan Economic Corridor (CPEC).

Pakistan and China jointly began work on Karakorum Highway (KKH) in 1959. Called as Friendship Highway in China, KKH was thrown open to the public in 1979. It has taken a heavy toll of life of the workers to the tune of 800 Pakistanis and 200 Chinese¹³. The route of the KKH traces one of the many paths of the ancient Silk Road. Innumerable hazards in building the highways are recorded by retired Pakistani Brigadier Muhammad Mumtaz Khalid, in his two-volume work, titled 'History of Karakoram Highway'. The highway, connecting GB region to the ancient Silk Road, runs approximately 1,300 km (810 miles) from Kashgar in Xinjiang region of China, to Abbottabad in Pakistan. An extension of the Highway - southwest from Abbottabad, in the form of the N-35 Highway, meets the Grand Trunk Road, N-5, at Hasan Abdal, Pakistan. Owing largely to extreme sensitivity of the Kashmir conflict between India and Pakistan, India finds that the Karakoram Highway has immense strategic and military importance for her, from the point of view of the security of her northern borders, and more so because the Highway runs through the region which India claims to belong to her, by virtue of accession of J&K State to the Indian Union in October 26, 1947.

On 30 June 2006, a memorandum of understanding was signed between the Pakistani National Highway Authority (NHA) and Chinas State-owned Assets Supervision and Administration Commission (SASAC) to rebuild and upgrade the Karakoram Highway to accommodate heavy-laden vehicles and in extreme weather conditions. China and Pakistan have planned to link the Karakoram Highway to the southern port of Gwadar in Balochistan, through the Chinese-aided Gwadar-Dalbandin railway, which extends to Rawalpindi. Much has been written on Pakistan's misrule of GB, denial of political and civil rights of local people and subtle ways in which Pakistan reduced GB to a colony only to achieve her larger political interests. ¹⁴ We will not go into the details of that sordid saga but shall deal only with strategic moves made jointly by Pakistan and China to establish their sway over the region for fulfilling their strategic interests.

Pakistan and China both understand the significance of Siachen Glacier which geographically lies in GB as it adjoins the 225 – km long Wakhan Corridor of Afghanistan. It is the only land connection Pakistan has with China.

Sino-Pak Nexus

Pakistan and China both understand the significance of Siachen Glacier which geographically lies in GB as it adjoins the 225 – km long Wakhan Corridor of Afghanistan. It is the only land connection Pakistan has with China. With the development of the corridor, Central Asia, traditionally an economically closed region owing to its geography and lack of infrastructure will have greater access to the sea and to the global trade network. For Afghanistan and Tajikistan,

both of which have signed transit agreements with Pakistan, it will provide a more economical means of transporting goods, making their export products more competitive globally. For China, meanwhile, the corridor will provide it with direct access to the Indian Ocean, enabling China to project itself strategically into the mineral and oil rich regions of Western Asia and Africa (and beyond). And for Pakistan, the project provides the country not only a third deep-sea port, but also a better connected gateway into China's backyard, giving Pakistan the potential to make good on its free trade agreement with the dragon economy.

Regional Strategy

In purely realist terms, the project makes Pakistan a complicit satellite in China's attempt to break the U.S. encirclement of Asia. Commentators link Gwadar to China's numerous other port facilities and corridors developed in partnership with other nations. This "String of Pearls", looks much like a noose around Southeastern Asia as far as India and the United States are concerned. India in particular has looked on with continued unease at the Pakistan-China corridor, and port, in terms of its effect on the maritime balance of power in the Indian Ocean. Ideally, if regional relations were better, the corridor would be a circuit linking the three economic powerhouses of the region, China, Pakistan, and India (as well as Iran for that matter), integrating the economic systems of South Asia and Central Asia.

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China's Commitments

On April 20, 2015 Pakistan and China signed agreements worth US\$ 28 billion to immediately kick-start 'early harvest' projects under the CPEC. The US\$ 28 billion financing agreements will immediately enter the implementation phase because necessary processes have already been completed. These include: 1000 MW solar power park in Punjab; 870 MW Suki Kanari (Khyber Pukhtunkhwa) hydropower project; 720 MW Karot (AJK) hydropower project; three wind power projects at Thatta of United Energy Pakistan (100MW), Sachal (50MW) and HydroChina (50MW); Chinese government's concessional loans for the second phase upgrading of Karakorum Highway (Havelian to Thakot); Karachi-Lahore Motorway (Multan to Sukkur), Gwadar Port east-bay expressway project and Gwadar international airport; provision of material for tackling climate change; projects in the Gwadar Port region and establishment of China-Pakistan Joint Cotton Biotech Laboratory and China-Pakistan Joint Marine Research Centre. 15

China has invested significantly in Pakistan Occupied Kashmir (PoK), which remains a disputed territory between India and Pakistan, especially in developing the Karakoram Highway, involving several thousand Chinese personnel belonging to the construction corps of the People's Liberation Army (PLA)¹⁶. "But reports from a variety of foreign intelligence sources, Pakistani journalists and Pakistani human rights workers reveal two important new developments in Gilgit-Baltistan: a simmering rebellion against Pakistani rule and the influx of an estimated 7,000 to 11,000 soldiers of the Peoples Liberation Army", wrote the outstanding journalist Selig Harrison in the New York Times of 27 August, 2010.

China's Anti-India Posture

A large section of the CPEC (China Pakistan Economic Corridor) also lies through the areas of GB in PoK, which the Indian Government and also some analysts in India have protested.

China does not entertain any sort of development work in Arunachal Pradesh. Analysts have pointed out that China "has been against Asian Development Bank funds being given to developmental projects in Arunachal Pradesh, which it considers disputed; Beijing has also objected to Japanese funds being utilised for such projects in Arunachal Pradesh,"17. It shows the amount of double standards China maintains as far as the PoK and disputed territories in

Arunachal Pradesh are concerned. China even protests the Indian Prime Minister visiting Arunachal Pradesh, which remains an integral part of India.¹⁸

Some analysts have stated that openly supporting the Silk Route as proposed by China would jeopardise India's sovereign status in some of the territories that China claims to be its own, especially in the Aksai Chin region and in Arunachal Pradesh. India should strengthen and work whole-heartedly in parallel projects that it has launched like that of the "Cotton Route" project along the North South Corridor, as well as Project Mausam, a regional initiative to revive its ancient maritime routes and cultural linkages with countries in the extended neighbourhood. India should stress more on developing the Chabahar port as "in the absence of transit through Pakistan, Iran is India's gateway to Afghanistan, Central Asia, and Russia and beyond, and the Chabahar port is the key element in that". Strengthening Chabahar should act as a strong initiative towards countering a lopsided development process, that might undermine the fragile balance that South Asia hangs on.

India should strengthen and work whole-heartedly in parallel projects that it has launched like that of the "Cotton Route" project along the North South Corridor, as well as Project Mausam, a regional initiative to revive its ancient maritime routes and cultural linkages with countries in the extended neighbourhood.

Such projects need to be strengthened as it would bolster the development activity in the true sense, rather than culminating in resource drainage by a bigger power that would lead to more deprivation and exploitation in the guise of aid and assistance. The July 5 pact, reflects the pressing need for better access via the KKH, calling for Gwadar-Kashgar rail links and a \$44 million fibre-optic cable from the Chinese border to Islamabad. China also has its eyes set on pipelines, seeing the Iran-Pakistan gas pipeline as a reliable source of energy. Many of these infrastructure projects are only possible with the expansion and improvement of the current road to the border. And expansion of the KKH is a challenging prospect, even for China's experienced road builders.

Threat Perceptions

Way back in a revealing article, published in *The New York Times* of 27 August 2010, Selig Harrison, wrote," While the world focuses on the flood-ravaged Indus River valley, a quiet geopolitical crisis is unfolding in the Himalayan borderlands of northern Pakistan, where Islamabad is handing over *de facto* control of the strategic Gilgit-Baltistan region in the northwest corner of disputed Kashmir to China." What are the ultimate intentions of China, in this new and contemporary "Great Game", in a region of the Himalayas where borders of China, Kyrgyzstan, Afghanistan, Pakistan and India meet? China wants a grip on the region to assure unfettered road and rail access to the Gulf through Pakistan. It takes 16 to 25 days for Chinese oil tankers to reach the Gulf. When high-speed rail and road links through GB are completed, China will be able to transport cargo from Eastern China to the new Chinese-built Pakistani naval bases at Gwadar, Pasni and Ormara just east of the Gulf within 48 hours.

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Strategic Perceptions

Here we clearly find that in building the CPEC and contemplated extensions, China is supplementing its 'Necklace of Pearls' strategy, thereby, completing the encirclement of India from sea and from land. Some commentators are of opinion that China has undertaken the CPEC project to ease Indian threat of choking the Straits of Malacca through which three-fourth of China's trade flows out. It will be remembered that before proceeding on his visit to China, Prime Minister Modi had embarked on a hectic visit of strategic islands of Indian Ocean namely Seychelles, Mauritius and Sri Lanka. Then, China has sharply reacted to the Independence Day speech of Prime Minister Modi in which he had

said that India does recognize the struggle of Balochistan, against violation of the rights of Bloch people. The First Post of 29 August 2016, reported with Beijing date line that an influential Chinese think tank has warned India that China will have "to get involved", if any Indian plot disturbs the \$46 billion CPEC, in restive Balochistan". Hu Shisheng, the Director of the Institute of South and Southeast Asian and Oceanian Studies at the China Institute of Contemporary International Relations (CICIR), told IANS, in a freewheeling interview that India's growing military ties with the US and its changed attitude on the disputed South China Sea are ringing alarm bells for China. The latest concern for China is Prime Minister Narendra Modi's speech from the Red Fort, in which he referred to the issues like Kashmir (occupied by Pakistan) and Balochistan. It could be regarded as a watershed moment in India's policy towards Pakistan. Why Chinese scholars are concerned is because this is for the first time India has mentioned it," he added.

Hu said China fears India may use "anti-government" elements in Pakistan's restive Balochistan where Beijing is building the \$46 billion CPEC -- a key to the success of its ambitious One Road One Belt project.

"There is concern that India may take the same approach, which is believed by the Indian side Pakistan is taking, asymmetrically using anti-government factors in Pakistan," Hu said on the expansive and leafy campus of CICIR."If this kind of plot causes damage to the CPEC, China will have to get involved," he said, referring to the alleged involvement of India in backing separatists in Balochistan, GB and Pakistan-occupied Kashmir.

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This interview from a very influential think-tank of China clearly indicates that China is not amiss in preparing defensive-offensive strategy to protect its work force engaged in massive projects connected with CPEC. It is reported that China had deployed 10,000-strong contingent at Khunjarab Pass that leads to Xinjiang when the KKH was under construction. China had apprehensions that India might obstruct the execution of KKH project.

As separatist movement in Balochistan is likely to gain momentum in days to come, China forewarned India that any success of Baloch freedom movement would be attributed to India's machination only. In other words, China, while endorsing Pakistan's accusations of Indian involvement in Baloch uprising, has sounded a warning note to New Delhi that it will intervene just because Baloch uprising disrupts CPEC. This means that China and Pakistan have already decided to react if Baloch nationalist movement succeeds. Islamabad and Beijing both fear India resorting to "non-state actors' theory of Pakistan in Balochistan.

"This will not help Pakistan to become a normal country. And it will also further disturb India-China relations," Hu pointed out. Hu noted the growing defence cooperation between India and the US was also a worrying factor for China. He also referred to US Defense Secretary Ashton Carter's visit to India in April during which both the countries agreed in principle to sign the Logistics Exchange Memorandum of Agreement (LEMOA)." There is renewal of defence and technological cooperation (between India and the US) for another 10 years, enhancing the cooperation under the framework of DTTI (Defence Technology and Trade Initiative)," Hu added."This is an alarming signal to China. It is a concern for China,"

He also said India will have to resist pressure exerted by the US and Japan to join them in countering China. "We also know that the US and Japan, as well as Australia, are very keen on getting India in their camp. They are also luring India by giving high-technology deals and advanced military weapons. It is up to India whether India can resist this kind of temptation," Hu added.

India's involvement in the South China Sea dispute was another irritant in the already strained relationship between India and China, Hu added.

"Our problem is with the US. We can see India is becoming more vocal in issuing joint statements with the US and Japan on the South China Sea," he added.²¹

This report of the *First Post deals*, with geopolitical implications of the CPEC, and endorses our view that the corridor is not meant only to cater to economic needs of China. It is clearly a part of China's policy of encirclement of India. The Immediate impact of CPEC narrative on India is that Indian government has been forced to revisit the security scenario of her borders with China in Ladakh and Arunachal, reinforce her border security management system in Ladakh and the North East. This will be in terms of personnel, strategy, armament, connectivity and overall logistics. But she may need to do more for securing Ladakh border where borders of China and Pakistan converge.

Chinese and Pakistan border troops have for the first time launched joint patrolling of the border connecting Pakistan-occupied Kashmir (PoK) with Xinjiang Province amid reports that over 100 Uighurs have fled the restive region to join the Islamic State (IS).

Presence of a large number of Chinese men in olive green in GB, serving either as workforce for the developmental enterprises or for performing security duties is also meant to prevent clandestine march of Uighur nationalists from joining terrorist training camps in PoK, Pakistan, Eastern Afghanistan or Turkey. Quoting PTI, *The Hindu*, on 22 July 2016, reported that Chinese and Pakistan border troops have for the first time launched joint patrolling of the border connecting Pakistan-occupied Kashmir (PoK) with Xinjiang Province amid reports that over 100 Uighurs have fled the restive region to join the Islamic State (IS).

The Hindu goes on to say that the People's Daily Online published a dozen photos, showing teams of armed troops from both sides conducting foot patrols in a number of areas.

This is the first time China-Pakistan began joint patrols in recent years. Though there was no write-up to provide details of the joint patrolling and what prompted both the countries to launch it, it coincided with reports of over 100 Uighur Sunni Muslims sneaking out of Xinjiang to join the ISIS (*Islamic State of Iraq and Syria*). Xinjiang, the western province of China with significant Uighur Sunni Muslim population has been the home of East Turkistan Islamic Movement (ETIM). Chinese authorities have attributed fundamentalist-terrorist attacks happening in Xinjiang for some time in the past to this movement.

The point is that though China and Pakistan jointly launched patrolling of Xinjiang-PoK border, yet Pakistan is adept in double speak and in all probability ISI is in liaison with the ETIM think-tank based in Germany, Turkey and London. ISI can clandestinely provide logistical support to the ETIM fundamentalists to join hands with Pakistan-based sister outfits like LeT (*Lashkar-e-Taiba*) or JeM (*Jaish-e-Mohammed*) to reinforce armed insurgency in Indian part of Kashmir.

Kashmir Valley leadership including the Hurriyat and even Chief Minister Mehbooba Mufti have been vociferously demanding opening all roads to PoK especially Kargil-Skardu Road. Should that happen, India will find another front opened by Pakistan-China combine in tandem with Kashmir separatists along very sensitive northern frontier?

There are clear hints from Chinese side that Beijing is going to stay in GB for good, and that the condition put in Sino-Pak agreement of 1963 about the status of the disputed territory in Aksai Chin, ceded by Pakistan after the dispute between India and Pakistan is resolved, is mere eyewash.

The *Dawn* of January 8, 2016 reported that Pakistan was mulling to elevate the constitutional status of northern GB region in a bid to provide legal cover to

Kashmir Valley leadership including the Hurriyat and even Chief Minister Mehbooba Mufti have been vociferously demanding opening all roads to PoK especially Kargil-Skardu Road. Should that happen, India will find another front opened by Pakistan-China combine in tandem with Kashmir separatists along very sensitive northern frontier.

the multi-billion-dollar Chinese investment plan. The move could signal a historic shift in the country's position on the future of the wider Kashmir region. The proposal would see the mountainous region mentioned by name for the first time in the country's Constitution, bringing it one step closer to being fully absorbed as an additional province, observes the paper. Will this development in GB impact or not impact India's position in Ladakh, particularly in the light of latest demand of all political parties and groups in the region for union territory status for Ladakh.

What has necessitated Pakistan to jerk for legal cover to GB? The Dawn reveals that a third top government official from Gilgit-Baltistan said the move was in response to concerns raised by Beijing about the CPEC, the \$46 billion infrastructure plan set to link China's western city of Kashgar to the Pakistani port of Gwadar on the Arabian Sea."China cannot afford to invest billions of dollars on a road that passes through a disputed territory claimed both by India and Pakistan," the official, speaking on condition of anonymity, said. By raising this question at this point of time in the history of CPEC, Beijing has killed two birds with one stone. It has legally secured its position and presence in an area which India claims to be its own. Secondly, It has subtly conveyed a message to the world in general and to India in particular that China is in GB for all times to come and not only till infrastructural projects are completed as has been given out earlier. This perception is reinforced by a revelation made by NDTV website in its edition of 22 July 2016.²²It said: Chinese troops will be positioned in Pakistan to protect the 3,000-km-long China-Pakistan Economic Corridor that connects the Gwadar Port in Balochistan to China's Xinjiang region. Besides, Pakistan has raised three independent infantry Brigades and two additional artillery regiments to protect the highway, security agencies have told New Delhi. A Brigade consists of least three regiments, each with about a 1,000 soldiers. Although China's People's Liberation Army or PLA will be positioned to protect the highway, its presence in Pakistan is a cause of concern for India. New Delhi has earlier objected to the presence of Chinese troops in the GB area and a substantial portion of the additional forces being raised in Pakistan and the Chinese PLA are likely to be deployed in that area of PoK.

Whether in the name of security of the CPEC or in the name of frustrating liberation movement of Baloch nationalists, Pakistan and China are, jointly as well as individually, working for massive military build-up in GB and along the entire tract running through Balochistan. Actually they intend to warn India of vulnerability of her position in Kashmir. CPEC has generated joint Sino-Pak threat to the stability and territorial integrity of the Indian State.

Conclusion

China-Pakistan Economic Corridor is the soft nomenclature of a strategy that has implications far beyond what it

conveys in ordinary sense. It is a deadly mix of Leviathan economic package and grandiose military stratagem set off in the bowls of forbidding mountain ranges considered the deadliest of all mountains in the world. China has embarked on this adventure purporting to establish her economic and military paramountcy over the Asian Continent, leaving her closer rival India far behind in the classical "Great Game", in its new avatar. In this Herculean enterprise, China is deftly using an Asian client state that hitherto functioned as the running dog of American capitalism.

CPEC is the lynch pin of the Belt and Road theory, to pin down India to its shrinking shell, and allow her no space for physical, economics and diplomatic limb-stretch. When implemented fully, CPEC will give Pakistan an entirely new shape and identity with Chinese flags fluttering proudly over her mosques and seminaries, that have been churning out cannibals of primitive ages commissioned to destroy human beings and their liberal institutions. Does CPCE carry the seeds of Third World War in its womb? Is the democratic world standing with eyeball to

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eyeball stance with Islamic orthodoxy, immensely patronized by a hegemonic state with roguish aspirations of gabbing lands through whatever means possible? These questions ask for cool and considered analysis.

CPEC is going to deepen Indo-Pak acrimony and prompt Pakistan's "non-state actors" to raise the pitch of Kashmir insurgency, with incremental bids for clandestine infiltration into Indian Territory in Kashmir. Recent Sino-Pak

joint military surveillance of PoK-Xinjiang border is more or less a precursor to their larger field activity. It is morale booster to valley-based insurgency formations. While concluding this study, analysts will have to discuss two important aspects of the subject. One is Sino-Pak combined brutal repression of growing dissatisfaction and unrest among ethno-nationalist forces in Gilgit-Baltistan region, and the second is China's search for military base at any strategic point along her newly found western frontier, say Wakhan corridor or Swat valley of western frontiers of Pukhtunkhwa. These military bases will not be meant only to contain India, that has growing camaraderie with nationalists in Afghanistan (to some extent in Iran as well), but will also be meant to tighten China's grip on enormous Afghan mineral wealth including the largest copper mines in the world for which China has made

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huge investments. The statement of Hu, an influential Chinese think-tank, that China's real concern is not India but the US, has to be understood clearly.

The first phase of the CPEC is likely to be functional soon, and it is expected to be completely ready in three years, giving China direct access to the Indian Ocean and beyond. The corridor is likely to be used, among other things, to transport fuel and petroleum products from the Gulf region into China. It will shorten the route for China's energy imports from the Middle East by about 12,000 kms.

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Implications of Changes in India's Nuclear Neighbourhood

Lieutenant General Arun Kumar Sahni, PVSM, UYSM, SM, VSM (Retd) @

Introduction

The commencement of 2017 witnessed a tumultuous event that once again drew attention to the nuclear dynamics in

the immediate neighbourhood of India. On 09 Jan, Pakistan officially announced that it had successfully tested for the first time a nuclear capable Submarine launched Cruise missile - Babur 3, with an estimated range of 450km. The test was stated to be another step for achieving a credible 'second strike capability' and enhancing its 'credible minimum deterrence'. These tests added volatility to the already simmering 'security cauldron' in the region. Even though, the authenticity of this test is doubtful, with specialists stating that based on its examination, the video released post the firing is morphed. The missiles shown at launch and the one at the target end are different, including the change in colour of the two missiles. The platform from which it has been launched is also not clear for the test seems to be once again from a sea platform, like an earlier one and not a submarine. In addition the claims that it was developed indigenously seemed far fetched, as a first launch success rate is highly improbable. This quest of Pakistan for nuclear wherewithal needs to be carefully monitored for its far reaching impact on the nuclear calculus in South Asia.

Firstly, that Pakistan is pursuing a proactive nuclear strategy and continues in building its 'triad'. Secondly, the test once again confirms that China is continuing to facilitate Pakistan's nuclear programme, in an overt and covert manner, even at the cost of violating the Non Proliferation Treaty.

Irrespective of the observations and anomalies with respect to the recent test, it confirms two key aspects. Firstly, that Pakistan is pursuing a proactive nuclear strategy and continues in building its 'triad'. Secondly, the test once again confirms that China is continuing to facilitate Pakistan's nuclear programme, in an overt and covert manner, even at the cost of violating the Non Proliferation Treaty. The recent reports of Pakistani military personnel having been taken on board China's Type 093 Shang Submarine, which docked in Karachi in April - June 2016 is another indicator of the on going collusive Chinese support.

The nuclear status quo experienced its first major upheaval when Pakistan tested the 60 Km Hatf IX/ Nasr missile, in April 2011. The official stance taken then, by the Pakistan's polity/ ISPR (Inter Service Public Relations) and the strategic community for testing this short range nuclear capable missile, was that it was to achieve 'full spectrum capability'. It was a landmark, as it heralded the likely induction of 'Tactical Nuclear Weapons' (TNWs) in

[®] Lieutenant General Arun Kumar Sahni, PVSM, UYSM, SM, VSM former 'army commander', with varied experience in India and abroad. He is well known for his academic excellence and oratory skills. Has an incisive strategic insight and understanding of internal and external security issues, including emerging international dynamics. Presently, he is mentoring new initiatives in the domain of Cyber and Information Security. An active speaker at seminars and various Institutions on issues of national security, nuclear, cyber, north east dynamics including its security nuances and leadership. He is a keen environmentalist with active participation for its policy formulation with the 'club of rome' and 'naturenomics' forum looking at eastern Himalayas.

the subcontinent. Thus, disrupting the established Indo - Pak strategic deterrence that had stabilised over time, ie, since nuclear testing by the two Nations in 1998. It disrupted the existing equilibrium, more importantly it heralded a major

change in Pakistan's approach towards nuclear weapons. These weapon systems transgressed from being mere political instruments to being a revisionist battlefield weapon system. Pakistan's intentions, to actively use nuclear weapons in its security architecture, in order to counter the widening conventional force level asymmetry with India, was crystal clear. Though there are no firm indicators on the progress for acquisition/ manufacturing of TNWs, it would be fair to assume that it is work in progress.

The spate of testing of ballistic and cruise missiles which can be used for carrying nuclear warheads by Pakistan, in the last few years, raises very important questions for the Indian security establishment. What is the impact of TNWs on strategic deterrence? Is there a need for India to review its Nuclear Policy? Also how to meet the challenge of addressing diametrically opposing nuclear philosophies of our adversarial nuclear neighbours, China and Pakistan? Any reactive response to Pakistan's immaturity will have an impact on critical Indo-China nuclear equation and vice versa.

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To address the issues raised in the preceding paragraph, one will examine and highlight the important tenets of China's nuclear philosophy and the changes that may take place in its approach, due to changed US strategy for a more active role in the Asia - Pacific. Also, take into account the rationale of Pakistan's current course of action with respect to its nuclear strategy. These would be essential inputs for India to review its Nuclear Strategy and initiate changes, if so warranted.

China's Nuclear Philosophy

China is a recognised "Nuclear Weapon State" with a well-developed and diverse inventory of nuclear weapons cum delivery systems. Though shrouded in secrecy, it has in place a robust 'Nuclear Command Authority' for the Communist Party to be able to exercise effective control on the nuclear arsenal.

Nuclear weapons, as per open source inputs, play a very limited role in Chinese military strategy and it reflects in its nuclear strategy. Its policy of 'assured retaliation' has led to it developing a nuclear force that can survive a first strike, and then inflict unacceptable damage on the adversary. The aim being to deter other nuclear armed states from using or threatening to use nuclear weapons against it. Chinese strategists believe that the destructive nature of nuclear weapons is so extreme that their mere existence creates" a latent influence limiting enemy military activity". They believe it is the 'inherent nature' of nuclear weapons that creates their deterrent effect, not the specific numbers of weapons or the 'relative strengths and weaknesses' of opposing nuclear forces¹. This was very unlike the holding of nuclear weapons by the two major powers, USA and Soviet Union ,at the peak of the 'Cold War'. China maintains a small inventory of nuclear weapons and they are

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in a de-mated condition with the delivery vehicles maintained in an un-alerted status in their caves and silos². With the deployment of the road mobile, solid fuelled ICBMs in the mid 2000s, China appeared to have achieved its policy goals, in consonance with the guiding philosophy.

Tenets of China's current nuclear weapons policy, was first stated in its National Defence white paper of 2002, which states: -

"China consistently upholds the policy of no first use of nuclear weapons, and adopts an extremely restrained attitude towards the development of nuclear weapons. China has never participated in any nuclear arms race and never deployed weapons abroad. China's limited nuclear counterattack is entirely for deterrence against possible nuclear attacks by other countries."

Since the end of the Cold War and US policy of 'Rebalancing to the Asia Pacific', USA has emerged as China's adversarial challenge. The US 'Nuclear Posture Review - 2001' looked at strategic superiority for the USA with development of a 'new triad'. Obama's 2010 'Nuclear Posture review', while emphasising strategic stability with China and Russia gave impetus to the development of missile defence and conventional long range strike capabilities. This could pressurise China to expand its force structure for enhanced survivability under the current strategy of 'assured retaliation' or abandon it for a 'first use' posture. Such as 'Launch on Warning' or a 'limited war fighting strategy', envisaging attack on an adversary's nuclear arsenal, or conventional forces⁴. Austin Long and Brendan Green are of the opinion that "China like past rising great powers will not accept decisive nuclear inferiority in perpetuity". In the early stages of the Cold War, similar attempt by the USA to gain superiority led to the erstwhile Soviet Union abandoning a restrained posture and fuelling an arms race. Therefore, China's reaction to these changing dynamics is of importance for India in particular and the region overall? Chinese response will influence international / regional stability, strategic calculations of the other nuclear nations in the region and the likelihood of instigating an arms race.

A critical analysis of the writings and debates by both Chinese and Western analysts, with respect to the ongoing US modernisation of nuclear assets and technological innovations in the conventional weapon systems, do not indicate a major shift in the Chinese nuclear policy. This does not foreclose modernisation and technological upgrades of the present nuclear arsenal that would be underway in China. However, the future deployment by the US of the advanced 'Ballistic Missile Defence' system and the 'Conventional Prompt Global System (CPGS)', in the Asia - Pacific region, could weaken Chinese nuclear deterrent and undermine the robustness of its force levels. Deployment of improved ISR assets and US Long range conventional weapons may entail marginal increase in the Chinese nuclear force levels, especially the ICBMs (Intercontinental Ballistic Missile). It is likely to maintain its strategy of 'assured retaliation', but may alter its implementation,

However, the future deployment by the US of the advanced 'Ballistic Missile Defence' system and the 'Conventional Prompt Global System (CPGS)', in the Asia - Pacific region, could weaken Chinese nuclear deterrent and undermine the robustness of its force levels.

allowing for ambiguity in its 'no first use' policy. Also, correspondingly the size and technical sophistication of its arsenal will change to ensure survivability of its force. The aim is to increase the robustness of its assets, without fuelling an arms race. The technological improvements would also focus towards improvement in the Early Warning, Command and Control, missile penetration, rapid reaction and protection of its forces.

This implies that in the near future there will not be any major impact on the current India – China nuclear equation. Also, the modernisation of the arsenal and China's nuclear holding to meet the US challenge will not impact the existing asymmetry in the nuclear capabilities that is already skewed in China's favour, with respect to India.

Pakistan's Current Nuclear Nuances

There is a lot that has been written and available in the open domain on the induction of TNWs in South Asia and its related nuances. So I shall here only recount the essentials to place my argument in perspective. There is no doubt that Pakistan embarked on the path of nuclearisation to off set the asymmetrical advantage that India enjoys with respect to its conventional military forces. This proved successful as analysts attribute the threat of nuclear escalation as the

restraining factor, in India's limited conventional response during the Kargil conflict and the massive military stand off during operation Parakram. Also, India's response post the high profile terrorist strikes had been restrained, including after the extreme provocation of the Mumbai terrorist attacks. However, enunciation of the 'Pro Active Strategy ' by

India to deal with the stalemate of 2001-2002, is attributed as the stimulus for acquiring TNWs, by Pakistan. A large number of military strategists and decision makers in Pakistan are of the opinion that TNWs complete, so-called full spectrum deterrence and as such, are a necessary counterweight to India's 'proactive military doctrine'⁵.

The justification for the short range missile system is that this is not a weapon for 'war fighting' but is a strategic asset and shall further stabilize nuclear deterrence and credibility in the region. It is to empower Pakistan to respond proportionately at the tactical level. On the issue of pre-emption, and loss of control security of the short range weapon platforms/TNWs requiring deployment closer to the international border/ Line of Control, it is argued that the TNWs will be controlled just like other strategic nuclear forces, maintaining centralized Command and Control at all times under the National Command Authority. It is supposed to create another rung in the escalatory continuum of nuclear deterrence. The argument theoretically sounds good, but the requirement and implementation with respect to the TNWs on ground, is highly debatable?

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India may not find the rationale plausible, but the reality is that its transition to a war fighting weapon system is a possibility and that is of importance. It will impose greater caution on the Indian decision makers for waging war, to desist Pakistan from its anti-India activities.

Implications for Deterrence

Nuclear deterrence is to deter war and in the case of Pakistan, these weapons are to safeguard the integrity of the State. Therefore, the nuclear arsenal and the devastation that it can cause is the 'Sword of Damocles' that a weaker adversary yields, to offset its disadvantages. Deterrence can be achieved by either 'fear of punishment', 'denial of objectives' or 'risk of conflict'. It would be fair to state the Pakistan's policy hinges on risk manipulation, to deter India. Also, as deterrence is a function of 'preservation of the capability to retaliate', Pakistan's pursuit for building a 'triad' is a logical extension of its nuclear policy.

As mentioned earlier in the article the present nuclear profile in the sub-continent has achieved the desired result and deterrence is in place. If that be so, then the question that needs to be examined is what is Pakistan's need for TNWs? And how much is enough? Pakistan justifies its pursuit for TNWs and increased arsenal by drawing parallel to US- Soviet equation of the Cold War. USA did embark on developing and acquiring battlefield nukes in Europe for

near similar reasons, but it is of importance to note that both the superpowers were fighting on the territory of a third country, with low population density. This is not true in our context and the employment, if and when it happens, will be on own territories with dense population, resulting in very heavy collateral damage of men and material. The magnitude of destruction has been substantiated by effect based studies in developed terrain astride the IB. Apropos, the resultant damage, even if TNWs are used against counter force targets, will be of such enormous proportions that it cannot be differentiated to be from a strategic or tactical asset and trigger a nuclear exchange. Therefore, it does not have any positives for enhancing deterrence. On the contrary, inspite of Pakistan's verbal assurances, its

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availability and the likely operationalised footprint creates real concerns of premature release and security of nuclear assets in a Pakistan embroiled in internal strife.

The pursuit for TNWs is not to offset the asymmetry in force levels or enhance deterrence, but to gain impunity from retaliation, while continuing with its nefarious action of supporting fundamentalist attacks and waging 'proxy war' on India. It could also be part of its long standing strategy of promoting 'brinkmanship', or a combination of the two. The overarching intention is to deter war, but more importantly it is to deny - reduce space for conventional conflict option being adopted by India, while it continues its machinations. This pursuit for TNWs, coupled with accretion of strategic assets, or weapon grade fissile material is worrisome, and fraught with danger of triggering an 'arms race' in the sub-continent, that both countries can ill afford.

On the question of impact on nuclear deterrence-there is no doubt that induction of TNWs will negatively impact the existing strategic balance between the neighbours and overall security in the immediate future.

Conclusion

The present India - China strategic picture is quite clear and there is no ambiquity that the 'Nasr' SRBM was a technology demonstrator and indicative of Pakistan's intention to acquire TNWs. Therefore, for regional peace it would be of utmost importance to monitor nuclear activities in Pakistan. Better and advanced ISR systems/assets, and intelligence operations with the help of international community is the need of the hour. Simultaneously, India needs to enhance the credibility of its stated response of NFU and 'massive retaliation'. With respect to deterrence the approach should be that of Thomas Schelling, who writes of manipulations of credibility as a means towards greater deterrence. It would be fair to state that in the sub continent the policy of 'Graduated Deterrence' and 'Limited Nuclear War', as debated during the 'Cold War' and rejected, is not a feasibility, and nor should it be considered as an option.

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Cyber Space, Outer Space and Information Space as the Non-Linear Strategic Frontiers

Lieutenant General Davinder Kumar, PVSM, VSM & Bar (Retd) @

T is widely believed that 21 century warfare will be fought largely in the virtual domain, thus catapulting Information Operations, conducted in cyber space, to a core national capability along with air, land, maritime, space and special operations. In the digital battle field of twenty first century, Technology and Information are the new normal and Cyber space, Outer Space and Information space the new domains.

Information has been recognized as a strategic resource which must be effectively managed to maintain a competitive and evolutionary advantage. Because of its critical role in reducing uncertainty, structuring complexity,

and generating greater situational awareness, any action taken in the information domain can leverage tremendous effects in both the physical and cognitive domains. Denial and manipulation of information are important instruments affecting the hearts and minds of a nation's population, the governance and the availability of critical systems and services and so on. Consequently, information has become critical to both the national sovereignty and military success. It also extends the range of new options for a planner or decision maker. The cyber space and outer space largely reside in the Information space, also called "Infosphere" and together they represent the new strategic frontiersat the heart of a nation's comprehensive combat power.

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Cyber Space

Cyberspace is the proverbial ether within and through which electromagnetic radiation is propagated in connection with the operation and control of mechanical and electronic transmission systems. A precise definition would be that 'Cyber Space is "A global domain, within the information environment, whose distinctive and unique character is framed by the use of electronics and electromagnetic spectrum to create, store, modify, exchange and exploit information via interdependent and inter-connected networks using information communication technologies".

Comments

- Cyberspace is an operating domain just like the atmosphere and space, and it embraces all systems that incorporate software as a key element.
- > It is an operational medium through which "strategic Influence" is conducted.

[®] Lt Gen Davinder Kumar, PVSM, VSM & bar, redred as the Signal Officer-in-Chief of the Indian Army in September, 2006, after rendering 41 years of distinguished service. He was the CEO & Managing Director of Tata Advanced Systems Ltd from September, 2008 till September 2011. He has worked with Indian Space Research Organisation (ISRO), Oil India, and the Planning Commission and has been on the Board of Public and Private sector companies. He has over 400 papers to his credit and has spoken on various national and foreign fora forums.

- The fundamental condition of cyber space is the blending of electronics, information and electro-magnetic energy.
- > It is a medium, in which information can be created and acted on at anytime, anywhere, and by essentially anyone.
- > It is qualitatively different from the land, sea, air, and space domains, yet it both overlaps and continuously operates within all four.
- It also is the only domain in which all instruments of national power (diplomatic, informational, military, and economic) can be concurrently exercised through the manipulation of data and gateways.
- > Cyberspace can be thought of as a "digital commons" analogous to the more familiar maritime, aerial, and exo-atmospheric commons.
- Like the other three commons, continued uninhibited access to cyber space can never be taken for granted as a natural and assured right.
- Unlike, other domains, cyber space is a domain in which the classic constraints of distance, space, time, and investment are reduced, in some cases dramatically, both for ourselves and for potential adversaries.

In the global economy of 21st century, cyber space is perhaps the single most important factor linking all the players together, boosting productivity, opening new markets, and enabling management structures that are flatter yet with a far more extensive reach.

Cyber Space-a Non-Linear Strategic Frontier

Cyberspace has arguably become a Nation's center of gravity not just for military operations, but for all aspects of national activity, to include economic, financial, diplomatic, and other transactions. It has been explicitly recognized as an operating arena at par with the atmosphere and space and begun to be systematically explored as a medium of combat in and of itself.

It provides the capability to launch organized attacks on critical infrastructure and other targets of interest from a distance, on a wide variety of "fronts," and on a global scale, at the speed of light. It is an economical tool for "power projection" and has altered the concept of sovereignty. It is the principal domain

in which a Nation exercises its command, control, communications, and ISR (Intelligence Surveillance Reconnaissance) capabilities, that enable global mobility and rapid long-range strike.

Cyberspace is transforming into a vast, complex universe, and we need new tools to understand it. 2It is dangerously deceptive because it linearises a dynamic process that is highly non-linear. There are several non-linear, dynamic processes in play that are driving the evolution of cyberspace as a complex system. And like many complex systems, it is inherently unpredictable. ³ The Web is shifting power in ways that we could never have imagined'

⁴Cyberspace is 'reinventing warfare'. For the major armies of the world, formed by the conventions of the Industrial Age, twenty-first century conflict seems unfathomably complex and ambiguous, because of the impact of technology and information, which are not only redefining "Warfare", but also the manner of its execution.

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⁵Cyberspace increases transparency. It makes it harder to keep things secret; and this, in turn, makes it harder to govern. Without doubt, cyberspace enables movements to mobilize rapidly in forms that are highly fluid and hard to defeat. The 'landscape of international relations' has been changed irrevocably by the way in which information now flows more freely into the public sphere.

Distinguishing Characteristics of Cyber Space

- Control of cyberspace is a sine qua non for operating effectively in the air, maritime and outer space domains.
- > Denial of unimpeded access to the electromagnetic spectrum through hostile actions, would render satelliteaided munitions useless, disrupt command and control systems, and the ensuing effects could be paralyzing. Accordingly, cyberspace has become an emergent theater of operations that will almost surely be contested in any future conflict. Successful exploitation of this domain through network warfare operations, can allow an opponent to dominate or hold at risk any or all of the global commons. One reason for the imminent and broad based nature of the cyberspace challenge is the low buy-in cost compared to the vastly more complex and expensive systems of air and space warfare. Consequently, smaller adversaries are able to cause "catastrophic cascading effects" through asymmetric operations against stronger and developed nations.
- > Cyberspace warfare is offense dominant wherein organized attacks on critical nodes of the nation's infrastructure can be launched by any party. Such attacks can be conducted both instantaneously and from a safe haven anywhere in the world, with every possibility of achieving high impact and a low likelihood of attribution and, accordingly, of timely and effective retribution.
- Vulnerabilities in cyberspace are open to the entire world and are accessible to anyone with the wherewithal and determination to exploit them. The challenge is to find them and that is one of the prime tasks of cyber espionage,

Any loss of cyberspace dominance would negate gains, to a large extent, in air and space in virtually an instant. Many nations, governments, militaries, private sector, R&D establishments and Academia across the world are, accordingly, involved in

developing technologies for offensive cyber operations. All of this has rendered offensive cyberspace operations an attractive asymmetric option for state, non-state actors and introduced a new but potent threat in the form of "lone wolves". The most sophisticated threat may come from China, which unquestionably is already a peer competitor to both the USA and Russia, with ample financial resources and technological expertise.

State-sponsored cyberspace intrusions are now an established fact and have been largely accepted. These have become a major source for espionage by way of probing attacks, technical and industrial intelligence. In light of its relative newness as a recognized and well-understood medium of combat, detailed and validated concepts of operations for offensive and defensive counter-cyber warfare and cyberspace

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interdiction are, in all probability, been formulated by different entities and integrated as part of the comprehensive national power. The bottom line is the development of full spectrum cyber power with a view to, "dominating the electromagnetic spectrum from wired and unwired networks to radio waves, microwaves, infrared, x-rays, and directed energy." Such activity would require production of appropriate cyber weapons which can be both surgical and mass-based in their intended effects.

Outer Space

⁶In the information age, satellites have become a core element of modern societies and are largely responsible for bringing the nations and individuals together. While satellite-based communications and navigation systems help to improve traffic safety, disaster response, or weather forecasts; satellite based systems help in education, health, earth resource

management and so on. Global climate change and the concomitant increase of water conflicts and energy crises will further enhance the importance of satellites as means of information procurement and disaster response. The advancement of the information society will also create new vulnerabilities. The more societies depend on satellites, the more important it will be to protect them as critical infrastructures. For strategic reasons, the vulnerability of space based systems used for collecting and relaying security-relevant information is increasing. Today, there are two general developments jeopardizing the safe and peaceful use of space: First of all, increasing space pollution, and secondly, the re-emergence of arms dynamics in space.

In a space system, most of the technologies have a dual-use character and civilian satellites are increasingly being used for military purposes. ⁷For modern armed forces, Satellites have become indispensable, especially considering the irresistible advance

of network centric warfare since the war in Afghanistan from 2001 onwards. This involves the integration of information from various military platforms, such as tanks, vessels, or aircraft, into a jointly used information network that optimises decision-making processes and navigation of forces. Satellites thus serve as force multipliers in the present day military operations.

Space based systems and satellites will continue to increase in importance. There is a new sensitivity and urgency emerging about the security of outer space and related techno-military superiority in space. ⁷Military blueprints by major space-faring powers now encapsulate concepts of 'space support' and 'force enhancement' which point to a central role of space assets in facilitating military operations while notions of ⁸'space control', "space power", "space situational awareness' and 'force application' suggest that not only the space has been recognized as the new strategic frontier but its weaponisation is likely in near future. The majority view indicates that space may, in the near future, be a theatre of military operations. ⁹Counter-space capabilities such as missile defence, anti-satellite capabilities and a new class of Directed Energy Weapons (DEWs), thus, assume critical importance for defence and security perceptions. Space faring nations across the world are

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busy in developing technologies and capabilities for physical and electronic hardening; anti-jam technologies, satellite maneuverability, redundancy at system and sub-system levels; quick launch facilities, mini, micro and Nano satellites both for restoration of facilities and as killer satellites.

Cyber Space and Outer Space

Cyber space is relatively a new strategic frontier as compared to outer space. It can, therefore, learn and adapt "good practices" evolved in space capabilities particularly in the realm of joint warfare. The logical approach in this exercise would be towards identifying gaps, shortfalls, and redundancies in existing offensive and defensive capabilities. Also, parallels between space and cyberspace, as domains of offensive and defensive activity, can be used for developing and validating cyberspace concepts of operations, tactics, techniques and procedures. ¹⁰For example:-

- Both domains, at least today, are principally about collecting and transmitting information.
- > Both play pivotal roles in enabling and facilitating lethal combat operations by other force elements.
- ▶ Both, have more to do with the pursuit of functional effects, than with the physical destruction of enemy equities, even though, both can materially aid in the accomplishment of the latter.
- In both domains, operations are conducted remotely by warfighters sitting before consoles and keyboards, not only outside the medium itself, but also in almost every case out of harm's way.
- > Both domains are global rather than regional in their breadth of coverage and operational impact.

- ▶ Both domains overlap—for example, the jamming of a GPS (Global Positioning System) signal to a satelliteaided munition guiding to a target is both a counter space and a cyberwar operation insofar as the desired effect is sought simultaneously in both combat arenas.
- Space provides an overarching capability to view globally and attack with precision from the orbital perspective. Cyberspace provides the capability to conduct combat on a global scale simultaneously on a virtually infinite number of fronts.

Information Space

¹¹The free flow of information within and between nation states is essential to business, international relations, social cohesion and to a military force's ability to fight. We live in a highly connected world, but it doesn't take much to tip over into instability or even chaos. The experience of recent conflicts, globally, one can easily conclude that the information is one of the most important tools in the hands of the military decision-makers. ¹²Information is a strategic resource vital to national security. Military operations today, are very intensely dependent on information and information systems both for effect based operations and integration of different components of national comprehensive power. Information is equally important in the planning and execution of operations at operational and tactical levels. ¹³Today's way of fighting wars has changed, significantly influenced by the technological revolution in gathering, storing, analysing and dissemination of information. The speed, accuracy and timeliness of information are at the core of the concept of information operations. It is imperative that military and civilian leaders understand the true value of "information management" and "information space" and the absolute necessity of achieving information superiority in a conflict.

Today's way of fighting wars has changed, significantly influenced by the technological revolution in gathering, storing, analysing and dissemination of information. The speed, accuracy and timeliness of information are at the core of the concept of information operations. It is imperative that military and civilian leaders understand the true value of "information management" and "information space".

"Information Space is a sum of individuals, organizations and systems that can collect, process, distribute or act on information". Information management is about quick processing of the raw data and presentation of useful and corroborated information at correct time, in relevant format and at the right place. People and automated systems observe, orient, decide and act on the information, in the information space which is the main area of decision making.

14 Lead in "competitive decision cycle" is the essence of Information Dominance. Superiority in competitive decision cycles requires one side to understand what is happening and act faster than the other. Simply stated, it is the ability to "operate inside an adversary's Observation-Orientation-Decision-Action (OODA) loops or get inside his mind-time-space to penetrate his moral-mental-physical being in order to isolate him from his allies, pull him apart and destroy his will to resist". This is precisely the principle underlying the Revolution in Military Affairs.

Information superiority is essential to achieve almost all joint combat capabilities of today's modern battlefield. By nature it is a relative concept and is transient. It is created and maintained by

By nature it is a relative concept and is transient. It is created and maintained by conducting information operations. It provides a competitive advantage only when it is effectively translated into superior knowledge to achieve "decision superiority", better decisions, adopted and implemented faster than the opponent can act, or in non-combat situation, decisions taken at a pace that allows forces to shape the situation or react to changes and achieve their mission.

Information Space exists within each of the four domains: sea, land, air and space and affects the ability to perform military operations in three dimensions - physical, information and cognitive. Accordingly, Information/Cyber space has been recognized as the Fifth domain of warfare. ¹⁵Seeing the exponential penetration of Information and Communication

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Technologies, and Media and their capabilities to influence and penetrate human mind, the day is not far when "Human Mind" will be the sixth and perhaps the most potent domain of warfare.

War in the sixth domain would be about controlling the human mind, either by shaping emotional and cognitive responses, or by outright exploitation of man-machine technology. It is, in a sense, *coercive persuasion through internal and external stimuli*.

Information operations conducted in the cyber space and the instant global reach provided by the outer space would be at the heart of this "Neuro Warfare". It is high time that we deploy adequate resources both in development of and protection from such operations and enhance our information warfare capabilities and undertake techno-military orientation of our space programmes. Space, Cyber and Infosphere are the emerging strategic frontiers in the 21st century security scenario. Development of capabilities, to conduct defensive and offensive operations to secure them are an absolute necessity both for human and national security. India needs to work on these in a mission mode and integrate these capabilities to enhance her comprehensive national power relevant to the likely threats and warfare in the present century.

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Section IV

India's Comprehensive National Power

India as a Leading Power - Reality Check

Shri Sanjay Singh, IFS (Retd) @

here has been considerable debate on one of the key aspirations of the Indian foreign policy as articulated in recent times for it"to be a leading power" an aspiration also expressed by many Indians.

This paper seeks to study the concept from the viewpoint of India, both in its contemporary and historical aspects. What are the attributes of a leading power? To what extent does India already possess them? To what extent did it possess them at various defining moments of its history and how did it exercise them? To what end? What were the values it espoused in the process of utilising them? In interacting with its neighbours, in the manner in which it conducted itself on the world stage?

It may be instructive to start with the immediate post-Independence years when India melded itself into a nation state, and set the foundational principles of the values that would determine its future and set its path in the years to come. As one of the first countries to gain independence in the post-colonial world, its freedom struggle imprinted itself deeply, not merely on the Indian people but on the world at large. The state of the Indian economy was parlous, it had little or no industrial base to speak of, all its social indicators pointed firmly to its negligible economic status. But still India led. It led the fight against colonialism and apartheid, in ending hostilities in Korea and in Indo-China, and subsequently in founding and

As one of the first countries to gain independence in the post-colonial world, its freedom struggle imprinted itself deeply, not merely on the Indian people but on the world at large.

shaping the Non-Aligned Movement, led by the vision, the conviction and the charisma of Jawahar Lal Nehru. India was a leading power in those years, based on the strength of our values and solidarity with other underdeveloped Asian and African countries, forged through the years of struggle for Independence, and the inequities of the prevailing world economic order.

The 60s saw India looking inwards, following the war with China in 1962 and with Pakistan in 1965. It was a time to focus on its own internal problems, to pay more attention to self-sufficiency in food, and the requirements of its evergrowing population and the poorest among them. It was the right thing to do at that time based on the understanding that foreign policy activism was not an end in itself but a means to an end - that of improving the lot of the Indian people, lifting their standards of living in all respects and ensuring that Indian economic growth delivered its benefits to those who needed it the most. On the domestic political front, it was a time of change and consolidation.

Events in the then East Pakistan brought this period of lying low on the world stage to an end. 1971 saw India taking in 10 million refugees and standing up for human rights at a time when no other country in the world was prepared to do so or even acknowledge that gross human rights violations were taking place on a scale unprecedented

[@] Shri Sanjay Singh, IFS (Retd) served in Indian Missions in Mexico, Germany, Ghana and France and in the Ministry of External Affairs, New Delhi. He was India's Consul General in Ho Chi Minh City and Deputy Chief of Mission in Paris. He held charge in the Ministry as Joint Secretary and was Additional Secretary (Gulf). He was India's Ambassador to Iran. He was also Secretary (East) in the Ministry of External Affairs and retired in April 2013.

India's Comprehensive National Power

since the second world war. It was India that took on the mantle of leadership in trying to convince the world of the Bangladesh cause, and when it failed to do so, to go it alone, with the power of the Soviet veto behind it, and to redraw the world map, bringing Bangladesh into existence. A critical juncture when all parts of the machinery of the Indian state came together under the leadership of Indira Gandhi and acted in co-ordination towards a common objective, guided by its own values and principles.

There was another period of relative lull till external circumstances, combined with rapid deterioration in its economic fundamentals pushed India into radical economic reform. At the unipolar moment when the Cold War came

to an end and events in India's neighbourhood and the Middle East set a host of other factors in motion, India undertook economic liberalisation. In the process, it saw the beginnings of a transformation not only in its economic direction but also in its foreign policy options, much of it guided by economic pull and push factors and the phenomenon of globalisation.

The freedom struggle had melded a renewed Indian nation and the past seven decades since independence, have witnessed an enormous transformation of the Indian economy, and in the growth of its comprehensive national power, decade after decade, unsteady at times but always forward. The past two decades in

The past two decades in particular have seen a signal transformation in how India perceives itself and how the world perceives India.

particular have seen a signal transformation in how India perceives itself and how the world perceives India. Pokhran 2, Brand India' emerging on the economic front following the leading role played by the Indian I.T. industry in dealing with the Y2K (also referred as Year 2000 problem) issue at the turn of the century, economic reforms leading to accelerating rates of economic growth and significant improvements in India's social indicators have led to a transformation in the lives of vast numbers of Indians and in India's comprehensive national strength. The generations of Indians born a little before and post economic 1991 have never experienced the days of foreign aid handouts, rationing and long waiting lines for various services including phone connections. They present the face of a more self-confident and aspirational India, willing to shed the diffidence, the caution and the moderation of the past.

While all this has changed, a number of India's other fundamentals underpinning its strength have not, and are not likely to change in certain critical areas – its size, its population, its unique civilisational heritage and ethos, the strength of India's values and its democratic institutions, its judiciary and free press, the rule of law, and respect for human rights. One may add to this, India's steadfastness and determinations in the fight against terrorism, having been one of its first victims. An additional factor, growing in importance is India's overseas Indian population, hardworking, law abiding and abundantly qualified; a force that is increasingly making its presence felt in electoral constituencies the world over and the corridors of power.

India itself has grown at an accelerating pace since the turn of the century and given good governance and a stable global environment, here is no reason why it cannot realise its potential and grow at a rate of 8-10 per cent p.a. Indian armed forces are one of the largest in the world and fully professional, capable of meeting all threats both external and internal and with the capability for power projection, which has been exercised by the nation in a calibrated manner

These are its innate strengths. Taken together, they have all, each in its own way, served to consolidate the leading role that India plays in much of what happens in the sub-continent, the Indian Ocean region, its extended neighbourhood and indeed to some extent on the world stage.

It is self-evident that India has been influencing global trends and outcomes in varying degrees for some time now. It cannot but do so given its size, population, civilisational heritage, economic strength, soft and hard power, and in keeping with the role it has always played, guided by its national ethos and unique sense of self.

With over one sixth of the world's population and the world's fourth largest economy in Purchasing Power Parity (PPP) terms India cannot but be an important player on the world stage. Whether it likes it or not its actions have significant regional and global impact. Its plurality, religious, linguistic and cultural diversity, woven into a harmony over centuries through a process of assimilation, also gives it an intrinsic strength that is unique in bridging differences between races, religions, cultures and faiths.

With over one sixth of the world's population and the world's fourth largest economy in Purchasing Power Parity (PPP) terms India cannot but be an important player on the world stage.

Over the ages, India has assumed a leading role whenever the occasion called for it. At such times its leadership has concentrated the national will to the objective

of promoting its interests and realising its vision in its own unique fashion. This is something that is in its history and perhaps in its people's DNA, though there are some who would question that, that India can bring to the table.

A.L. Basham, the author of the seminal work "The Wonder that was India', has noted in a subsequent article in 1967 as follows: ".....our overall impression is that in no other part of the ancient world were the relations of man and man, and of man and the state, so fair and humane..... To us the most striking feature of ancient Indian civilization is its humanity."

It is thus perhaps not surprising that India has not produced military leaders such as Alexander, Julius Caesar, Attila, Charlemagne, Genghis Khan, Tamerlane, Napoleon, Hitler, Stalin, Mao Zedong or others of their overweening ambition and often destructive power.

Many of these figures are national heroes. India's leaders and national heroes on the other hand belong to an entirely different ilk: Gautam Buddha, Ashoka, Samudragupta, Harsha, Pulakesin, Akbar, Rajendra Chola, Shivaji, Ranjit Singh, Mahatma Gandhi, Jawaharlal Nehru, B.R. Ambedkar..... to name a few.

India has nevertheless proven to be fertile ground for the rise of great and powerful empires. It has been the cradle of great and transformative ideas which have changed the course of history and influenced the trajectory of human progress. They have brought about paradigm shifts in how mankind approached critical issues, fought against colonialism and apartheid, for independence, and for developing countries to stand up for their rights.

Today, the energy displayed by Prime minister Modi has seen the beginnings of a more visible and energetic Indian role in world affairs. In a review of the book 'Modi Doctrine: The Foreign Policy of India's Prime Minister' by Sreeram Chaulia, Talmiz Ahmad lists out the various aspects of 'the Modi Doctrine', a veritable alphabet soup giving it its own imprint to the multi-faceted aspects of India's foreign policy:

The five **S**'s of the BJP's diplomatic strategy — **Samman** (national honour), Samvaad (extensive diplomatic interaction), Samriddhi (shared economic prosperity), and Sanskriti evam Sabhyata (cultural linkages). In Asia, it is guided by three C's: connectivity, commercial ties and cultural bonds, Globally India's strengths are defined by three **D**'s: **democracy, demography** and **demand.** Overall, the diplomatic effort has three attributes, defined by the 3 P's: path-breaking, proactive and pragmatic.

As articulated by Prime Minister Modi in his address to the Combined Commanders Conference in December 2015 "--- across the world, India is seen not just as bright spot of the global economy, it is also seen as an anchor for regional and global peace, security and stability----our responsibilities are no longer confined to our borders and coastlines.---"

Globally India's strengths are defined by three D's: democracy, demography and demand. Overall, the diplomatic effort has three attributes, defined by the 3 P's: path-breaking, proactive and pragmatic.

However, there are sceptics who have laid out the challenges before India can actually assume this role. Ashley J. Tellis, senior associate of the Carnegie Endowment for International Peace, on 'India's great power aspirations' writes that "It will take concerted effort to realise Prime Minister Narendra Modi's vision of transforming India into a leading power. India

India's Comprehensive National Power

stage.

will have to reform its economy, strengthen its state capacity that increase its security and influence in international politics.... and articulate a clear perspective of India's role in Asia and the world without either defensiveness or hubris. ----taking the initiative in developing cooperative solutions that address the most pressing regional and global challenges, and building the military capabilities necessary to protect India and to provide the public goods needed to strengthen peace and security in the Indo-Pacific."

The advice is well founded. There is yet some distance to be travelled if India wishes to play a greater role and be a leading force for stability and growth on a larger and increasingly complex world

India's tradition of strategic restraint, or caution, in the past rests not on the unwillingness of previous Indian leaders to be more assertive in their conduct of foreign policy, but in a clear headed realisation of India's strengths and weaknesses. India does not look to be an active player in many issues that engage other countries because, it chooses not to. It is a calibrated approach that has served India well and has allowed it to use its limited resources on more pressing and important tasks at hand.

India's tradition of strategic restraint, or caution, in the past rests not on the unwillingness of previous Indian leaders to be more assertive in their conduct of foreign policy, but in a clear headed realisation of India's strengths and weaknesses.

There have been times when India chose to lead and there are times when it did not. Discretion and good sense determined when India did what, and should continue to do so. Perhaps there are times when it is better to wait and watch events unfolding, before deciding whether or not to lead. Perhaps being a balancing power is not such a bad idea after all, when the circumstances call for it. The attributes of being a balancing power are not too far removed from those of a leading power; both need adequate heft and resources.

After all, assertiveness in foreign policy can be a good thing, especially when there is clarity about the objectives to be achieved, resources to implement, and institutional mechanisms to implement follow through. India thus contributes to peace through the positions it takes in the United Nations, and through its contribution to peacekeeping, having been one of the largest contributors to UN peace-keeping forces over the years.

The achievement of a more ambitious engagement will require the nation to further strengthen its political institutions, its diplomatic and administrative resources. It will require further economic reform in order to generate and to sustain high and inclusive economic growth, with an enhanced emphasis on science and technology. It will require socio-economic stability and social harmony, based on an inclusive idea of India and its civilisational ethos. It will require a more efficient law and order machinery, and expeditious judicial relief. It will need it to continue to strengthen its capacities for conventional as well as non-conventional defence. All this and more is required to implement India's people's vision for itself and for the world.

Central to this undertaking in a democracy such as India's with its diversity of races, cultures and creeds must be the citizens of India, the fulfilment of their aspirations towards a better life and the building of a society wherein every Indian has a stake. Given India's growing numbers and their growing needs, the State will need to play a correspondingly larger role and assume commensurate responsibility in ensuring social welfare and the provision of public goods education, health care, sanitation, drinking water and other basic facilities. The objective being to create a milieu, wherein, every Indian has a stake in the country's prosperity, social peace and stability, and the country pulls together.

In addition to its formidable internal challenges, India continues to face diverse external challenges, starting with its immediate neighbourhood. Leaving aside, Pakistan, where the possibilities are limited, India's foreign policy places primary importance on a peaceful, stable and friendly neighbourhood in South Asia, where it has traditionally been the leading power even if not always acknowledged as one. There will always remain more to be done in this area, given the scale of the challenges, but it is here that our aspirations to playing a leading role will require to be consolidated. This requires augmenting the infrastructure, to meet traditional as well as non-traditional threats, in securing our borders, and

the seas around our extended neighbourhood in the Indian Ocean, even while promoting connectivity, commerce and intra-regional co-operation.

It is expected that by 2050, India will be the third largest economy in the world. It will concomitantly possess a significantly higher order of industrial and technological strength, and with perhaps an even greater ability to shape events in the region and beyond. India already possesses this to some extent, but there is some distance to be traversed, if it is to be active on a larger and growingly complex world stage.

The role that India will play assumes added importance at a time when the international order is at yet another cusp of major change. New forces seeking to reverse the steady progress of globalisation are at play. There is presently no country in the world that knows what the immediate future will bring, be it how

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Brexit is to be implemented, the direction in which Europe will head, or the course that American foreign policy will take under its new President. The rise of China presents its own challenges as do the interplay of forces both in East as well as West Asia. The unipolar moment has come to an end and India is seeking to carve out its own place in the jostling and re-alignments taking place. The country has a major role to play in addressing global issues of energy, food, environmental security and sustainable development, even if only on the strength of India being home to one sixth of mankind. There are constantly emerging new issues related to governance of global commons, knowledge and information management, freedom and equity in use of space as also cyber space, the power of the social media and the internet, non-traditional threats, trans-border crimes, pandemics and natural disasters. India can and should play a leading role in addressing each of these challenges, but in order to do so, it needs to build further on the national foundations that are already in place.

Thus, India will require a mix of forward looking external, defence, economic and internal policies to underpin more ambitious foreign policy aspirations. In framing these policies, it is important to

have clarity regarding our objectives as well as motives, the interests that we protect and the values that we espouse, whether it is in setting the international agenda on global peace and development, global commons, environment and the rules of trade, or channelling Foreign direct investment (FDI) towards our manufacturing sector and consolidating our place in the global supply chains, and the kind of leading power India will try to be. A country with a 5000-year-old history will not imitate others but will be true to itself and pursue a path informed by its own genius. There have been several views expressed on this and an important statement

India could, if it esolves, lead the way to shaping a new world order which is aligned with the challenges we confront as humanity.

on this was made by former Foreign Secretary Shyam Saran, in his Y.B. Chavan Memorial Lecture 2016 on the Decline of Internationalism at IDSA. He said "I do not pretend to know how one could bridge the disconnect between the reality of the One World we inhabit today and the wave of intolerance, sectarian and racial hatred and the grossness of political discourse which is sweeping across country after country in the world. I do know, however, that India could, if it is so resolves, lead the way to shaping a new world order which is aligned with the challenges we confront as humanity. For through the ages, India has developed a civilization whose attributes are what that new order requires: the innate syncretism of its accommodative and self-confident culture, its easy embrace of vast diversity and plurality with an underlying spiritual and cultural unity and a deep conviction that to achieve greatness a nation must stand for something more than itself."

In conclusion, India has much to contribute to the shaping of a new world order and is indeed doing so in its own way. Primarily by being India, and all that it stands for and has historically always stood for. The ambition, however, to play a greater role on the world stage, while laudable in principle, may need to keep pace with its own internal growth as a nation. India is on the way there, but not quite yet.

China and India: The Road Ahead

Shri Mohan Guruswamy @

here seems a misplaced notion prevalent in India, and it was much in evidence in the Prime Minister's interaction with Indian industrialists on September 15, 2016. It is that China's slowdown means an opportunity for India. Even the CEA (Chief Economic Adviser) Arvind Subramaniam, though somewhat circumspect, says: "Cheap oil will help our macro-economic indicators. The Chinese slowdown and massive excess capacity in sectors like steel will put pressure. But cost of building infrastructure has come down due to fall in commodity prices. This will boost infrastructure development. India will remain an attractive destination."

But there is little evidence that his government is investing more in infrastructure. The capital expenditure to budget, and capital expenditure to GDP ratios are both still pointed south. To expect foreign capital to build India's infrastructure is to be naïve. Foreign funds invariably come with a short term perspective, and as recent experience shows investment in India's infrastructure is neither easy nor does it offer attractive returns.

The two economies are now in two entirely different stages of development. For a start China's GDP is three and half times bigger than India's. Their GDP is in excess of \$11 trillion and India has just scaled \$2.2 trillion. How China moves and acts in the future will affect the developed economies enormously, as it has been the major provider of growth for the last two decades, and India's growth had little bearing or derived little benefit from it. They exist in different orbits of the world economy. A slowed down China now growing at 6 per cent still adds \$660 billion to global growth, while a speeded up India now growing at 7 per cent adds a mere \$144 billion.

The Chinese slowdown and massive excess capacity in sectors like steel will put pressure.

For India to pick up the Chinese slack, it needs to be posting a more frenetic 9-10 per cent over the next decade or more. There is not even a glimmer of that now. Hope is a good thing but wishful thinking leads to serious consequences. We must be careful and realistic, when we analyse our prospects and decide on our actions.

Although the Chinese economy does not compete directly with India's, the effect the former imposes on the global economy is likely to influence the Indian economy. In this regard, whether a slowing Chinese economy will really create more opportunities for the Indian economy? It needs, rethinking. If the global economy slows down further as part of the results of Chinese economic restructuring, it would be difficult to see why a sluggish world economy would help the Indian economy?

[@] Shri Mohan Guruswamy is a Distinguished Fellow at the United Service Institution of India, New Delhi, and a Visiting Professor at the Administrative Staff College of India, Hyderabad. He is the author of several books on policy issues, the latest being - Chasing the Dragon: Will India Catch-up with China? A Harvard graduate, he is a frequent commentator on matters of current interest in the print and electronic media and has held senior positions in government and industry.

There are many factors that have hampered the Indian economy, and the most important reasons lie in exercising policy options and the level of domestic development, rather than external environment or international factors. The Indian economy is in a more favourable demographic transition, and how this will be translated into the kind of growth China experienced in the previous three decades depends on the sagacity, determination and vision of our leaders.

The success of the Indian economy in the years ahead depends on a number of crucial elements, and the most important ones are likely the leadership's policy options and internal interactions. Seeing how major policies relating to a common and nationwide tax regime (GST), and land acquisition have been stymied, do not present a very optimistic picture.

The real problems in China will get accentuated, as exports to the USA and EU will slowdown, as the USA in particular is determined to reduce its trade gap. Also, low cost production is shifting to other low labour costs economies like Vietnam and Indonesia.

Let's therefore be clear about one important aspect - the present financial crisis in China does not affect its overall economic prospects one bit. Financial crises are inevitable, as greed and irrational expectations will always drive the market upwards till reality catches up and pulls it down.

But when some people lose money others make money. So to judge China's economic prospects by what happened to the stock market betrays an inability to separate issues pertaining to financial market behaviour and the economic reality. Also to think that the housing bubble is a crisis that will not be surmounted would be unwise. Most of the unoccupied housing units in China, as is in India, have been paid for. Those who speculated in the property market will inevitably get hurt in the process, but the economy has already gained from the investment. Future investment in the Chinese real estate market will inevitably be slow. But that is also inevitable as population is aging and new housing demand will reduce.

The real problems in China will get accentuated, as exports to the USA and EU will slowdown, as the USA in particular is determined to reduce its trade gap. Also low cost production is shifting to other low labour costs economies like Vietnam and Indonesia. China will naturally attempt to overcome this by stimulating domestic consumption, and can even finance it by slowly reducing its foreign reserves, as Saudi Arabia and others are doing now.

However much China may invest by running down its reserves, it will be irrational to expect near double-digit expansion when demographic trends are against it. The high growth period in China is petering off and that is the transition we must be wary off. Where will the world get its next growth engine? Demography favours India. But the Indian political discourse gives no inkling of any awareness of this or inclination to put immediate politics aside for a period to set course for the long term.

The transition from an export driven GDP to an internal consumption demand driven economy will be a daunting task. China's exports are mostly low labour cost exports, and hence skill levels will be low. Internal consumption will demand goods of higher sophistication and the retraining of labour will be a problem.

As demands rise and domestic standards of living rise, people will expect more from the system. As Abraham Maslow, the psychologist theorized re is a hierarchy of needs, and so when one demand is satiated people will want more. This will increasingly take the form of demanding more political and social freedoms.

As China becomes upper middle class, dominating the challenge to the primacy of the Communist Party, will be from upper middle class values. These values are

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India's Comprehensive National Power

universal. Thus growth, that is the increase of choice for the consumer in goods and services, will be increasingly accompanied by demands for more choice in immediate governance issues.

Obviously China's interaction with the global economy and its size will only demand its greater participation in its organization. China also needs to invest more in other countries to create markets for itself. For instance if China invests in India, it will create a long and continued demand for Chinese goods. The current adverse trade situation will not be allowed to continue for very long.

China must invest more in rebalancing the international economic system. The world cannot only depend on western demand and consumption, financed by printing more money to finance it. China must team up with other large developing country economies like India, Brazil and Indonesia to restructure the IMF and World Bank. The BRICS is a great opportunity, but only if the discussions progresses to consider weightier issues than the usual cosmetics professional diplomats are habituated to post on the agenda. Chinese President Xi Jinping and Prime Minister Narendra Modi have the responsibility of looking well ahead and take a more cosmic view of how our world should look in the future. They can prepare China and India to assume the roles that beckons.

India's Sustainable Economic Growth, Challenges and **Prospects**

Professor Imon Ghosh ®

ow strategically significant, in terms of Comprehensive National Power (CNP), is sustainable economic

Writing on India's National Vision, Values, Interests and Strategic Objectives in the first edition of the USI Strategic Yearbook 2016, Major General PJS Sandhu (Retd) asks, "What are the big 'strategic objectives' for India of our dreams that if achieved, would take us nearer to our goal as a nation? Many issues come to mind – poverty alleviation, health, education, infrastructure, climate change and environment, energy, internal and external security, and so on." He notes that, "Some of the pre-requisites for building CNP (Comprehensive National Power) are:-

- A high rate of growth. India should aim to achieve and sustain a growth rate of 8 - 10 percent for at least two decades. It must be ensured that the growth is inclusive and covers the underprivileged.
- The growth must be sustainable in the long term. The environment and climate change need to be factored into our growth story."1

While this paper shall address each of the dimensions identified above, along with their challenges and prospects, I shall also introduce ways to build India's CNP by reducing poverty in order to accelerate India's economic growth, a subject I have been thinking, writing and speaking about for the past 25 years.

India's public spending on healthcare is currently around one per cent of Gross Domestic Product (GDP) (among the lowest for any country) as compared to three per cent in China and eight per cent in the UK.

The Role of Health in India's Sustainable Economic Growth

The health of a nation and its citizens impacts its sustainable economic growth. Nutritional standards affect health, and individual diseases can often be mapped to the loss of productivity, and man days at work.

Challenges

India's public spending on healthcare is currently around one per cent of Gross Domestic Product (GDP) (among the lowest for any country) as compared to three per cent in China and eight per cent in the UK.

Consecutive governments and expert groups have recommended that at least 2.5 per cent of the GDP must be devoted to public expenditure on health because of the huge burden of diseases in India.

WHO (World Health Organisation) statistics state that more than 5.2 million lives are lost annually in India, and the death rate in urban India is expected to rise by 42 per cent by 2021. Much of this is preventable with better health care.

[@] Prof Imon Ghosh is Founder of the Inclusive Growth and Financial Stability Forum, and is a NHRDN National Professor. He has a long standing interest in reducing poverty to accelerate India's economic growth.

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The Constitution of India lists health as the responsibility of state governments, rather than the central government. It makes every state responsible for "raising the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties".

Health challenges in India include malnutrition, a high infant mortality rate, a wide range of diseases (including dengue fever, hepatitis, tuberculosis, malaria and pneumonia which continue to plague India due to increased resistance to drugs), poor sanitation, a lack of safe drinking water, and among the highest(preventable) maternal mortality rates in the world. ²

These health challenges are especially acute in India's approximately 650,000 villages (640,867 different villages, according to the 2011 census of India) where around 70 percent of India's population lives. Challenges in rural India include poor infrastructure, inadequate road connectivity, and health centres / hospitals

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that lack basic amenities and medicines, as well as the paucity of doctors and other health care professionals.

Prospects

The prospects of enhancing India's Comprehensive National Power in the area of health would involve:

- A substantial expansion and strengthening of public sector health care system.
- > The provision of clean drinking water and sanitation as one of the principal factors in control of diseases, is well established from the history of industrialised countries, and it should have high priority in health related resource allocation.
- ➤ Increasing the availability of skilled human resources, through a large expansion of medical schools, nursing colleges, etc. In addition, a massive effort needs to be made to recruit and train paramedical and community level health workers.
- Leveraging advances in medical technology like tele-medicine, and
- Ensuring the widespread adoption of success stories on the ground like the 108 ambulance service which provides ten to fifteen minute response times of well-equipped and maintained ambulances throughout some Indian states (but not others), free of all charge to patients at a cost of just one rupee per citizen per year from public health budgets in a public-private partnership model. The 108 ambulance service was not available in New Delhi during the 2001 terrorist attack on India's parliament, and the wounded were transported to hospitals by various means of transport including cycle rickshaws.

The Role of Education in India's Sustainable Economic Growth

Among the world's major economies, India is in a unique demographic position: In contrast to the ageing populations in every other large country, India will remain a 'young nation' (with the average age of its population in the 20s and 30s) for the next half century, until around 2065. In contrast, China will age faster, achieving its demographic tipping point within a decade, in 2025, due to its One Child policy. India, however, will only receive a demographic dividend if investments are made in educating and skilling its youth. As UNESCO notes (in the title of one of its publications), sustainable development begins with education. ³

Challenges

The challenges India's education sector needs to address include:

- Lack of infrastructure. Approximately 95 per cent of schools are not yet compliant with Right To Education (RTE) Act infrastructure indicators, including all-weather buildings. 10 per cent schools lack drinking water facilities, 40 per cent lack a separate toilet for girl students (adversely impacting their enrolment in school), and around 60 per cent of schools are not electrified.
- > Gap between education provided and industry requirements
- Inadequate funding
- > Costly higher education
- > Poor global ranking of institutes
- > Inadequate research

➤ A paradigm shift from teacher-centric pedagogy to student-centric and ragogy to better prepare students for life-long learning in a Volatile, Uncertain, Complex and Ambiguous (VUCA) world.

Prospects

Initiatives to enhance India's Comprehensive National Power in education include

- More and better trained teacher, including on-going professional development.
- Greater government investment in education, targeting at least 6 per cent share of the GDP for the educational sector.
- Quality education that incorporates a greater research focus. India needs to invest much more on research along with the generation and widespread use of socially useful innovations, and patents. This is essential for establishing thought leadership in a knowledge economy.
- Adoption of technology.
- Focus on skills development and certification to prepare India's youth for employment in India as well as abroad.
- A Public Private Partnership model to encourage the active participation of the private sector in national development, especially where public resources are inadequate to meet needs.
- ➤ The establishment of an All India Education Service.
- A periodically updated Education Policy that enables India to benefit from its demographic dividend, and helps students better prepare for their and India's future.

The Role of Infrastructure in India's Sustainable Economic Growth

The infrastructure sector is a key driver for the Indian economy. India's Production Possibility Frontier (PPF) will be determined to a large extent by the quantum and the quality of infrastructure not just

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India's Comprehensive National Power

in urban centres but also in India's 650,000 villages, where almost 70 per cent of India's population lives. Improving India's infrastructure will enlarge markets, enhance GDP growth, improve welfare, and benefit businesses as well as households.

Challenges

Indian agriculture is still largely dependent on the monsoons (and can benefit from being 'weather-proofed' with more widespread irrigation). Other than mobile phone coverage, progress in building Indian infrastructure has been painstakingly slow. All weather road connectivity is recognized as a lifeline for India's villages. Besides roads, rural infrastructure needs include-housing, healthcare, education, power (especially from renewable sources), irrigation, storage facilities, drinking water, sanitation and telecommunication. Expanding cooking gas supplies in rural areas would greatly help to reduce deforestation, and improve health by reducing illnesses related to smoke inhalation. Urban infrastructure needs include urban housing, institutional and business premises, urban transport, drinking water, solid waste management, electricity, healthcare, airports, railways, seaports, roads and bridges, storage facilities, gas supplies, entertainment and recreation facilities etc.

Prospects

A strategic objective, and one that can enhance India's Comprehensive National Power with infrastructure, is to make India a manufacturing hub in order to ensure employment and entrepreneurial opportunities for our youth.

The Role of Climate Change and Environment on India's Sustainable Economic Growth

The technologies that nations adopt are strategic choices that impact the environment, sustainable development and even climate change.

Challenges

Adopting coal fired power generation plants rather than investing in renewable energy sources, for example, has implications for air quality, global warming, changing weather and rainfall patterns, and even significant rises of sea levels over time. India has so far made this expedient choice, due to the widespread availability of coal and relatively low fuel costs, even though there are issues with insufficient coal supplies as the demand for power increases. Food security is also challenged by environmental degradation and climate change. Extreme weather conditions, evolving at short notice, can even affect military assets as the severe cyclonic storm Vardah, demonstrated in December 2016, when it buffeted ships and submarines on the south east coast of India.

Newer renewable electricity sources are targeted to grow substantially by 2022, including a more than doubling of India's large wind power capacity and an almost 15 fold increase in solar power from April 2016 levels.

Prospects

Transitioning to low-carbon and renewable energy needs to be a priority. India was the first country in the world to set up a ministry of non-conventional energy resources, in the early 1980s. Newer renewable electricity sources are targeted to grow substantially by 2022, including a more than doubling of India's large wind power capacity and an almost 15 fold increase in solar power from April 2016 levels. This will place India amongst the world leaders in renewable energy use.

Balancing current needs with the needs of future generations is at the heart of sustainable economic growth. As Jeffrey D. Sachs, eminent economist and Director of the Earth Institute from 2002 to 2016 notes, "We need to defend the interests of those whom we've never met, and never will." These include future generations of Indian citizens.

The Role of Energy in India's Sustainable Economic Growth

India is the world's fourth-largest energy consumer and is likely to overtake China in the next decade as the primary source of growth in global energy demand, according to the World Resources Institute.

Challenges

An overview of India's individual fuel sectors shows different degrees of progress were made in each of them over the last two decades:

- The power sector achieved a greater degree of liberalisation, allowing private investment along the entire value chain: generation, transmission and distribution.
- The coal sector remains the most inefficient and least open to private investment, despite coal being the country's primary source of fuel.
- The oil and gas sector is highly liberalised to attract private investment and to increase domestic production.

Major challenges remain: over 56 per cent of India's rural population, for example, does not have access to electricity. This is approximately equal to the population of the United States.

- > The renewable sector features strong private investments, which are essential to materialise the potential of renewables, for supplying a clean and modern energy, particularly in rural areas.
- The nuclear sector is exclusively controlled by the central government and has obtained access to the global nuclear industry and technology.4

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Prospects

India's Prime Minister Mr. Narendra Modi, among others, has called for an "energy revolution" to harness the country's coal, gas, hydro, nuclear, and wind resources to promote energy security and economic development in a sustainable manner.

The Role of Internal and External Security in India's Sustainable Economic Growth

Conflict zones aren't the most conducive environment for sustainable economic development. Conversely, achieving an economic turn-around is possible when security and the rule of law exists, as the state of Bihar has demonstrated in recent years.

Challenges

As Lt Gen PK Singh, has observed, "the Country is faced with a huge defence expenditure, primarily to defend our long frontiers which are still disputed, unsettled and un-demarcated. To this must be added ever increasing expenditure on internal security. Yet a feeling persists that the Country ought to be spending a lot more to meet internal security challenges and external threats."5

Prospects

Articulating and periodically updating a National Security Strategy for India, based on a broad political consensus and the best thinking of India's security experts, would help the nation face the numerous and formidable challenges to its national security, and deploy its national security resources (including manpower and budgetary resources) more strategically.

A New Approach to Reduce Poverty in order to Sustainably Accelerate India's Economic Growth

I invite you to explore with me and co-create solutions to reduce poverty to sustainably accelerate India's economic growth. It is said that no idea is so good that it cannot be improved upon ... or so bad that it cannot be used as a stepping stone to a better idea! India has two distinct financial sectors – an informal / traditional financial sector that dates back thousands of years (the writings of Manu mentions the occupation of *banker*) and a formal / modern financial sector. The two rarely interact.

India's informal economy employs over 93 per cent of its workforce. While formal economy workers and entrepreneurs are able to borrow money at single or relatively low double digit interest rates, the rural poor and informal economy workers and entrepreneurs typically pay interest rates that are in the triple, quadruple

A National Security Strategy for India, based on a broad political consensus and the best thinking of India's security experts, would help the nation face the numerous and formidable challenges to its national security, and deploy its national security resources (including manpower and budgetary resources) more strategically.

or far higher digits per annum! An example is the vegetable vendor in India who borrows INR 90/- in the morning and has to pay back INR 100/- (or INR 120/-) by the evening. This amounts to 11per cent (for INR 100/-), compounded daily, which adds up to 4,015 per cent per annum in simple interest alone!

A single cent, compounded daily at 11per cent interest would earn the lender \$34,904,969,039,821.86 after 365 days, or approximately twice the GDP of the United States! No wonder Albert Einstein called compound interest the most powerful force in the universe!

Interest rates this high, unfortunately, don't lend themselves to capital formation in either the formal economy, or in the more vulnerable informal and rural economies. What if we could empower the 900 million plus people who live in India's 650,000 villages to enhance their disposable incomes through access to affordable credit? How would this impact

- The Indian, and global, economy?
- ➤ Rural-urban migration?
- ➤ Maternal health, and infant mortality?
- Farmer suicides as a result of overwhelming debt?
- ➤ The incidence of bonded labour?
- ➤ Life-expectancy?

The informal economy's potential - and with it, the growth prospects of the entire Indian economy - are not going to be achieved without the availability of (A) affordable credit, (B) in adequate quantities, (C) at the right time, and with (D) adequate geographical coverage.

Formal Financial Sector		Informal Financial Sector
Cost of Capital	Strength	Weakness
Capital Adequacy	Weakness	Strength
Timely Decisions	Weakness	Strength
Geographical Coverage	Weakness	Strength

Since the informal financial sector's strengths are the formal financial sector's weakness (and vice versa) as evident from the table above, I have advocated the establishment of refinance markets, that bridge the two sectors to leverage each other's strengths and bring down interest rates in the rural and informal economies to levels comparable in the formal economy, while ensuring capital adequacy, timely decisions and full geographical coverage.

Bringing down interest rates in the informal financial sector to levels that are at par with the formal financial sector would reduce bonded labour, inter-generational debt and farmer suicides (where a crushing burden of debt often has a major role to play), besides accelerating economic growth, promoting capital formation and other desirable social and developmental goals.

Refinance markets that bridge the formal and informal financial sectors to reduce the exorbitant interest rates in the informal financial sector would work equally well in a cash-based economy, as well as one, that relies on digital payment forms. They could help reduce the economic side effects of India's current demonetization, while remonetizing the economy (especially in the difficult-to-reach rural and informal economic sectors) and help India to achieve its economic potential and production possibility frontier.

This would also meet the pre-requisites of a high rate of inclusive growth, covering the underprivileged and being sustainable in the long term, which Major General PJS Sandhu (Retd) noted was necessary for building India's Comprehensive National Power.

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Integrating Energy Security Dynamics in Four Border Junctions: A Grand Vision for India

Professor Mahendra P Lama@

'ndia's neighbourhood today presents one of the most attractive and challenging geographies in terms of energy security dynamics both from the viewpoint of sustainable development complexities and national security perspectives. The four crucial energy junctions have very distinctly emerged in four corners of India's borders where it stands to be the central actor. These junctions are India-Nepal-China junction on the north; India-Pakistan-Afghanistan-Iran junction on the west; India-Sri Lanka-Maldives junction on the south and finally India-Bhutan-Bangladesh-Myanmar and South East Asia junction on the east. These junctions could be further extended to connect the other regions and sub-continents. India as a core connecting geography, have the geo-strategic advantage of

integrating these four junctions both as a transit country, say for pipelines, and as a

host of regional power pool for electricity.

The fact that India itself is a burgeoning energy market with distinct policy, slant on green and renewables, makes it doubly attractive. What does it require for India to approach the entire energy security project in this four-junction perspective? [Section I] What are the opportunities and risks involved? [Section II]. More significantly how do these partner countries in the four junctions accept India as a point of central tendency and a centripetal force? [Section III] Are there any experimentation of these types in other regions? [Section IV]

The four crucial energy junctions have very distinctly emerged in four corners of India's borders where it stands to be the central actor.

Section I

Three fundamental issues arise in India's management of these four-junction energy flow. Firstly, it's a question of grand and long term vision that India need to redesign and practically include the newer vistas of energy flows in this integration of four junction energy security dynamics. India's own domestic requirement makes such long-term vision imminent and a crying need. For instance, the latest projection by NITI Aayog clearly shows that the demand for electricity itself will grow almost three-fold from 762 TWh in 2012 to 2239 TWh by 2030, wherein the highest increase will be in residential and industrial sectors. (Table 1). Coal with 52 percent share (2030) will continue to be the dominant source in the primary energy mix, followed by oil 29 percent and gas 8 per cent. India's levels of import dependence of fossil fuels will rise from a level of 32 per cent in 2012 to 45 per cent of the primary energy supply in 2030 in which dependence on oil imports at over 80 per cent will be the highest followed by over 59 percent import dependence on coal and almost 40 per cent dependence on gas imports.²

[@] Prof Mahendra P Lama is currently a High-End Expert in the Institute of South Asian Studies in Sichuan University in Chengdu, China. He teaches in School of International Studies in JNU, New Delhi. Besides the Founding Vice Chancellor of Central University of Sikkim, he also served as Member of the National Security Advisory Board of Government of India. He has extensively worked on issues of regional cooperation and integration in Asia focusing on trade, investment, energy, migration, human security and environment.

Table 1

India: Electricity Demand in Different Demand Sectors (TWh)

Sectors	2012	2022	2030	2047
Industry	336	494	703	1366
Residential	175	480	842	1840
Commercial	86	142	238	771
Agriculture	136	245	336	501
Others	29	71	121	233
Total	762	1433	2239	4712

Source: NITI Aayog (2015) p 10

Table 2

India: Share of Different Sources in Primary Energy Mix

Share in Primary	2012	2022	2030	2047
Energy Supply (%)				
Coal	47	52	51	52
Oil	27	28	29	28
Gas	8	9	9	8
Nuclear, Hydro and	3	6	6	8
Renewables				
Others	14	6	5	5
Total	7017	11189	15286	25890

Source: NITI Aayog (2015) p 15

However, the four junction energy exchange has the potentiality to transform the entire matrix of supply dynamics and sources of primary energy mix (Table 2). This stands imminent in the context of building a range of newer infrastructures including ports, economic corridors, roads and railways around Indian sub-continent; steady decline in crude oil price³ and substantive progress made in the shale gas production mainly in the US⁴ had serious implications on various forms of energy imports by energy hungry countries. India's commitment to comply with the provisions of the Paris Agreement at the 21st Conference of Parties (COP) to the U.N. Framework Convention on Climate Change⁵ and its Intended Nationally Determined Contributions (INDC)⁶, would be another major factor that is likely to trigger tangible changes in future energy mix.

In the recent years since gas price is indexed with oil prices mainly in Asia, the plunging of crude oil price led to steady decline in former price and a glut in gas supplies has been recorded. This is against the expectation, that low prices would make it more competitive and act as demand stimulant. The steady decline in gas price has been more than offset by "substantial price drop for coal," that competes directly with gas. low carbon prices seen typically in the European Union market have made it difficult for gas to take advantage of its environmental characteristics to become more competitive. Proactive policies related to renewable energy development (solar and wind) and reemphasis on nuclear energy could further affect gas prices.

Broadly, three policy implications emanate. The present situation poses questions of additional demand "through

new markets or by boosting consumption in existing markets" and also elimination of destination restrictions on gas exports by the stakeholders and shift gas pricing mechanisms "from oil indexation to hub indexation". This would mean further liberalization of gas market in Asia and "separating transportation from commercial activities, allowing third-party access to pipeline and LNG terminals, and liberalizing gas prices." For India, the opportunities lie in terms of market expansion within the country, say by developing "national gas pipeline grid" to graduate to a gas based economy and extending the same to neighbouring countries. The access to supply channels like other party's pipelines and LNG terminals which remained outside the conventional framework so far now provides immense opportunity.

For India, the opportunities lie in terms of market expansion within the country, say by developing "national gas pipeline grid", to graduate to a gas based economy and extending the same to neighbouring countries.

This also means making a sharp departure from traditional source management to handling both the supply and demand centres. For instance, crude oil sources like the Middle East and African countries and gas from Myanmar, Iran and Central Asian countries need to be reconfigured in the context of extending the market from/through India to neighbouring countries including China. Here India will play a role of market and also a transit country.

Secondly, this schematic demands sharp expansion and deepening of India's role in regional cooperation ventures, with bold initiatives in both, including the remaining neighbouring countries in a process like *South Asian Association* for Regional Cooperation (SAARC), and also proactively playing deeper role in Bangladesh–China–India–Myanmar (BCIM), Association of Southeast Asian Nations (ASEAN) to Central Asia Regional Economic Cooperation (CAREC), and Shanghai Cooperation Organisation (SCO). For instance, the eastern junction could be opened and realised through regionalism process like BCIM and sub-regionalism venture like inclusion of Myanmar in the BBIN initiative. And if the Northern junction is to be made useful, then China's present status as an observer in SAARC either could be transformed into a full-fledged membership or a recognised "project partner' like "apex institution" in SAARC could be bestowed.

Thirdly, bringing diverse players of producers, traders, investors and guarantors to the regional forum, that would realise these four junctions of trans-border dreams of energy flow, exchange and trade. Some of these players are already there like JICA¹¹, which are doing several projects in South Asia including Matarbari Ultra Super Critical Coal-Fired Power Project in Bangladesh; Greater Colombo Transmission Distribution Loss Reduction Project (Sri Lanka) and Umiam Stage 2 Hydropower Station R&M Project (India). These players would also actually integrate the externalities with the internal developments in a number of proposed economic corridors including China-Pakistan Economic Corridor (CPEC).

Section II

For India as the core market and transit country, there are several opportunities, that vary from re-configuring the neighbourhood for new variety of regionalism and to renegotiating the vistas of cooperation, to inter-linking with various physical infrastructures laid in Central Asia, South Asia, South East Asia and immediate neighbourhood of West Asia. This also amounts to effectively harnessing regional organisations like SAARC, BCIM, BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation), CAREC, ASEAN and SCO. Each junction has its peculiarity and could trigger gains of unprecedented variety. The cascading and spiralling impact of this junction approach on energy exchanges,

This also amounts to effectively harnessing regional organisations like SAARC, BCIM, BIMSTEC, CAREC, ASEAN and SCO. Each junction has its peculiarity and could trigger gains of unprecedented variety.

regional investment, trade and people-to-people contacts, could in fact, decimate national prejudices that hamper regionalism. For instance, the western junction could provide India a pivotal role in three areas:

Realising much discussed yet averted gas pipelines like Turkmenistan-Afghanistan-Pakistan-India (TAPI) and Iran-Pakistan-India (IPI) with a new thinking that these pipelines will be extended to other neighbouring countries including Sri Lanka, Bangladesh, Nepal, Bhutan and China. The developments related to Salma Dam in Afghanistan¹²; Gwadar Port in Pakistan and Chabahar Port¹³ in Iran mainly triggered by India and China in fact could facilitate the newer variety of energy exchange routes as these will make interactions among the partner countries more attractive and durable. Chabahar port does not carry "strategic intent" 14. This is more so as Iran supports China's OBOR project. Rather, this port provides another trade and transit route complementing and not a competing route¹⁵ - to Afghanistan other than via Pakistan, and physically connects

Afghanistan, Iran and Central Asia via sea route. Indian Prime Minster rather indicated the wider physical and inclusive ramification of this port when he stated that: "The key arteries of the corridor would pass through the Chabahar port of Iran. It's very location, on the mouth of Gulf of Oman, is of great strategic significance. Afghanistan will get an assured, effective, and a friendlier route to trade with the rest of the world. The arc of economic benefit from this agreement would extend beyond our three nations. Its reach could extend to the depths of the Central Asian countries. When linked with the International North South Transport Corridor, it would touch South Asia at one end and Europe at another. And, studies show that as compared to the traditional sea routes, it could bring down the cost and time of the cargo trade to Europe by about 50 per cent. Over time, we could even look to connect it with the strong sea and land based routes that India has developed with the Indian Ocean Region and South East Asia."16

These junctions' four development on a sub-regional basis could reduce cut throat competition and costly and diplomatic obstructionist manoeuvring in energy development and access in the neighbouring countries including in Myanmar, Nepal and central Asian countries.

These new openings embrace all possibilities of cooperation among Central and South Asia. The lifting of US led economic sanctions on Iran has enhanced the possibility of gas imports from Iran. The enhancement of supply base and varieties of fuel in the energy basket would widen technological choices and fuel preferences. For instance, for the steel industry the Gas based Direct reduction process will be much more cost saving and energy efficient than metallurgical coal based Blast Furnace-Basic Oxygen Furnace (BF-BOF). However, because of the "insufficient supply of domestic gas in the country, coupled with unfavorable economics of imported LNG", the steel industry will be pushed to deploy BF (Blast Furnace)-BOF (basic oxygen furnace) in steel manufacturing.17

- Bringing the electricity from the Central Asia-South Asia (CASA) project to India¹⁸ and;
- India opening and extending the market for energy produced in various projects under the China-Pakistan Economic Corridor (CPEC)¹⁹. As against the peak demand deficits of almost 5000 MW with outages of many hours in the rural areas, these projects are likely to generate more than the project power demand of Pakistan of 45000 MW in 2030 (as against current installed capacity of 22500 MW). These four junctions' development on a sub-regional basis could reduce cut throat competition and costly and obstructionist diplomatic manoeuvring in energy development and access in the neighbouring countries including in Myanmar, Nepal and central Asian countries. This could also allow offloading of surplus capacities in some countries to nearby geographies on a seasonal and daily basis.

Nepal's well known and widely repeated apprehensions that in case of its hydro-power development in collaboration with India, the later will be the only buyer - a case of monopoly - and juxtaposing such a situation with Nepal's sovereignty could also be addressed effectively. The inequality and inequities in the benefit sharing of Kosi and Gandak Agreements and the failure of number of protracted negotiations in 1970s and 1980s and also the virtual scrapping of

the Mahakali Agreement of 1996,²⁰ are all just a fall out of this apprehension. If energy produced in Nepal could be exported to the power hungry south western provinces of China including Tibet, Xinjiang-Uygur, Sichuan, Qinghai, Yunnan, Gansu, Shaanxi and towards the south to Sri Lanka through an interconnection, Nepal's lost opportunities could now be transformed into huge national gains. Besides, Nepal and Bhutan's INDC could distinctly aim at sharing clean energy with neighboring countries. In fact, these projects could trigger a number of national grid interconnections, not only between India and Nepal, but also India with other neighbouring countries like Pakistan, Sri Lanka and Myanmar.

A number of studies are already in place on the mechanism and technical details of transmitting power to Sri Lanka and Pakistan including done by South Asian Regional Energy Initiative (SARI-E) under USAID and academic

institutions and regional think tanks. These included a 44 km multi modal land bridge based transmission between Dhanushkodi (South-East of Tamil Nadu) and Thalaimannar (North-West Sri Lanka) 21 and interconnections between Dinanath (Lahore) and Patti (Punjab).²² An example has already been set by such national grid inter-connection between India and Bangladesh.²³

The visible climate change impact upon the hydrological flows in most of the rivers that flow from the water tower like Tibetan plateau makes the harnessing of hydro power more imperative and inevitable. Since 2011, China has emerged as the largest consumer of electricity.²⁴ For instance, by 2020 electricity demand in China is likely to go up to 7,496 TWh from 2543 TWh in 2005 wherein 530 TWh (7 %) will come from nuclear; 321 TWh from renewable (4 %) and 1122 TWh (15%)

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from hydro and rest from coal (71 %).²⁵ As per the estimate of the China's National Centre for Climate Change Strategy and International Cooperation (NCSC) China would require 900 GW of non-fossil fuel during 2014-2030.²⁶

India and China have effectively participated in a range of power development projects in Nepal in the past. These include Gandak (15 MW), Trishuli (21MW), and Devighat (14.1 MW) built with the cooperation of India and Sunkoshi (10.05 MW) with the cooperation of China. All these projects not only supported the development process in Nepal but also triggered a chain of debate and discourse on the pros and cons of commercial harnessing of hydel power resources in Nepal.²⁷ There have been protracted negotiations between India and Nepal in harnessing Pancheswar, Rapti, Karnali and many other rivers and also the signing of the Mahakali Treaty. There have been conspicuous efforts from the Chinese side to invest in hydel power resources in Nepal. The neighbouring countries including India²⁸ and China have burgeoning markets where demand for power has been steadily rising. Various cross border interconnections are carried out.29

On the other hand, the distribution of energy resources and bases also indicate the geographical concentration in this northern junction. For instance, in case of China, 82 per cent of coal deposits are located in the north and southwest and about 67 per cent of hydropower in the southwest. However, demand centres with 70 per cent market are located in far away central and coastal areas.³⁰ This also implies that the energy

trade could be a two-way process.

Both India and China have developed a huge network of power grids and transmissions lines that would not only provide access to various demand centres in their national markets, but would provide inter connections to other neighbouring countries. The Super Grid concept and Smart Grid provisions have made the grid interconnections and market access both economical and easier. For instance, China's plan to build bulk power hybrid grids (1000kV HVAC and 800kV HVDC0) by 2020 will make the "trans-regional, large capacity, long-distance and low loss transmission"

China's plan to build bulk power hybrid grids (1000kV HVAC and 800kV HVDC0) by 2020 will make the "transregional, large capacity, long-distance and low loss transmission" a reality.

a reality.31

Both these countries are now moving towards renewables, because of the global and domestic pressures on reduction of use of fossil fuels, emissions therein, and also because of the cheaper options in terms of both production and import. "China was also the largest generator of wind power in 2013, with 91 GW of installed capacity—a 72-fold increase from 2005. China was second to Germany in solar power in 2013, with 19 GW of installed solar capacity. Between 2013 and 2020, China plans to increase hydroelectric capacity by two-thirds and to more than double wind and solar capacity". The 13th Five Year Plan of China (2016-2020) states that it is committed to reduce carbon intensity per unit of GDP by 50 per cent below 2005 levels by 2020. Its pledge to meet 20 per cent of its energy needs with non-fossil energy by 2030 will require China to deploy an additional 800–1,000 GW of wind, solar, nuclear, and other zero emission power generation capacity by 2030.³³

In this very first trans-border "Green Energy Corridor" in South Asia, India can actually take the lead in forming a Nepal-India-China (N-I-C) junction consortium in the north, to help in attracting regional and sub-regional investment partners. This should in turn work towards creating a N-I-C Junction Power Development Fund

(NICPDF), with the help of international financial institutions. It can also initiate a N-I-C junction-wide information network, to facilitate the regular exchange of data on demand-supply gaps in various forms of energy, policy changes, price and market conditions, technological innovations and inputs, investors and investment opportunities, energy expertise, seismic and other geological and environmental data. N-I-C junction countries could reach an umbrella agreement that would spell out the procedural and legal aspects of cross border cooperation in this field. This could also include harmonisation of macro policies in the energy sector and firm linkages with the technical and professional institutions. This N-I-C junction fits well with China's intense search for and acquisition of low carbon resources.³⁴ India could similarly create a power pool evacuating electricity from the west, east and north junctions, and wheeling them to countries and

Actually, many of the regional and sub-regional grouping which India has been a member, including SAARC, BCIM, BBIN, BIMSTEC, Ganga Mekong, will be subsumed in the form of effective projects under this new arrangement.

smaller geographies wherever there is market. It actually does so vis-à-vis Bhutan and quite likely with Bangladesh, to access Bhutanese and Nepalese electricity. Actually, many of the regional and sub-regional grouping which India has been a member, including SAARC (South Asian Association for Regional Cooperation), BCIM (Bangladesh—China—India—Myanmar Forum for Regional Cooperation), BBIN (Bangladesh, Bhutan, India, Nepal), BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation), Ganga Mekong, will be subsumed in the form of effective projects under this new arrangement. Some of these moribund groupings will thus be rejuvenated. In many cases, India could make use of its transmissions network fully, and natural resources in a more sustainable manner, and conserve significantly its own energy resources, and postpone their use for long term future. In many of these projects India could access finance from private conglomerates, and form both the traditional sources like ADB (Asian Development Bank) and World Bank, and the newer upcoming sources like BRICS Development Bank and Asian Infrastructure Investment Bank (AIIB). In both these later financial institutions India has a considerable stake.

Under this junction framework, there are possibilities that a large number of international energy companies will participate in various types of energy production. There will be ample opportunities for the Indian companies to invest in the neighbourhood. Some of its own regional surpluses could get better pricing and Indian companies could make investment in the neighbourhoods, on regional basis and not on a bilateral basis. There are several risks too in first envisaging this grand vision, making them acceptable to the partner countries and translating them into actions. The foreseeable risks could vary from non-acceptance of India's proposition by the partner countries, capital deficiency, trans-border politico-security management; institutional and market failures in the demand centres and the management and natural resource risks in the supplying countries.

Section III

India and all its neighbouring countries including China, are likely to have tremendous pressure on the existing energy

resource availability. The energy vision documents of most of these countries, besides moving more towards green and renewable, give ample emphasis on cross-border access. These demand-supply gaps could even take the form of political instability and further dislocation and slowing down of economic activities. India's political stability, robust institutions, steady economic development based on firm and progressive economic reforms, and presence of multiple international private and development players, along with the tested regulatory framework in energy sector management could in fact, be a major scoring point in acquiring this new role of regional pivot in trans-regional and continental energy management. However, India in order to catapult itself to this core position has to undertake transforming steps in five crucial areas.

The four junctions approach will conspicuously shift the discourse and policies to focussing on externalities, and connecting the markets and supply centres as a commercial hub and pool manager.

- On the very issue of borders and their management, the question is whether it would continue to treat them purely from the orthodox national security perspectives or reposition them as instrumental opportunities for four junction energy exchanges. This is crucial, as the basic premise and very take off of these four junction interconnections, would depend on the ability to relocate the criticality of borders and capacity to manage them for larger trans-regional actions.
- ii) The entire discourse on energy at the national and regional level is largely based on primarily harnessing internal resources and accessing the deficit from the other outside source, for instance from the Middle East and African countries. Whereas the four junctions approach will conspicuously shift the discourse and policies to focusing on externalities, and connecting the markets and supply centres as a commercial hub and pool manager. This demand joining, other trans-border pipelines, connecting with other economic corridors, and also getting interconnected with other power pools. This means the basic elements in foreign policy matrices related to energy, have to undergo fundamental changes where India's role becomes more of a facilitator-transit-trader than a mere demand and consumption centre.
- iii) The present role of domestic institution, including related to power, gas, coal, oil and non-conventional energy will no longer be just management of domestic affairs with an extended arm on overseas operations. These need to be reoriented with a strong and parallel institution, primarily catering to the needs of planning, technological acquisitions, financial mobilisation and establishing cross-border institutional connections. For instance, in case of China the overseas assets of Sinopec, PetroChina, and China National Offshore Oil Corporation (CNOOC) reached a little more than \$100 billion during 2009-13. Many of these assets suffer from steady devaluations and have massive over capacity thereby opening scope for the Indian companies to coordinate and collaborate.

This is more so as China and India import 52 per cent and 62 per cent of its oil supply respectively from the Middle East.³⁷ The very fact, India and China have already shown willingness to move from competition based exclusive acquisition model in the same host country and aimed at same assets to partnership based cooperation model in a number of oil and gas projects in countries like Colombia, Iran, Peru, Sudan and Syria.³⁸ The Energy Working Group in the India-China Strategic Dialogue has been discussing some of these issues comprehensively.³⁹ In many cases India has to help build and establish agencies and institutions in the neighbouring countries to match with Indian newer actions.

The Energy Working Group in the India-China Strategic Dialogue has been discussing some of these issues comprehensively. In many cases India has to help build and establish agencies and institutions in the neighbouring countries to match with Indian newer actions.

- iv) The present form of regionalism with traditional approaches moving from preferential trading arrangement, to economic union will be largely irrelevant under these circumstances. India has to adopt and adapt to various newer and more effective instruments of regionalism including exclusive project based approach. This also means the macro geography, based conventional regionalism framework could now become much narrower, making just the contiguous geography more powerful and targeted. This again calls for the restructuring of distribution of powers, and functions in the federal structure of the country. The Chinese model, in doing so particularly vis-à-vis South East Asia, and Central Asia have become largely successful.⁴⁰
 - This in a way has already started happening in the BBIN sub-region.⁴¹ The power exchange between Tripura and Bangladesh triggered by 726 MW Combined Cycle Gas Turbine (CCGT) at Palatana (Udaipur, Tripura) provides a new direction in the Eastern Junction in terms of local integrative exchange. Palatana project has started exporting 100 MW to Bangladesh in lieu of the services provided by the later in transporting the project related equipments and goods and service through its waterways via Calcutta and through its roads to the project site. The level of confidence this project has generated is demonstrated by the fact that simultaneously a 10 Gigabit Per Second (GBPS) bandwidth gateway of internet connectivity for the entire North Eastern states has been secured via Bangladesh. This is for the first-time India's North east region gets bandwidth through the Bay of Bengal base far away from the traditional sources of southern and western India.⁴²
- This four-junction approach would make India's traditional bilateral approach much less useful as it demands consultation, agreements and project actions with more than two countries in each junction. For instance, in case of the eastern junction besides the Bangladesh, Bhutan, India, Nepal (BBIN) countries, inclusion of Cambodia, Laos, Myanmar and Vietnam (CLMV) countries would be very crucial. The failed attempt to lay Myanmar-Bangladesh-India gas pipeline in 2005 was primarily because India hesitated to both delink from bilateral mode (with Bangladesh), and got heavily tied down with resultant chicaneries and imbroglios, ignoring larger and long term gains. However, within another decade the situation has turned upside down leading to unprecedented level of energy cooperation between these two countries.⁴³

On the other hand, the success story of Greater Mekong Sub-region (GMS) despite controversies on river water sharing and China's overwhelming participation, 44 is another model where Cambodia, Laos, Myanmar, Thailand and Vietnam and two provinces in China viz., Yunnan and Guangxi Zhuang Autonomous Region, have come together to generate and exchange power. With an area of 2.6 million sq. km. and a population of over 320 million, power generation takes place mostly in Laos, Thailand and Vietnam, and transmission and distribution in Cambodia, Laos, PRC and Vietnam. There are bilateral agreements on border power trade between countries (e.g. Malaysia-Thailand, Thailand-Laos, Laos-Vietnam) and cross-border power interconnections like 500 kV DC Interconnection (PRC – Lao PDR - Thailand); 500 kV GMS Power Interconnection (Thailand - Lao PDR - Vietnam) and GMS Power Transmission Project (Cambodia). This could be a crucial segment of the proposed Eastern Junction. For instance, North East Region (NER) of India alone has hydel power potential of over 58,000 MW (40 percent of the national potential). However, it has hardly harnessed 1,242 MW (over 2 percent of total potential) and 2,810 MW of hydro power is under construction. Its Natural Gas reserves of 151.68 billion cu. ft. could generate 7500 MW for 10 years and coal reserves of 864.78 million tonnes could generate 240 MW/day for a period of 100 years. The recently released Hydro Carbon Vision 2030 for North East India makes a comprehensive attempt in relocating the NER in the energy map of India where cross-border exchanges have become a core strategy.⁴⁵

Section IV

This kind of junction experimentation is not new at all. There are several geographies and countries that have actually designed, practiced and made them powerfully successful. The pool based approach and interconnection of power systems of contiguously located countries and their coordinated operation have provided immense technical and economic benefits. These allow each electrical utility to make savings on power plant investment and operating costs as a result of the improved use of the interconnected system. It also contributes to the quality of electricity supplied to customers and reduces environmental damage. The problems of seasonality and daily deficit-surplus aspects have been effectively tackled. The Southern African Power Pool (SAPP) created in 1995—encompassing among

The pool based approach and interconnection of power systems of contiguously located countries and their coordinated operation have provided immense technical and economic benefits.

others South Africa, Lesotho, Mozambique, Namibia, Malawi, Zimbabwe and Zambia under the regional cooperation organization viz., Southern African Development Community (SADC)—is one example, which matches well with the BBIN sub-region situation. They trade in power with a view to provide reliable and economical power supply. SAPP countries have a diverse mix of hydro and thermal generation plants, serving a population of over 200 million people. It has a coordination centre in Harare which carries out a number of functions including monitoring the operations of SAPP, collecting data, undertaking planning studies and training activities, and disseminating information to members. The Pool is working satisfactorily with immense gain to all the participating countries. There are examples of such regional power pools successfully operating in several parts of the world.⁴⁶

One of the longest synchronous inter-connected system is inter-connection between the EHV networks of Hungary, Slovakia, Czech Republic and Poland. Similarly, Canada has several links with USA for export of power. In the Scandanavian region of Europe, the Finnish Grid is connected to Sweden, Norway and Russia; and in South East Asia, Malaysia is interconnected with the electricity grids of Thailand and Singapore.

In all these cases, local geographies have participated and borderlands have actually become the theme of interaction. Natural resources and bio-diversity have acquired core importance that triggered people centric multiplicity of cooperation. This lead to revival and rebuilding of connectivity and rediscovery of cultural and historical heritage. Markets are extended, integrated and expanded and gradually a critical mass of regional civil society is formed. Nevertheless, invariably political consensus is localized. Given the project mode, cooperation and integration starts from below, steady economic restructuring takes place and greater specialization in production emerges. Invariably, in such a situation, given the breadth and depth of benefits and stakeholders, political risks are also likely to be localized and traditional constraints are frozen. Failures too can be localised without damaging national interest in a big way. In many cases, it is not all necessary for a participant to

Natural resources and biodiversity have acquired core importance that triggered people centric multiplicity of cooperation. This lead to revival and rebuilding of connectivity and rediscovery of cultural and historical heritage.

change its macro policies as national prejudices are consciously sidetracked. This actually forces the participants to avoid conflicts between ideological orientation and long term objectives of socio-economic development.

End Notes

- A Report on Energy Efficiency and Energy Mix in Indian Energy System (2030) Using Indian Energy Security Scenarios, 2047, NITI Aayog, 2015
- 2. NITI Aayog (2015), p18
- 3. Crude oil price plunged by almost 70 percent in 2014 to \$ 30 per barrel by early 2016.
- 4. Gas prices have substantially dropped to around \$2 per million British thermal unit under the shale gas revolution
- 5. The per capita emission generation will rise from levels of 1.7 ton in 2012 to 3.3 tons in 2030 and further to 5.8 in 2047. NITI Aayog (2015), p 18
- 6. INDC outlines the measures countries intend to undertake mainly to: (i) reduce greenhouse gas emissions, (ii) adapt to climate change, and (iii) provide financial, technological and capacity building support by developed to developing countries.
- Despite restriction on coal as major agent of pollution, its use as a competitive base-load electricity source has a growing number of takers.
- 8. Leaders Speak: "At the 2016 Pacific Energy Summit", July 14, 2016, National Bureau of Asian Research, http://pacificenergysummit.org/2016/07/14/from-the-summit-at-the-2016-pacific-energy-summit/
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- Mehta, Vikram S, Indian Express, September 5, 2016. http://indianexpress.com/article/opinion/columns/pipelines-over-politics-3013678/
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- 12. This 42 MW Afghanistan-India Friendship Dam built on Harirud river in western Herat province, bordering Iran, is 20km long and 3km wide, with a capacity of 640 million cubic meters of water. It "would not just irrigate the fields of six hundred and forty villages in Chiste, Obe, Pashtun Zarghun, Karokh, Gozara, Injil, Zindjan, Kohsan and Ghoryan. It would also bring light to over two hundred and fifty thousand homes in this area". Prime Minster Modi's speech during inauguration of this project on 4 June 2016. http://www.security-risks.com/security-trends-south-asia/afghanistan/speech-by-prime-minister-at-the-inauguration-of-afghanistan---india-friendship-dam-in-herat-6328.html
- 13. The agreements signed include developing two terminals and five berths, a commercial contract to develop Chahbahar port, a pact to connect it to Zahedan on Iran's border with Afghanistan and Pakistan through a railway line and a transit agreement to transport goods into Afghanistan. The likely interconnection of transit corridor involving Chahbahar to Zaranj to Delaram (Afghanistan) with International North-South Transit Corridor from the Iranian port of Bandar Abbas into Central Asia could make the inter-linking of South, Central and West Asia with Russia and Europe a reality may re-energise the International North-South Trade Corridor (INSTC). "This will bring India closer to the Eurasian Economic Union (EAEU), which includes Armenia, Belarus, Kazakhstan, Kyrgyzstan and Russia." India and Pakistan can both benefit from Chahbahar, Sachdeva, Gulshan, Hindustan Times, Jun 01, 2016
- 14. Narayanan, MK, http://www.thehindu.com/opinion/lead/mk-narayanan-on-indias-bid-for-membership-on-nuclear-suppliers-group/article8804267.ece?homepage=true
- 15. Ahmadi, Sayed Mujtaba, "Reconnecting the heart of Asia and pioneering new policies for empowering the region", Jun 08, 2016. Deputy Chief of Mission and Economic Counsellor at the embassy of the Islamic Republic of Afghanistan in India
- 16. Prime Minister of India's Speech in the laying down the foundation of Chahbahar Port http://www.pmindia.gov.in/en/news_updates/remarks-by-pm-at-chabahar-connectivity-event/?comment=disable

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- 19. Under the \$ 40 billion China-Pakistan Economic Corridor Project (April 2015) out of the 51 agreements signed 20 related to energy projects. Ground breaking has been done for 5 projects of 1850 mw.
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China's installed capacity reached 1360 GWh by 2014 where 67 % is contributed by thermal in which 95 % is coal fired.

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Military Digital Transformation, Digital India: Its Implications for the Indian Military

Major General Amarjit Singh (Retd)@

Abstract

Digital India is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy^{1,2}. This paper presents the technological, organizational and cultural influences on the evolution of the programme, its proposed impact on public sector e-governance capabilities and the potential for a digital transformation of the public and commercial space in India. We examine how the specific capabilities created under the programme may be leveraged for military purposes. The broad technology trends are evaluated in terms of the opportunities and challenges they present for the Indian military. Specific and general recommendations are made on how the Indian military may incorporate the established and emergent capabilities in their force structures and operational doctrine.

Introduction

Technology Context

The rapid growth of the Internet in the 1990s heralded the coming of the Information Age³. The advanced economies had a good proliferation of electronic connectivity over land lines, immediately gained by a new approach to automation of processes and work flows in the commercial sector, followed by the government sector. The existence of a large English speaking population and a good academic and social connect, particularly with North America, provided an opportunity to a

Digital India flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge.

limited part of the Indian population to be connected to the emerging technology landscape. Unrestricted by any history of regulations that controlled the traditional manufacturing economy, India also saw the emergence of an entirely new segment of the economy to service the demand for automation in the advanced economies.

The exponential advances in technology were not confined to the Internet alone. While Colonel John Boyd of the US Air Force had introduced the OODA Loop⁴ to military decision making much earlier, it was in the first Gulf War of 1991 that its technical pervasiveness became possible at the tactical levels. The new formulation of "Precision Warfare" led many military thinkers to theorize that the world was seeing another Revolution in Military Affairs⁵ (RMA). In 1996, Admiral William Owens introduced the concept Network Centric Warfare⁶ (NCW) when he presented his paper on a 'system of systems.' It was left to Cebrowski, Garstka and Stein to fully amplify the concepts underlying NCW in their 1999 book "Network Centric Warfare: Developing and Leveraging Information Superiority." Interestingly, they drew their concepts from how the commercial sector was already using Information and Communication Technologies (ICT). The basic elements of NCW in this formulation, with a one-to-one correspondence with what was already happening in the commercial space, are shown in Figure 1.

[@] Maj Gen Amarjit Singh superannuated from the Corps of Signals of the Army after holding diverse roles in Planning and Operations in the technical and General Staff branches. He is presently a Vice President with Persistent Systems Ltd, Pune.

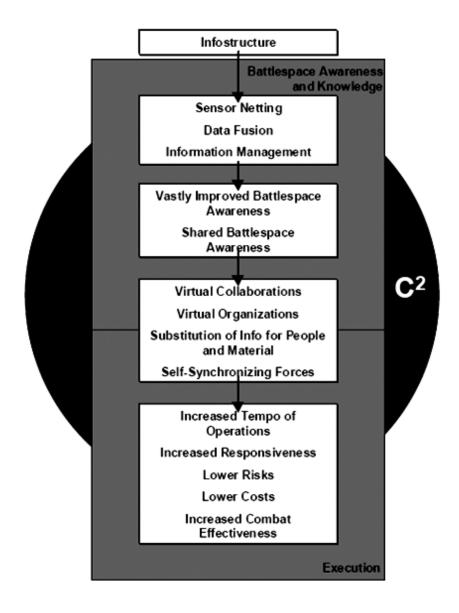


Figure 1: The Military as a Network Centric Enterprise

Source: http://www.au.af.mil/au/awc/awcgate/ccrp/ncw.pdf

While the basic concepts of NCW did leverage all the advances in ICT, the concept of "Power to the Edge⁷" appeared from the same sources in 2003. Essentially:

Modern information technology permits the rapid and effective sharing of information to such a degree that "edge entities" or those that are essentially conducting military missions themselves, should be able to "pull" information from ubiquitous repositories, rather than having centralized agencies attempt to anticipate their information needs and "push" it to them. This would imply a major flattening of traditional military hierarchies, however.

While Peer-to-Peer (P2P) communications⁸ was conceptualized as part of the original design of the Internet, it was in 1999 that concept of file sharing, introduced by Napster brought an explosion in P2P communications. By the end of the 1990s, P2P had grown to extensive online collaboration and the term Web 2.0 became popular. In essence, Web 2.0 capabilities⁹ are enabled by:

Rich Internet Application (RIA) - experience brought from desktop to browser, whether it is "rich" from a graphical point of view or a usability/interactivity or features point

Web-Oriented Architecture (WOA) - Web 2.0 applications expose their functionality so that other applications can leverage and integrate the functionality providing a set of much richer applications.

Social Web - Web 2.0 websites tend to interact much more with the end user and make the end-user an integral part of the website, either by adding their profile, adding comments on content, uploading new content, or adding user-generated content.

The exponential advances in the enabling technologies ensured that cell phones became smaller and less power intensive, so rapidly that started outnumbering traditional terrestrial network connected phones in the 2000s.

While Web 2.0 refers to content on the networks, the networks also were evolving. Second Generation (2G/2.5G) cellular networks based on GSM and later CDMA technologies emerged in the 1990s. The exponential advances in the enabling technologies ensured that cell phones became smaller and less power intensive, so rapidly that they started outnumbering traditional terrestrial network connected phones in the 2000s. The demand for greater bandwidth and richer content on cell phones resulted in the emergence of successively higher speed 3G10 and 4G11 networks and today the world is already experimenting with 5G12 networks. The hand held devices have themselves become so capable that the traditional desktop market is in terminal decline and the laptop market is also threatened by the newer crop of tablets and "phablets."

The traditional model of centralized computing had already been overtaken by the Client-Server model of computing. As in other trends, the later part of the 1990s saw the dawn of Cloud Computing¹³ as the new paradigm in computing, enabled by technologies of Virtualization¹⁴ and reliable high bandwidth networks. In 2006 Amazon launched the Elastic Compute Cloud¹⁵ and by the dawn of the current decade all major technology players like Google, Microsoft, Oracle and IBM had their own cloud offerings. The National Institute of Standards and Technology (NIST) of the US Department of Commerce define five essential characteristics, three Service Models and four deployment models of Cloud¹⁶ (see Figure 1).

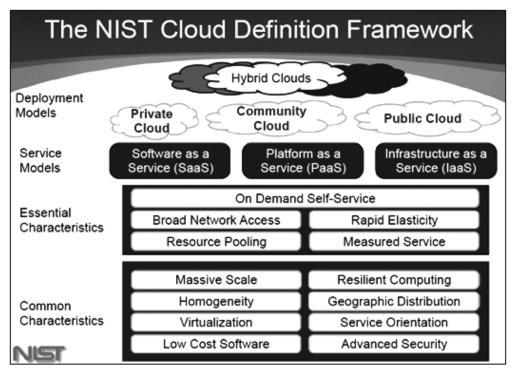


Figure 2: NIST Cloud Computing Framework

Source: https://robiulislam.wordpress.com/2011/12/28/cloud-computing-security/

Along with the rise of Social, Mobility and Cloud, the last decade has also witnessed the rise of Big Data and Analytics. The rise of Big Data¹⁷ has its origins in the increases in computing power and the amount of data accumulated by enterprises who have traversed the path of automation and digitization for some time. Rapid developments in Artificial Intelligence¹⁸ (AI) (primarily Machine Learning¹⁹, but increasingly Deep Learning²⁰) is resulting in capabilities that allow rapid insights from previously unmanageable data allowing much faster decision making and response, to emerging operational scenarios, a paradigm referred to as "Data to Decisions" (see Figure 3).

The combination of Social, Mobility, Analytics and Cloud (SMAC) has the ability to transform how enterprises operate, something also visualized as part of NCW. Essentially, with SMAC we have the promise of being able to predict the future and delivering the knowledge at any place in a very economic manner. The potential of revolutionary changes in how enterprises operate and how the transformation could happen is being referred to as Digital Transformation²¹. The impact of the evolution of SMAC is also being realized rapidly in the areas of Human Computer Interaction (voice and image recognition), Robotics²², Internet of Things²³ (IoT), Augmented Reality²⁴ (AR), Virtual Reality²⁵ (VR), Autonomous Vehicles²⁶ and Drones²⁷.

Figure 3: Data to Decisions (D2D) Framework

Source: http://www.aptusdatalabs.com/our-platform/

Indian Context

While India created an entire service sector in its economy by servicing the automation needs of the advanced economies, developmental priorities, infrastructure constraints and limited public aspirations meant that even automation was late to arrive to Indian enterprises and most certainly the government. The Passenger Reservation System was fielded by the Railways in 1986. In 1988, the Centre for Development of Advanced Computing (CDAC) was set up. Nevertheless, V Rajaraman²⁸ identifies 1991 as the turning point in India's digital history when the NASSCOM was formed and software exports grew rapidly. By 2000, bank automation was also a reality, led primarily by private sector banks. It was in this context that early attempts towards e-Governance were launched by the Central and State governments in the 1990s.

Subsequently, e-Governance evolved to cover the desirable features like "citizen centricity, service orientation and transparency." The National e-Governance Plan (NeGP) had a collective vision of making "all Government services accessible to the common man in his locality, through common service delivery outlets, and ensure efficiency, transparency, and reliability of such services at affordable costs to realize the basic needs of the common man." The Government approved the NeGP, comprising of 31 Mission Mode Projects (MMPs) and eight components, on 18 May 2006.

The Digital India Programme

Figure 4: Word Cloud representing Digital India Elements

The vision of the Digital India programme is to transform India into a digitally empowered society and knowledge economy (see Figure 4). The three key areas of the programme, as listed on its website²⁹, are:

- Digital Infrastructure as a Core Utility to Every Citizen
 - Availability of high speed internet as a core utility for delivery of services to citizens
 - Cradle to grave digital identity that is unique, lifelong, online and authenticable to every citizen
 - Mobile phone & bank account enabling citizen participation in digital & financial space
 - Easy access to a Common Service Centre
 - Shareable private space on a public cloud
 - Safe and secure cyber-space
- Governance and Services on Demand
 - Seamlessly integrated services across departments or jurisdictions
 - Availability of services in real time from online & mobile platforms
 - All citizen entitlements to be portable and available on the cloud

2017

- Digitally transformed services for improving ease of doing business
- Making financial transactions electronic & cashless
- Leveraging Geospatial Information Systems (GIS) for decision support systems & development
- Digital Empowerment of Citizens
 - Universal digital literacy
 - Universally accessible digital resources
 - Availability of digital resources / services in Indian languages
 - Collaborative digital platforms for participative governance
 - Citizens not required to physically submit Govt. documents / certificates

The notable components of the programme management structure³⁰ are as follows (see Figure 5):

- A Monitoring Committee under the Chairpersonship of the Prime Minister with representation drawn from relevant Ministries/ Departments.
- > A Digital India Advisory Group headed by the Minister of Communications and IT to solicit views of external stakeholders and to provide inputs to the Monitoring Committee, advise the Government on policy issues and strategic interventions necessary for accelerating the implementation of the programme across Central and State Government Ministries/Departments.
- > An Apex Committee headed by the Cabinet Secretary to oversee the programme and provide policy and strategic directions for its implementation and resolving inter-ministerial issues.
- > Institutional mechanism at State level would be headed by State Committee on Digital India by the Chief Minister. State/UT Apex Committees headed by Chief Secretaries would be constituted at State/UT level to allocate required resources, set priority amongst projects and resolve inter-departmental issues.

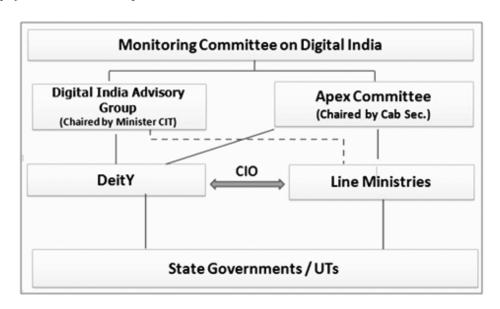


Figure 5: Digital India Programme Management Structures

Source: http://www.digitalindia.gov.in/content/management-structure

Improved Connectivity is the bedrock of any digital governance efforts. Broadband for All-Rural, Broadband for All-Urban and National Information Infrastructure (NII) are the three main vehicles for increasing reach under the programme. 250,000, village Panchayats would be covered under the National Optical Fiber Network (NOFN). As part of the Urban Broadband track, Virtual Network Operators would be leveraged for service delivery and communication infrastructure would be mandated in new urban developments and buildings. The NII aims at integrating all public sector ICT infrastructures - State Wide Area Network (SWAN), National Knowledge Network (NKN), Government User Network (GUN) and the MeghRaj Cloud. Under the Public Internet Access Programme, the number of Common Service Centres (CSCs) would be increased to one CSC in each Gram Panchayat and would form the main end-points for delivery of government and business services. The Ministry of Communications and IT (MeitY) would be the nodal department to implement the scheme.

The programme envisages Government Process Re-engineering (GPR), using IT with the guiding principles being:

- Form simplification and field reduction; online applications and tracking
- Online repositories for certificates, educational degrees, identity documents, etc. so that citizens are not required to submit these documents in physical form
- Integration of services and platforms e.g. Aadhaar platform of Unique Identity Authority of India (UIDAI), payment gateway, Mobile Seva platform, sharing of data through open Application Programming Interfaces (API) and middleware such as National and State Service Delivery Gateways (NSDG/SSDG)
- The workflow inside government departments and agencies would be automated to enable efficient government processes and also to allow visibility of these processes to citizens.

e-Kranti³¹ (NeGP 2.0) is the set of applications forming the top most architectural level of delivery of services to citizens. There are 44 Mission Mode Projects (MMPs) under e-Kranti, which are at various stages of implementation (see Figure 6). The key principles of e-Kranti are:

- Transformation and not Translation
- Integrated Services and not Individual Services
- Mandatory GPR in every MMP
- ICT Infrastructure on Demand
- Cloud by Default
- Mobile First
- Fast Tracking Approvals
- Mandating Standards and Protocols
- Language Localization
- National GIS (Geo-Spatial Information System)
- Security and Electronic Data Preservation

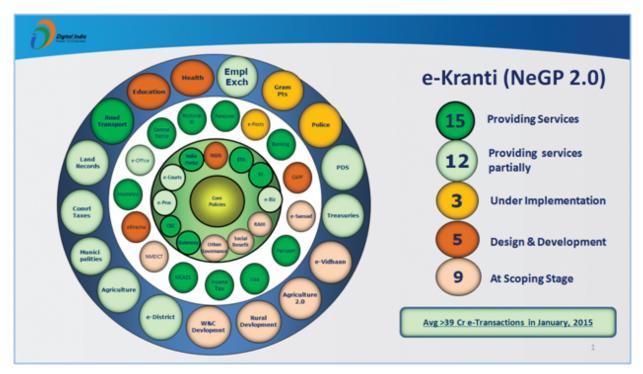


Figure 6: MMPs under e-Kranti

Source: http://negd.gov.in/e-kranti-negp-20-framework-0

Evaluation of Scope and Potential

The Digital India programme has been continuously evolving to incorporate many elements of the ongoing commercial and technological developments in ICT. While the government proposes broad based access to "digitalized" services, there is neither any explicit thinking about transformational changes in the way governance itself is organized nor is there any cultural shifts marking the relationship between citizens and the government. Like most automation there is, however, greater potential for accountability due to greater transparency. Notwithstanding, the programme does usher in the following changes that are of relevance to the military:

- For Greater availability of Voice and Data services in the border regions, corresponding to the TBA (Tactical Battle Area), as well as in the hinterland, corresponding to the Communications Zone. This provides the military options to plan the integration of this infrastructure into its own networks, during peace, mobilization and active hostilities. This remains relevant even as the military builds all segments of its modern enterprise network by leveraging capabilities built under the Network For Spectrum³² (NFS) project, Air Force Network³³ (AFNET) and the Defence Communication Network³⁴ (DCN). The implications are:
 - A very high bandwidth terrestrial network comprising the NOFN nodes supplemented by NKN network infrastructure provides a non-radiating environment that can be exploited mostly in the rear areas where the military's bases, static HQ, training infrastructure and logistics installations are located.
 - ❖ The ubiquity of mobile networks with ever increasing data capability provides a communications fabric for mobile elements in the rear areas, providing for previously unimagined capabilities in terms of monitoring the movement of personnel and stores. Communications for operations in disturbed areas, where the military is inducted and de-inducted at short notice for short periods and is unable to build its own network, also benefits in a major way. This possibility was discounted in the earlier years due to communication security concerns. Now, however, there are many options to ensure that cryptographically

- secure communications are provided over Commercial off the Shelf (COTS) as well as consumer grade equipment.
- The ubiquity of mobile networks in the TBA (which naturally spill across the IB/LC/LAC and can also be designed to do so), when combined with the cryptographic innovations, permit coordination between mobile combat echelons in the period preceding actual hostilities by merging within the ambient levels of commercial mobile network activity levels. This enables the attacker, as well as the defender, to retain tactical surprise while achieving the high degree of coordination required for shallow attacks by holding formations, such

As the bandwidth of the mobile networks increases, would have adequate connectivity make to the NCW concepts of Self Synchronization and Power to the Edge a reality.

- as those required by the Cold Start³⁵ doctrine. As the bandwidth of the mobile networks increases, we would have adequate connectivity to make the NCW concepts of Self Synchronization and Power to the Edge a reality.
- Beyond the connectivity layer, we can take stock of the computing infrastructure over which the applications are to be deployed, with reference to the deployment and service models shown in Figure 1. Both the NKN and the Central and State government enterprise networks have very robust and capable datacenters that are to be leveraged for the Cloud First principle of engineering services under Digital India. The GI Cloud called MeghRaj³⁶ has all the capabilities required for an enterprise cloud. The architecture of MeghRaj is shown in Figure 7. The GI Cloud policy framework also provides for private sector Cloud Service Providers (CSPs).

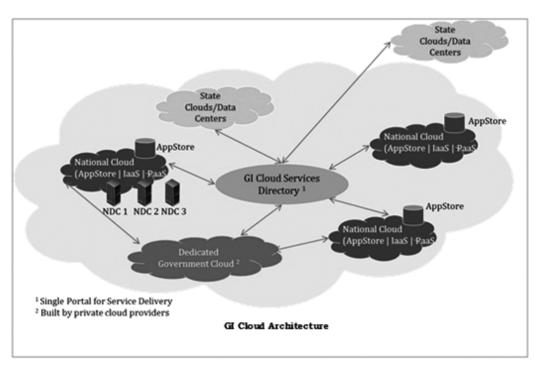


Figure 7: MeghRaj Cloud Architecture

Source: http://meity.gov.in/content/gi-cloud-meghraj

The all-encompassing Digital Identity system in the form of the UIDAI Aadhar provides the basic capabilities over which the government Identity and Access Management (IAM) platform can be built. Since all military personnel have an Aadhar identity, the military can build its own cloud connected enterprise IAM and related mechanisms to permit Single Sign On (SSO) for building trust across disparate applications. The development of e-KYC³⁷ for onboarding and verifying users by private service providers is a good example of the possibilities. Beyond the direct application of Digital India related capabilities, emerging applications of Blockchain³⁸ technologies provide advanced options for building high trust distributed systems, permitting rapid assembly and dispersion of mission oriented task forces.

A well-established observation of public sector ICT is that most IT budgets are spent on procurement of hardware and very little on software development. This is unsurprising as hardware is mostly commoditized while building software requires a greater degree of organizational commitment. Therefore, the big trend in technology is the decline of "bespoke software development" and the mass migration to "software platforms³⁹." The development and fielding of a number of software services under the rubric of e-Kranti is to be understood in this wider context. Some of these can be adapted for internal use within the military with minimal changes, thus reducing costs and time to deploy. The functionality inherent in some of the MMPs requires access to them by military elements for performing their designed role, primarily in peace but also during mobilization and active hostilities. There are other MMPs whose functionality is required by military personnel and their families, as well as military veterans, as citizens but where the last mile delivery capability may not match the aspirations of the military community. Table 1 provides a short summary:

e-Kranti MMP	Candidate	Military	Military
	for Internal	Elements	Citizens
	Military Use	Need Access	Need Access
Roads and Highways Information	No	Yes	No
System (RAHI)			
Land Records (NLRMP)	No	Yes	Yes
Crime and Criminal Tracking	No	Yes	Yes
Network and Systems (CCTNS)			
e-Health	No	Yes	Yes
e-Courts	Yes	Yes	Yes
e-Procurement	Yes	Yes	No
e-Municipalities	No	Yes	Yes
e-Education	No	Yes	Yes
e-Office	Yes	No	No
e-Posts	Yes	Yes	Yes
e-District	No	Yes	Yes
Passport	No	No	Yes
Banking (Micro ATMs, CSC, Postal	No	Yes	Yes
MSC)			
National Citizen Database	No	Yes	No
CSCs	No	Yes	No
National Service Delivery gateway	No	Yes	No
(NSDG)			
National Geographical Information	No	Yes	No
System (NGIS)			

Table 1: Mapping e-Kranti MMPs to Military Requirements

Beyond the direct impact of the capabilities being packaged specifically under the Digital India programme, the second and third order effects of the availability of a high grade "Infostructure" (the original terminology of NCW) are the unleashing of a host of domain capabilities. Examples of these include the National Agriculture Market⁴⁰ (NAM), Government e-Market⁴¹ (GeM), sharing economy services like Uber and Ola, private sector online retail portals and social collaboration and media platforms like Google Maps, Google Photos, Facebook, Instagram, Slack, WhatsApp, Twitter, Signal, Telegram etc.

- All these applications have rich media environments and encourage a high degree of collaborative work. Live video is increasingly supported on most public content sharing platforms.
- The cryptographic capabilities for messaging embedded in these platforms are of the highest order.
- Increasingly, all these services have advanced human computer interaction abilities (voice recognition, digital assistants, image recognition and biometric security features) embedded in the consumer devices as well as their cloud backend.
- The recent Demonetization of high value currency notes has also provided a big stimulus to digital usage in the financial domain and has brought the role of CSCs and Micro ATMs to the fore.

Most of the capabilities described above are also available for deployment inside enterprises, either as enterprise versions of the same applications or as alternate platforms (for example Microsoft Yammer for social collaboration). Beginning from the time when Blackberry provided the only means of secure communications for enterprise users, these capabilities are now being taken for granted. For deploying applications securely on enterprise use mobile devices, enterprise app stores like Accelerite Radia Endpoint Manager⁴² have been developed. This class of applications enables enterprises to extend their internal systems with a high degree of confidence to consumer grade devices. The result of all these advances is that while the military is struggling with the concepts around Soldier As a System (SAS), a reasonably digitally capable Indian is already capable of operating in the role of "Citizen As a System" or "Business Person As a System." Thus, SMAC, the basis of "Digital" in Enterprise Digital Transformation⁴³ (EDT) is readily available for the public sector as well as the military to exploit.

The sharing economy is of course dependent on the sharing of personal data, which when aggregated, provides great business insights. This is a two-way street in which users benefit from shared information even as they contribute to the sustainability of the commercial platform (consider navigation in Google Maps as an example). From the government viewpoint two perspectives emerge. First, the greater "digital footprint⁴⁴" (sometimes also referred to as "digital exhaust⁴⁵," albeit in a different context) of the citizens allows it to measure many aspects of the Citizen Experience and thus enable insights for the provision of "Smart" services. The concept of Smart Cities⁴⁶, enthusiastically adopted by the Indian government in the form of a strategy and plan⁴⁷, is built on such thinking. Second, governments acknowledge that data belongs to the citizens and that Open Data⁴⁸ serves the purpose of Open Government⁴⁹ as well as unleashing the process of discovering and deriving value and insights from such data, beyond what the government itself is able to do. In effect, by opening data for use by agents outside the enterprise or government, it is possible to massively scale enterprise collaboration, through the effect known as Crowdsourcing⁵⁰. This enables the creation of massive knowledge repositories like the Wikipedia (which this article leverages extensively). From the military point of view, the technologies underlying crowdsourcing enable the rapid assembly and dispersal of knowledge workers to solve complex problems using humongous data sets in reasonable time frames, examples being Imagery Interpretation⁵¹ and Intelligence Analysis and Processing in general.

Governments and militaries across the world have also become alive to the potential of digital transformation and the concept of Data to Decisions. The practice of treating the Data layer as separate from the Applications layer in IT architectures started from the corporate sector and is now spreading to the public sector. Recognizing this,

governments have been setting up organizational units characterized as a Digital Service^{52,53} to integrate all the data across many departments and agencies and to assist the less capable ones in attempting digital transformation. The position of a Chief Data Officer⁵⁴ has been created in enterprises which are alive to the value of data. At the policy level too, governments and militaries have developed greater understanding of the potential and risks of digital transformation, with the leaders laying down elaborate policy guidance in the form of Reference Architectures^{55,} ^{56, 57} and Cloud Computing Strategies⁵⁸ to ensure smooth transformation. Comprehensive architectures like the Vega Architecture⁵⁹ enable any enterprise, including the military, to transition their traditional IT infrastructure and systems quickly into a modern operating system capable of providing decision support for all contingencies.

Governments militaries have developed greater understanding of the potential and risks of digital transformation, with leaders laying down elaborate policy guidance in the form of Reference Architectures and Cloud Computing Strategies

While EDT applied to the military has the potential to achieve all the outcomes sought of NCW, there are technical, organizational and doctrinal challenges.

- At the technical level, the size, spread and diffusion of critical data increases the surface of attack from malicious external actors as well as less capable or compromised internal actors. Since the infrastructure evolves at all times, there are always underlying vulnerabilities that can be converted into exploits. At the time of writing, it can be said that determined attackers can penetrate any digital systems, whether connected to the Internet or otherwise. Thus, the aspects of Information Assurance and Mitigation gain salience by the day. As the threats evolve, the strategies and capabilities to mitigate them also evolve. Thus, automation of cybersecurity using available AI methods is a frontline development.
- At the organizational level, the challenges pertain to the expanding skills gap between existing human resources and the kind required to examine, plan, procure and operate the new digital capabilities. The emerging technology architectures also challenge the organizational structures built on the old technologies. Thus, integrating all enterprise data in the data layer is not only about overcoming the technology silos but also the organizational silos. It is for this reason that most organizations find it convenient to introduce digital transformation through new digitally focused horizontal services. The transition from interim structures to a new generation of stable structures remains an ongoing exercise.
- The biggest challenge of transformation is not "Digital" at all. Rather, it is in developing a new understanding of the capabilities and devising new ways of how these capabilities are to be used to achieve the organizational objectives. For militaries, known to be highly risk averse (for predictable reasons), the manner of introducing digital transformation would be quite different from the commercial and government sectors. The logical method would be to attempt this in parts of the enterprise that are closest to the commercial sector in the method of their operation and then attempt it in the part of the enterprise most akin to the government. The most success may be seen from applying SMAC technologies and the emerging technologies like AI to narrow segments of the enterprise which have lesser operational risks but greater capability gaps due to the complexity of the problems to be solved, for example, in the areas of Data Fusion⁶⁰ and actionable insights in Intelligence.

Recommendations

The focus in the preceding sections has been to identify the potential of digital transformation of the military in the context of the Digital India programme, highlighting key concepts, opportunities and challenges. This is designed to assist military planners to design appropriate strategies. The following important recommendations, though not comprehensive, can be made:

- Appropriate structures in the Ministry of Defence and the Headquarters Integrated Defence Staff (IDS) should establish institutional connections with the MeitY to examine all options for leveraging directly the capabilities being created under Digital India in peace, during mobilization and during active hostilities.
- Integration of all Enterprise Infostructure in the depth areas under the aegis of HQ IDS. Examples of this abound in many foreign militaries. This would free up tremendous resources for building the higher layers of the Information Architecture.
- Despite the creation of a large number of organizational elements over the last many years in order to develop NCW capabilities, the progress has been slow and the technologies with which some systems have evolved have become obsolescent even before the systems have been fielded. HQ IDS and the respective Services should re-examine the existing organizational structures to ensure that these are designed with correspondence to the fully mature technological congruence across the entire scope of ICT. Similarly, the traditional method of development of ICT capabilities for the enterprise, based on various iterations of the Defence Procurement Procedure⁶¹(DPP), is totally inappropriate for digital transformation in the context of the rate of change in ICT technologies. There is a pressing need for the introduction of a special category for digital transformation in the DPP, based on best practices in the non-military sector, the key concepts being "Agility" and "Continuous Transformation."
- The military continues to rely on legacy methods of classifying the security value of information, leading to roadblocks in deploying any modern capabilities in the name of "security". There is a pressing need to develop a modern framework for classifying the value of digital information using the dimensions of value, impact from loss, time factor and other relevant parameters. This would lead to more granularity in policy and responsiveness to operating scenarios (for example, Aid to Civil Authority, Non-conventional operations and Conventional operations).
- There is a need to harmonize military ICT systems to COTS technologies to the extent feasible, so that technological advancements can be absorbed rapidly and matching human resource capabilities can be scaled up rapidly. This would have the sanguine effect of making military personnel ready for second careers.
- > The military and the civilian strategic community (primarily the intelligence agencies) need to work together to develop core capabilities that cannot or should not be sourced internationally. More important, they need to leverage existing technology to share and disseminate information and insights without compromising their sources.
- With the launch of Digital India, the staid organs of government are gradually overtaking the military in information capabilities. While this is not surprising, a large part of the differential in the rate of absorption stems from the traditional tendency of the military command echelons to make information available in a top down manner. Digital transformation is about valuing the data available, planning for its generation and retention and unleashing the power of the organization to draw insights from the pool. There is a need for all echelons to examine the creation of specific roles and responsibilities to this end; the trend in the civilian domain to clearly differentiate between the functions of ICT and Data should be examined critically.

Conclusion

Warfare is one of the most challenging domains for leveraging technology for gaining insights. The developments in the recent years, captured in the aspirations of the Digital India programme, enable the kind of digitalization that was not possible when the tenets of NCW were evolved in the US. A focused approach by the Indian military would permit it to catch up with the government sector. More importantly, the emergent technologies listed above would allow it dispel

the "Fog of War" in a way that was not considered feasible in earlier times. While Digital India does not envisage any transformation of the organs of government, it does aspire to transforming the relationship between the government and citizens. It is for the military to boldly examine organizational and doctrinal transformation that could be enabled if the gains of digitalization were to be absorbed and internalized.

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Technological Empowerment in India: How it can be achieved?

Major General PK Chakravorty, VSM (Retd)®

Introduction

echnology is the application of scientific knowledge for practical purposes. Technology develops and explains the human made world. It involves development, processing and management. Technology is currently being used in numerous fields. Technology is dynamic and keeps on improving at high speed. Currently we are in the Information Age and a variety of advanced technologies are being used in our day to day life. In Communications Technology, today the I phone can prepare a Power Point Presentation, construction material are being fabricated on

3 D computers, blood can be tested without samples, a guitar can be played using an application and learning can be done by Artificial Intelligence.¹ Empowerment means to make someone stronger and more confident especially in controlling their life and claiming their rights.2Technological empowerment leads to build up of Comprehensive National Power. A nations standing in the world is directly related to its technological empowerment. The country that wins the highest number of Gold Medals in the Olympics is also technologically the most empowered nation in the world. Technology and Doctrine are the important ingredients of Military Strategy. The usage of the atom bomb led to the end of the Second World War. The Gulf Wars had unleashed 500 new technologies. Net work centric warfare is the order of the day, and all countries are structuring their forces to fight on this concept.

I phone can prepare a Point Presentation, construction material are being fabricated on 3 D computers, blood can be tested without samples, a guitar can be played using an application and learning can be done by Artificial Intelligence.

India has taken measured steps towards empowerment of technology. There is a need to examine the current state and the measures needed to optimise technological usage in our country.

Current Empowerment of Technology in India

India had missed the Industrial Revolution and on gaining independence, the Government focussed on technological empowerment. The task was to initiate reforms to promote higher education, science and technology in India. ³ In contrast it must be noted that our ancient scientists were great visionaries. Aryabhata was a genius in algebra and was the first to proclaim the earth is round and rotates on its axis. It is stated that Bhaskarcharya, discovered Gravity 500 years before Sir Isaac Newton. The Grand Anaicut built by Karikalan, the Chola King around the Second Century, built a dam on the Kaveri River which is even today an engineering marvel. However, having missed out the Industrial Revolution, India lost its place as a technological power. 4

[@] Maj Gen PK Chakravorty, VSM (Retd) is former Additional Director General Artillery of Army Headquarters. He is a graduate of the National Defence College and has served as the Defence Attaché to Vietnam. He is a prolific writer on strategic subjects.

In the last seven decades since independence India has made all round technological progress with many accomplishments. This technological empowerment has reduced our poverty level which stands at about 12 .4percent of our population.⁵ These were undertaken through Mission Mode programmes which are elucidated below: -

- Agriculture. The Green Revolution was ushered putting an end to famines. The Revolution was born in early 1970. Shri C Subramaniam, the Union Minister for Food and Agriculture duly supported by Dr M S
 - Swaminathan and Dr Norman Borlaugh, a Nobel Prize winner achieved this difficult task. They used skills in genetic engineering, to enhance production of agricultural products, resulting in self-sufficiency. India currently grows more than 250 Million Tonnes of food every year, and efforts are on to have the second Green Revolution, possibly, in another five years, to step our production to 400 Million Tonnes.
- Milk. Like the Green Revolution, we have witnessed a White Revolution conceived by the National Dairy Development Board based at Anand, Gujrat. This commenced in October 1955. It started with 64 societies and 20000 members. Their brand name Amul has become a house name. India produces more than 100 million tonnes of milk and is the largest producer of this item in the world.
- Steel. Jamsetji Tata with technology from the United States opened a steel plant at Tatanagar. Currently India produces more than 92 million tonnes of steel which is assisting in economic development.
- Nuclear. Dr Homi J Bhabha built the Tata Institute of Fundamental Research and Bhabha Atomic Research Centre, to enable India to undertake research in nuclear energy. This has resulted in empowering the nation to utilise applications for power generation, eradication of germs from food products, water management and medicine. Currently there are seven nuclear power plants, with an installed capacity of about 6780 Mega Watts. There are more reactors under construction, which would enhance the capacity to 10,000 Mega Watts in about four years. This energy has also enabled us to develop nuclear weapons, to be secure against our hostile adversaries.
- ➤ Outer Space. Dr Vikram Sarabhai pioneered India's space programme. The first rocket launching station was set up at Thumba. Currently, India is launching satellites with Polar Satellite Launch Vehicle (PSLV), with a capacity to launch a 1200 kg satellite at an altitude of 800 km. Successful tests have also been undertaken with Geosynchronous Satellite Launch Vehicle (GSLV), for putting a 2500 kg satellite in Geosynchronous orbit. India has also launched CHANDRAYYAN-1 orbiting the moon and Mars Orbiter Mission (MOM) also called MANGALYAAN which commenced orbiting Mars since 24 September 2014. Satellite communications have enabled to provide services related to education, health care, weather, water resource management, mitigation of natural disasters and military applications in the field of surveillance, communications and post strike damage assessment.
- ➤ Weapons. India has successfully manufactured a variety of arms, ammunition, aircraft and ships. To name a few, these includes- the 155 mm Dhanush Gun, Pinaka Multiple Barrel Rocket Launcher, Advanced Light Helicopter Dhruv, Main Battle Tank Arjun and Tejas fighter aircraft. India also undertook development of missiles under the Integrated Guided Missile Programme project. Currently, AGNI, AKAASH, PRITHVI and BRAHMOS have been inducted giving us a credible capability in the field.⁸

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The Way Forward

India currently has achieved a reasonable degree of technological empowerment. The issue is how it can be carried forward to make us a developed country. It is pertinent to note that industries in the developed countries are bringing out high technology systems, to lead the world in the sale of goods and services, as also to dominate the arms industry which brings them a high share of profits. It is natural for the developed countries to keep the high-end technology, and part with low end details which are nearing obsolescence in their system. The gap is difficult to bridge and talent from developing countries gets channelised in undertaking research and development for developed countries. The current Government of India, has realised this issue and adopted a policy which would enable us to design and Make in India. This would gradually see high end technology entering our country, which would lead to 'Technological Empowerment'. This would also lead to higher Foreign Direct Investment (FDI) entering our country. In 2015, India received US \$ 63 billion in FDI. This program is devised to transform India into a global design and manufacturing hub. Certainly this would lead to technological empowerment.⁹ There are 25 sectors of the economy on which the project focuses. Foreign Direct Investment is permitted in all these sectors.¹⁰

It is pertinent to note that for the country to grow we need to adopt technology at a bigger scale. There are still parts of the country without electricity, roads and healthcare. Empowerment in technology will enable the country to enhance economic growth and social development. Productivity of business and agriculture, as also spread of education facilities and health care, would contribute to large sections of our country. There are a dozen technologies identified by a McKinsey Global Institute, which could have an impact of \$ 550 billion to \$ 1 trillion a year. Technologies have been clubbed into the following:-

- ➤ **Digital Applications**. These would comprise Mobile Internet, Cloud, Automation of Knowledge, Digital Payments and a verifiable digital identity.
- ➤ Smart Physical Systems. This aspect deals with internet of things, which implies items functioning with internet. It further includes Intelligent Transportation and Distribution Systems, Advanced Geographic Information Systems (GIS) and Next Generation Genomics. Simplistically genomics deals with the study of genes and their function.¹¹
- ➤ Energy. This field includes, use of unconventional oil and gas exploration through horizontal drilling and hydraulic fracturing as also Renewable Energy and Advanced Energy Storage.

The report also mentions Empowering technologies which would transform India. These are enumerated below:-

- ➤ **Mobile Internet.** The current penetration in India is about 10 percent of the population. In another decade, it would reach between 50 to 55 percent of the population.
- ➤ Cloud Technology. Currently, we are beginning to use this technology. By 2025 about half the nation would be using this technology.
- Automation of work related to knowledge. This pertains to the usage of smart phones, which is currently around 100 million and are being used primarily for online information and booking. In ten years, the number of users would increase to about 800 million, and the applicability would be enhanced to agriculture, health and education, thereby, empowering a large part of our nation.
- ➤ **Digital Payments.** Currently, there are 1.5 billion retail electronic card transactions every year, and about three quarters of a million retail establishments accepting digital payments. The number would be enhanced eight times in the next 10 years.

- Share of verifiable identity. About 93 percent of our population have Aadhar Cards in our country and the number will soon rise to the entire country having the Aadhar Card.
- Internet of things. This is the networking of physical devices, vehicles, buildings and other items, embedded with electronics, software, sensors, actuators and net work connectivity that enable these objects to collect and exchange data. This allows objects to be controlled remotely across existing network infrastructure, creating opportunities for direct integration of the physical world with computer systems, resulting in improved efficiency and

About 93 per cent of our population have Aadhar Cards in our country and the number will soon rise to the entire country having the Aadhar Card.

economic benefit.¹² It is expected that about six billion devices would be connected to serve the purpose by 2025.

- ➤ Intelligent Transportation and Distribution. This pertains to penetration of smart grid technology in India. Currently, it is in the process of being introduced, and within a decade it is anticipated that at least 50 percent of the country would be penetrated by smart grid technology. This would include all our Tier 1 and Tier 2 cities and a reasonable part of rural India.
- Advanced GIS. The GIS provides basic satellite images of forests, ground water, soil and minerals from multiple agencies. At present, only a few states are using the data. By 2025, there would be easy to use maps, overlaid with diverse geotagged data including 3 D underground and crowd sourced data. There would be application based packages (apps) for GIS decision support.
- Next Generation Genomics. There are two areas which are impacted by this technology; agriculture and medical therapy. In agriculture, it entails hybrid and genetically modified crops and medical therapies based on genomics. It is estimated that in a decade, 40 million hectares would be utilised for genetically modified crops against the current usage of 18 million hectares. Further, personalised therapies for about one million patients and prenatal screening of about 10 million births.
- Advanced oil and gas exploration recovery. This would multiply about 20 times by 2025, enabling very high oil and gas exploration cum production.
- ➤ Renewable energy. Renewable energy resources primarily solar would be generated in large quantities. India would produce about 43 Giga watts of power from solar energy by 2025. This would be approximately 9 per cent of the total generating capacity from solar energy.
- Advanced Energy Storage. In the next decade storage cost per megawatt hour of energy would be substantially low and people would have the capacity to store energy in the entire country.¹³

These technologies need to take strong roots in India, and the government must appoint a professional trouble shooter, who should be a single point contact, to see these digital technologies take off in the fields of Finance, Education, Health Care, Agriculture, Energy and Infrastructure.

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As regards Finance in India, as per statistics about 400 million people hold bank accounts, out of a population of 1.3 billion. 14 About 21 percent of the adult population do not operate a bank account, despite tremendous efforts

made by the government in the last two years. The exposure to banking will reduce the currency notes as also enable people to save and raise their income. Greater effort must be made to make banking facilities available to rural area through inclusive banking, where bank accounts are opened by mobile wireless machines. These could also be hand held machines on which transactions are done and thereafter, entries made by use of laptop and printer. The process has been tried out and met with limited success.

Rural areas need to be grouped, and schools opened in areas which provide communications to these villages. Accommodation be provided to teaching staff and rural tenures be made compulsory for teachers, bankers, doctors and other personnel be it in the public or private sectors. Technology could improve if 'Massive Online Courses'

are conducted in multifarious disciplines to ensure skill development. Professional training institutes be opened based on a study of requirements, and these be digitised for modern learning.

It is interesting to note that 300 million people in our country do not have access to electricity in a power surplus country. ¹⁵There are people living in many states where power has to reach rural areas. Use of technology to extend power lines, along with renewable energy, will assist in providing power to these areas. Further, technology would reduce transmission losses, and effective metering, as

Technology could improve if 'Massive Online Courses' are conducted in multifarious disciplines to ensure skill development.

also energy policing would reduce pilferage. The government is on an ambitious plan to provide electricity to all by 2022.

Hybrid and genetically modified crops, precision farming, using GIS (geographic information system) mapping software for soil, weather and water data to guide farming decisions, mobile internet based market information will empower agriculturists. These would help to generate about \$ 60 billion by 2025. These improvements would benefit 100 million farmers and bring better nutrition to 400 million consumers. In the health sector, disruptive technologies, could transform India's public health, which has only half the doctors and nurses as per international standards. Remote health services, where consultations are done through mobile internet, digital tools, that will enable low cost diagnosis by modestly skilled health care workers, would provide health services in rural areas. The issue undertaken scientifically would benefit about 400 million rural people.

Technological empowerment is possible with good physical infrastructure. There is a need to smarten our roads, ports and airports. The model would be a public private partnership. Where private partners are unwilling, government must build and recover through toll charges, cess and taxes. Water is becoming a big problem with our burgeoning population. We have to optimise existing water resources and undertake research to reduce cost of desalinating sea water with assistance from Israel, which has become a country having adequate water by using smart techniques.

Empowering Technology in Defence Production and Government Services

India needs to develop a defence industrial base, to indigenously manufacture Defence equipment for its Armed Forces. It is improving in this field with a new Defence Procurement Procedure 2016 and the Make in India process. High technology equipment is being co-developed to ensure empowering of technology in the field of Defence production. The process is being implemented, and would witness optimisation in the short term. The policy of creating a level playing field, for the private sector, would enable introduction of higher technologies in our defence manufacturing sector.

The government has launched a 'Digital India Campaign', on 01 July 2015. The vision of the campaign is to make 'High Speed Internet', available to all citizens, e-governance and empower the citizens digitally. There would be an effort

to maximise transactions on line.¹⁶ This would assist in empowering our country technologically, thereby, enhancing economic growth, and building our Comprehensive National Power.

Conclusion

The government and the people of India would like to make India a developed nation. This is possible through 'Technological Empowerment' which needs to be undertaken expeditiously by the government and the people.

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Make in India: Prospects and Predicaments for the Aerospace and Defence Industry

Commodore Sujeet Samaddar, NM (Retd)®

efence production in modern India began during the British period, when the East India Company recognised that modern military hardware was vitally necessary for maintaining and expanding the British presence in India. Thus, the Board of Ordnance at Fort William, Calcutta was created in 1775 and by 1787 a gunpowder factory was established at Ichapore. Further, in 1801 a Gun & Shell Factory was established at Cossipore, Calcutta, and a rifle factory came into production in 1904. Warships continued to be built in the private sector and the first proposal to set up an aircraft industry in the private sector was put up in 1940.

Post-independence the defence industrial base was firmly controlled by the Central Government through the nationalisation of Hindustan Aircraft, Mazagon Docks and Garden Reach Shipbuilders and Engineers. It was only in 1962, almost 15 years after independence, that a need was felt to create a Department of Defence Production with the objective of "developing a comprehensive production infrastructure for the defence of the nation". From these humble beginnings, India's state owned aerospace and defence (A&D) industrial base has grown to 41 factories of the Ordnance Factory Board (OFB), and 9 Defence Public Sector Understandings (DPSUs) with 45 production units. The Defence Research and Development Organisation (DRDO) with its network of more than 50 laboratories have been the primary source of indigenous development and production of equipment in India. In the initial period of defence production in India the core

This immunity from competition and assured contracts, led to low production efficiency and business complacency which in turn resulted in huge cost and time overruns for virtually every project.

idea was that the Defence Research and Development Organisation (DRDO)/State-Owned Enterprises (SoE) would be the designers and production houses either by themselves or under licence or technology collaboration with foreign Original Equipment Manufacturers (OEMs). This created a monopoly market with the MoD as the sole customer and nominated DPSUs as sole suppliers, either by themselves or under licence from foreign OEMs. This immunity from competition and assured contracts, led to low production efficiency and business complacency which in turn resulted in huge cost and time overruns for virtually every project. By the 1990s, the SoEs were beginning to prove inadequate in terms of capability, capacity and skills to meet the platform/system requirements of a modern armed force, hence the need for private sector participation was recognised.

The core difficulty for the entry of the private sector was that Industrial Licenses(IL) were granted under Industries (Development and Regulation) Act, 1951 (IDR Act) and defence production was kept under Schedule 1 (Industries reserved for public sector), thus strictly regulating the operation of defense industries including domestic sales and

[®] Commodore Sujeet Samaddar, NM (Retd), retired as Principal Director Naval Plans in 2009. He has been Vice President of NOVA Integrated Systems, and later served as CEO and Director of ShinMaywa Industries India Pvt Ltd. He has been an alumni of DSSC, CAWS, NIDS (Tokyo) and UNU (Tokyo). He has been a visiting Fellow at JIIA (Tokyo) and at USI. He is presently Member IISS, London; Fellow of Aeronautical Society of India; Honorary Distinguished Fellow at CAPS and Honorary Advisor (A&D) at FICCI.

export of defense equipment. With the Gazette Notification (Part II) No. 412 dated 25.07.1991 the sector was no longer exclusively under Schedule 1 but was also included in Schedule II (Industries requiring compulsory licensing). Though private sector participation in the A&D sector became possible, but, for big business houses, it remained unattractive since the business was confined to being "suppliers" to the SoEs. Despite opening up of the sector and the obvious size of the business opportunity several complexities and uncertainties remained. The private sector saw the perceived investment risks, far outweighing any potential benefits, as contract after contract continued to be nominated

to SoEs, or was won by global OEMs. Delays in obtaining licenses and foreign investment approvals, restrictions on domestic sales and exports, intricate taxation laws, restrictions on foreign direct investment, commercial conditions that favoured the SoEs, were other factors that continued to discourage private sector investment in this sector.

Further, with no guarantee of firm orders, customer requirements shrouded in secrecy, an inability to operate on economies of scale through addressing both domestic and export markets due export restrictions, and above all lack of transparency in procurement matters, particularly with respect to schedule and open ended 'no cost no commitment' trials, provided little encouragement for the private sector to enter this industry. Despite the introduction of a Defence Procurement Procedure in 2002 and its newer editions the indigenous aerospace and defence

All lack of transparency procurement matters, particularly with respect to schedule and open ended 'no cost no commitment' trials, provided little encouragement for the private sector to enter this industry.

industry remained either a SoE or OEM preserve. However, there was an active intervention by the industry associations, and a growing realization within government that private sector participation was not only desirable but had become essential if depleting force levels and import dependency had to be overcome.

Dynamism in the sector came in post the "Make in India" initiative of the Government of India (GoI) in 2014 and since then the A&D sector saw a quantum jump in interest from the private sector. In a span of about a year, several radical steps have been taken. Foremost of which was a refreshing change in the mind-set of the MoD which now regularly interacts with industry associations. These included:-

- MoD shared the Technology Perspective and Capability Road (TPCR) map with industry.
- > DRDO's (Defence Research and Development Organisation) Long Term Technology Perspective Plan enumerated various requirements for the defence industrial sector.
- > The list of defence items requiring industrial licence was pruned down to only 16 categories, the process streamlined and validity licence extended it from 7 year to 15 years with a provision to further extend it by 3 years. Since the launch of 'Make in India' initiative in September 2014, and until September 2016, more than 100 industrial Licenses to 70 companies for manufacture of various defence items.
- In July 2016, the revised Arms Rules, enunciating the process of manufacture of small arms of less than 12.7 mm calibre was notified.
- During the last three financial years and up to September 2015, 169 procurement proposals worth INR 2, 49,755 Crs were approved. In the Company Financial Year (CFY) contracts worth about INR 150,000 Crs for Apache and Chinook Helicopters, Rafael aircraft, Ka-226 helicopters, S-400 Missile system and frigates were signed.
- In November 2015 FDI up to 49 percent was allowed through automatic route and above 49 percent under Government route on case-to-case basis. IVs that can achieve a minimum of 30 percent indigenous content for their products were made exempt from offset obligations.

- Exchange Rate Variation (ERV) protection was extended to all Indian companies.
- Anomalies in excise duty/ custom duty were removed, and all Indian industries (public and private) became subject to the same kind of excise and custom duty levies.
- A defence security manual for defence manufacturing units was promulgated
- > Outsourcing and Vendor Development Guidelines for SoEs were promulgated to increase outsourcing from private sector including SMEs.
- A defence export strategy was put in place and items that no longer required approval for exports were notified, a Standard Operating Procedure (SOP) for the issue of No Objection Certificate (NOC) and requirement of End User Certificate (EUC) shared and, a provision for issuing advance / in principle clearance for exploring business opportunities abroad was also allowed. DRDO also issued a compendium of its products having export potential to help Indian industries to explore the potential export market.
- Offsets have been further liberalised and following measures have been adopted:

A defence export strategy was put in place and items that no longer required approval for exports were notified, a Standard Operating Procedure (SOP) for the issue of No Objection Certificate (NOC) and requirement of End User Certificate (EUC) shared and, a provision for issuing advance / in principle clearance exploring business opportunities abroad was also allowed.

- * Requirement for the submission of the offset implementation plan extended from at the time of bid to as late as one year before date of discharge of the offset.
- Flexibility in relation to nomination or change in offset partners post signing of contract.
- * Restoration of 'services' as an eligible avenue for offset discharge but Services like 'Quality Assurance' and 'Training' would continue to be in abeyance.
- * Reduction in indigenous content requirement to 30 percent in Buy (global) bids where an Indian firm/JV is bidding for the proposal.
- An Integrity Pact was mandatory for contracts over Rs 100 crore under the DPP 2013. Now, vendors contracting for equipment worth Rs 20 crore will also have to sign the pact.
- ERV protection has been allowed on foreign exchange component to all Indian companies including private companies in all categories of capital acquisitions, so as to create a level playing field between the Indian and foreign industry.
- Outsourcing and Vendor Development Guidelines for DPSUs and OFB have been formulated, and circulated to SMEs for defence manufacturing to promote the participation of private sector.
- So far as categorisation is concerned the preference has been prioritised as to Buy (Indian Designed, Developed and Manufactured), 'Buy (Indian)', 'Buy & Make (Indian)' & 'Make' categories of acquisition over 'Buy (Global)' category, thereby giving preference to Indian industry in procurement.

Therefore, over the past year, Government of India has adopted a slew of measures to improve prospects for investment into the aero-def industry. While these measures are indeed appreciable, several predicaments dampen the prospects

Government of India has adopted a slew of measures to improve prospects for investment into the aero-def industry.

of the growth of the aero-defence industry. Some of the predicaments that require early resolution are described in the following paragraphs.

Acquisition Time Lines and Credibility

If there is a single reason that is a complete disincentive for the A&D industry, it is the inability of the Ministry of Defence to adhere to its own procurement timelines promulgated in the DPP 2016. Second, there is widespread uncertainty whether the project which has passed through all stages would be cancelled or withdrawn "without assigning any reason whatsoever." Recent examples are the Multi Role Tanker and Transport(MRTT) program of the IAF, Mine Counter Measure Vessel (MCMV) program of the Indian Navy and the Future Infantry Combat Vehicle (FICV) program of the Indian Army, to name a few. GoI must realise that companies are accountable to their shareholders and participation in programs is a cost which has to be approved by the Board/Shareholders which requires some visibility on timelines and outcomes.

Taxation

The present tax regime is a big disincentive for investment and growth of the A&D sector. Since June 1, 2015 the GoI issued two notifications, relating to imposition of excise duty and customs duties on all procurement irrespective of the suppliers status as a SoE/FOEM/. Private entity thus did create a level playing field for domestic industry but it also simultaneously raised the cost of acquisition by the Ministry of Defence. Due to the removal of the excise and customs duties exemptions for all entities, the MoD has to now absorb all taxes and duties within the approved Demands for Grants which are on the Gross Expenditure and not on Net Expenditure basis. The Demands for Grants are approved on the Gross Expenditure and not Net Expenditure. This implies that Taxes paid by MoD as part of the purchase cost would be budgeted within the allotted Gross Expenditure. The post "level playing field" situation for defence procurements under "Make in India" is shown in Table below.

Particulars	Duty Rate	Import Content	Local Content	Value Addition	Product Cost
Input cost		70.00	15.00	15.00	100.00
Basic Customs Duty (input)	10.00%	7.00			
Additional customs Duty (input)	12.50%	8.75			
Special Additional Duty (input)	4.00%	3.43			
Excise Duty (input)	12.50%		1.88		
VAT / CST	12.50%		2.11		
Total Cost of Production		77.00	17.11	15.00	109.11
Tax on Finished Goods					
Excise Duty	12.50%				13.64
Cenvat Credit (availed for input)					0.00
VAT / CST	12.50%				15.34
Credit for VAT (CST not available)					0.00
Delivered Cost to MoD					138.09

Thus, the annual spend on force modernisation and force maintenance will stand reduced by about 40 per cent as this table reveals. Also, Cash Flows of the Indian A&D industry, particularly Micro Small and Medium Enterprises

(MSMEs) who form the bulk of the supply chain, would be impacted significantly, as operating cash will be locked in for paying the excise duty on supply of defence items to DPSUs / OFBs. This in turn will raise the cost of production, so the cost of capital over the period of refund may be at least 8-9% considering that payments may take 6 months to

realise. Consequently, MoD would procure lesser quantity of items which impact the economies of scale that make local manufacture feasible. This tax structure may also encourage the Services to source globally since that acquisition categorisation is cheaper and more reliable considering the low budget allocations. Therefore, before the advent of the Goods and Service Tax (GST)(effective April 01, 2017), it is a vital necessity that goods and services supplied to the MoD and its direct contractors, should only attract either the minimum GST rate of 5 per cent, or be exempted, which would free up the budget for purchases rather than payment of taxes for a public good - which is national security. Second, incentives and exemptions provided to the infrastructure and core sectors must also be allowed for the A&D business under the IT Act.

The Government of India is encouraging setting up of production facilities for the integration assembly and delivery of platform/ equipment or system directly from an Indian facility to the MoD.

Deemed Exports

The Government of India is encouraging setting up of production facilities for the final integration assembly and delivery of platform/equipment or system directly from an Indian facility to the MoD. However, these deliveries should be considered as deemed exports excise and customs duties, and in future the GST would apply. It is proposed that "deemed export" related benefits be extended to defence acquisitions categorized under - "Buy Global" or under the "Buy and Make with TOT" or the "Buy and Make (India)" category, or under an "Intergovernmental Agreement". This would require, amongst other manufacturing requirements, final assembly, integration, testing and delivery to the MoD from a facility located in India. For sourcing of certain equipment and systems from abroad for "Make" projects, either for technical or commercial reasons, a similar situation may be obtained. This policy intervention would lower capital cost of acquisition, as the Table below illustrates. If "Deemed Export" status is accorded to "Make in India" by FOEMs for supplies to MoD, this would make a saving of about 25 per cent in the cost of acquisition.

Particulars	Duty Rate	Import	Local	VA	Product Cost
Input cost		70.00	15.00	15.00	100.00
Basic Customs Duty (under AA)	10.00%	0.00			
Additional customs Duty (under AA)	12.50%	0.00			
Special Additional Duty (under AA)	4.00%	0.00			
Excise Duty (input)	12.50%		1.88		
VAT / CST	12.50%		2.11		
Total Cost of Production		70.00	18.98	15.00	103.98
Tax on Finished Goods					
Terminal Excise Duty (Exempted)	12.50%				0.00
Duty Drawback					-1.88
VAT / CST	12.50%				13.00
Credit for VAT (CST not available)					0.00
Delivered Cost to MoD					115.11

Price Variation Clause

The Defence Procurement Procedure 2016(DPP 2016) issued by the Ministry of Defence does not provide a price variation clause for projects running into several years which is unrealistic, and a disincentive for the A&D Sector. Under Rule 204 (viii) (a) of GFR (2005) where projects run into several years, a price variation clause is provided. Since the provision for price variation already exists in government guidelines, the same must also be made applicable to defence contracts which invariably run into several years.

Multi-Currency Bids by Indian Industry

Indian bidders can only bid in INR for defence ministry projects. Since the import content of defence products can be as high as 50 per cent, multi-currency bids by Indian Vendors bidding for Defence projects can offset major currency risks particularly for long duration projects, requiring global sourcing. Multicurrency bids by Indian Vendors should be permitted for Defence contracts also. RBI guidelines permit such bids.

Purchase Preference for Indian A&D Industry

Under DPP 2016, Indian bidders require an indigenous content of 30 per cent when competing under 'Buy Global' (without attracting offset provisions) and 'Buy Indian' acquisitions. This direction, originally intended to benefit Indian industry, may be counter-productive, since Indian companies would have to source 30 per cent content from local Indian Tier-1/Tier-2 vendors, who do not have ready capability, and are at the bottom of the learning curve and lack the economies of scale to offer a competitive price. On the other hand, Global OEMs are free to select vendors from across the world, who offers the best price and terms and conditions, thus making their bids more winnable. In 'Buy Global' cases a purchase preference for Indian vendors becomes logical and a 10 per cent price advantage would be eminently reasonable. This is admissible under Indian law and should be included in the DPP 2013.

DCF Method for Multi-Currency Bids: Disadvantageous to Indian Industry

The Discounted Cash Flow (DCF) method is applicable to determine the Net Present Value (NPV) of stage payments made over several years. However, as per the methodology adopted in the DPP 2016, Indian and foreign currency bids (after conversion, basis the spot rate of the date of opening of the price bid, to the INR equivalent) and are both discounted at the GoI's prime lending rate on loans to state governments. This is extremely disadvantageous to Indian bidders since the interest rate differential in risk free interest rates across currencies maybe as much as 7 to 10 times the GoI's lending rate. It is proposed that the applicable discount rate for bids in different currencies should first be discounted at its own risk free interest rate or LIBOR + 2% and then converted to INR on the spot rate prevailing on opening of bid as per internationally accepted norms.

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Offsets

There are no two opinions that the offset policy has not achieved its intended objective. It is evident to all stakeholders that the key issue is that, the offset policy/procedure is unnecessarily complicated and is more an exercise in accounting, than a strategic instrument to generate much needed national capacity and capability building in addition, to skill development in the A&D Sector. The crux of the problem is the unnecessary and restrictive stipulation of offset fulfilment limited to the OEM or his project specific Tier 1 Vendor only in proportion to the work share in the specific product. Since OEMs are mostly system integrators and have about only 30 percent content by value in a product with the balance 70 percent contributed by possibly 60-70 or more Tier 1 Vendors, there can be no useful offsets that can build national capability in this salami

slicing approach. In addition, for each contract of the OEM the Tier 1 Vendor list may be different, thus making a Tier 1 vendor under one contract ineligible for offsets under another project by the same OEM. Similarly, a group company may have won another contract in India but that Group Company cannot meet offset requirements from Indian vendors who are already "qualified" to the OEMs vendor specifications. Therefore, a more pragmatic offset policy specifically aligned to "Make in India" is needed.

Indigenous Content

A high indigenous content must be the final objective. However, this does not mean that every item of a system is sourced only from indigenous vendors. Smart 'Self-reliance' in today's context means a mixture of global buy and localized "buy or make", to achieve reduced costs, faster deliveries and most importantly, superior quality and system performance. However, the present direction of the DPP 2016 requires each item of the Bill of Material to exclude import content at all stages (tiers) of manufacturing/production/assembly. For example, steel sourced from SAIL would require deletion of all import by way of ore, scrap iron, mineral additives etc. that may be sourced from global vendors and this 'import' content reduced to arrive at the indigenous content! Also, taxes and duties though paid by

Smart 'Self-reliance' in today's context means a mixture of global buy and localized "buy or make", to achieve reduced costs, faster deliveries and most importantly, superior quality and system performance.

the OEM are to be excluded from the invoice value of the local source/vendor. Hence this definition and restrictions needs major alignment with the core realities of production and manufacturing unique to the A&D(Aerospace and Defense) sector and should be aligned with the concept of "Make in India" as visualised by PM Modi, instead of this futile accounting exercise conceived in the DPP 2016.

Promotional Funds

As an incentive to promote the Indian aerospace and defence industry and develop a strong domestic manufacturing base, encourage entrepreneurship and promote research & development, the following are proposed:

- A Defence Manufacturing Promotion Fund (DMPF) for providing grants and loans for procurement of capital goods/input services for establishing defence and aerospace industries, particularly in the MSME sector.
- A Defence Entrepreneurship Promotion Fund (DEPF) for providing grants and loans to entrepreneurs, investing in import substitution goods and services for the A&D sector.
- Defence Industrial Research & Development Funds for providing grants and loans, to encourage research and development in the private sector/academic institutions, for creating test facilities, financing mission mode projects, etc.

Innovation

The defence and aerospace sector also requires a fillip for innovation. A Joint Innovation Council with participation of Indian Industry, IITs/IISc, MoD and Defence Services could be considered.

National Aerospace and Defence Production Policy

A 'Task Force' could be constituted, drawing members from the Ministries of Defence, Finance, Home, Civil Aviation, Surface Transport, Electronics and Telecommunications, Commerce and Industries, and the Industry bodies to draft the national aerospace and defence production policy. This would consolidate incentives and exemptions for domestic industry, encourage directed FDI, promote Foreign

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Technology Cooperation Agreements, and recommend processes to build national capacity in this vital sector. A suitable representative from the PMO could chair the Task Force.

Concluding Remarks

Despite the proactive stance of the government, doing A&D business in India continues to be a highly complex and daunting task for the Indian private sector and foreign OEMs. Recent policy initiatives have certainly brought in several reforms that helped bring certainty, transparency, and clarity in policy. Some have already been implemented to improve prospects for R&D industry. But, key predicaments, notably an indefinite procurement decision timeline with open ended trials, lack of tax and monetary incentives as available to other sectors, an inverted duty structure that still favours imports over indigenous production, will need to be addressed if this policy is to deliver on the "Make in India" promise. Clearly this has to be an inter-ministerial endeavour and not left to the MoD alone to resolve.

The demand for defence goods is cyclical. Now, since there is a major obsolescence issue and a necessity for force augmentation, the A&D sector is worth about US \$400 billion (over the next three plan periods). It is our collective national duty that all these projects must be "Make in India". We must note that our Hon'ble Prime Minister said "Come, Make in India" not just "Make in India". Resolving the predicaments outlined above would improve the prospects for the growth of an indigenous aerospace and defence industry.

Restructuring of UN Peacekeeping Operations to Meet Future Challenges

Shri Asoke Kumar Mukerji, IFS (Retd)®

fter the creation of the United Nations (UN) in 1945, UN Peacekeeping Operations (PKOs) have been increasingly used as an instrument by the UN Security Council (UNSC) to address threats to the maintenance of international peace and security. Until the end of the Cold War in 1989, less than two dozen PKOs were deployed, essentially to oversee peace agreements between member states of the UN. Since the end of the Cold War, the numbers of PKOs have mushroomed, with over 50 PKOs established so far by the UNSC. In terms of troops deployed, the number has increased from 34,000 in 2000 to over 106,000 in 2015.

While many of these PKOs have met their objectives and been wound up, there are currently 17 active PKOs deployed in the field, including the most recent one in Colombia.³ Recent initiatives⁴ in the United Nations is to significantly increase the number of troops and troop contributing countries⁵, as well as there is a renewed debate on the effectiveness of PKOs to meet the objective of securing international peace and security and serve to highlight the challenges facing PKOs in the 21st century.

According to the office of the UN High Commissioner for Refugees (UNHCR), 65 million people are currently displaced by war and persecution.

These challenges flow from the breakdown of international peace and security across continents, with the immediate impact being felt by civilians. According to the office of the UN High Commissioner for Refugees (UNHCR), 65 million

people are currently displaced by war and persecution. This is the highest such number since the 'Second World War', when the UN was founded. The response of the United Nations has focused on how to make PKOs more effective. In September 2014, the UN Secretary General, Ban Ki-moon, convened a High-level Independent Panel on Peace Operations (HIPPO) under the Chairmanship of Nobel Laureate and former President of Timor Leste, Ramos Horta, to "undertake a thorough review of United Nations peace operations today, and the emerging needs of the future."

Countries advocating major policy and structural changes in the mandates of PKOs have felt that the reliance of PKOs on the three traditional core principles of UN peacekeeping, is the main reason for their perceived ineffectiveness, including alleged indiscipline among troops from developing countries. Countering this, many countries, especially the Troop-Contributing Countries (TCCs) of the PKOs, have reiterated that the three core principles of peacekeeping continue to be valid and relevant. Beyond the policy framework, the role of PKOs to meet challenges, both expected and unexpected, has been an issue of concern.

On the policy framework, the HIPPO Report reiterated the importance of observing the existing three core principles of PKOs, which it elaborated as "consent of the parties, impartiality and the non-use of force except in self-defense or defence of the mandate". At the same time, the panel felt that while these three principles were important

[®] Shri Asoke Kumar Mukerji, IFS (Retd) was India's Ambassador and Permanent Representative to the United Nations from 2013-2015.

for "observing ceasefires and implementing peace agreements", a more "flexible and progressive interpretation of those principles" was needed to respond to volatile situations.8

The need for interpreting the principles of peacekeeping to restructure PKOs is controversial, requiring the participation of all the member states of the UN, and not only the fifteen-member UNSC, of which five are permanent members. The "core" principles of PKOs are not set out in the UN Charter, but have emerged, out of the continued deployment of UN peacekeepers over the past seven decades. Any attempt to reinterpret these principles has to take into account the larger framework in which the PKOs operate today. As the UN Secretary General told the UNSC in June 2014, "UN peacekeeping operations are increasingly mandated to operate where there is no peace to keep."9

Keeping the peace, requires the UN, especially the UNSC, to invest more in creating a supportive political environment for PKOs to succeed. The case of UNMIT in Timor Leste is often held as an example of how a PKO can successfully

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complete its task and exit, leaving the issues of governance in the hands of the host government. 10 The requirement to achieve and sustain the peaceful settlement of disputes is at the heart of the UN Charter.¹¹ Unfortunately, neither past precedent nor the provisions of the UN Charter appear to guide the UNSC when it draws up mandates for PKOs.

The HIPPO's Chairman, Ramos Horta, emphasized this larger framework by referring to the need to look at "special political missions, including the changing nature of conflict, evolving mandates, good offices and peacebuilding challenges, managerial and administrative arrangements, planning, partnerships, human rights and protection of civilians, uniformed capabilities for peace operations and performance."12

The HIPPO Report has recommended four "essential shifts" for UN peace operations to deliver better results. These are:

- Politics must drive the design and implementation of peace operations.
- > The full spectrum of United Nations peace operations must be used more flexibly to respond to changing needs on the ground.
- A stronger, more inclusive peace and security partnership is needed for the future; and
- The United Nations Secretariat must become more field-focused and United Nations peace operations more people-centered.¹³

To succeed in implementing these shifts, the UN must first of all complete the restructuring of the body that mandates PKOs, the UNSC. Article 24.1 of the UN Charter, gives the UNSC the "primary responsibility for the maintenance of international peace and security". Decisions taken by the UNSC are binding on all member states of the UN.14

Since 2010, mandates for PKOs, written by the Security Council have been appropriated arbitrarily by its so called "pen-holders", a concept not found in the UN Charter. Under this arrangement, permanent members of the UNSC have taken to drafting the Council's mandates in a non-transparent manner.¹⁵ This mechanism effectively places the entire burden and responsibility of the UNSC in drawing up PKO mandates in the hands of one of its permanent members.

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No single country can claim domain expertise on all the areas of the world, and it has abrogated itself in this manner, and there are relevant questions of transparency and accountability arising from such a mechanism. These are important issues, especially when the primary responsibility for the success or failure of the PKO lies with the UNSC, and the impact of the PKO reflects on the work of the United Nations itself.

In addition, the constraints of lack of adequate equitable representation in its permanent structure from regions where PKOs are deployed, especially Africa and Asia, the UNSC has chosen to "reinterpret" the provisions of the UN Charter, relating to participation by countries, not in the Council which contribute troops to PKOs. By its Resolution 1353 (2001) of 13 June 2001,¹⁶ the UNSC specified the format, procedures and documentation of meetings with the troop-contributing countries, which is mandated by Article 44 of the UN Charter. The thrust of this Resolution has been to deny Troop Contributing Countries (TCCs)direct consultations with the UNSC when mandates are drawn up, and instead divert TCCs to technical consultations only with the Council President accompanied by UN Secretariat officials. This has impaired the effective functioning of PKOs on the ground, especially during moments of crisis.¹⁷

Taken in conjunction, these structural constraints of the UNSC have aggravated the current challenges facing PKOs. Unless the UNSC is structurally reformed, as mandated by the UN's 2005 World Summit, ¹⁸ and acts to "increase the involvement of States not members of the Council in its work," PKOs will continue to face these challenges.

In this context, three cross-cutting systemic challenges need to be emphasized.

The first of the big challenges identified for PKOs is the protection of civilians, ¹⁹ including the most vulnerable among them – women and children. Protection of civilians is currently integrated into PKO mandates. However, when PKOs fail to act to defend this mandate, especially when operating in an environment where the armed forces of the host country itself are alleged to violate the commitment to protect civilians, the resultant tensions affect the effectiveness of the PKO. This is happening with *United Nations Mission in South Sudan (UNMISS)*. ²⁰

To help the PKO meet this challenge, the UNSC has to activate itself politically, to persuade the host country government to cooperate with the objectives of the UN's peace operations. So far, in the case of South Sudan, this has not happened. ²¹ Based on the experience of PKOs on the ground in implementing the mandate to protect civilians, the UNSC must prioritize allocation of human and material resources to enable PKOs build and maintain the necessary infrastructure to protect civilians seeking shelter in their bases.

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A second major challenge facing PKOs is their deployment in crises which evolve into civil war situations, often bringing in elements from countries, immediately neighboring the country,hosting the PKO. This was evident in the Democratic Republic of Congo. The PKO Mission in the Democratic Republic of the Congo(MONUSCO)²², evolved from sustaining the Lusaka Peace Agreement of July 1999 between countries of the region, to an operation, involved in keeping the peace between the government and anti-government armed groups in DRC (Democratic Republic of Congo) itself in 2010, to further being mandated to fight on the side of the host government against its internal opponents like the M-23 in March 2013.

These issues have to be seen in the context of the UNSC's legal framework, when it passed Resolution 2098 in 2013, creating the Force Intervention Brigade (FIB) in MONUSCO.²³ Before taking the FIB as a model for future PKOs, the UNSC must clarify how UN troops deployed in a civil war within the country hosting the PKO, can take sides in an internal armed conflict. It must clarify whether by integrating interventionist mandates as part of the main PKO, it has made all peacekeepers of that PKO "enemy combatants" under the provisions of international humanitarian law, losing

any immunity from future prosecution?²⁴ The experience of MONUSCO is today relevant for United Nation Mission in South Sudan (UNMISS) in South Sudan as well²⁵, as the UNSC attempts to operationalize a Regional Protection Force in UNMISS.²⁶

A third major challenge for PKOs is to operate in areas which are afflicted by trans-border terrorism, which has not hesitated from threatening and attacking PKOs such as United Nations Disengagement Observer Force(UNDOF)²⁷ in the Golan Heights and MINUSMA in Mali.²⁸ Given the ongoing spread of transnational terrorism, this challenge is likely to be faced by PKOs in other locations as well, in the future.

The UNSC has chosen to downplay this challenge probably due to a desire not to "politicize" trans-border terrorism. However, the fact remains that the effectiveness, and sometimes, rationale of PKOs is directly challenged by this phenomenon. Unless the UNSC acts decisively against trans-border terrorism, including by enforcing the obligations of member states of the UN to counter terrorism in all its forms and manifestations, the result of this threat will be to erode the impact of both the PKOs and the UN itself.²⁹

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The key to restructuring the UN's PKOs to meet future challenges lies with the UNSC. "Physician, heal thyself" should be the proverb that guides the UNSC in this process.

End Notes

- The UN Charter adopted in 1945 itself did not explicitly provide for PKOs. When the Suez Crisis erupted in the second half of 1956, the UNSC was deadlocked in decision-making by the use of vetoes by two of its permanent members, France and the United Kingdom, who were belligerents in the Suez Crisis. The UNGA met in the first ten days of November 1956 under a Uniting for Peace resolution and recommended the deployment of UN-flagged troops as the First United Nations Emergency Force (UNEF-I). The clear objective given by the UNGA for these troops was of securing and supervising the cessation of hostilities, with the consent and cooperation of the parties to the conflict. The French, British and Israeli troops left the conflict zone by 8 March 1957. After the withdrawal of non-Egyptian troops, UNEF patrolled the area as a buffer between Egyptian and Israeli forces, to provide impartial supervision of the ceasefire. UNEF was withdrawn after Egypt, against whose territory the armed aggression had been committed, informed the UN Secretary General in the middle of 1957 that it would no longer give consent to the presence of the peacekeeping operation on Egyptian territory as the conflict had subsided. See an account of UNEF-I available on the UN website. Available at http://www.un.org/en/peacekeeping/missions/past/unef1backgr1. html
- 2 From the **List of Peacekeeping Operation** the UN website. Available at http://www.un.org/en/peacekeeping/documents/operationslist.pdf
- 3 See UN Peacekeeping website. Available at http://www.un.org/en/peacekeeping/operations/current.shtml
- 4 The most high profile of these initiatives has been the Leaders' Summit, 2015, hosted by the United States in September 2015 in the United Nations in New York. For further details see http://www.un.org/en/peacekeeping/operations/leadersummit.
- 5 Over 120 member states contribute more than 125,000 UN peacekeepers. See the Infographic available at http://www.un.org/en/peacekeeping/images/PKD_Infographic_web.jpg

- 6 Global Trends 2015Report issued by UN High Commissioner for Refugees. Available at http://www.un.org/apps/news/story.asp?NewsID=54269#.WCWzHfl96M8
- 7 Identical letters dated 17 June 2015 from the Secretary-General addressed to the President of the General Assembly and the President of the Security Council, No. A/70/95–S/2015/446*. Available at http://www.un.org/en/ga/search/view_doc.asp?symbol=S/2015/446
- 8 See the HIPPO Report, Para. 124, p. 46. No. A/70/95–S/2015/446*. Available at http://www.un.org/en/ga/search/view_doc.asp?symbol=S/2015/446
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- 10 http://www.bbc.com/news/world-asia-20873267
- 11 Chapter VI. *Charter of the United Nations*. Published by the United Nations Department of Public Information. Available at http://www.un.org/en/charter-united-nations/
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- 13 Ibid. Page 10.
- 14 Articles 24 and 25. *Charter of the United Nations*, published by the United Nations Department of Public Information. Available at http://www.un.org/en/charter-united-nations/
- 15 http://www.securitycouncilreport.org/un-security-council-working-methods/pen-holders-and-chairs.php.For example, the pen-holder for Peacekeeping issues is the UK, while France takes the lead on MINUSCA, MONUSCO, MINUSMA and UNIFIL is France, and the USA holds the pen on UNMISS, UNDOF (with Russia), and all Counter-Terrorism issues.
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- See, for example, an early analysis of the trans-national terrorist threat to MINUSMA in "Adapting and Evolving: The Implications of Transnational Terrorism for UN Field Missions", Woodrow Wilson School, Princeton University, April 2014, at https://www. princeton.edu/sites/default/files/content/docs/591c_Adapting_and_Evolving_The_Implications_of_Transnational_ Terrorism.pdf

Building Capacity for Protection of Civilians in UN Peacekeeping Operations

Lieutenant General Chander Prakash, SM, VSM (Retd)®

Introduction

ontemporary peacekeeping is multidimensional and necessitates integrated operations with an increasing focus on the protection of civilians. Mandates, over the years have changed and become more complex. UN peacekeeping missions are required to address the full spectrum of peacebuilding activities; from providing secure environments to monitoring human rights and rebuilding the capacity of the state. Such mandates put great emphasis on the physical protection of civilians by UN peacekeepers.

Over the last two decades, the world has witnessed armed conflicts marked by violence and mass atrocities against civilians. The international community looks up to the United Nations and in particular to the UN peacekeeping operations, to protect civilians in conflict zones and provide them the necessary security and safety. The deficiencies in capacities and capabilities of UN peacekeeping operations to protect civilians from mass atrocities in Rwanda, Bosnia and Somalia, and also in some of the ongoing missions such as Democratic Republic of Congo (DRC) and South Sudan have been clearly thrown up.

What is Protection of Civilians (POC) in UN Peacekeeping?

There is no common UN definition of the protection of civilians (POC). The General Assembly, the Security Council, Member States, and troop- and police-contributing countries (TCC/PCCs) have different views and approaches to the protection of civilians. The human rights and humanitarian actors follow an approach based on the rights afforded by international law, particularly humanitarian and human rights law, known as the rights-based approach. The development agencies, such as the United Nations Development Programme (UNDP) follow a much broader definition, which effectively includes the protection of civilians within the much

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broader context of good governance and economic and social developments, known as the "everything you do affects the security of the individual" approach. There are some who concentrate only on physical violence and the measures needed to protect individuals and groups, if necessary, by use of force. UN peacekeeping's concept of the protection of civilians tries to bring all three elements together¹.

Peacekeeping operations, more often than not, have been explicitly mandated to "protect civilians under imminent threat of physical violence". This is because the safety and security of civilians is critical to the legitimacy and credibility of peacekeeping missions. However, it needs to be noted that the UN peacekeeping missions do not

[®] Lt Gen Chander Prakash, SM, VSM (Retd) was commissioned into the Regiment of Artillery on 17 Jun 1973. He was General Officer Commanding a Mountain Division and also Military Adviser in Embassy of India in Paris, France with concurrent accredition to Belgium, The Netherlands and Luxembourg. He retired as Commandant, DSSC, Wellington on 31 Oct 2013. Presently, he is Deputy Director and Editor at USI of India.

and cannot 'own' the concept of protection; but, they can and should bring the international civilian, military and police skills, the host state, mandated UN protection agencies, non-governmental organizations and the International Committee of the Red Cross in areas of their operations, to work in a coherent manner so that their actions, where possible and feasible, are mutually reinforcing to enable effective protection of civilians.

Types of Threat to Civilians

The threats to local population in areas of operations of a peacekeeping mission could be any one or combination of the following:-

- (a) Attacks by non-State armed groups directly or indirectly targeting the civilian population. Also, the armed conflicts between non-State armed groups or between the State forces and armed groups can cause forced displacement of the population or a specific segment of the population. There could also be inter- and intra-community tensions and conflicts; control of territory by non-State armed groups resulting in arbitrary detention and reprisal against the civilian population; armed banditry and organized crime resulting in civilian casualties, reduced freedom of movement for the population and decreased economic activity.
- (b) Forced recruitment and use of children by armed groups; the military use of schools; conflict-related sexual violence; lack of access to basic services; civilian casualties as a result of the use of improvised explosive devices (IEDs).
- (b) 'State actors' violations, such as arbitrary arrests, illegal detention, and ill treatment or torture; conflict-related displacement; increased inter-communal violence; security and rule of law vacuum, and insecurity and crime resulting from the weakness and withdrawal of State authorities; kidnapping and extortion of civilians; and it could be even retaliation against civilians "collaborating" with UN peacekeeping mission.²

Gaps in the Ability of Peacekeeping Missions to Protect Civilians

The UN peacekeeping mandates do not holistically and consistently take into consideration the nature and type of threats to civilians. Protection of civilians tends to be understood primarily in military terms. Hence, many other aspects related to POC remain neglected. The gaps are as under:-

- (a) There is a lack of mission-wide strategy to deal with POC issues that address protection of civilians, and utilization of mission assets to reduce violence and threats to civilians on a day-to day basis and also as a response to crises. In some cases, mission-wide strategies have been evolved but they lack the requisite structure and capacities to develop and implement protection strategies.
- (b) Mission leaders at senior levels, both civilian and military, do not demonstrate consistency in either their level of understanding or their relative prioritization of the issue of protection of civilians.
- The UN peacekeeping mandates do not holistically and consistently take into consideration the nature and type of threats to civilians.
- (c) Most missions do not have sufficient capacity to collect and analyze the information needed to address day-to-day threats and are unable to predict potential crises that could lead to rapid escalations of violence. There is also a lack of means and resources to react in a timely manner.
- (d) It is not feasible for the peacekeepers to 'protect everyone from everything'. There is a lack of mechanism to manage expectations. An effective public information strategy is required at the country level to ensure that the populations and the international community understand mission approaches, capacities and capabilities to deal with a situation.

Responsibility and Expectations from a UN Peacekeeping Mission

The host State government always has the primary responsibility of protecting the civilian population within its borders.³ Hence, the protection should come from State security (military, police, and gendarmerie) and judicial structures. But more often than not, the national authorities are not capable or willing to meet these obligations, and, UN peacekeeping operations with POC mandates are expected to undertake protection of civilians with or without the support from host State institutions. Humanitarian organizations and other (some other word) protection actors are also expected to provide protection and defend the rights of the affected civilian population. Some of the UN peacekeeping missions (MONUSCO for example) have also been authorized to "use all necessary means" or "all necessary actions", up to and including the use of deadly force to implement that mandate.4

Capacities Needed for Effective Protection of Civilians

There is consistent mismatch of UN peacekeeping mandates with the actual resources made available on the ground. Peacekeepers are required to operate in more complex and diverse environments with significant geographic challenges. Peacekeepers too are under threat when they act robustly. Comprehensive solutions are required. Peacekeepers should, therefore, be deployed and employed with clear directions, support systems, necessary equipment, enablers and also training to implement the mandates authorized by the Security Council.⁵ Following are needed for any meaningful protection of civilians:-

First and foremost is the need for a comprehensive policy on protection of civilians by peace missions, including for crisis management across all peace operations and country teams.

- (a) Comprehensive Policy. First and foremost is the need for a comprehensive policy on protection of civilians by peace missions, including for crisis management across all peace operations and country teams. The UN needs to introduce measures that allow for expedited human resources and procurement processes in crisis situations. The policy should clearly articulate accountability and the command and control channels of senior leaders at UN headquarters and in the missions involved in peace operations at the policy level.⁶ Without this, no amount of resources, capacities and capabilities provided will be sufficient.
- (b) **Define the Operational Role**. The role of peacekeeping missions as protection actors must be operationally defined to clarify what missions are expected to do and what roles individual actors within the missions are expected to play, especially for senior mission leaders, police personnel, and military officers. The lack of an operational concept for peacekeeping missions, and the confusion between other concepts of protection, undermines the ability of missions to define their role and develop coherent strategies at the most fundamental level.
- (c) Tools and Means to Analyse the Threats. Peacekeepers are required to act against a wide variety/array of possible incidents of physical violence against civilians. No peacekeeping force is able to address complete spectrum of protection threats at all times. Accurate threat and vulnerability analyses tools would be of great help for coherent operational planning and for the optimal employment of available resources to maximize the protective layer over at-risk civilians.
- (d) Situational Awareness Means. Good situational awareness is essential for ensuring the safety and security of civilians, and peacekeeper as well. Modern intelligence systems, both in terms of equipment and trained human resource, are required for timely response and pro-active protection of civilians. Satellites, aircraft such as unmanned aerial vehicles, ground-

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based sensors and other surveillance technology can record and transmit imagery for dissemination and further analysis. This can improve situational awareness for UN peacekeepers concerning potential attacks by armed groups, troop dispositions and movements, convoy protection, and route clearance. Political and legal restrictions imposed by host states and other UN member states, which are concerned about interference in internal affairs and apprehensive that information gathered for UN operations may be mishandled or exploited in other contexts, will have to be overcome. Host-state's consent, sovereignty, and legality are an issue. A conducive political climate can resolve most of the challenges. Case in point is the deployment of UAVs in MONUSCO in the Democratic Republic of Congo.

- **(e) Enablers.** The peacekeepers need to be provided the necessary equipment and enablers to enable them to execute the mandate. The missions should be provided adequate number of combat engineering companies, Special Forces teams, and formed police units. These will go a long way in improving the operational effectiveness and much needed deterrence effect.
- (f) Capacity to Distinguish Civilians from Combatants. In many operational environments, such as in the Democratic Republic of Congo (DRC) and the Central African Republic, it is usually not possible to distinguish between civilians and armed elements. Civilians may be in the possession of arms, without necessarily having a status of "combatant". Under international humanitarian law, civilians who are in the possession of arms, for example, for the purpose of self-defence and are not currently engaged in hostilities, are entitled to protection. Capacity to distinguishing civilians from combatants needs to be provided to the peacekeepers.

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- (g) Mobility. Most of the vulnerable sections of civilian population live in areas where the infrastructure is poor and areas inaccessible as is the case in South Sudan, Mali, Central African Republic and DRC. The missions would, therefore, need to be provided with varied mobility assets such as helicopters both utility and armed, to have a chance to deliver on their mandate. Also they should be equipped with means of transport for rivers and lakes, and all-terrain vehicles that can move in the mud and the swamps. Largely, the peacekeepers depend on helicopters as this is the most practical means of transport. However, this limits the numbers of troops that can be deployed and retained in remote locations significantly. Adequate number of dedicated aviation assets need to be allocated particularly to the military component so that the uniformed peacekeepers can react in a timely manner.
- (h) **Security Sector Reforms.** High-Level Independent Panel on Peace Operations (HIPPO) had highlighted that the security sector can be the greatest spoiler of peace. For long term protection of civilians, reforms of the security sector are most critical. Though there are bilateral efforts to engage in Security Sector Reforms (SSR), but often these are undertaken with minimal transparency and coordination. The UN needs to provide overall support and coordination so that the SSR is effective. The reforms across the different security sectors have to be coherent. The uniformed peacekeepers both military and police need

to be provided the required means and resources for imparting training to the national security forces. Peacekeeping strategies too should refocus on strengthening national protection capacities through security sector reform.⁸

(i) Training in Operational Scenarios. The modus operandi of traditional military operations is different from protecting civilians. The tactics and operations of protecting civilians usually involve highly mobile teams, The uniformed peacekeepers both military and police need to be provided the required means and resources for imparting training to the national security forces. somewhat similar to actions taken by robust armed police units, and also require ability to undertake crowd control and riot control. Peacekeepers need to train in these tactics and operational drills for various scenarios which they are likely to encounter. They should be put through simulation exercises with other stake holders and partners to deal with crisis situations under challenging circumstances.

- (j) Means to Prevent Illegal Cross-border Inflow and Manage Counter-Terrorism Activities. Peacekeeping operations should be provided with resilient executive mandates in order to ensure security and public order, including the prevention of illegal cross-border inflows of weapons and mercenaries. Police components of peacekeeping missions should be provided with sophisticated technologies and clear mandates to improve the protection of civilians and manage counter-terrorism activities. The challenge of protecting and managing civilians where internally displaced people are in camps is huge as seen in South Sudan. It is necessary to assess how the environment could be improved and what tools are needed in this regard. Dove-tailing of military and police activities is also something that needs to be examined.9
- (k) Force Protection Means and Legal Protection. Robust actions by the peacekeepers are likely to attract retribution from the spoilers, thus the threat to life and UN property in the mission area. Therefore, it is absolutely necessary that the peacekeepers are provided the necessary wherewithal to protect themselves, their bases and the UN property. The legal provisions should also be such to protect them from prosecution when they act in good faith.

Conclusion

UN peace operations continue to face significant capability shortfalls to undertake effective protection of civilians when mandated to do so. Peacekeepers when protecting civilians face an increasingly complex set of strategic, operational and tactical challenges. To respond to emerging environments, deliver their mandates and protect civilians, UN peacekeeping missions need resources that enhance their operational capabilities effectively. Expectations from peacekeepers with respect to protection of civilians are high and of course justified but means are meagre. The UN and the Member States have to provide the required capacities to the UN peacekeeping missions some of which are highlighted here so that the mandates can be delivered.

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Integration and Synergy in India's Instruments of National Power

Shri Shakti Sinha, IAS (Retd)®

'ndian policymakers and most informed citizens have a very strong belief in what they perceive to be India's manifest destiny; that it is only a matter of time before India regains its place on the global high table. Angus Maddison's estimations that India was the world's largest economy till the 16th century when China overtook it, and that it

remained the second largest economy till 1870 has become an article of faith for many Indian strategic thinkers. Barring large-scale disruption, it is most likely that India would become the third largest economy, in exchange rate terms, by mid-21st century but that is largely a function of its population size, as in the past, and not of its productivity. India's per capita income and social indicators place it in the bottom quarter of global average. It is this situation and a determination to get out of it that should drive the country's efforts at raising its National Power. This in turn requires heightened security capabilities to ensure a much larger global footprint and middle-income status that can finance such force projection. This begs the question – are India's instruments of National Power designed for, and capable of, achieving its ambitions? And if not, are Indians simply day-dreaming or do we have the capability to make the necessary course correction that would better leverage India's inherent strengths and the underlying potential through better synergy?

This begs the question India's instruments of National Power designed for, and capable of, achieving its ambitions? And if not, are Indians simply day-dreaming or do we have the capability to make the necessary course correction that would better leverage India's inherent strengths and the underlying potential through better synergy?

This paper aims to look at the different instruments of National Power, viz., (i) The body politic, particularly the leadership; (ii) Bureaucracy and governance systems; (iii) Diplomacy, and; (iv) Its security architecture. The listing is not complete since it does not take into account the increasingly important role that the higher judiciary has arrogated to itself even as arrears of undisposed cases shows no signs of abatement. This choice is deliberate since that would involve getting into the minutiae of governance and would derail the discussion; instead the centre focus of this piece is to take stock of how the country is doing and how it can do better. However, this aspect of the executive-judiciary relations would be addressed in the narrative of how to bring about optimum outcomes to national efforts at generating economic growth, and ensuring a stable environment required to achieve such desired goals.

Body Politic

This is the most visible, and the most controversial part of the Westphalian Nation State that India is. And, I would add, the most crucial element since it provides the leadership to the Indian State. Most metropolitan commentators, particularly those commenting in English convey the impression that the Indian State has largely failed, that its leit motif is corruption and therefore it is in urgent need of de-politicisation. While a sense of disappointment is natural, such a harsh verdict is out of sync with reality. It ignores two key achievements of India's political system and leadership. One,

Shri Shakti Sinha, IAS (Retd) is the Director of Nehru Memorial Museum & Library, Teen Murti. He writes and speaks on governance, political economy and on strategic affairs particularly relating to Afghanistan. He has published a number of book chapters, working papers etc.

India's success at achieving and sustaining political stability, something even the most sympathetic observers were unwilling to predict in 1947 and in the succeeding four decades. Two, India's success, next only to China, in lifting hundreds of millions of people out of poverty, particularly after the adoption of economic reforms in 1991. These two very considerable achievements need some explanation since many analysts take them for granted. Or worse, belittle them. Despite a series of armed secessionist insurgencies, India has not lost territory other than through surreptitious occupation by neighbours in contravention of international law, and none in the last five decades. Rather it has gained territory through de-colonisation and merger. The continuation of low-intensity insurgencies which have degenerated into acts of terror in Kashmir and parts of the North-East are sustained with support of external powers, as was the case in the Punjab in the decade of the 1980s. Similarly, at one stage in the early part of this century, the fear of a 'red corridor' linking Bihar all the way to Tamil Nadu via Jharkhand, Chhattisgarh, Odisha, Madhya Pradesh, Maharashtra and undivided Andhra Pradesh was enough

Democracy is at the root of India's stability since it has imparted much needed adhesiveness between the State and Society, sadly largely absent in India's neighbourhood which has seen debilitating civil wars, high levels of violence and continued political instability, so much so that contrived 'anti-India' narratives are necessary, to keep some of these countries together.

for even serious commentators to worry about the writ of the Indian State. Presently, other than random acts of terrorist violence against local security forces and village-level elected representatives in a few of these states, left-wing extremism is not even seen an issue of debate. This success comes from the democratic and open nature of the Indian State anchored in the Constitution, whose key features include fundamental rights tempered by special provisions for discriminatory treatment in favour of the socially disadvantaged, allocation of responsibilities to the Union (Centre) and States, an independent judiciary and with flexibility to allow for changes in tune with the times. This has allowed the political leadership to not only co-opt newer groups, but also undergo significant transformation, that is a truer reflection of social realities. Democracy is at the root of India's stability since it has imparted much needed adhesiveness between the State and Society, sadly largely absent in India's neighbourhood which has seen debilitating civil wars, high levels of violence and continued political instability, so much so that contrived 'anti-India' narratives are necessary, to keep some of these countries together.

India's success as a democracy was not a given, much like the country's ability to keep itself together. This sentiment was best reflected in what Selig Harrison, the respected American journalist who was based in India for many years, and was seen as a sympathetic observer, wrote in 1960, that 'the odds are wholly against the survival of freedom...the issue is, in fact, whether any Indian state can survive at all.' One-third of the world's population living in a democracy are Indians. However, up to fairly recent times, each national election was cited as probably its last. Indeed of the decolonised countries that won independence after World War II and have sustained democracy, India is the company of Mauritius, Belize, Jamaica, Papua New Guinea, Solomon Islands and Vanuatu, who are small nations with generally much higher levels of per capita income.

Clearly India political leadership has not got the credit it deserves. Part of the reason would lie in the fact that India's 'intellectual' leadership is out of touch with the country, primarily, because it views the country through paradigms of Western categorisation, that are not suitable for Indian realities. Exploring this strand of thought is outside the scope of this paper. However, the other reason for dissatisfaction with the political leadership is the reality of the country's relative failure to develop its instruments of National Power, thereby denying India its preeminence in this part of the world. This, and the persistent of poverty, despite

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the considerable achievements of the past quarter century has left the country unable to punch at its own weight consistently in the international arena. The political leadership's responsibility in this affecting changes initiated over the past two years, has to be sustained and deepened so that the country can gain its rightful place in the comity of nations.

Bureaucracy and Governance Systems

The systems of governance that independent India inherited and built upon is quite different from even what prevailed in Britain itself. Over the years, the system has modified considerably driven by successive government's ambitious agendas of economic growth and social transformation. This is a far cry from the extremely limited, security oriented State that the Raj was. Consequently, the scope, and size, of government is vastly different. Two parallel developments have been; an increase in the size of the civil services, cutting across generalists and specialist cadres, and the creation of silos which involved in their own narrow objectives, lose sight of overall goals. These two developments are not confined to what is popularly referred to the civil services or the bureaucracy, but also extends to the armed forces, a point which this paper would come back when suggesting the ways forward.

In this scenario where the government has simply become too big to work coherently mostly reflecting the political leadership loss of the ability to make it work synergistically to achieve broad national goals. Periodic efforts at reform have led to superficial changes, often to the adding of more manpower and layers rather than to better accountability. Far more effective results have come when political leaders have clearly defined specific objectives, reorganised organisations and recognised the abilities of the market, e.g., the telecom revolution, national highways development program, opening up air travel to the middle class, Jan Dhan Yojana etc. But where the objectives are vague as in education and health, or in defence preparedness, the results are not commensurate with the efforts and resources put in. The system, otherwise, is more about process and apparent attainment of targets (budgetary allocations spent rather than on tangibles achieved), as a scholar studying Indian diplomacy found out, when he asked to see files in the Ministry of External Affairs. He was told by a senior diplomat that reading files to understand India's diplomatic initiatives would be a waste of time as files are about processes not intent.2

Diplomacy

While on the one hand, some of the brightest minds used to join the Indian Foreign Service, on the other; their international interlocutors have often found Indian diplomats difficult to work with. They are seen as hectoring rather than engaging.³ The reverse side of this picture is the extremely small size of the Indian Foreign Service, around 1000 including at the secondary level (IFS 'B'). Even when one adds, the defence and other technical attaches, the total strength is only around 1750. Shashi Tharoor puts it succinctly, when he says "India is served by the smallest diplomatic corps of any major country, not just far smaller than the big powers but

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by comparison with most of the larger emerging countries." Specifically, the number of Singaporean diplomats is roughly the same as the number of Indian diplomats, with those of Brazil and China are far more numerous.

This puts tremendous pressure on Indian diplomats who man missions from Zahedan and Ulan Bataar to Windhoek and Paramaribo. The scope of international diplomacy has moved to new areas of trade, investment, climate change, global commons and terrorism financing. At the same time, traditional power politics and the move away from a unipolar world to one, which China seeks to re-write the international rules, even as it uses its huge currency reserves to extend its influence in countries, in India's neighbourhood, raises new challenges for Indian diplomats. Their present numbers and (limited) skill-sets and zealous guarding of turf has meant that despite having outstanding diplomats, many of whom have established international reputations for successful serving Indian larger interests, the country is unable to protect its interests, or to project its strengths at the desired levels consistently. Present plans on enhanced intake at probationers' level would take decades to reach the desired manning levels. And the Indian civil services, of which the Foreign Service is a subset, has not yet learnt to accept lateral entrants at different levels, who would bring in both the numbers and the skills required to handle the multi-dimensional complexity in a relatively short time-frame.

Security Architecture⁵

There is often a tendency to confuse individual courage and commitment with organisational efficiency. This confusion applies to the Indian security forces, particularly to the armed forces. The Indian army played an extraordinarily

important role in consolidating India in the immediate aftermath of independence, particularly in preventing adventurism in Hyderabad and Junagadh and in defending Jammu & Kashmir against Pakistani invasion. It's last such act in consolidating the physical form of the country was the liberation of Goa in 1961. It lost little time in recovering from the debacle of 1962, particularly in the Eastern sector, acquitted itself creditably in 1965, when again it had to counter Pakistani adventurism, no doubt inspired by 1962 defeat. It scored a decisive victory in 1971, through some extremely imaginative moves in avoiding pitched battles around population-centric areas, leaving the enemy with little space for manoeuvre. And again, forced into an unequal fight in 1999, beat back the Pakistani forces, that had taken-over heights above Kargil, forcing them to sue for peace.

However, the Indian military's ability to fight a sustained war, or even a two-

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front war, is open to question; then Chief of Army Staff General VK Singh's letter to the Prime Minister was quite categorical in this regard. Massive import dependence and the inability to move beyond single service operation, is hamstring Indian defence effectiveness. Admiral Arun Prakash has argued that for the amount of money spent on national security, the results are sub-optimal, and that the issue should become important enough to decide the electoral fortunes of governments in national elections. On the one hand, the lack of integration between the Ministry of Defence and the Service Headquarters has led to the latter feeling left out of decision making on key issues affecting them. Suspicion and mutual recrimination is hardly conducive to obtaining desired outcomes. On the other hand, an extremely distorted version of civilian control has meant that the three services pretty much plan their own strategies, with the political masters and their bureaucratic subordinates, refusing to get into what they mistakenly identify as purely military matters. Both the civilian and the military have over-read the lessons of 1962 in ways that does not do justice to the nation and its armed forces. Operational details about the 1965 Indo-Pak war, the 1987 Sri Lanka mission as well as about the 1999 Kargil war has shown that that the three services are at best comfortable with the coordination mode of interaction, with each service planning its own operations. An integrated approach to war is a long way off; the only peacetime opportunity for integration, the Andaman & Nicobar Command would now revert to the Navy since being a joint command has meant that it has been starved of assets, including manpower, by the three services. Similarly, turf wars over maritime reconnaissance, and army's aviation wing and problems in air force/ naval tactical support to combat operations are symptoms of larger malaise. When it comes to procurement, the situation becomes

even more embarrassing. Other than the Navy, which has embraced indigenisation, the other services have serious issues with domestic research, development and production. Despite India producing a Jet fighter aircraft in the 1950s,

the first country outside the major powers to do so, the travails of LAC Tejas is again symptomatic of the sub-optimality of India's defence preparedness. On the one hand, Defence Research & Development Organisation (DRDO) and Defence Public Sector Units (PSUs) over-promise and under-deliver, causing problems in deployment. On the other hand, confusing and changing requirements General Staff Qualitative Requirements (GSQRs) prepared by generalists in the Services means that the product cannot be developed within the laid down time and cost limits. Brochure shopping i.e., choosing different features from rival products, in fact, holds up international procurement frequently. The services also procure similar equipment separately, in line with the silo approach of government departments. The result is excessive costs since the benefits of consolidation and a resultant

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economy of scale is lost. Worse, it prevents interoperability. The costs for the nation, both in terms of inefficient utilisation of money and of lack of defence preparedness is simply unacceptable.

Way Forward

There are no easy solutions but if India aspires to sit on the global high table, the status quo would have to change and any such change has to be transformative, not tinkering. Dr Ambedkar commenting on the Constitution, made it clear that it was only an instrument and that its success would depend on the calibre of those who yielded the instrument. India's story is one of half success and half failures, with political stabilisation and democracy succeeding in liberating millions from servitude, and in empowering the disadvantaged by giving them agency. However, economically it did not empower the disadvantaged, compared to its own social and political successes. Why did this happen?

This was because political mobilisation, in the absence of rigid ideologies, was based on identity politics, particularly so in a deeply divided and diversified society. The result is that this politics of identity became an end in itself; demands for access to education and health coverage as a tool of empowerment did not strongly develop. Similarly, economic policies that, in the name of the poor, really denied opportunities for growth and improvement in the quality of life were left unchallenged. Access to government employment served to mute any doubts that could have arisen. Subdued economic growth and the persistent of poverty has meant that the nation has not been able to allocate as much resources to national security as required.

Such politics of identity and entitlement is now being seriously challenged, though opposition to it are considerable and fighting back. The new narrative is about empowering each individual so that she/he can take part in the struggle to develop the country and take it forward. In this politics of victim hood or of

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entitlement based on birth have no role to play. The entire menu of Jan Dhan Yojana including health and old age insurance requires a technological platform that would facilitate inter-family transfers as well as direct cash transfers from the government to individuals in lieu of fragmented subsidies goods and services. Played out in full, it would be tremendously empowering to those presently out of the formal system. Similarly the Goods & Services Tax (GST) and demonetisation is not just about reducing opportunities for corruption, which they are, but also about creating incentives for 'virtuous' behaviour. The package of government policies and schemes, e.g., Make in India, Skill India, Stand-Up India, improving investment climate, increased investments in infrastructure etc., must be seen in this framework. Simultaneous, all these steps would facilitate the poor persons' ability to become a part of the formal economy, with its attendant benefits, as the economist Hernando De Soto has been arguing for long.⁶ However, for these policies and schemes to make sustained changes, substantial governance reforms are necessary. These would include promoting domain specialization in generalists, substantial lateral entry at different levels in the government, reduction in decisionmaking levels, process re-engineering to reduce paperwork and making systems more transparent. Critically, ministries and departments must separate their policy making and implementation roles, while creating sarong and independent regulators to ensure minimum service levels. For this, ministries would have to be reorganised around specific tasks that are measureable in terms of outcomes, and outcomes not use of inputs. Failure to do so has allowed judicial intervention into the purely executive function, and often into the realm of legislature. This undermines faith in the executive, which is supposed to make policies; without faith investors are unlikely to move, thereby holding up economic growth.

Coming to the sphere of security architecture, India cannot completely rely on either the British or the US model. Both Britain and India got their Ministries of Defence at the same time. As mentioned earlier, the evolution of the Raj in India and the government in Britain over the same period also took on different paths, naturally, as the objective conditions in both countries and the purpose of government was quite dissimilar. India cannot also adopt the US path uncritically as the structure of governance from the presidential vs. parliamentary, to the organisation of the different services are not comparable. However, what India must learn from others is that while the armed forces must not be micromanaged, they should not be expected to draw up their own strategic doctrines. And no country, leave alone one with annual per capita income in the neighbourhood of US\$ 2000 can afford to have its different services not work in synergy. A single point advisor to the government drawn from any service, but clearly superior to the three service chiefs, would be a good place to begin. Such a Chief of Defence Staff (CDS) would preside over the Chiefs of Staff Committee (COSC) with veto powers. In a reasonable time period, say 3-5 years, combined logistical and support services should replace single service

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arrangements. To begin with, training, medical services and even resettlement should be placed under the CDS. Once a country's strategic doctrines are finalised, each service would develop its operational guidelines, which would be meshed together by the CDS acting along with the Defence Ministry. Training doctrines and institutions – why have separate War Colleges for each service? for example – it would need to be reorganised, so that at all levels, and not just at the NDA, combined courses are run for officers across services. Cross-posting of officers of different services should be done at the Brigade-equivalent level to develop 'jointness' at all levels. And just as the service complaint about the lack of domain knowledge among bureaucrats in the Defence Ministry which should be rectified, officers in the three services, particularly the army should be encouraged to specialise and not be generalists. The inherent bias against specialists, works against an army's ability, to be at the cutting edge of technology.

De-classification of government records at regulated times would help develop knowledge and enable learning based on a better understanding of realities, and not myths propagated in closed units with no access to information. Civilian involvement in military studies should be encouraged and all military training institutions should have a minimum of permanent civilian faculty. A military officer would be better served by having a proper understanding of democratic governance works and of the social milieu that is served by the State and which in turn influences the State. This would not only make them better officers but would also enable the services to better inform government decision-making. Controversies about frequent changes in promotion criteria and even in force deployment that have done on an ad hoc basis could be prevented, once more rigorous academic work on these are done in military institutions itself, allowing the Ministry to take a longer term view.

Conclusion

Political stability, weight of its economy internationally, and the ability to project its powers beyond national borders, are the three key components of National Power. These three are not isolated categories and work best in synergy. While the core of national institutions are not easy to change, and are rarely needed, institutional design and processes cannot be frozen in time. Constant adaptation, rather than re-inventing the wheel after each incident of failure, real or perceived, is the secret of regeneration of the momentum, required to attain goals articulated by stakeholders. Its reverse, the hanging on to models that may have worked in the past, but which have become anachronistic, can be fatal for societies, so many of whom have got stuck in what economists call 'the middle-income trap.'

India has a rare opportunity to take advantage of its demographic boom. It also faces unprecedented challenges including in its own neighbourhood with the rise of China, that is revisionist and is committed to supporting Pakistani adventurism in all its forms, e.g., putting on 'hold' at the UN Security Council on sanctioning terrorists, blocking India's membership of the Nuclear Suppliers Group, investing in the China Pakistan Economic Corridor that runs over Indian territory unlawfully occupied by Pakistan, undermining political stability in Afghanistan and Nepal by propping up terrorists and obscurantist forces among others.

With the USA withdrawing into a shell, based on an over-reading of its relative decline globally, Europe in perennial crisis, Russia wavering in its commitment to India driven by its reliance on Chinese line of support & desire to push US back from the Baltics, and Japan unable to completely break out of its economic stagnation despite Prime Minister Abe's best efforts, India has to re-engineer its instruments of National Power so that it can integrate disparate elements into working in synergy, to attain its rightful place in the sun. Developments of the recent past are encouraging, but these have to be sustained over decades, not years. Essential elements of the roadmap have been listed here; the question is - will India seize the day?

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Section V

India's Defence Capability

Towards a De-novo Approach to Perspective Planning -Indian Military's Force Structuring and Development

Lieutenant General GS Katoch, PVSM, AVSM, VSM (Retd) @

"By failing to prepare, you are preparing to fail."

---- Benjamin Franklin

General

Perspective Plan is a plan for a fairly long period, say 15 or 20 years, less detailed and less concrete than plans actually implemented in smaller blocks (which are usually of duration between three to seven years) and less abstract than mere statistical projections¹. It is neither a fully worked out plan nor just a theoretical exercise, but a framework within which concrete short term plans can be fitted. This article seeks

to recommend a de-novo approach to Perspective Planning for the Indian military because the current planning creates "a yawning gulf between plans and reality".² This gulf was evident when post the Uri attack the armed forces "revealed to the government the critical voids in its ammunition reserves" to fight a war. Apparently the furore created by the leakage to the press of a letter to the Defence Minister by the then Chief of Army Staff (COAS) Gen VK Singh in Mar 2012, red flagging almost the same deficiencies have not made any significant difference. Therefore, it is obvious that there are systemic deficiencies in our perspective planning. This requires that we develop a planning methodology, that can help our armed forces to bring strategy and resources into balance, and prioritize capabilities, that will ensure that the country's security aims are met.

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Present Process

Background4

Defence planning on a five-year basis started in 1964. Structured perspective planning for the Indian armed forces started in 1986 when the Directorate General of Defence Planning Staff (DGDPS), comprising officers from the three Services, DRDO, and Ministries of Defence and External Affairs, was established under the Chiefs of Staff Committee (COSC) to coordinate and harmonise defence planning. Civilian officers from the Ministries were gradually withdrawn leaving the DGDPS a tri-service set up. However, it still enabled each Service Headquarters to prepare defence plans in a more rational manner. But due to lack of clear political direction and each Service primarily planning for itself, joint planning and coordination between Services and other departmental plans of the MoD, were largely ignored. Subsequently DGDPS became part of HQ Integrated Defence Staff (IDS).

[@] Lt Gen GS Katoch, PVSM, AVSM, VSM (Retd) is a former DG Perspective Planning of the Indian Army. He has extensive experience in CI operations and has a post graduate degree in Defence Analysis from the Naval Postgraduate School, Monterey, California. His focal area of interest is Irregular Warfare.

Present Organisation

The IDS is responsible for the process of generating the Service plans as one of its charters. This is handled by the Policy Planning and Force Development (PP&FD) Branch, the erstwhile DGDPS. The PP&FD branch is responsible for Force Structure Development, Budget Analysis, Acquisition, Procurement and Technology Management, formulation of the Long Term Integrated Perspective Plan (LTIPP), five year defence plans and prioritisation of schemes. It also coordinates the country's strategic and security perspective, possible objectives and assesses critical deficiencies in force capabilities.

LTIPP

Producing the LTIPP is a comprehensive task which should involve collaboration with multiple agencies such as the Cabinet Committee on Security (CCS), National Security Agency (NSA), Ministry of Defence (MOD), Ministry of Home Affairs (MHA), Ministry of External Affairs (MEA), Ministry of Finance (MOF), Intelligence agencies, HQ IDS, Army HQ, Naval HQ, IAF HQ, DRDO, and Industry including both Public and private sectors. In practise only the HQ IDS, Service HQs, MoD and DRDO are involved in the process. The HQ IDS gets the approval of the Chiefs of Staff Committee (COSC) for the LTIPP. Thereafter there is a long process of getting it approved from the government because the rationale

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for every proposal must be explained and justified to an audience which is not attuned to military affairs. The LTIPP for 2012-2027 was approved by the Defence Acquisition Council (DAC) in April 2012. Ideally the process should follow the following six stages:

- First Stage. Articulation of a National Security Strategy conceptualized by the CCS assisted by the National Security Adviser (NSA).
- > Second Stage. Formulation of Defence Planning Guidelines visualised by the MOD stating the contingencies the services would be expected to respond to in the next 15 years.
- ➤ Third Stage. Formulation of a Defence Capability Strategy by the IDS and three Services. The document analyses the capabilities needed for the envisaged contingencies, compares them with existing capabilities and identifies gaps with priorities.
- ➤ Fourth Stage. Preparation of a Defence Capability Plan by HQ IDS in consonance with the Services. This would have a span of 15 years and would list the capabilities with associated time frames. The plan would elucidate the broad nature of each project and whether they would be achieved by indigenous development or by import.
- Fifth Stage. This would be the preparation of the LTIPP. The LTIPP would contain the specific programmes and projects listed in the Long-Term Perspective Plan (LTPP) of the three Services which are required to be undertaken to reach the targets of the Defence Capability Plan.
- **Sixth Stage**. Approval by government.

In reality the second and third stages presently manifest as the Defence Minister's Operational Directive which is only based upon the inputs from the three Services and "is the only authoritative guidance provided to the armed forces". It is to be issued every five years. The current Operational Directive was issued in 2009.

Factors Affecting Planning

Threats and Capability

Threat Based Planning (TBP) is organizing and equipping the armed forces to be superior to the enemy's. Capability Based Planning (CBP) is organizing and equipping to deal with various contingencies which may arise in the absence of a tangible enemy or those not connected to a tangible enemy. The two types of planning are not water tight. Grassroots planning is done separately by the three Services. The problem starts here because each Service has its own worst-case scenario which it plans to tackle on a stand-alone mode, as no Service wants to be found lacking in war, or a crisis. This tendency is a result of inadequate integration and a trust deficit in the other Services, as well as the other arms of the government. To obviate this, Chief of Defence Staff (CDS) with powers to dictate to all three Services, has long been recognized as an imperative, but not implemented, because of politico-bureaucratic as well as inter-Service resistance. Planning for the worst case makes military but not financial sense.

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The Planning Dilemma- How Much to Plan For?

A two-front war implies being prepared to fight on either front with equal capability. In India our unsettled borders and hostility with both China and Pakistan will always make the military do perspective planning for the worst case scenario of a 'two front war'. Worst case scenarios are arrived at by "agreeing that a given worst case is bad enough. However, it is important to recognize that no worst-case scenario is truly without potential nasty surprises".6 It is to hedge against such surprises that the capability wish list keeps on expanding. With the afore mentioned pull towards the worst case scenario, we presently plan for a two and a half front war, the half being securing our rear areas from attack.

Infirmities in the Present Process

The present process suffers from the following infirmities which are listed in the order of priority:

- With no clear National Security Strategy defining the nature of perspective threats, the threat analysis becomes subjective. The lowest level at which a written statement of external military threats is articulated is the RM's Operational Directive. This because of lack of a military culture in the MoD becomes a compilation of threat assessment done by the three Services. The bureaucracy because of their knowledge of Business Rules and Office Procedure can apply rules and regulations correctly but the same are not tempered by intrinsic military knowledge. While they are expected to take advice from the military they are unable to apply it ideally.
- There is no integrated joint perspective planning. Each Service does individual planning which the HQ IDS basically compiles together to form the LTIPP. Each Service analyses the threat posed to the country by the corresponding Service of the enemy without a correct analysis of

synergy and economy of effort inherent in integration and jointness.

There is no yardstick or benchmark of committed financial outlays for execution of Defence Plans. The defence budget is not part of committed liabilities. Every Finance Minister states that if required whatever the Defence wants will be given. This is not workable because the 'if required' clause means that in the absence of war, many major projects are delayed or reduced in scope⁷. The defence procurement procedure even afters implification remains a long drawn process detrimental to national defence.

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The DRDO's propensity to propose designing and making almost everything, even when it has no institutional background of that weapon/equipment further sets back perspective planning.

Corrective Measures through a De Novo Approach

Myriad clichéd, though rational solutions are proposed to rectify the infirmities in our perspective planning. These range from 'The government must articulate a clear national security strategy', to 'The MoD needs to have professionals with strategic expertise', to 'the Services must have better integration' to the ultimate solution, 'have a Chief of Defence Staff (CDS)'. These solutions have become *nom possumus, therefore* we need to examine what we can do in the absence of any or all of the above. This implies that even if impediments to perspective planning persist, we should still institute whatever measures are doable to make some progress. Suggestions are given in succeeding paragraphs.

Rational Security Environment Forecast

Think tanks like the USI (United Service Institution of India), IDSA (Institute for Defence Studies and Analysis), have traditionally provided an alternate autonomous source to provide comprehensive security forecasts and solutions. However, their inputs suffer from two things. Firstly, the reluctance of the formal organizations and headquarters to share classified inputs with the thinks tanks which by their very nature are not bound by *Omerta* oaths. Consequently, think tank thinking is not current. Secondly, Cognitive Biases create in us a tendency to believe in only information that confirms our hypothesis. Therefore, it is beneficial to pay attention to foreign analysts' who research and write on strategic issues with lesser bias and which are relevant to us. Two key points from a foreign source relevant to us are:

- ➤ India's Strategic Vision is to have regional primacy and strategic autonomy.8
- Seen from Beijing [....] India is not a serious threat, and their rivalry, self-evident in India, is barely acknowledged in China".

Assessment of the 'Two and a Half Front' Concept

Our defence planning has centred on perspective planning for a 'two and a half front war'. That is the Western Front, the Eastern Front and a Rear Area Front. In military terms, a two-front war is one in which war is waged with equal intensity in two geographically separated locations against different enemies at the same time. Historically no country has been able to sustain a two front war in modern times. Even a country as strong as the United States realised that in their expeditionary

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context of 'fronts', they could not indefinitely sustain two fronts in Iraq and Afghanistan. Our perspective planning must therefore be realistic and plan for one and a half fronts wars. One full offensive front and one half defensive front. In addition the armed forces should have faith that while the Armed Forces are at the 'front', the country will ensure that the Central Armed Police Forces (CAPFs) will guard their 'rear'.

Correcting the Perspective Planning Process

Perspective Planning is bound to lack clarity to enable ideal planning because of opaque directions from the government and the lack of one central authority who can override myopic or partisan projections of individual Services. In the absence of a CDS (Chief of Defence Staff), the Defence Minister/Defence Secretary willy-nilly adjudicate in inter Service disagreements. This is fraught with pitfalls because it takes decades of service to amass the knowledge of military affairs sufficient to give direction to the future planning for the armed forces. Career bureaucrats who head the defence ministry may have great management and administrative skills.

Career bureaucrats who head the defence ministry may have great management and administrative skills. But their knowledge of defence matters can only be superficial especially when they come to the MoD at a very late stage.

But their knowledge of defence matters can only be superficial especially when they come to the MoD at a very late stage¹¹. A foreign analyst states that current perspective planning suffers because "[t]he army's Prospective Planning Cell [Directorate] in New Delhi, [...] does not possess the institutional authority to examine trade-offs between [internal and external security commitments]"¹². The same holds true for the HQ IDS not having the institutional authority to examine trade-offs between the three Services.

Streamlining Financial Planning

Money once allocated for a project must be rolled over to the next financial year with escalation as per inflation built in. The government's argument that money will be released whenever required in an emergency, is not workable for the armed forces. Soldiers, sailors and airmen must be kept worked up to remain proficient in handling their weapons and equipment, applying operational art and tactics. These are skills which both time and turnovers can rust. Other than small arms no new weapon can be purchased six months before start of hostilities and expected to be used effectively. That is a sure-fire recipe for disaster. Even fast track purchases take nine months as per procedure. Purchases fast-tracked during the Kargil war reached much after the war¹³.

Conclusion

Military Perspective planning is a process which to an extent must be based on heuristics¹⁴. Objective facts and figures can be a guideline but cannot be binding. No enemy will lay bare his stratagems and capabilities. Hence, the prime factor in planning is a security threat which will always be ambiguous. It is for this reason that military perspective planning needs practical experience. A study states that "people rely on a limited number of heuristic principles which reduce the complex task of assessing probabilities and predicting values to simpler judgemental operations". ¹⁵Heuristic ¹⁶ principles in the context of our perspective planning lead us to the following recommendations rooted in realism:

- We need to reassess who is our Number 1 security threat; China or Pakistan. It is detrimental to perspective planning to plan to counter the former while fighting the latter. A heuristic conclusion is that Pakistan will remain Enemy No 1 for the foreseeable future keeping in view the fact that we are engaged in a form of war with it, with no end in sight.
- We should plan for a one and a half front war. One offensive and one purely defensive. The hitherto planned 'half' internal rear-area front must be the responsibility of the Home Ministry with its militarised CAPFs.
- Perspective planning must be placed under the officer who possesses the institutional authority to examine trade-offs between internal and external security commitments or proxy war and conventional war. In the context of all Services this should be the Operations Branch. This is most relevant for the army which is heavily committed in internal/proxy wars. In the army, this is possible by placing the Perspective Planning Directorate under the Vice Chief of Army Staff or the Director General of Military Operations and hiving off its procurement related responsibilities.

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- Perspective planning must *ab initio* be done keeping in mind the extent of budgetary support available. The assurance that when required additional resources will be made available in a crisis is not supported by past precedence.
- India seeks regional primacy without conquering new territory; therefore force structuring must be done with defensive strength as the primary focus.

India's Defence Capability

Strategic autonomy is a product of economic and military strength. In the development of this primacy is to economy, the second will then follows. This has been the underlying policy of any party which forms the government. This is not surprising considering the abject poverty which still afflicts a vast proportion of our population. Perspective planning should recognize this and accordingly temper planning. The three Services must have maturity of vision to enable the IDS to prioritize in the absence of a CDS. If we do not inculcate this maturity we may guard our turf, but at the peril of the nation.

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Role of Ballistic Missile Defence (BMD) in India's Strategic Deterrence

Dr Roshan Khanijo

Introduction

The advent of the Nuclear age has inevitably brought along with it the proliferation of advanced technologies, as States have attempted to safeguard their sovereign interests, and often outmaneuvered each other by developing niche technologies to acquire lethal weapons. If the arrival of nuclear missiles heralded this process of offensive military modernization, there has been an equal move towards evolving technologies for deterrence purposes as well. Countries have invested heavily in technologies that could possibly detect, track, intercept, and destroy

nuclear missiles, and also develop more precession missiles. This has resulted in the diversification of the nuclear arsenal, and some of the new spin offs that have materialized are advanced ICBMs (intercontinental ballistic missile) with MIRVs (Multiple Independently Targetable Reentry Vehicle), Cruise Missiles, Ballistic Missile Defence System (BMD), Hypersonic Glide Vehicles, etc. The traditional arms race that emerged during the bipolar world of the cold war still exists but in a more diffused multipolar manifestation. The geostrategic proximity of Asian Nation States ensures that the power projection of one state has a cascading effect across the continent. Furthermore, the nations within the Asian subcontinent have also begun to realize that niche technologies are stepping stones to more advanced knowledge. In order to prevent the power balance from shifting towards the first

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world nations once again, they have been forced to recalibrate their deterrence capabilities and indirectly became a part of this modern day 'arms' race. BMD is one such niche technology which nations in Asia are keen to develop for a plethora of reasons. This paper attempts to examine the varying motivations that drive nation states – particularly India - towards the acquisition of such technologies.

History

Various global powers have had very differing reactions to developing BMD programs. The Americans, for example, sought the development of BMD during the post-Cold War era. This can be evinced by President George W. Bush's statements from the time where he states "We need new concepts of deterrence that rely on both offensive and defensive forces. Deterrence can no longer be based solely on the threat of nuclear retaliation----We need a new framework that allows us to build missile defence to counter the different threats of today's world¹". To this end on December 13, 2001, the erstwhile president Bush formally announced the intention of the United States to withdraw from the Anti-Ballistic Missile Treaty (ABM), which had hitherto been considered the "cornerstone of strategic stability2" during the

[@] Dr Roshan Khanijo is the Senior Research Fellow and Research Coordinator at the United Service Institution of India. She has authored a book -"Complexities and Challenges of Nuclear India", and a monograph -"Iran's Nuclear Conundrum". She has written a number of Occasional Papers, and authored chapters in National and International books, and Magazines. She has been a panelist in national and international events.

India's Defence Capability

Cold war era. Since then, other countries – primarily Russia and China – have made intense efforts to harness these niche technologies. Russia is attempting to create its own equivalent of the U.S. missile defence systems - Terminal High Altitude Area Defence (THAAD) and GMD. The Russians currently possess the Russian A-135 anti-ballistic missile system, which is presently operational around the city of Moscow³. Furthermore, they also have the Theater Missile Defence S-400/500 and the Tactical Missile Defence S-300V.

On the flipside, despite realizing the significance of these technologies, China was initially against the Americans developing BMD. They have changed their stance since then, as they are steadily working to developing indigenous BMD systems as well. In 2010, China had tested an advanced missile defence system, and they had also conducted a second land-based mid-course missile interception test in 2013 and 2014. The latter had the capabilities of an exo-atmospheric kill vehicle. China is currently working towards increasing its tactical BMD capabilities

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by producing its own variant of the S300 and supplementing it with the Russian S-400 air defence system which will extend China's ballistic missile defence reach⁴. The major powers, therefore, have continued to pursue their tryst with BMD unabated; the question that remains is whether India should continue to develop its BMD? If so, what would be the compulsions, reasons/benefits and limitations of such a course of action?

India and BMD

Reasons for Development

In the absence of an officially sanctioned long-term strategy for BMD, the Indian objectives behind the development of BMDs revolve around multiple factors. Primarily, there is a need to prevent the creation of a major technological gap. The current age of rapid technological proliferation leaves no scope for loopholes, and a vulnerability once created through technical inferiority will be nigh impossible to rectify. It is essential therefore, in the interests of geostrategic power projection to develop these capabilities in order to safeguard sovereign interests. There are several varying positions that theorists adopt with respect to the development of BMD technology within the country.

Some theorists following the realist school of thought base their arguments for the development of BMDs on geostrategic power projections. However, others believe that the development of such capabilities is a lengthy and pricey process that yields very limited results. A third argument that is brought forth in the various debates surrounding the BMD assimilation process is the fact that a lot of the technologies used for BMD can also help with the modernization of conventional military arms as well. While a consensus on the issue cannot be brokered, the arguments need to be examined in detail to understand the complexities of developing India's BMD program.

India is currently surrounded by two nuclear states with diverse nuclear arsenals. Furthermore, the nuclear doctrines of both these Nation states are fundamentally different. While one has lowered the collective nuclear threshold through the implementation of a "First Use" policy with regard to Nuclear weapons, the other has maintained a similar level of hostility by crafting a conditional 'No First Use' clause to their doctrine. There has been a phenomenal increase in the number of cruise and ballistic missiles available within the region, as is evinced by the stock count of China, which single handedly possesses one of the largest arsenals of cruise missiles. The sustained growth of Pakistan's nuclear arsenal and missile inventory, plus China's modernization of its nuclear and conventional

The sustained growth of Pakistan's nuclear arsenal and missile inventory, plus China's modernization of its nuclear and conventional missiles, presents an unprecedented complication for India's security.

missiles, presents an unprecedented complication for India's security⁵. Furthermore, Pakistan's Tactical Nuclear Weapons trajectory has created further uncertainties and threats. Given the volatility of the Pakistani state, the threat of nuclear weapons falling into the hands of non-state actors has become an added complication to the hitherto omnipresent threat of Accidental Launch. Since the launch authority would be pre-delegated to field commanders, the dangers of an accidental detonation remain a constant threat. Therefore, given these apparent vulnerabilities of administrative centers and military facilities to missile threats, there is a need for India to improve its nuclear forces' ability to survive a nuclear attack and create the potential for retaliation⁶. In order to gain reliable retaliatory capabilities, India, seeks to ensure the survivability of multiple avenues of threat namely - the nuclear arsenal and the effectiveness of command control, communications, computing, information and intelligence, and ground- and space-based missile early warning systems⁷. Major efforts in the early 2000s were thus directed towards acquiring and developing technologies specifically in these areas. This can be indicated by the purchase of two, Israeli Elta Green Pine multi-functional radars, part of the Arrow-2 BMD systems in 2001⁸. The proponents of the realist school of IR would therefore believe that it is prudent for India when faced with two volatile threats to invest in deterrent and defensive measures such as the BMD and other such niche technologies.

BMD Capabilities of India

India aims to deploy a multi-layered defence system to protect the country from ballistic missile attacks. The Indian BMD is a two-tier system that consists of two interceptor missiles, namely the Prithvi Air Defence (PAD) and the Advanced Air Defence (AAD). PAD is an anti-ballistic missile, developed to intercept incoming ballistic missiles outside the atmosphere (exo-atmospheric), i.e. a high altitude interception, which has a maximum interception altitude of 80km and can engage the ballistic missiles (300km-2,000km range) at a speed of Mach 5°. Currently, this PAD missile is being replaced with PDV (which was successfully test fired on 27 April 2014) and which can engage MRBMs up to 2,000km range¹⁰.

AAD on the other hand is a system aimed at intercepting incoming ballistic missiles in the endo-atmosphere at an altitude of 30 km (lower altitude), thus the basic objective is that these two-tiered shield should be able to intercept any incoming missile launched 5,000 kilometres away¹¹. The radar which is being used for this system has been derived from the Israeli Green Pine long range radar, and is known as the 'Swordfish' and DRDO (Defence Research & Development Organisation) plans to upgrade the capacity of the Swordfish to 1,500 km. In order to further strengthen the Air defence system further, the Indian government has negotiated with the Russians to acquire 12 Units of S-400 missiles.

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Role of BMD in India

The BMD can become an important strategic pivot around which the defence system of the country can be shaped, but even this system has its limitations and cannot work in isolation. As a limited defence mechanism, BMD can neutralise enemy nuclear attacks and provide the time and space required to plan an efficient retaliatory mechanism. Thus a limited BMD capability aimed at providing area defence to the national capital and C&C (Command and Control) structures could be showcased as demonstrating the country's willingness and readiness to face any eventuality¹². It can be used for both 'Counter value & Counter Force' purposes. For Counter value purposes, the DRDO has confirmed that it plans to employ BMDs to protect central commercial capitals like Delhi and Mumbai first and eventually spread that cover towards other cities as well. For counter force purposes on the other hand, scientists and theorists believed at the BMD systems could be used for protection against decapitation strikes and command and control echelons ce the latter

capability cannot cover extensive areas, it could instead be used to protect a set of land-based weapons from the point of view of a second strike capability¹³.

If one were to re-examine the geostrategic power balance and plot the creation of a BMD policy, one would have to create a dual use strategy that could possibly combat the differing threats on either side of the mainland. Currently, China is developing new technologies to implement its Anti-Access/Area-Denial (A2/AD) strategy in the Western Pacific region and these technologies can also be used to impact targets in Indian waters as well as India itself and a robust and well formulated BMD system is therefore necessary for India to defeat China's A2/AD capability¹⁴. Meanwhile Pakistan poses the twin threats of weapons used by non-state actors and the delegation of TNWs to local commanders. The former can make the weapons vulnerable to theft and the latter presents a strategic dilemma to the officers on the field regarding whether they should 'use it or lose it'.

The conclusion one can draw from these examples is that a limited BMD system increases deterrence by denial as the deterrence effect of the BMD is not only applicable between rational state actors but also when non-state actors target state actors ¹⁵Furthermore, according to Rajesh Basrur, "...a limited BMD can also deter a state with revisionist intentions that would want to carry out a bolt-from-the-blue strike. In other words, if generating dissuasion in the mind of the aggressor is central to nuclear deterrence, a limited BMD shield could potentially achieve that in the South Asian context" 16 What emerges therefore is that in some ways BMDs increase the confidence of a nation - particularly those nations that have incorporated NFU in their nuclear policy. The BMD systems help maintain the credibility of the NFU nation's Second

Strike, as it provides a loophole where the adversary's First Strike may not be able

According to Rajesh Basrur, "...a limited BMD can also deter a state with revisionist intentions that would want to carry out a bolt-from-the-blue strike".

to destroy the enemy's arsenal completely. Furthermore, the numbers required to neutralise a BMD would be large and given the qualitatively potent yet quantitatively limited nature of a nuclear attack the possession of such a system would make the enemy pause before attacking blindly. Thus in a limited sense the retaliatory capabilities and protection of the Indian C&C system would certainly receive a boost through the acquisition of BMD technology. Theorists have opposed such a stance by claiming that the creation of such a system would only intensify the arms race and lead to an increase in number of nuclear weapons by Pakistan and China. However, such fears are unfounded as both countries have been increasing their arsenal prior to India's foray in to the BMD and will continue to do so regardless of the decision made. China is currently competing with the US in terms of global power projection and will not slow down even if India were to abstain from developing its BMD program. Pakistan on the other hand remains a volatile vulnerability that will continue to make attempts to accrue power through any means possible. The establishment of the Kahuta & Khushab plutonium reactors are evidence of this fact as the reactors were developed prior to India's BMD Programme.

Challenges

While the pros of investing in BMD technologies have been depicted in detail, one must remember that BMD technologies are not impenetrable. Furthermore their accuracy/effectiveness remains to be tested in a warlike situation. There are several challenges involved in the creation of a successful Ballistic Missile Defence program. Defeating a ballistic missile involves four functions: detection, discrimination (separating the missile from everything else), fire control (determining exactly where to intercept), and killing (hitting the missile with some type of interceptor) and since it is a complex mechanism the evidence indicates that BMD systems will perform considerably below tested, near-perfect intercept rates or predicted kill rates¹⁷. Thus far,the effectiveness of BMD systems in test trials have been mixed,

Defeating a ballistic missile functions: involves four detection, discrimination (separating the missile from everything else), fire control (determining exactly where to intercept), and killing (hitting the missile with some type of interceptor).

and critics continue to question their value in realistic battle conditions¹⁸. It has also been stated that the performance of BMDs further decreases if the adversary uses Multiple Independently Targetable Reentry Vehicles (MIRVs) and decoy technologies in warheads, and uses the low flying cruise missiles.

One must keep in mind that India's geostrategic location makes it vulnerable to two hostile nuclear capable enemies. Both these enemies however adopt different ideological and methodological tactics while dealing with the Indian subcontinent. In such a catatonic arms race, there is a constant need to stay one step ahead of one speers and therefore, states like China and Pakistan are now developing countermeasures for their ballistic missiles, including MIRVs, Manoeuvrable Reentry Vehicles (MARVs), chaffs, decoys, missile trajectories that are either lofted or depressed, and the use of cruise missiles¹⁹ which will severely challenge the BMD's efficacy. Aside from the technological problems that might prevent a successful implementation of the BMD program, another issue is that given the terrain configuration along India's border with Tibet, the desired probabilities of detection and tracking may not be achievable in the medium term range and furthermore, a deployable BMD and TMD (Theatre Missile Defence) capability requires massive investments in satellite networks²⁰ and is a costly affair.

Given the high price of technological investment, the limited and unpredictable efficacy of these technologies in a situation of War and the geostrategic challenges of dealing with two tactically differing enemies, there is some amount of credence to the claim that investing in these technologies might be unnecessary. However, it is essential to state that lower tier terminal TMDs can provide limited deterrence. Furthermore, critical components of BMD systems are countermeasures- resistant detection, tracking and fire control radars, satellite based detection and communication systems and investments in developing these technologies have payoffs not only for ballistic missile warfare but also for conventional air defence²¹. Therefore keeping the entire spectrum in mind perhaps limited investments in such technologies might prove beneficial in the future. Technological progress cannot be halted or reversed, while it is prudent to be selective of the technology used for the projection of state power, it is also essential to remember that within the compact geostrategic Asiatic region, maintaining technological parity with one's neighbours is the safest form of deterrence.

Conclusion

India's decision to move towards BMD systems is logical, particularly given the utter lack of progress on disarmament issues. In fact all the major global powers are currently pursuing this technology and other mid-level countries have allied themselves strategically to reap the benefits. Korea for example has allied itself and counts on the BMD umbrella of the US to protect its vulnerabilities. Secondly, given the geostrategic instability within the region, India's adversaries have been increasing their arsenals both quantitatively and qualitatively (through strategic modernization and upgradation), hence, it becomes imperative for India to prevent any negligence in its deterrence capabilities. It should be remembered that deterrence can only be successful if a nation has the ability to defend its nuclear arsenal from a first strike before engaging in a retaliatory second strike. For this kind of offensivedefence, BMDs- especially the TMD - can play a significant role. While challenges such as accuracy remain a concern, limited deterrence/protection will always be more desirable than no protection. The Indian BMD program is primarily aimed at augmenting its deterrence/defence policies. This non-escalatory policy is evinced by the NFU clause. As a country India has always believed in the de-escalation of volatile situations but in order to maintain one's peace, one must first prove that

It should be remembered that deterrence can only be successful if a nation has the ability to defend its nuclear arsenal from a first strike before engaging in a retaliatory second strike. For this kind of offensivedefense, BMDs – especially the TMD - can play a significant role. While challenges such as accuracy remain a concern, limited deterrence/protection will always be more desirable than no protection.

one is adept at war. A nation state cannot truly practice the tenements of deterrence if it doesn't possess the capability to abet an attack in the first place. As the theorist Carl von Clausewitz, states "the defensive form of war is in itself stronger than the offensive²²."

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Building Jointmanship in the Armed Forces

Brigadier Gurmeet Kanwal (Retd) ®

The revolution in military technology has not only changed the character of our military programmes, it has also to a significant degree blurred the lines of demarcation among various Services.

—Charles Hitch

Complex Threats and Challenges

n this era of strategic uncertainty, which dawned at the end of the Cold War, India is confronted with complex threats and challenges to national security. The sources and types of conflicts for which joint planning must be

carried out have become more diverse and less predictable, even as the number of potential adversaries continues to grow. Infiltration across land borders, air space violations, burgeoning maritime security challenges, repeated cyber-attacks and increasing demands for Indian contribution to multinational forces are some of the other factors guiding national security imperatives.

Success in modern war hinges on the formulation of a joint military strategy based on the military aim and its joint and integrated execution. The range of missions that India's armed forces will need to undertake in future is expanding to include sub-conventional conflict, low-intensity border wars and insurgency fuelled by foreign powers. The global security agenda has expanded in functional terms. Yesterday's peripheral challenges, such as the security of energy sources and the threat from mass migrations, now compete with conventional threats for the attention of the armed forces. These changes in the security paradigm are changing the strategic terms in which military leaders must address long-term integrated joint planning so as to create defence capabilities that will be relevant to the emerging threats.

As the security of energy sources and the threat from mass migrations, now compete with conventional threats for the attention of the armed forces. These changes in the security paradigm are changing the strategic terms in which military leaders must address long-term integrated joint planning.

Operational Justification for CDS and Theatre Commands

Under the prevailing circumstances, the early appointment of a Chief of Defence Staff (CDS), is an inescapable operational necessity. More than ever before, and especially in the nuclear era, it is now necessary for the national security decision makers to be given "single-point military advice", that takes into account, the inter-dependence of each of the

[®] Brigadier Gurmeet Kanwal (Retd) is a Distinguished Fellow, at the Institute for Defence Studies and Analyses (IDSA), New Delhi and Adjunct Fellow, Centre for Strategic and International Studies (CSIS), Washington, D.C. He is former Director, Centre for Land Warfare Studies (CLAWS), New Delhi. His books include Nuclear Defence: Shaping the Arsenal; and, Indian Army: Vision 2020. The New Arthashastra: A Security Strategy for India edited by him was released recently.

armed forces on the other to meet complex emerging challenges. Ideally, the CDS should be an overall commander-inchief, and from him command should flow to individual theatre commanders. Given India's long land borders with a varied terrain configuration and two major seaboards, as also adversaries who are geographically separated, a "theatre" system of tri-service command is best suited for the optimum management of both external and internal security challenges. Contrary to the belief that only the United States needs a theatre system because of its wider geo-political interests and involvement in security issues all over the globe, with its inimical neighbours and peculiar national security threats and challenges, India too needs a theatre system for integrated functioning to achieve synergy of operations with limited resources. The Chinese, with similar needs, have a well-established theatre system.

Experience with Tri-Service Organisations

While almost all operational planning still tends to have an individual Service orientation from the strategic to the tactical levels, the post-Independence history of the Indian armed forces suggests that wherever integration has taken place, the experience has been praiseworthy. The tri-Service training institutions present perhaps the greatest success story. The National Defence Academy (NDA), Khadakvasla, has earned well-deserved laurels for the deep and strong spirit of camaraderie and the long-lasting bonds that it inculcates among its alumni. The Defence Services Staff College (DSSC), Wellington, provides institutionalised guidance to budding staff officers from the three Services, and puts them on a common grid as far as staff procedures and processes are concerned, so that they learn to converse in a tri-Service language that all graduates understand.

The National Defence College (NDC), New Delhi, brings together potential future leaders and bureaucrats to learn and absorb the intricacies of national-level defence planning and the interplay of economic, diplomatic and political factors with national security.

The College of Defence Management (CDM), Secunderabad, provides common professional training in modern management practices to mid-career officers, who will be placed in both command and senior staff appointments. The CDM has earned an enviable reputation as a leading management training college in India. Though the three Services still conduct individual Higher Command courses, a Joint Capsule (JOCAP) lasting one month is conducted jointly at the Army War College, Mhow. The joint training imparted during JOCAP helps officers from the three Services to better understand complex operational issues so that they are better trained for integrated joint planning. Finally, the National Defence College (NDC), New Delhi, brings together potential future leaders and bureaucrats to learn and absorb the intricacies of national-level defence planning and the interplay of economic, diplomatic and political factors with national security. All of these institutions have been extremely successful in achieving the aims that were set out for them.

Among tri-Service HQ, the Strategic Forces Command (SFC) and the Andaman and Nicobar Command (ANC) have proved their efficacy in the short time period that these have been functional. These two HQ have demonstrated their capability for integrated operational planning and, in the case of HQ ANC, during Tsunami relief operations, skilfully coordinated execution. In fact, their success augurs well for "theatre commands" in future. HQ Integrated Defence Staff (IDS) has also achieved immense success in its experiment with vertical as well as horizontal integration in all its branches, including at the level of Personnel Below Officer Rank (PBOR). However, the three Services HQ have so far not extended the cooperation necessary to make its functioning a complete success. Other success stories include the fully integrated tri-Service Signals Intelligence (SI) Directorate under the DGMI (Directorate of Military Intelligence), including some units in the field, the Defence Imagery Interpretation Centre (DIPAC), the Movement Control Directorate at Army HQ, the Armed Forces Medical Services, the National Cadet Corps (NCC), the Services Sports Control Board (SSCB). To a lesser extent, the Military Engineer Service (MES) has also fulfilled a common requirement. Hence, a good base already exists and on this the edifice of more deeply integrated jointmanship can be built in future.

Other Tri-Service Organisations

Several other areas of functioning necessitate overarching military Command and Control at the national level. While India's nuclear doctrine and policy are guided by the National Security Council and the Cabinet Committee on Security, the execution has to be entrusted to the Services and here a joint approach is mandatory. The newly-constituted Strategic Forces Command (SFC) for the planning, coordination and control of India's nuclear weapons must function directly under the CDS while the nuclear warheads and the delivery systems comprising the "triad" remain with the respective services and under civilian control. The CDS and through him the C-in-C of the SFC must exercise "command" over the deployment and launching of all nuclear warheads and the delivery systems even though their physical possession vests with the individual Services. The acquisition and dissemination of strategic military intelligence, needs tri-Service planning, and should justifiably lie in the domain of the Defence Intelligence Agency (DIA) guided by the CDS. The Director General of the DIA, should report directly to the CDS. He must coordinate with the National Security Council Secretariat, and the civilian intelligence agencies (R&AW, IB et al), on behalf of the three Services and act as a link between them. The tasking of common assets of the three Services like DIPAC (Defence Image Processing and Analysis Centre) should be controlled by the DIA.

Aerospace, information cyber-security and warfare, issues like the management of the electro-magnetic spectrum, including frequency management, Electro-Magnetic Compatibility (EMC), Electro-Magnetic Interference (EMI), Electronic Emission Policy (EEP) and the offensive employment of noncommunications devices, such as radars for electronic warfare, should all be the legitimate domain of the CDS and HQ IDS.

Aerospace, information warfare, cyber-security and issues like the management of the electro-magnetic spectrum, including frequency management, Electro-Magnetic Compatibility (EMC), Electro-Magnetic Interference (EMI), Electronic Emission Policy (EEP) and the offensive employment of non-communications devices, such as radars for electronic warfare, should all be the legitimate domain of the CDS and HQ IDS. It is time to set up tri-service Aerospace, Cyber and Special Forces Commands to meet emerging challenges in these fields and to better manage all available resources.

Similarly, for better synergy in training and in the interest of promoting a culture of 'jointmanship', including the writing of joint doctrine, it is necessary to merge the training commands of the Services like HQ ARTRAC (Army Training Command) into a single tri-Service Training and Doctrine Command. Training institutions such as the National Defence College, the College of Defence Management, the National Defence Academy and the proposed National Defence University (NDU) that is meant to foster Professional Military Education (PME) should come under the Training and Doctrine Command. A tri-Service Logistics and Maintenance command has also been long overdue. Organisations like the Armed Forces Medical Services, Canteen Stores Department and a host of others must be placed under the direct command of the CDS for better synergy in their functioning and optimum utilisation of their potential.

Integration at the Directional Level

Higher level decision making in the Services still tends to be personality driven and the collegiate concept of decision making has not really taken root. This exacerbates the lacunae inherent in single-Service operational planning. The concept of operational command flowing from the CDS to the theatre commanders, is still considered far too radical and is likely to take over a decade to implement. As an interim measure, the following are recommended:

➤ Integration of Operations Directorates. The quality of discussion at the tri-Service Joint Planning Committee (JPC) would be considerably enhanced, if advisors from other Services were posted in each of the operations directorates at the level of ADG (Additional Director General) and DDG, so that individual Service plans benefit from professional advice of the other Services, before these are taken up for integration at the HQ IDS. These advisors could be given only a consultative role, or they could be given functional responsibilities as well.

For example, one of the ADGs at the Military Operations Directorate could be from the air force and one of the DDGs could be from the navy.

- Inter-posting at Services HQ. The ends of jointmanship would be much better served if officers of the rank of Major Generals and equivalents from the Navy and the IAF, were posted to suitable slots in each other's Service HQ. For example, the ADG Movement Control, could be from either the navy or the air force, and not necessarily only from the army. A large number of such appointments can be identified.
- Command Level. This logic could easily be extended to staff appointments at the Command HQ as well. There is no reason why the MG i/c Administration at HQ Central Command, should not be from the navy or the air force. Naval and air force Command HQs can also identify appointments tenable by senior officers from the sister Services.
- The ends of jointmanship would be much better served if officers of the rank of Major Generals and equivalents from the Navy and the IAF, were posted to suitable slots in each other's Service HQ.
- War games. All high-level war games, such as those conducted at Command HQ, and premier training establishments, should be open to senior officers from the other Services. This will enhance the quality of understanding of each other's capabilities and limitations.
- Integrated Bureaucracy. Efforts must also be made to gradually assimilate bureaucrats also in Services HQ, and Command HQ, as today's wars, particularly sub-conventional conflict, can be fought successfully only with the full support of civilian counterparts.
- Sports and Adventure Activities. Sports and adventure activities should be increasingly planned on a tri-Service basis.

Integration at the Functional Level

The fact that success on the modern battlefield requires the formulation of joint and fully integrated plans and their methodically coordinated execution does not need to be emphasised. Tri-Service planning requires a deep understanding of each

other's capabilities and limitations at all levels. Such a professional ethos can be inculcated only through first-hand experience, gained through service in each other's HQ and units. Bearing in mind the commitments of each of the Services, the need to participate in and attend specialised professional courses, the impact on the career prospects of officers and the shortage of officers in all the Services, particularly the army, the following measures are considered necessary to inculcate a tri-Service ethos among officers of the armed forces:

- Attachment with Units. During the first five years of service, each above average officer, should spend a period of one to two months on attachment with a unit, preferably in an operational area, in one of the two sister Services. This will give the officers an insight into the functioning and professional ethos of the other Service.
- Cross-posting in HQ. Suitable appointments that are tenable by officers from sister Services should be identified in various HQ by all three Services, e.g., at brigade, divisional and corps HQ. After the Staff College course at Wellington, up to 25 to 30 per cent officers should serve in junior staff appointments at HQ in sister Services to consolidate theoretical learning. For example, the DQ of an armoured brigade could be from the air force. Those who do not get an opportunity at this stage should be posted to such appointments later during

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their service. Appointments will need to be carefully selected to ensure that efficiency is not compromised. Placing the much larger number of army officers in suitable appointments will pose much greater challenges for the navy and the air force, than for the army. However, it should be possible to find a suitable via media.

- Observers in Exercises. A much larger number of observers should be sent for both joint as well as single-Service exercises, especially exercises with troops. The logistical difficulties should not prove to be insurmountable.
- Inter-posting of Instructors. Hand-picked instructors should be posted to each other's training establishments, so as to enhance awareness and learn from each other's strengths. To some extent this is being done already, but the scale needs to be enlarged. For example, there is no reason why a navy

or air force expert cannot teach electronic warfare at the Military College

of Telecommunications Engineering at Mhow, and vice versa.

Tri-Service Courses. Similarly, training establishments should offer specially designed courses to officers from the sisters Services. For example, a two-week course at the Infantry School, Mhow, could be designed to teach the basics of small arms and light weapons and explosives to navy and air force officers.

It should be possible to conduct an integrated tri-Service Higher Command course with specialised training being combined with joint lectures, seminars, model discussions, syndicate work, area studies and war games.

Integrated Higher Command Course. In due course, it should be possible to conduct an integrated tri-Service Higher Command course with specialised training being combined with joint lectures, seminars, model discussions, syndicate work, area studies and war games. The initial model could be the one adopted by the DSSC where each of the Services has its own Division and about one-third of the training is common.

Looking Ahead

If the past is a pointer to the future, the rich experience of the Indian armed forces in successfully managing joint tri-Service establishments augurs well for the future. However, the pace of integration needs to be stepped up considerably. It will probably take many more decades before a stage is reached where all the officers can wear the same uniform. Though the attire may not be purple, a purple ethos can be inculcated in the hearts and minds of the officers with some effort. Instead of following a top-down approach, it may be better to start from the lowest rung, so that a new generation of officers grows up without the parochial baggage of its predecessors. However, it must be ensured that while promoting jointmanship, individual Service expertise and professionalism is not compromised, or even diluted. Finally, the aim should be to create an integrated framework from the bottom-up, which, while capitalising on single-Service professionalism, is increasingly and necessarily joint.

It is time to implement the Group of Ministers (GoMs) decision to appoint a CDS. Theatre commands are but one step further in the quest for synergy in operations. It should be a short step, but the way the Indian system works, it will probably be a long one. In the prevailing battlefield milieu of joint operations, combined operations and even coalition operations, modern armed forces cannot be successful without a well-developed and deeply ingrained culture of jointmanship. While the colour of the uniform may be olive green, white or blue, the colour of the heart should be purple. The establishment of the Integrated Defence Staff is a good beginning, but there is a long road ahead. Fortunately, it appears to be paved with good intentions.

Reforms for Optimisation of Defence Spending

Shri Amit Cowshish @

Introduction

ndia figures among the top ten countries in the world with the highest military expenditure. It ranked fourth in 2014, inched up to the sixth position the following year, and climbed up another two notches to become the L fourth largest spender in 2016. Paradoxically, back home in India, the budgetary allocation for defence is widely seen as grossly inadequate. The parliamentary Standing Committee on Defence (SCoD), has for long been helplessly bemoaning inadequacy of defence budgets and recommending higher allocations, though without any success.

Is the seemingly low level of allocation for defence the result of political apathy and bureaucratic shenanigans, or are there some other reasons why the government is unable to raise defence budget beyond the current annual average increase of 10-12 per cent? If so, what options does the defence establishment have to optimize the defence outlays?

Inadequacy of defence outlays – perceptions and reality

Broadly speaking, there are two reasons why the defence budget is considered inadequate. One, because it is quite low in

terms of percentage of the Gross Domestic Product (GDP), and two, because the annual allocations are invariably less than the requirement projected by Ministry of Defence (MoD). India's defence budget has come down from possibly an all time high of 2.45 per cent in 1993-94 in the past twenty five years to 1.65 per cent in the year 2016-17, though the picture would be quite different if one takes into account the allocations for defence pensions and other organisations, such as the Coast Guard and the Border Roads Organisation, which are usually excluded from what is commonly referred to as the 'defence budget'.

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If all the Demands for Grant of the MoD are taken into account, the overall allocation for all organisations and activities under its administrative control would

work out to 2.44 per cent of the GDP for the year 2016-17. That is better than 1.65 per cent but, going by the general view, it is still not good enough. This will be true of the previous years also, but that does not change the nature of discourse regarding the size of India's defence budget, for it remains below three per cent of the GDP – a figure that SCoD has been persistently advocating as the ideal level of funding for defence. This perception of inadequacy is further reinforced by the perennial gap between the requirement projected by MoD and the budgetary allocation.

[@] Shri Amit Cowshish is a former Financial Advisor (Acquisition), Ministry of Defence. Amit Cowshish is presently a Distinguished Fellow with the Institute for Defence Studies and Analyses, Senior Visiting Fellow with the Delhi Policy Group and a Partner with Dua Associates, Advocates and Solicitors. He writes extensively on issues concerning financial management in defence, acquisition policies and procedures, and other related issues.

There is no empirical evidence that India's interest will be best served if the level of defence budget is raised to three per cent of the GDP. Considering the annual underutilization of the capital funds by MoD, the manner in which the annual requirement is worked out is also questionable. Deposing before the SCoD in 2016, the Defence Secretary candidly admitted, "We do not have a clear say on how much money is going to be spent in a particular year against the Budget".1

While the extent of inadequacy of defence budget can be a matter of debate, there is no denying that the capabilities required by the Indian armed forces to face the security challenges cannot be acquired without infusion and utilization of far larger sums of money than has been the case so far. This gives rise to the question whether defence outlays can be increased more sharply in the coming years.

Viability of sharper annual increase in outlays for defence

At the bare minimum, MoD's (Ministry of Defence) expectation would be to get the amount it projects to the Ministry of Finance (MoF), if not a higher amount that equals three per cent of the GDP. Therein lays the rub. A look at the figures related to projection and allocation of funds for defence indicates the magnitude of the problem. The defence outlay of Rs 2,49,099 crore for 2016-17 is Rs 46,883 crore less, than what MoD has asked for, and a whopping Rs 2,02,851 crore less, than what the allocation would be, if it were to be pegged at three per cent of the GDP. The government will obviously need to generate much higher revenue if this gap is to be bridged but there are serious limitations on the government's ability to do so. India's tax base is one of the lowest in the world. There are political compulsions that obviously come in the way of either expanding the tax base or increasing the level of direct and indirect taxation, without which substantially higher revenues cannot be generated on a regular basis.

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The target for containing the fiscal and revenue deficits, statutorily mandated by the Fiscal Responsibility and Budget Management Act, 2003, is another factor that the government has to reckon with, while preparing its annual statement of income and expenditure. Even if the government somehow manages to increase its revenues, the competing demands from other sectors, especially such as health, education, infrastructure development, and poverty alleviation, will come in the way of a steep increase in defence budget in the coming years. Recognising the reality that there is little chance of a steep increase in the allocation for defence is, therefore, fundamental to efficient planning. This needs to be internalized for optimizing utilization of the annual budgetary allocation. A fiscally prudent plan has better chances of yielding desired outcomes than a plan based on unrealistic assumptions about availability of funds.

Narrowing down the problem

To advocate, adherence to fiscal pragmatism in defence planning is not to suggest that the defence outlays are adequate. The real issue concerns the extent of shortfall and, more importantly, efficient utilization of the allocated resources. Undeniably, it is largely because of the budgetary constraints that India is unable to make rapid strides in several important areas, such as cyber security, outer space, and acquire other military capabilities. Many ongoing projects such as creating the Mountain Strike Corps have been affected by budgetary constraints, not to mention the low levels of serviceability of the in-service equipment and the war wastage reserves. This problem cannot be wished away by demanding more funds. The need of the hour is to plan for making the most efficient use of funds likely to be made available for a given year, of which both MoD and the Services Headquarters (SHQs) always have a very good idea. If nothing else, the past trend of allocation can provide a sound and pragmatic basis for defence planning.

Revenue budget

The past experience shows that inadequacy of funds is more acute under the revenue segment of the defence budget, with approximately 70 per cent of the revenue budget being spent on pay, allowances and other obligatory expenses on ration and clothing. This impacts availability of adequate funds for other operational requirements, such as buying of spares and myriad ordnance stores including ammunition. Shortage of funds also affects training, maintenance of infrastructure and, more damagingly, serviceability of the equipment currently in use.

Capital budget

In so far as the capital budget is concerned, for the present the problem is not so much with allocation of funds as with their utilization. The underutilization of the capital budget (difference between the budget estimates and the actual expenditure) has increased from Rs 374.84 crore in 1999-2000 to Rs 14,506.36 crore in 2015-16.

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Funds for capital acquisition

Approximately 75 to 80 per cent of the capital budget is spent on capital acquisitions. Going by the SCoD reports, most of the capital acquisition budget is taken up by committed liabilities on account of the ongoing contracts, leaving inadequate sums of money for the 'new schemes', the term used for new acquisitions. This issue needs to be understood in the correct perspective. There is no stipulation that new schemes can be processed only if sufficient funds are available to cover the entire cost of a particular scheme in the year in which the contract is signed. As a matter of fact, the total estimated value of all the schemes, at various stages in the long acquisition process at any given point of time, is invariably far more, than the total allocation for that year. Normally, only an advance payment equal to 15 per cent of the total value of the contract is made at the time of its signing, with the rest of the payment being linked with the delivery schedule, which then becomes a part of the committed liabilities in the subsequent years. Therefore, unless the delivery against a particular contract is also scheduled to start in the same year in which the contract is signed, MoD can go ahead with signing of a contract if sufficient funds are available for paying the advance in respect of that contract. For the year 2016-17, out of Rs 70,000 crore allocated for capital acquisition, a total sum of Rs 8,590.37 crore only is available for the new schemes. This is barely sufficient for signing new contracts worth Rs 57,000 crore, assuming advance payment of 15 per cent against all such contracts. This seems quite inadequate but it is very much in keeping with the past trend of contracting by MoD.

In response to a question in the *Lok Sabha* in February 2016, the Defence Minister, informed the house, that between 2012-13 and 2014-15, as many as 162 contracts were signed for a total amount of Rs 1,33,093.29 crore. This works out to an average of Rs 44,364 crore, entailing advance payment of Rs 6,654 crore every year. The amount available for new schemes in 2016-17 is, therefore, more than the average expenditure on new schemes during the aforesaid period. Some analysts point out that the funds for new schemes are not adequate even for paying the advance against the deal for 36 Rafael Medium Multi-role aircraft, which itself would be close to Rs 10,000 crore. This is true but the fact is that the advance payable in respect of this deal was consciously not catered for while earmarking funds for new schemes this year. Responding to a specific query on availability of funds for this deal, MoD informed SCoD in February 2016, that 'a separate proposal will be moved for additional funds in FY 2016-17, to procure the 36 Rafael aircraft after details regarding cost and delivery timelines are finalised.' Be that as it may, the present level of funding will prove to be grossly inadequate if and when the pace of signing of contracts picks up momentum.

Focusing on the problem areas

Given the existing fiscal constraints, the immediate focus has to be on consolidation and sustenance of the existing capabilities, and those that can be acquired at the present level of funding. This will require earmarking of funds

every year for specific priority activities, such as procurement of ammunition, serviceability of equipment and maintenance of infrastructure. On the capital side, priorities will have to be fixed in terms of the specific acquisition programmes for which the contracts must be signed during a given year.

Specific steps for optimisation of budgetary outlay

Optimisation implies making the best or most efficient use of the available resources by rearranging the existing systems and procedures. In the context of optimisation of the budgetary outlays, MoD needs to identify specific steps that need to be taken to achieve optimisation. To begin with, the rhetoric on jointness must give way to specific measures, which can potentially bring about a lot of efficiency in utilisation of resources. Appointment of a Chief of Defence Staff (CDS), is not necessarily a pre-requisite for bring about jointness. There is no reason why three senior most military officers, heading their respective services, cannot jointly agree

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on what is in the best interest of the armed forces and the nation, and why this can happen only when one of them is raised to the higher level of CDS. Jointness implies doing away with redundancy, inefficient deployment of manpower and possible wasteful expenditure, thereby freeing more resources, both human and financial, for operational needs. Of special interest has to be rationalization of expenditure on manpower which accounts for more than one-third of the total defence outlay.

Two, MoD's focus has to shift from utilization of budgetary outlays to realizing specific outcomes. This will require a structural change in the way the budgetary allocations are made under various heads. New budget heads will need to be created for specific programmes, schemes and projects. Allocations will need to be linked with quantifiable targets and measurable outcomes. This will not be unprecedented. Even under the existing system, some projectspecific budget heads, such as those related to the Married Accommodation Project of the three services and VLF (very low frequency)Project of the Indian Navy, already exist. This has also been recommended by SCoD.3 There is no reason why this concept should not be extended to the non-salary segment of the revenue budget also to facilitate outcomeoriented monitoring.

Three, a system of outcome-oriented monitoring will need to be put in place. A high powered structure, such as the Defence Procurement Board (DPB), within MoD should not only monitor progress, but also be mandated to resolve any issues, that threaten achievement of the pre-determined targets, as soon as any such issue arises. Accountability, must be fixed at the end of the year. This is the essence of outcome-oriented monitoring, which is sadly lacking in the present system. Shortage of ammunition is a case in point. The report of the Comptroller General of India on ammunition management created a stir, when it was submitted to the parliament in May 2015.⁴ The report succinctly brings out the failure on the part of the ordnance factories in meeting the production targets, and that of the procuring agencies in finalizing the import contracts, but it is not known if MoD fixed the responsibility for these lapses. Impunity is anathema to efficiency.

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Four, the existing scheme of delegation of financial powers, especially under the revenue segment, is not commensurate with efficient management of funds. Full and unfettered financial powers need to be delegated to the SHQs and the lower functionaries commensurate with the responsibilities entrusted to them. Since the powers can be exercised only within the limits of budgetary allocations and, in any case, MoD has one of the most elaborate systems of internal audit, there is no real danger of misuse of funds. On the contrary, delegation of full financial powers will cut down delays inherent in the present system resulting in the most efficient utilization of funds.

Five, decentralization of decision-making and delegation of financial powers will need to be bolstered by policy and procedural changes, permitting signing of long-term price agreements and rate contracts, as also outsourcing of all non-core functions. The potential of Performance Based Logistics remains grossly underexploited. With some innovative thinking and initiative by MoD, outsourcing could benefit a large section of the ex-servicemen community, which could be encouraged to become service providers by constituting suitable legal entities.

These steps are only indicative of what could, and needs, to be done in near future to make the most efficient use of the available resources. In the long run,

In the long run, there is no alternative but to consider non-conventional options, to augment the resources, be it by way of imposing a cess, rising of defence bonds, or permitting commercial exploitation of idle capacity of defence assets, subject to the security concerns being taken care of.

there is no alternative but to consider non-conventional options, to augment the resources, be it by way of imposing a cess, rising of defence bonds, or permitting commercial exploitation of idle capacity of defence assets, subject to the security concerns being taken care of. Unless, of course, there is a dramatic change in the immediate and extended neighbourhood, resulting in much needed peace dividend. For the present, it seems like a pipe dream, though.

End Notes

- Standing Committee on Defence (2015-16) (Sixteenth Lok Sabha), Lok Sabha Secretariat, Twenty Second Report, p/16
- 2 Ibid., Para 1.25, p/24
- 3 Ibid., p/59
- 4 Comptroller & Auditor General of India, Report No 19 of 2015 on Ammunition Management in Army