



AIR POWER

Journal of Air Power and Space Studies

Vol. 7 No. 1, Spring 2012 (January-March)



AIR POWER

CENTRE FOR AIR POWER STUDIES

New Delhi

AIR POWER is published quarterly by the Centre for Air Power Studies, New Delhi, established under an independent trust titled Forum for National Security Studies registered in 2002 in New Delhi.

Board of Trustees

Shri **M.K. Rasgotra**, former Foreign Secretary and former High Commissioner to the UK **Chairman**
Air Chief Marshal **O.P. Mehra**, PVSM, former Chief of the Air Staff and former Governor Maharashtra and Rajasthan
Air Chief Marshal **S.P. Tyagi**, PVSM AVSM VM, former Chief of the Air Staff
Smt **Vijayalakshmy K Gupta**, Secretary (Defence Finance) Ministry of Defence 139 South Block New Delhi.
Dr. **Sanjaya Baru**, former Media Advisor to the Prime Minister and currently Editor, *The Business Standard*
Captain **Ajay Singh**, Jet Airways, former Deputy Director Air Defence, Air HQ
Air Commodore **Jasjit Singh**, former Director IDSA

Managing Trustee

AIR POWER Journal welcomes research articles on defence, military affairs and strategy (especially air power and space issues) of contemporary and historical interest. Articles in the Journal reflect the views and conclusions of the authors and not necessarily the opinions or policy of the Centre or any other institution.

Editor-in-Chief

Air Commodore Jasjit Singh AVSM VrC VM (Retd)

Assistant Editor

Distributor

KW Publishers Pvt. Ltd.

All correspondence may be addressed to

Assistant Editor

AIR POWER

Arjan Path, Subroto Park, New Delhi 110 010

Telephone: (91.11) 25699131-32 Fax: (91.11) 25682533 e-mail: diroffice@aerospaceindia.org

website: www.aerospaceindia.org

© Centre for Air Power Studies

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or by any information storage and retrieval system without written permission from the Director, Centre for Air Power Studies, New Delhi

ISBN: 81-87966-30-0

AIR POWER Journal is published four times a year and is distributed by

KW Publishers Pvt. Ltd.

4676/21, First Floor, Ansari Road, Daryaganj, New Delhi 110 002

Telefax: 23263498 e-mail: knowledgeworld@vsnl.net

Printed and Published by Air Cmde Jasjit Singh (Retd) on behalf of the Forum for National Security Studies (the Trust running the Centre for Air Power Studies, New Delhi) and Printed by Rajkamal Electric Press, Plot No. 2, Phase IV, HSIIDC, Kundli 131028, Sonapat, Haryana and Published at P-284, Arjan Path, Subroto Park, New Delhi 110 010. Editor: Air Commodore Jasjit Singh (Retd).

RNI REGN No. DELENG/2006/18450

CONTENTS

Vol. 7 No. 1, Spring 2012 (January-March)

- Editor's Note** VII
1. **K. SUBRAHMANYAM AND INDIA'S STRATEGIC CULTURE** 1
- Shri **Shivshankar Menon**, India's National Security Adviser, delivered the first K. Subrahmanyam Memorial Lecture organised by the "Subbu Forum" on January 19, 2012, at the India International Centre. Shri Subrahmanyam was the country's leading strategic thinker and critical of the gross lack of strategic culture in India at all level. His demise a year ago was a great loss to the country. Subbu (as he was fondly called) tried tirelessly for more than half a century, through all possible means of communication, to emphasise the critical need for people, especially the thinking elite and decision-makers/opinion shapers, to pay serious attention to the formulation and practice of a strategic approach to national security and national development. He stood tall through the Cold War to articulate India's core interests and even more eruditely after the end of the Cold War when the framework in which India had to grow toward its manifest destiny had changed rapidly and dramatically.
2. **THE RESURGENCE OF NAXALISM:
IMPLICATIONS FOR INDIA'S SECURITY** 13
- Naxalism had first reared its head in the early 1960s when it was put down more through the use of force than any politico-economic measures. **Professor S. Adhikari**, former Head of the Department, Department of Defence and Strategic Studies, University of Allahabad, has objectively looked into the reasons and causes of the resurgence of Naxalism which erupted a few years ago and spread to a significantly large part of India, with some places no longer under the effective control of the government. Adhikari brings his immense analytical

capabilities to bear on a deep understanding of the problem and its possible solutions.

3. **NEW FRONTIERS OF MILITARY LEADERSHIP:
ENVIRONMENTAL FORAYS** 39

For the past two decades or so, the developed countries have started to pay closer attention to the interactive relationship between environmental issues (especially on ozone depleting substances critical to military systems). It is but natural that this process has to be understood and dealt with in view of the demands of new challenges for military leaders no doubt far away from the battlefield, but nonetheless which can have an immense impact on the battle space. Group Captain **Manoj Kumar**, Senior Fellow at the Centre for Air Power Studies (CAPS), has argued for greater consciousness and responsibilities of the military leadership in the arena on which there are few convergences of national interests among countries and even less knowledge in most governments in the developing countries.

4. **INDIA-IRAN RELATIONS UNDER THE SHADOW OF
INDIA-US STRATEGIC PARTNERSHIP** 59

The US strategy of containment of Iran for more than three decades and now the serious issue of their bilateral relations on the matter of Iran's nuclear programme have raised new issues which impinge on India-Iran relations. The more recent tightened sanctions against Iran and the threats of possible strikes by the US/Israel against the Iranian nuclear infrastructure have added further complications and challenges to India in its relations with Iran. Dr. **Asif Shuja**, Research Associate at CAPS, examines the issues involved and tries to evolve possible options to manage the challenges to India-Iran relations in the future.

5. **THE NEED FOR STRATEGIC CHANGE IN REGIONAL
POWERS' POLICY TOWARD AFGHANISTAN FOR
POLITICAL STABILITY** 77

After more than a decade of war in Afghanistan, the US and NATO

have decided to withdraw their military forces from Afghanistan in stages beginning in September 2012 and completing in September 2014. Meanwhile, they expect to hand over security responsibilities to the Afghan National Army and police forces increasingly trained to support the Karzai government. However, the role of the regional powers, especially Pakistan, will be a major factor in the process of establishing political and social stability in Afghanistan. Dr. **K.N. Tennyson**, Associate Fellow, CAPS, argues for a strategic change in the aims and objectives of the regional powers if stability in Afghanistan has to become a reality.

**6. RASHTRIYA RIFLES IN KASHMIR:
INDIA'S COUNTER-TERRORISM FORCE** 95

Alienation and terrorist violence started in Jammu and Kashmir in 1988, initially propelled by the JKLF. This erupted in early December 1989 and rapidly assumed major proportions, initially mainly in the Kashmir Valley. External support from Pakistan rapidly exacerbated the situation which the central and state police forces were unable to control and it became necessary to deploy the Indian Army. Once the scale and continuity of externally supported terrorism from its sanctuary in Pakistan and POK were recognised, a new paramilitary force called the Rashtriya Rifles was created by deputing personnel from the Indian Army. Ms. **Debalina Chatterjee**, Research Associate at CAPS, traces the creation, expansion and performance of the Rashtriya Rifles as a counter-terrorism force.

**7. SHIFTING STRATEGIES AND TACTICS OF
THE US/NATO FORCES AND THE TALIBAN
IN THE PRESENT AFGHAN WAR** 117

The war initiated by the US in Afghanistan after the 9/11 terrorist attack in the USA, to control the Taliban and Al Qaeda, has undergone many ups and downs in the past decade. In recent years, the resurgence of the Taliban has created a major shift in the challenges of an already complex situation and consequent changes in the strategy and tactics

of the ISAF, on one side, and the Taliban, on the other, especially the robust use of armed UCAVs normally referred to as “drone” attacks. Collateral damage and casualties have added to the complexities of the war and its potential resolution. **Shelly Johnny**, Associate Fellow at CAPS, has tried to unravel the complexities of the changes taking place.

8. **SELF-RELIANCE AND SYNERGY IN AEROSPACE SECTOR:
THE ROAD AHEAD** 141

India’s large aerospace market and limited capability in indigenous design, development and production have been the objects of serious studies in recent years. Shri **S. N. Misra**, Principal Controller of Defence Accounts (Navy), has undertaken a path-breaking study on the potential, necessity and prospects of synergy in the efforts to rebuild self-reliance in the aerospace sector in India for the future.

9. **AIR DOMINANCE OVER THE OCEANS** 167

Air power has historically played a critical role in air-to-air as well as air-to-surface operations during the past hundred years. Its impact has been increasing with exponential advances in technology. But the impact of air power in the maritime environment over the vast ocean space has been far more dramatic than in other domains. Air Commodore **Jasjit Singh**, Director, CAPS, points to the intrinsic quality of the vertical dimension that allows air power to control and influence the events and military forces on the surface of the earth while the reverse is not possible. Since warships and merchant ships at sea are large targets and comparatively easily located and targeted, the impact of air power is even more dominant. Through history, especially since World War II, Jasjit Singh traces the pure air-to-air engagements in battles, with no direct engagement between powerful fleets and warships, that changed the course of the war and history. Inevitably, the aircraft carrier replaced the battleship as the capital ship of naval power.

EDITOR'S NOTE

The much delayed process of aircraft acquisition and the excruciatingly tough trials to evaluate the six aircraft on offer have finally led to the short-listing of the French Rafale as the key Medium Multi-Role Combat Aircraft (MMRCA) for the coming years. There is still a long process ahead to negotiate the terms of the contract wherein offsets, no doubt, would constitute a key factor. It would be gross error to think of offsets only in terms of the financial element in that 50 percent of the cost would have to be ploughed back into the Indian industry and economy. We need to understand that the very reason we are buying the MMRCA is that we were not able to design and develop it in spite of having manufactured and overhauled thousands of aircraft and engines in our aircraft industry which has grown into a colossus over the past 72 years. *The offsets process must be seen as a lever to acquire greater capability in design and development of aircraft and their systems.* After all, the Rafale has already been designed and over 160 aircraft have been manufactured and are in service with the French Air Force, some of which were employed in thousands of strikes over Libya.

It is obvious that with a life of nearly 3-4 decades (in actual service), the Rafale will require upgrades in technological terms of a large number of its systems and sub-systems like the radar, Electronic Counter-Measure (ECM) systems, etc. in another 10-15 years from now. The research and development of such upgrades (and the prioritisation of such steps) must be planned now in conjunction with Dassault and other manufacturers of such systems. The crux of the matter is that such upgrades must be developed and applied in

India by the Original Equipment Manufacturer (OEM) in partnership with Indian entities, preferably in the private sector, which would also help to raise the technological and design capabilities in the aviation and other sectors and, in turn, energise the Indian industry and economy. In the first case, such an approach may require 70:30 partnership led by the OEM, which should lead to Indian companies taking on 70 percent share by the time the aircraft gets ready for the next major upgrade 10-15 years later.

These joint ventures would form the base for design and development of systems and components for military and civil aviation in India for the future. The government must avoid the temptation of accepting offsets in the shape of already designed systems like the mission simulator, as has been done in the case of the Lockheed C-130 Super Hercules; or that of seeking to do everything in and through Hindustan Aeronautical Limited (HAL). Building design and development capacity and capability in a whole range of weapon connected systems and components/spares is the route that will make any “mother of deals” productive and cost-effective in the decades ahead.

K. SUBRAHMANYAM AND INDIA'S STRATEGIC CULTURE

SHIVSHANKAR MENON

Dr. Sanjaya Baru, Mrs Subrahmanyam (whose birthday it is today), Air Marshal Kapil Kak, Cmde Uday Bhaskar, Ladies, Gentlemen and Friends

I thank the Subbu Forum and the India International Centre (IIC) for doing me the honour of asking me to deliver the first memorial lecture in memory of the late K. Subrahmanyam (KS), a towering figure, a teacher to many of us, and someone who was central to debates on India's national security for over half a century.

This lecture is also a responsibility because of the very high standards of intellectual rigour and analysis that KS set in his lectures and writings. Many of you present here knew KS well. His intellectual sharpness was awe inspiring until you understood that it was an expression of his dedication to his craft and to the power of reason, and hid a sensitive appreciation of others beneath that forbidding exterior. Today, every think-tank in India which concerns itself with strategic affairs, has people who worked with KS and whom he mentored. He combined those qualities of mind with personal courage, which became evident when he was on an Indian Airlines aircraft which was hijacked.

Shri **Shivshankar Menon** is former Foreign Secretary, and at present, the National Security Adviser, Government of India.

But I am not here to recount KS' life or his intellectual struggles with orthodoxy and political correctness in matters of national security.

Instead, I would like to consider what K. Subrahmanyam stood for in his professional life and the areas where he enriched our strategic culture. Let us first look at the Indian strategic culture itself. Thereafter, we might look at how KS changed the way that we in India look at some major security issues. And, finally, I will speculate on what would concern KS if he were looking at the world today.

INDIA'S STRATEGIC CULTURE

We often hear statements alleging that India lacks a strategic culture. Sadly, this is more often heard from Indians than foreigners. One sometimes wonders whether the idea that India lacks a strategic culture was not useful in the past to those who did not wish to see India's weight translate into the effective exercise of power on the international stage. While one can understand foreigners spreading this idea, it is incomprehensible to me that some Indians should also believe this and still propagate this idea.

The most cogent expression of this idea was by George Tanham, a senior defence analyst at the RAND Corporation in the early Nineties. Frankly speaking, for a civilisation and state like India not to have a strategic culture is impossible. It is like someone claiming to be apolitical, which itself is a political choice. Many others see in India a strategic culture that is "more distinct and coherent than that of most contemporary nation states", according to Rodney W. Jones.

What is strategic culture and how can foreigners and Indians draw such diametrically opposite conclusions about India's strategic culture? As I have said before, the most comprehensive (but incomprehensible) definition I have seen is: strategic culture is that set of shared beliefs, assumptions and modes of behaviour, derived from common experience and accepted narratives (both oral and written) that shape collective identity and relationships to other groups, and which determine appropriate ends and means for achieving security objectives. Or, to put it more intelligibly without the academic jargon, strategic culture is an identifiable set of basic

assumptions about the nature of international and military issues. This would involve both a central strategic paradigm (about the role of war in human affairs, the efficacy of force, the nature of the adversary, and so on), and a grand strategy or secondary assumptions about operational policy that flow from the assumptions.

By this definition, of course, we in India have a strategic culture. It is an indigenous construct over millennia, modified considerably by our experience in the last two centuries. For instance, war and peace are continuing themes in the Indian strategic culture. While not celebrating war, the culture treats it as acceptable when good fights evil. The Indian strategic culture has been comfortable with this contradiction. Both major Indian epics deal with wars, and treat rivalries as natural and normal. Kautilya addressed the use of force in detail. While Gandhiji shunned the use of force and opposed violence in politics, he was politically steely and unyielding, and accepted appropriate violence as unavoidable in certain circumstances. As a result of this acceptance of contradictions, Indian strategic culture supports ethical views that dovetail easily with international norms of conduct whether legal or on human rights, as long as they respect India's status. The traditional culture also has a strong pedagogical bias which is reflected in the way India chooses to negotiate, and in the attendant risk that any external compromise is seen domestically as surrender.

One of the best descriptions of India's contemporary strategic culture is by Kanti Bajpai who has pointed out differences between 'Nehruvians', neo-liberals and hyper-realists, stressed what is common to all three streams of Indian strategic thought, and described how they might differ on the best means but not on India's external goals. To summarise Bajpai, all three streams agree on the centrality of the sovereign state in international relations and recognise no higher authority; see interests, power and violence as the staples of international relations that states cannot ignore; and think that power comprises both military and economic capabilities at a minimum. Beyond this, they differ on the best strategy and the means to be adopted.

For 'Nehruvians', the natural state of anarchy can be mitigated by understandings between states, and to make preparations for war and a

balance of power central to security and foreign policy is both ruinous and futile. For neo-liberals, mutual gain is a conditioning factor for the natural state of anarchy between states, particularly as they become interdependent. They, therefore, see economic power as a vital goal for states, to be achieved by free markets at home and free trade abroad. The hyper-realists are, however, pessimistic and do not believe in transformation, only endless cycles of inter-state threat, counter-threat, rivalry and conflict, where the risk of war is only managed by the threat and use of violence. For them, the surest way to peace and stability is the accumulation of military power and the willingness to use force.

For Bajpai, relations with the USA provide an example of how this works in practice. All three streams recognise the USA as the only superpower and of real significance to India, and agree that there is no military threat to India but there is a diplomatic threat at times, with US policies affecting India collaterally, particularly in the region. Nehruvians see the USA as an imperial power that must be contained and cannot countenance any rivals, and they, therefore, seek multilateral answers to the preponderance of US power. On the other hand, neo-liberals take the opposite view, stressing how essential the USA is for India's own development, and believing that the US can be supportive of India's views and aspirations. Hyper-realists differ from both, arguing that the only way to build India into a military power of the first rank is to work with all those who might help, like the USA, but to realise the limits of that cooperation and its limited utility for India's security.

The elements of Indian strategic culture are evident in what is common to all three streams, Nehruvians, neo-liberals and hyper-realists. The same elements are also evident in earlier Indian writings on statecraft, whether in Kautilya, the Mahabharata's Bhishmaparva, or even in Ashoka's edicts. All regard the international system as anarchic, and see international relations as fundamentally power relations. In the practical application of that culture, therefore, all three of today's Indian schools believe that nuclear weapons are essential for India's security in a world that shows no signs of moving

toward their abolition and elimination, and which is inhabited by threats to India's security.

It is this common strategic culture that we inherited, first clearly expressed and adapted for modern times by Prime Minister Jawaharlal Nehru, which explains the substantial agreement on values, on goals and even on means in our foreign policy, despite marked and rapid changes in the external environment in which we have operated. That is why the core traits of our foreign policies have persisted since independence, irrespective of the parties in power. Our goals have stayed constant even as the means available to us have increased and as the world around us has become more complex and more linked to our own development.

For instance, our actions in 1971 should have been no surprise to anyone who had bothered to study our strategic culture. Both our major epics, the *Mahabharata* and the *Ramayana*, are about wars and treat them as natural and normal, not celebrating them but as necessary instruments of statecraft, justified when good fights evil. This says something about war and peace as themes in our strategic culture.

We are sometimes asked how the non-violent land of Gandhi could do what we did in 1971. As Gandhiji himself said in *The Gita* and *Satyagraha*,

I do believe that when there is only a choice between cowardice and violence, I would advise violence. Thus, when my eldest son asked what he should have done, had he been present when I was almost fatally assaulted in 1908, whether he should have run away and seen me killed or whether he should have used his physical force which he could have wanted to use, and defend me, I told him that it was his duty to defend me even by using violence..... I would rather have India resort to arms in order to defend her honour than that she should, in a cowardly manner, become or remain a helpless witness to her dishonour.

In saying so, Gandhiji was expressing ideas and a political rationalism whose roots one can trace back to India's ancient history, to Kautilya or Ashoka, whichever you prefer.

KS' CONTRIBUTIONS

It would be clear from this brief description of the Indian strategic culture that KS stood squarely in a long tradition of thought and attitudes, but applied it creatively to the vastly changed circumstances of the second half of the 20th century and the last decade. That his ideas faced resistance because they were new was natural. But so was their ultimate acceptance as orthodoxy, since they implicitly were a development of a long tradition of Indian strategic thought.

Let me try to list some of the more significant contributions that he made to Indian strategic thinking and culture. Five aspects in particular struck me as significant and relevant even today.

Our Nuclear Doctrine

When KS began speaking of the need for India to build a nuclear weapon as the most cost-effective solution to our unique situation, his was a lonely voice in India. It took years of steady and unrelenting argument and persuasion, (and, quite frankly, the actions of the Nuclear Weapon States—NWS) for his ideas to be widely accepted. He persuaded us of the idea of nuclear weapons as political rather than war-fighting weapons. And when we did conduct nuclear weapon tests in 1998, it was natural that it was to KS as Chairperson of the National Security Advisory Board (NSAB) that we turned to articulate the doctrine that governs the use and control of India's nuclear weapons. (Pakistan, which tested soon thereafter, has yet to articulate its doctrine, which says something about the different strategic cultures at play in the subcontinent.)

It is easy to underestimate the significance of what KS did to teach us how to think about nuclear weapons in a democracy. The ideas that Indian nuclear weapons would only be used in retaliation, that they would remain firmly under civilian control, that deterrence required massive retaliation and, therefore, assured survivability creating a second strike capability, were all first articulated by KS. Today, we take them for granted.

He also maintained the link with our traditional emphasis on disarmament, making it clear that it was because our security was threatened and the

other NWS had not responded to our calls for general and complete nuclear disarmament that we were compelled to weaponise, and that we remained willing to disarm under legally binding commitments and timeframes accepted by all the NWS along with matching commitments from the Non-Nuclear Weapon States (NNWS).

We also owe to KS the very vocabulary that we now use in discussing India's nuclear weapons programme. When KS began writing in public on the subject, the vocabulary of nuclear weapons policy was that created and developed in the context of the nuclear arms race between the US and the Soviet Union. Its relevance to the Indian, or for that matter the Chinese, situation has always been limited. (In 2006, Chinese and US arms control experts realised after decades of talks that they needed a mutually agreed bilingual glossary to minimise misunderstanding. It took eighteen months to reach agreement on 1,000 terms relating to nuclear security. But there was still no consensus on key concepts like "limited deterrence" and "minimal deterrence" or "deterrence" itself!!) In our case, we are still in the process of developing our own vocabulary and concepts, building on the work of the pioneers.

Defence and Development

When KS first began to write on defence issues in the Sixties, the conventional wisdom was that every rupee spent on defence was a rupee snatched from development or feeding our people. The 'guns vs. butter' argument was natural in a country where government and individuals were poor and hunger was rampant. KS was one of the few after Sardar Patel to argue that economic development needed a sound defence as a prerequisite. He also went on to argue that the economic spin-offs from defence spending were not inconsiderable in terms of growth and technological independence. He had a vision which was rare for that time of what defence as a sector could mean to the national economy, driving technological modernisation and growth by providing non-inflationary consumption. That we have not yet realised that vision in practice, despite exponential growth in resources available for defence, is not because his ideas were faulty but because they

were never implemented. This debate on defence and development is one that still continues and is unsettled to this day.

National Security Structures—The Kargil Review Committee and the GOM

If India was the first parliamentary democracy to attempt to harness the advantages of a National Security Council system, and has constructed structures for this purpose in the last ten years, many of the initial conceptions and ideas can be traced back to KS' writings and those of his generation. A lifetime worth of thought was compressed into the Kargil Review Committee's report and many of those recommendations were later adopted by the Group of Ministers (GOM).

Strategic Autonomy in Thought and Deed

The one thread that ran through all of KS' writings was the need to increase India's real strategic autonomy. By this, he never meant cutting ourselves off from the world. He realised that this would doom us to eternal technological mediocrity and leave us vulnerable to even minor threats. Instead, he envisaged India working with other countries as equal partners, as an active participant in the shaping of international outcomes and, ultimately, the international system itself. For him, non-alignment was a strategy, not an ideology. As a flexible realist, he responded to changes in the international situation facing India. In the Sixties, he advocated India reaching out to the US; post-1971, he was a strong advocate of the Indo-Soviet relationship; after 1991, and particularly after 2005, he was impatient with our tardiness in grasping the strategic opportunities that he thought had opened up for India.

This was not mere opportunism. He was a strong nationalist, rejecting US conditionalities for military assistance after 1962; driving hard bargains with the USSR as Secretary Defence Production in 1979; and, resisting policy choices that would have constrained our nuclear options in the Seventies.

Values in National Security Strategy; Realism-plus

What made KS' realism different from the common or garden variety of

Western realism was his ability to combine a strong commitment to the basic values of the Indian Republic (of secularism, democracy and pluralism), with his realist pursuit of national interest. I suppose one could call this the “realist-plus” approach. He was an advocate of value-based relationships: with the US and others on democracy, with Russia on secularism, and with Europe on liberalism. He often argued that there was no real contradiction between the promotion of democracy and the pursuit of India’s interests in our neighbourhood. I remember heated discussions in the Joint Intelligence Committee (JIC) when KS was chair in 1977-78. The example used by both sides of the argument was Pakistan, where democratic governments had been well-meaning but ineffective while military regimes had promised delivery but presided over a basically unsatisfactory relationship with India. It is an argument that still resonates in India today. But there was no question of where KS stood on this defining issue.

KS argued that the values in the Indian Constitution—secularism, pluralism, democracy and quasi-federalism—were imperative to hold India together in the 20th century. India is alone, along with the USA in an earlier age, in seeking to industrialise and accumulate power as a democracy. All the other major nations of the world industrialised and gathered power before they became democratic. KS felt that this was why the rise of India, like the 19th century rise of the US, would not arouse the concerns, conflicts and reactions that the rise of other powers throughout history had provoked. For him, it was, and remains, a matter of India’s self-interest to help to build a democratic, pluralistic and secular world order.

To my mind, perhaps the greatest contribution that KS made to intellectual discourse in India was to bring us back to the Indian realist tradition, one of the few realist traditions in the world that has a place of pride for values. KS’ writings and work re-taught us how to think strategically. He taught us that strategy is not just about outdoing an adversary who is trying to do the same to you. It is also about finding cooperative solutions and creating outcomes in non-zero-sum situations, (which are most of our lives), even when others are motivated by self-interest and not benevolence. Strategy is the art of creating outcomes that further your national interest and values,

and includes putting yourself in others' shoes so as to predict and influence what they do.

The measure of his success is the extent to which these ideas are now commonly accepted and no longer strike us as extreme. Not very long ago, in the living memory of my generation, this was not so.

KS' CONCERNS TODAY

What would have concerned KS today?

Shortly before he died, KS sent me four papers that he was working on. One was unfinished and the others were unpolished. The papers were nothing if not ambitious and magisterial, as one would expect from him. They were on an Indian Grand Strategy for the first half of the 21st Century, Indian Defence Policy, Nuclear Deterrent in the Indian Context, and India in the 21st Century. I do hope the KS Forum and the Subrahmanyam family will see their way to publishing these papers.

Reading these papers today, when uncertainty in the international system is at unprecedented levels and as we seem to be entering a new phase of the world economy, one is struck by how his "realist-plus" perspective seems best suited to describe what we see around us, and to chart a course forward. We are in a world where there are few certainties, where coalitions form around issues, and alliances are permeable, where power is increasingly shared but unevenly among several major powers, and where conflicts are asymmetric. This is a world with which the Indian state system was familiar for most of our pre-modern history, a world where Krishna, Bhishma and Kautilya would all feel equally at home. So it seems logical that we should return to our strategic culture as made modern by thinkers like KS to seek answers to the questions we face.

CONCLUSION

If India is to deal with the issues of the new 21st century world, it is essential that we further elaborate our own culture and tradition of strategic thought. So long as India's situation and needs are unique, we must encourage our own ways of looking at developments, and develop

our own strategic culture, vocabulary and doctrine. To do so would be an appropriate tribute to KS. Fortunately for us, there is no isolationist streak in our strategic thought so far, and we have a rich tradition to draw on. Ironically, the greater our capabilities, the more we need the world and are integrated into it. So, if anything, the need for, and the rewards of, studying our strategic culture will grow with time.

THE RESURGENCE OF NAXALISM: IMPLICATIONS FOR INDIA'S SECURITY

S. ADHIKARI

India is a millennium old civilisation, with one-sixth of humanity within its borders and 30 percent of the population living below the poverty line. It has led to huge economic disparities which create a feeling of deprivation and desperation among the unprivileged classes. The pluralistic Indian society is characterised by ethnic, religious, linguistic and socio-economic disparities which pose a serious threat to the internal security of the country. The Information Age has made globalisation a reality, where nations and societies are constantly creating wealth. Economic prosperity is only possible with sustained economic growth which demands a peaceful internal security environment. Naxalism or Left Wing Extremists (LWE) is an expression of the aspirations of the people who are deprived of a life of dignity and self-respect. The pattern of violence perpetuated by Naxalism is an indicator of an emerging serious challenge to the internal security and economic stability of the nation. This article introduces the polemics of Naxalism/LWE/Maoism and the prevailing situation which has seriously endangered the democratic fabric of the Indian states. An attempt has been made to contextualise the nature and spread of Naxalism/LWE and the threat it poses to the Indian states. The terms "Naxalites", "Maoists" and "Left Wing Extremists" have been used interchangeably. The article has

Prof. **S. Adhikari** is a former Head of Department of Defence and Strategic Studies, University of Allahabad.

been divided under the following sections: Genesis of the Problem; Naxal Strategy; Counter-Naxal Strategy; Measures and Recommendations; and Conclusion.

THE GENESIS OF THE PROBLEM

To understand the genesis of the Naxal movement, one has to study it within the framework of the Communist movement in India. The term “Naxalism” comes from Naxalbari¹, a small village in the Darjeeling district of West Bengal, where a section of the Communist Party of India (Marxist) [CPI(M)] led by Charu Majumdar and Kanu Sanyal led a violent uprising in 1967. They tried to develop a “revolutionary opposition” to the official CPI (M) leadership. On May 25, 1967, landlords attacked a tribal who was granted right to a piece of land by the court on the basis of tenancy rights. Revolutionary cadres of the CPI (M) counter attacked the landlord, giving rise to the “Naxalbari Uprising”. The uprising was spearheaded by Charu Mazumdar. Similarly, a peasant revolution was launched in an area called Srikakulam of Telengana region of Andhra Pradesh led by C. Pulla Reddy. Both incidents were violent in nature and drew their inspiration from the success of the Communist movements in China and Russia. The radicals comprehended the Indian situation then to be similar to that in China prior to 1949 and characterised it as essentially semi-colonial and semi-feudal. Based on that analysis, the revolutionaries concluded that the “People’s Democratic Revolution” should be launched in India by immediately resorting to an armed struggle on the Chinese lines.²

ROOT CAUSES

The roots of Naxalism or LWE date back to preindependence times. The Telangana movement in the Nizam’s Hyderabad and the movement in Bengal were the first of their kind in the 1940s. The main cause of the problem, when it began, was class and social inequality. In India, the people followed two distinct lines of thinking within the Communist movement.

1. V. Marwah, *India in Turmoil* (Rupa Publication, 2009), p. 98.

2. M. Manoranjan, *Revolutionary Violence: A Study of Maoist Movement in India* (New Delhi, 1977), p. 60.

The first line of thinking was propagated by Ranadive and his followers. They rejected the importance of the Chinese revolution and lay emphasis on the simultaneous accomplishment of a democratic and socialist revolution, based on city-based working class instructions. The second line of thinking drew lessons from the Chinese experiences, particularly Mao Tse Tung's theory of "protracted war", in building up the armed struggle.³

The following issues at the inception of the Naxal problem bring to fore the plight of the sufferers.

Zamindari System

The Zamindari system was adopted during the British Raj wherein a piece of land was given to a Zamindar and in return, he was required to pay a certain amount to the company or the state. The Zamindar did not cultivate the land himself. He distributed and redistributed it till it reached the tiller of the land who was a tribal or a common man working hard in the field. At each stage, the poor people or the tribals suffered immensely because a certain amount was required to be paid to the renter of the land and it led to the exploitation of the poor tribal at each stage.

Status of Tribals

The government decided to declare certain forests as reserved forests for the purposes of conservation, scientific research, for sanctuaries and land acquisition for dams, roads, industries, etc. It was done directly at the cost of the tribals who were the inhabitants of these forests for many generations. Thus, the state government, the contractors, and lower level officials fully exploited the tribals, bringing down their status to that of encroachers in the forests.

Resettlement and Rehabilitation

Unfortunately, in our country, the records of resettlement and rehabilitation and payment of compensation for lands and assets acquired from the people

3. R. Kujar, "Naxal Movement in India: A Profile", *IPSC Research Papers*, New Delhi, September 2008, p.2

for various purposes have been very poor. For certain poor families, it has meant generations of resettlement without being given any compensation. This has led to deprivation and marginalisation of the people. Although industrialisation did take place in the country, the tribals were deprived of the basic benefits of education and training. Therefore, they could not avail of new opportunities in the industries, and remained marginalised.

Administration in Remote Areas

Being very poor and unmonitored, these areas were developed but had poor connectivity. Even post-independence, the agrarian reforms did not reach these areas. Cosmetic solutions like *Bhoodan* and *Gramdan* were not effective. Corruption, vote bank politics and atrocities against the Scheduled Castes played havoc with the economic and social fabric of the society.

Governance Related Factors

The malfunctioning of government machinery in terms of inefficiency, corruption and exploitation was largely considered as the main factor behind the creation of a power vacuum as well as a space for Maoists to take root in and find legitimacy amongst the deprived and impoverished sections of the population in the country. The resurgence of LWE of such huge proportions was directly attributed to the failure of successive governments to address the aspirations of the common masses in the most deprived regions of the country. Since the demand of the poor people for change was not coming from the government, a natural recourse was to look for an alternative. The mass mobilisation has been possible only due to the inherent disenchantment with the prevalent system. The Naxals reached out to the people, understood them, took up their issues and fought for their dignity and rights.⁴ They earned goodwill among the tribals and the downtrodden.

It is of great interest to note that unlike the other internal security problems of the northeast, Jammu and Kashmir (J&K) and Punjab, which

4. T. Vijayendra "Kyon Naxalbari Andolan Jinda Raheja", in Veer Bharat Talwar, ed., *Naxalbari ke Daur Mein* (New Delhi, 2007), pp. 641-648.

were separatist in nature, LWE is **not** a separatist or externally driven movement. LWE believe that democracy is ill suited to India and want to make it a Communist type state. They have no respect for, or faith in, the Indian Constitution and the democratic system of government. They strongly believe in a classless society and consider rich capitalists, farmers and industrialists as their enemies. The aim is to overthrow the established government by using armed guerrilla rebellion along with agitation by the masses which in effect means dictatorship by the proletariat. Globalisation and liberalisation are seen as challenges to socialism. Therefore, Maoist indoctrination affects such deprived sections the most.

LWE is not a separatist or externally driven movement. LWE believe that democracy is ill suited to India and want to make it a Communist type state.

It is common knowledge that in most Naxal-affected regions, there is total lack of governance. The civil administration departments like the police forces, revenue department, and judicial institutions are seldom heard of. This has allowed the Naxal forces to run a parallel government in these areas. The practice of holding *Jan Adalats*, land distribution, construction of irrigation facilities and tax collection by the Maoist cadres, are evidence of the lack of the hold of the state government, as also explain the reach of Naxalism

Socio-Economic Inequalities

These areas are severely affected by the disparities in economic and social terms. The rich Thakurs and Zamindars consider poor people and tribals as people with no dignity and, hence, socially exploit them. All kinds of social discrimination is practised against them. The females of the poor classes are treated as commodities to be used and exploited. These inequalities in society force them to take recourse to violence and join Naxalism.

Economically, there is a large gap between the haves and havenots. Lack of employment opportunities for the youth in the relatively deprived regions of the country further allows Naxal groups to recruit more and

The extremists live by the gun, reaping a rich harvest of extortion and tax collection, with revenues to the tune of Rs.1,000 crore a year.

more people. Hence, the primary incentive to join the Naxals was to ensure an adequate income. The poverty levels in the Naxal affected states of Orissa, Bihar, Chhattisgarh and Jharkhand are much higher (with more than 40 percent of the population living below the poverty line).

Safe Sanctuary

The Naxal areas stretch from Nepal to Tamil Nadu. The areas chosen by the Naxalites are far from the urban areas, and the terrain of the region, dominated by jungles, hills and riversides, suits their requirement. This obviously facilitates the task of the Naxalites and complicates the task for the security and police forces.

Financial Support

No organisation can survive without sound financial support and a source of regular income. By rough estimates, the CPI (M) generates approximately Rs 500- 700 crore annually. This money is spent on payment to its cadres, for the purchase of arms and ammunition, running of frontal organisations and institutions. The main sources of funds are wealthy industrialists who carry out mining in these areas. To finance their activities, the Naxalites “accept contributions” in the form of “taxes and levies”, loot government treasuries and banks and also extort vast amounts from businesses, industries, political leaders, government officials, rich landlords and professionals. The extremists live by the gun, reaping a rich harvest of extortion and tax collection, with revenues to the tune of Rs.1,000 crore a year.⁵ The quantum of collection varies from state to state. As per estimates, the total collection from Bihar and Chhattisgarh is around Rs 200 crore and Rs. 150 crore respectively,⁶ while that from Jharkhand and Andhra Pradesh is about Rs. 350 crore and Rs. 100 crore respectively.⁷ In addition, the Naxalites are also engaged in, or control, significant levels of illegal economic activity,

5. *The Economic Times*, April 9, 2008.

6. *Ibid.*

7. R.K. Bhonsle, “An Integrated Strategy”, *Yojana*, February, 2007, p. 32.

especially harvesting and smuggling of forest produce. Smuggling of *tendu* leaves and other forest products such as opium and *kattha* also adds to their coffers.⁸

ORGANISATIONS

PWG (People's War Group)

If today, Naxalism is considered as the greatest internal security problem and the Naxals claim to be running a parallel government, the credit mostly goes to the PWG.⁹ The PWG has declared that India is a vast 'semi-colonial' and 'semi-feudal' country, with about 80 percent of the population residing in villages. It is ruled by the big landlord classes, similar to imperialism.¹⁰ People's war is based on armed agrarian revolution which is the only path for achieving people's democracy i.e. new democracy in our country.¹¹

MCCI (Maoist Communist Centre (India))

Right from the beginning, the MCC resorted to armed struggle as the main form of resistance and waged a protracted guerrilla war as the central task of the organisation.¹² The concrete economic and political conditions of India led to the concept of Mao Tse Tung's philosophy of war, i.e. to establish a powerful people's army and dependable, strong and self-sufficient base areas in the countryside, to constantly consolidate and expand the people's army and the base areas in order to encircle the urban areas from the countryside by liberating the countryside, and, finally, to capture the cities and establish the state system and political authority of the people themselves by decisively destroying the state power of the reactionaries.¹³

8. *The Hindu*, March 23, 2008.

9. *30 Years of Naxalbari*, undated Maoist literature (Vanguard, Publication), p. 30.

10. Kutjur, n. 3, p. 7.

11. "Path of People's War in India – Our Tasks", a comprehensive PWG party document highlighting its aims, objectives and strategies. See also D.R. Kaarthikeyan, in P.C. Dogra, ed., *Naxalite Movement* (New Delhi, 2004), p.187.

12. See A.A. Cohen, *The Communism of Mao Tse Tung*, p. 188.

13. *Red Star*, Special Issue, p. 20, as quoted in A. Banerjee, "Inside MCC Country" dated June 2003.

Formation of CPI Maoist

After the merger of the CPML with the PWG and MCCI into the CPI (Maoist) in September 2004, there were reports that they were trying to woo other splinter groups and had also consolidated their front organisations into a “Revolutionary Democratic Front” (RDF) to intensify their mass contact programme. A press release issued by the General Secretary on October 14, 2004, stated that unity was aimed to give more importance to the cause of “Revolution in India”. The new party has pledged to work in close collaboration with the Communist Party of Nepal [CPN (Maoist)], which is now in power in the Himalayan Kingdom of Nepal. Two guerrilla armies of the PWG and MCCI i.e, the People’s Guerrilla Army (PGA) and the People’s Guerrilla Liberation Army (PGLA) respectively, have also been merged. The combined strength is called the People’s Liberation Guerrilla Army (PLGA) from December 2004 onward.

LINKAGES: NATIONAL AND INTERNATIONAL

Recent studies say that the Naxals have well established linkages with other insurgent groups and few Muslim Fundamental Organisations (MFOs) which are actively involved in India. These links provide the movement with not only psychological support, but also material support in the form of money and weapons.

J&K Terrorist Groups

Naxalite spokespersons, on many occasions, have openly supported the actions and cause of the J&K terrorist groups. The Lakshkar-e-Tayyeba (LeT) terrorists who carried out the attack on the American Centre at Kolkata in 2001 had escaped to Jharkhand and took refuge in a Naxalite sympathiser’s house in Ranchi. In return of this and similar other favours, the J&K terrorist who are well trained in handling sophisticated arms, impart training to the Naxalite groups.

Northeast Insurgent Groups

Intelligence agencies have been reporting linkages between Maoist elements

and the insurgent groups of the northeast i.e. the United Liberation Front of Assam, Nationalist Socialist Council of Nagaland, and People's Liberation Army (ULFA, NSCN, PLA). The northeast insurgent groups like the PLA and NSCN follow the Maoist ideology and were even trained and supported by China in the 1960s and 1970s.

The Inter-Services Intelligence (ISI) has been very active in Nepal and Bangladesh for long, especially along the borders, in their desire to encircle India.

Students Islamic Movement of India (SIMI)

It has emerged that the Naxals have openly supported the activities of SIMI and both have been lately collaborating with each other.

Communist Party of Nepal (Maoist)

Naxalite groups in India have tried to sustain their fraternal and logistic links with Nepal's Maoists. The LWE outfits of India, along with CPN (Maoist) have decided to work towards carving out a "Compact Revolutionary Zone". The Indian LWE groups have been extending moral, material and training support to CPN (Maoist) cadres in guerrilla warfare, which has resulted in significant growth of Naxal violence since 2001. Cooperation between Maoists active in Nepal through Bihar, Jharkhand, Chhattisgarh, up to Andhra Pradesh, has provided the left wing extremists contiguous areas in which to operate, move, hide and train.

Coordination Committee of the Maoist Parties of South Asia (CCOMPOSA)

The Maoist groups of four South Asian countries, India, Nepal, Bangladesh and Sri Lanka, have joined hands to form CCOMPOSA to advance "People's War" in South Asia. The objective of the Committee is to unify and coordinate the activities of the Maoists parties and organisations in South Asia and spread protracted People's War in the region.¹⁴

14. See R. Kujur, "CCOMPOSA: A Mirage or Realty", October 31, 2006, at www.ipcs.com.

ISI Links

The Inter-Services Intelligence (ISI) has been very active in Nepal and Bangladesh for long, especially along the borders, in their desire to encircle India and is giving support to numerous Indian militant groups based in Bangladesh. The rise of LWE groups in India and Nepal has further served their purpose and they do not hesitate in providing moral and material support to these groups. This bond has been mutually beneficial to both the parties, as the LWE receive weapons and other war-like stores from the ISI to be used against the Indian states.

LTTE Links

The Naxalite linkage with the Liberation Tigers of Tamil Eelam (LTTE) dates back to the 1990s when it was estimated by the intelligence agencies that the PWG used to acquire weapons, especially AK-47 rifles, from this organisation.¹⁵ In the present context, the Naxalites are actively involved in Tamil Nadu with the discovery of a training camp organised by former PWG Naxals in the Periyakulum forests, Theni district, which is also believed to have strong sympathy for the LTTE. It has led security agencies to suspect a renewed nexus between the Naxals and the LTTE.¹⁶

Revolutionary International Movement

The PWG maintains constant touch with the Maoist groups of 27 countries through the Revolutionary International Movement.¹⁷ A Turkish Maoist organisation is known to have undertaken the task of publishing PWG activities through an Internet website.

Linkage with Left Wing Philippines Groups

A few media and intelligence reports from Southeast Asia state that the Naxalites in India have also developed links with the left wing extremists

15. P. Singh, *The Naxalite Movement in India* (Ruby and Company, 1995), p. 114.

16. D. Srivastava, "Naxalite -LTTE Nexus in Tamil Nadu: An Alliance in the Making", August 14, 2007, at www.ipcs.com.

17. P.V. Ramana, "PWG's Emerging New Global Linkages", February 11, 2004, PWG's www.ipcs.com.

of the Philippines, and through them, with other groups of Southeast Asia. The increasing expansion of Naxalism got further strengthened with covert support from other groups with a similar ideology in the Indian subcontinent. India's 'all weather adversary' Pakistan has grasped the opportunity provided by Naxalism to further increase unrest in Indians and try to re-emphasise its dictum of 'bleeding India by thousand cuts'.

NAXAL STRATEGY AND TACTICS

Organisational Strength of the Extremist Groups

The consolidation of several sections of the Naxalites has been responsible for the organised, institutionalised and planned manner in which the Naxalites function. The ideological dedication, the cadre-based organisational set-up and understanding of the micro socio-economic situation in various regions of India makes the extremists plan, operate and implement their strategies efficiently. There is a Central Committee and a Politburo at the apex. The hierarchical structure, which flows from the Regional Bureaus—State Committee/Special Zone Committee—Zone and Sub-Zone District/Division Committee—Squad Area Committee, is well established and institutionalised. The armed wing has a few divisions and *dalams*. At the village level, they have units called "**Sanghams**" comprising ideologically committed active supporters.

Protracted War

The Naxalites have adopted the strategy of "protracted war". The aim is to capture political power by armed struggle as a prelude to the subsequent unification of the liberated areas. The armed struggle has no time limit. It can attain the goal in one or 10 or 20 years and, in this way, the struggle moves ahead. Recently, the Naxalite groups have laid greater focus on organising along military lines. The military wing has based its ideology on guerrilla warfare. They have resorted to well conceived, thoroughly planned and ably executed sensational actions such as the attack on the convoy of Mr. Chandra Babu Naidu, the then Chief Minister of Andhra Pradesh, the

The Naxals' aim is to enlarge their mass/support base by undertaking development work and garnering the support of the civil liberty groups.

forced release of prisoners from the prisons at Jehanabad (Bihar), Narayangarh (Orissa), police stations in Chhattisgarh and Silda (West Bengal) and the recent spurt in hijacking of trains in Bihar and Jharkhand.

Building up Bases/Guerrilla Zones

In order to fulfill the aim of protracted war, the Naxalites believe in building up both physical and mass bases. Initially, the bases are built up in rural and remote areas. The areas are, then, to be developed into "Guerrilla Zones" and ultimately into "Liberated Areas". Naxalites operate in the very heartland of India, known as the Dandakaryna region (named after a mythological region from the epic *Ramayana*) which spreads over Chhattisgarh, Orissa, Andhra Pradesh, Maharashtra and Madhya Pradesh. The heart of this region is the thickly forested area of Abhujmadh which is approximately 10,000 sq km. This area till date has not been surveyed by the Government of India. The Naxalites treat it as a totally liberated area.

Compact Revolutionary Zone (CRZ)

The Naxalites, with the support of their Nepal counterpart, plan to create a 'Red Corridor', starting from the Nepal border with Nepal and extending upto Kerala. It was in August 2001 that the idea came up of establishing a Compact Revolutionary Zone (CRZ) or the Red Corridor. It extended from the forest tracts of Adilabad (Andhra Pradesh) to Nepal, traversing the forest areas of Maharashtra, Chhattisgarh, Jharkhand and Bihar and Nepal. It was conceptualised at Siliguri in a high-level meeting of the Maoist leaders. The notion of CRZ seems to be working in the correct direction. There has been a remarkable growth in Maoist between 2001 and 2010 in India.

Training

The LWE affected areas being underdeveloped and forested, safe joint

training camps can be organised. It has been reported that some Nepal Maoists have been possibly trained in the West Champaran and Aurangabad districts of Bihar, and Palamau and Kodarma districts of Jharkhand. Also CPI -ML and PWG cadres are imparting specialist training to the Maoists of Nepal in Rolpa and Rukum districts of Nepal. On this basis, they attack the enemy's outposts. An uncorroborated media input reveals that an attack on a police outpost in the West Champaran district on July 16, 2004, was carried out jointly by Indian and Nepalese groups. The attack on a police post in Madhubani in North Bihar in June 2005 is also reported to be a joint operation.

Tactics

To obtain their strategic, objectives, the Naxalites have been very ruthless in their approach. The following methods highlight their tactics to achieve their goals.

Enhance Public Support and Mass Base: The failure of the Naxalbari movement in the initial stages led the Naxalite leaders to rely solely on the people and create a powerful mass base.¹⁸ Therefore, now, the Naxals' aim is to enlarge their mass/support base by undertaking development work and garnering the support of the civil liberty groups. In addition, they indulge in rendering instant justice through 'Jan Adalats'. While the movement has strengthened itself in the forest areas and in areas marked by lack of governance, the Maoist leadership feels that urban centres have remained untouched. Therefore, in a meeting held in January 2007, the Central Committee formed a five-member Urban Sub-Committee and entrusted it with the task of preparing an Urban Perspective Document.¹⁹

Jan Adalats: Naxalites hold 'Jan Adalats' to dispose of the criminal and civil cases and, then, dispense justice by settlement of disputes and punishing the offenders. For this, the PWG has introduced a new 'Judicial System' by forming the 'People's Court', i.e., the Gram Rajya Committee and subsequently 'Revolutionary People's Committee', as an alternate

18. Singh, n. 15, p. 11.

19. K. Srinivas, "Reddy, Maoists to Focus on Urban Centre", *The Hindu*.

judicial system. The 'Judicial Department' i.e. 'Sangham' comprising three to five members with a 'People's Protection Squad' at its disposal, delivers judgments and sentences, including fines and imprisonment in a temporary designated lock-up in the village, apart from awarding capital punishment. The Dandakaranya Adivasi Mazdoor Kisan Sangh (DAKMS) and the Krantikari Adivasi Mahila Sanghatan (KAMS) are two specific Naxal front organisations that are entrusted with the task of looking into all disputes.²⁰

Present Domain of Naxalism/LWE

The exponential spread of Naxal influence has now engulfed 231 districts/20 states as compared to 182 districts/16 states earlier, which indeed gives a pan-India hue to the Naxal movement. The Naxals' consolidation along the axis of the projected 'Red Corridor' or the 'Compact Revolutionary Zone' (CRZ) highlights the long-term objectives of the outfit. The Naxals' aim is to upgrade their armed wing from a 'Guerrilla Force' to a regular 'People's Army'.

Major Developments

Change in Strategy: To accomplish its central task i.e., seizure of political power through protracted People's War, the party in its recently held Congress, reviewed the stage of the revolution and decided to review its strategy in the military-organisational-politico/perception management arenas. The CPI (Maoist) has chalked out elaborate plans to expand and consolidate its area of influence in Jharkhand. The CPI (Maoist) is actively pursuing its strategy of upgrading 'guerrilla warfare' into 'mob warfare' with a view to increase its influence in the states of Bihar, Jharkhand and Chhattisgarh. On the military front, the outfit has resolved to raise the level of the war and spread the revolution to new areas. It is fought by concentrating forces from various locations, with fluid battlefront developments and having the requisite training and mobility to attack the enemy in its most vulnerable areas, followed by speedy withdrawal. For this purpose, it

20. Ministry of Home Affairs, Annual Report, 2008-09.

has also decided to provide better weaponry to its army and also arm its 'Jan Militia'.²¹ The ultimate objective is to convert the People's Liberation Guerrilla Army (PLGA) into a regular People's Liberation Army (PLA) capable of undertaking the highest form of 'positional warfare', wherein the Naxal forces would capture territories, enforce the tenets of Maoism and liberate them from the yoke of imperialistic forces. In this endeavour, the CPI (Maoist) plans to convert its Guerrilla Zones into Base Areas, in its traditional strongholds, where the Maoists would dominate and provide a parallel administration to the local population. Consequently, the party focussed its efforts to strengthen the armed wings in Bihar, Jharkhand, Orissa and the Bastar region of Chhattisgarh. Ultimately, it is planned to liberate the backward areas of Central and Eastern India, specially Dandakaranya, Bihar, Orissa and Jharkhand.

The outfit also undertook regular launching of limited campaigns termed as 'Tactical Counter-Offensive Campaigns' (TCOCs) against the security forces, to deter them and put them on the back foot.

CPI (Maoist) Formulates Financial Policy: The Central Committee (CC) of the party has formulated a new financial policy to ensure proper collection, allotment and dissemination of funds. The objective of the policy is to streamline the system of collection of funds and check diversion and unnecessary expenditure. The new policy incorporates a top-down model of allocation of funds from the Central Committee to lower level committees, unlike the erstwhile system of retention of a major share of funds at the lower level, whilst leaving approximately 20 percent funds for the Central Committee. As per the policy, a higher level committee would now earmark the budgetary allocation of each lower level committee in the party hierarchy and the expenditure incurred would be strictly on the basis of budgetary allocations. It is estimated that the CPI (Maoist) in 2007 collected at least Rs. 40 crore from the states of Andhra Pradesh, Chhattisgarh, Delhi, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Punjab and UP. The Central Military Commission (CMC) had a budget in 2007-09 of approximately Rs. 60 crore, including Rs. 10 crore earmarked for the Central

21. Marwah, n. 1, p. 69.

Technical Committee, Rs 5 crore for communication, Rs 2 crore for the maintenance of hideouts and Rs 70 lakh for the purchase of weapons.

Alternate Red Corridor: The CPI (Maoist) plans to establish its presence in the Western Ghats, between Raigarh district of Maharashtra in the north and Wayanad district of Kerala in the south, with Karnataka as its base. The outfit's plan to use the Western Ghats, straddling the states of Maharashtra, Goa, Karnataka and Kerala, is primarily aimed at creating another Compact Revolutionary Zone (CRZ) analogous to the main one along the eastern corridor of the country. It has set a 3-4 years timeframe to achieve this objective. The main objective of the CPI (Maoist) is to establish strategic and tactical bases, which could provide safe sanctuary from the security forces' action and an alternative to the existing CRZ. This has led the CPI (Maoist) to undertake a major revamping drive since the beginning of the 21st century. So far, in 2011, 2,633 recruits have reportedly joined the PLGA in comparison to approximately 900 recruits in 2006. The outfit has organised 34 training camps in 2011 as compared to 13 in 2010.

COUNTERING NAXAL STRATEGY

There is a need to have a holistic view of this problem before it engulfs the entire country and results in endangering national security. This part can be covered under two sections: measures already undertaken by the central and state governments and recommended measures.

Measures Undertaken by the Central and State Governments

The governments have taken the following measures to control the Naxal problems:

Modernisations of State Police: Funds are given to the states under the Police Modernisation Scheme to modernise their police forces in terms of modern weaponry, latest communication equipment, mobility and other infrastructure. The Naxal affected states have also been asked to identify vulnerable police stations and outposts in the Naxal areas and take up their fortification under the scheme. However, some of the states need to improve the level of utilisation of funds under the scheme. So far, the central

government has released an amount of Rs 3677.67 crore to the Naxal affected states viz. Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra, Orissa, Uttar Pradesh, West Bengal, Uttarakhand, Tamil Nadu, Kerala and Karnataka. Within this, Rs133 crore were provided to the Naxal affected states for demining units, sophisticated weaponry and the latest telecommunication equipment.²²

Special Training of Police: Specialised training of the state police in guerrilla warfare and such operations under central arrangements are being undertaken. The personnel are being trained in specialised camps set up by the army in Bihar, Jharkhand, Chhattisgarh, Orissa, Uttar Pradesh and other places to fight terrorism and dealing with Improvised Explosive Devices (IED). The Army is training this force in counter-insurgency operations to include identification of IEDs, disposal of bombs, and use of detectors and jammers.

Special Intelligence Structure: The Naxal-affected states have taken the necessary steps to set up/streamline the intelligence structure²³ to effectively deal with the Naxal problem. Besides, it has been recognised that police station level collection of actionable intelligence holds the key to preventing Naxal violence. The Naxal-affected states have, accordingly, been asked to further streamline the intelligence collection and sharing mechanism between different agencies operating at the ground level so as to undertake intelligence driven anti-Naxal operations.²⁴

Inter-State Joint Anti-Naxal Operations: The menace of Naxalism is an inter-state problem. Naxalites operate without any hindrance of political and physical boundaries. In order to overcome the problem of inter-state movements by security forces, joint operations by the Special Police Units of the neighbouring states were required to be institutionalised, which has since been done in the form of "Operation Green Hunt". This is a well coordinated joint operation by the state police forces, adequately supported by the central forces, less army. In addition to this, air support is being given to the states and hiring charges for helicopters are also being reimbursed by the central government under SRE.

22. Ministry of Home Affairs, Annual Report 2008-09.

23. Marwah, n. 1, p. 91.

24. Ministry of Home Affairs.

Long-Term Deployment of Central Paramilitary Forces: In order to supplement the efforts of the states in providing an effective response to the Naxal violence, 40 battalions of the Central Paramilitary Forces have been deployed on a long-term basis, as requested by the affected states. The central government had also exempted the states from the payment of the cost of deployment of these forces for a period of three years from July 1, 2004, involving an amount of nearly Rs. 1,100 crore. In addition, as many as 52 companies of the Provincial Armed Constabulary (PAC) have been trained to carry out anti-Naxal tasks.²⁵

India Reserve Battalions: The Naxal affected states have been sanctioned 29 India Reserve Battalions mainly to strengthen the security apparatus at their level and also enable the states to provide gainful employment to the youth, particularly in the Naxal areas. Recently, additional India Reserve Battalions have also been approved for the Naxal affected states. The central government has now provided Rs. 20.75 crore per India Reserve Battalion as against the earlier amount of Rs. 13 crore per battalion. The states have been asked to expedite the raising of these battalions as soon as possible

Deployment of Seema Suraksha Bal (SSB) Along Indo-Nepal Border: In order to contain the activities of Nepalese Maoists on Indian territory, the SSB has been given the responsibility to protect the Indo-Nepal border. The government has recently given more powers to the SSB so that the management of the borders in these areas can be improved. For this, an outlay of Rs. 444 crore has been sanctioned for the SSB.

Protection of Railway Infrastructure: Generally, the Naxalite groups target properties. Hence, the Naxal affected states have been asked to set up credible mechanisms to enable effective coordination on the ground among the Railway Protection Force (RPF), Government Railway Police (GRP), local police and intelligence agencies to ensure the protection and safety of railway passengers, railway tracks and other railway properties. Besides, the Railway Ministry has also taken the necessary steps to further strengthen the infrastructure for improvement of the safety and security of the railways.²⁶

25. [http//www,what is India.com](http://www.what is India.com)

26. Ministry of Home Affairs, Annual Report, 2006-07.

Backward Districts Initiative (BDI): Since the Naxalite threat has to be seen on the developmental front also, the central government has provided financial assistance of Rs. 2,475 crore for 55 Naxal affected districts in the 9 states of Andhra Pradesh, Bihar, Chhattisgarh, Orissa, Jharkhand, Maharashtra, Madhya Pradesh and West Bengal under the BDI component of the Rashtriya Sam Vikas Yojana (RSVY).²⁷ The Planning Commission has been requested to include other Naxal affected areas under their proposed Scheme of Backward Regions Grant Funds (BRGF) for which there has been an outlay of Rs. 5,000 crore from fiscal year 2005-06 onwards.

Tribal and Forest Related Issues: In order to address the areas of disaffection among the tribals, the government introduced the Scheduled Tribes (Recognition of Forest Rights) Bill, 2005, in Parliament on December 13, 2005. Further, to facilitate social and physical infrastructure in the forest areas, the Ministry of Environment and Forests, issued general approval to allow such infrastructure by utilising up to one hectare of forest land for non-forest purposes. In August 2010, the government had decided to take the following actions: Mines and Minerals (Development and Regulation Act) was recommended to empowered Groups of Ministers; reduce rising protest against mining as no development is likely to take place; companies to share the equity/profit with the locals; payment of environmental levy; companies to shell out 26 percent of their equity; and individuals to share 26 percent of their profit.

Effective Implementation of Land Reforms and Creation of Employment Opportunity in the Naxal Affected Areas: Naxal groups have been raising mainly land and livelihood related issues. If land reforms are taken up on a priority basis and the landless and poor in the Naxal areas are allotted the surplus land, this would go a long way in tackling the developmental aspects of the Naxal problem. The states have been requested to focus greater attention on this area as also to speed up developmental activities and create employment opportunities in the Naxal affected areas, with special focus on the creation of physical

27. Ibid.

infrastructure in terms of roads, communication, power as also social infrastructure such as schools, hospitals, etc.

Public Perception Management: The states have been advised to resort to publicity campaigns in order to expose the unlawful activities and misdeeds of Naxal outfits and their leaders, use of violence and armed struggle, loss of human life and property and absence of development activities in the affected areas due to fear of, and extortion by, Naxal cadres, etc. The central government has taken the following measure to check the Naxal threat:

Firstly, a Task Force was constituted on October 7, 2004, under the Chairman of Special Internal Security (IS). It deliberates upon the steps needed to deal with Naxalism more effectively and in a coordinated manner. The members of the Task Force comprise nodal officers of the Naxal-affected states namely, Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Maharashtra, Madhya Pradesh, Orissa, Uttar Pradesh and West Bengal and the representatives of the Intelligence Bureau (IB), Central Reserve Police force (CRPF) and SSB. The Inspector General (IG) (Ops) CRPF and IG (Ops) SSB also participate in the deliberations. The Task Force has provided a useful forum to discuss and streamline anti-Naxalite operations being carried out by the affected states.²⁸

Secondly, keeping in view the overall dimensions of the Naxalite activities, a high level Coordination Centre was set up in 1998, headed by the Union Home Secretary, with the Chief Secretaries and Director Generals of Police (DGsP) of the Naxal affected states as its members. They meet regularly and review and coordinate steps, taken by the state to control Naxalite activities.

In addition to this, the decision was taken in the Chief Minister's Conference on Internal Security and Law and Order, held on April 15, 2005, to constitute a Standing Committee under the chairmanship of the Union Home Minister, with the Chief Ministers of 13 Naxal-affected states as its members. The government has also constituted an Inter-Ministerial Group (IMG). The IMG has members drawn from the developmental ministries and

28. Ibid.

the objective is to ensure effective implementation of developmental programmes in the Naxal affected areas.

The government must build-up political pressure to tackle this serious internal security problem.

RECOMMENDED MEASURES

Political Measures

The government must build-up political pressure to tackle this serious internal security problem based on the following recommendations. The government must initiate diplomatic measures to enlist the support of the neighbouring countries to deny cooperation between Naxal organisations. Legislative back-up, statutory actions, banning of unlawful organisations and setting up of a coordination centre to deal with Naxal extremism must be formed on the basis of the government response to the challenge posed to internal security. The left groups must be invited to join the political process. Examples are those of the CPI, CPI (M), All India Forward Bloc (AIFB) earlier and, recently, the CPI (ML) that have joined the political process successfully. Then, there is a need for all political parties to have a united stand in dealing with the problem.

Socio-Economic Measures

The central and eastern parts of the country are relatively underdeveloped as compared to other parts of India, both industrially and agriculturally. The areas also lag behind in almost all human development indicators. Hence, efforts must be made by the government to tackle the disparities in the social system on a war-footing. The government must take immediate steps to eliminate poverty, ensure speedy development and enforce law and order strictly. This could be made more effective by central plans with liberal central financial assistance which the government is doing.

Psychological Initiatives

In order to enlist the support of the people the government must rely on psychological warfare. Here, the government must expose the weakness

in the Naxals' ideological framework. Then, restoration of people's faith in the government and efficient use of the mass media to highlight the use of extreme violence by the Naxals and the loss of human life and property are other key areas in the government's strategy. People should be made aware of the diminishing role of Communism, as in the collapse of Communism in the USSR. Knowledge should be imparted that Communism deals with the materialistic aspects of life only, whereas the Indian culture does not advocate materialism. The leadership of Naxalism is in the hands of the upper class, whereas the cadres belong to the lower classes. There should be realisation among the masses that India believes in the concept of non-violence. Socialism can be achieved peacefully through the democratic process. It should be noted that many South American and South Asian countries have not progressed despite strong leftist movements. In the age of globalisation, applying the Maoists' strategy is not so relevant for India. In any case, China is more capitalistic than India. Furthermore, an attractive and all encompassing surrender-cum-rehabilitation policy will have a great psychological effect on the Naxals who seem far removed from their ideology. Giving relief to victims will show the human face of the government

Involvement of Armed Forces

A variety of options exist to tackle the security scenario as a separate entity, i.e. either by involvement of only the police or police and central paramilitary forces or involvement of the Indian armed forces in a limited capacity. There are various repercussions of the involvement of the armed forces to be considered before deciding on an option. It is a must that all pros and cons are considered in totality.

Today, the armed forces are heavily committed to fulfill both their primary and secondary tasks. On the one hand, heavy deployment of the Army along with various other paramilitary forces, continues at the borders to thwart the nefarious designs of our staunch adversary and, on the other, the Indian Army, along with some component of the Indian Air Force and a very miniscule portion of the Indian Navy is busy fighting a prolonged proxy war in Jammu and Kashmir and controlling insurgency

with all its undying efforts in northeastern India. 'Aid to Civil Authorities' is another major aspect of the involvement of the Indian armed forces in the case of disasters and unrest. Today, India is progressing well to further its vision to become a world power, showcasing its capabilities and participating in restoring world order and peace by participation in United Nations Peace-Keeping Missions. At present, the armed forces have a very limited involvement in counter-Naxal operations. This indirect participation involves: the training police and CPOs in Army run Jungle Warfare Schools in guerrilla warfare and also to train companies of the state police and assist in operations by sharing intelligence gathered by unmanned aerial vehicles operating in the area.

The government must constitute an apex central body which will coordinate/counter Naxalism/LWE measures in all affected states.

Application of Forces

The state governments realise that Naxalism is a 'law and order problem' that must be dealt with firmly. The government must constitute an apex central body which will coordinate/counter Naxalism/LWE measures in all affected states. Simultaneously, each state should set up a dedicated anti-Naxal force under capable officers with fixed tenures of 2-3 years, on the pattern of the 'Greyhounds' of Andhra Pradesh. The Directors General of Police (DGsP) of the Naxal-affected states should share information. The Prime Minister, in his remarks on internal security at the Chief Ministers Conference on September 5, 2006, had emphasised that the real key to check the Naxalites is good and timely intelligence. For launching successful counter LWE operations, adequate intelligence is essential which must be systematic and oriented. Efficient intelligence sharing between Multi-Action Teams (MAC) and State Multi-Action Teams (SMAC) is a must. The most important factor, however, remains effective integration of strategic and tactical intelligence and information gathered at the police station level. While the overall counter-action by the affected states in terms of Naxalites killed, arrested, surrendered and arms recovered from them has shown

much better results in the last two to three years, there is an urgent need to further improve and strengthen the police response, particularly in the states of Bihar, Jharkhand, Orissa, Maharashtra, by improving and sharing actionable mechanisms and strengthening the police forces. The same goes for the states of Andhra Pradesh and Chhattisgarh to some extent, which need to sustain their present momentum of effective counter-action against the Naxalites and their infrastructure.²⁹ The police force as a whole needs to be increased and fast. The irony of the situation is such that the national average of the police-public ratio is about 1.3 policemen per 10,000 citizens, yet in Bihar, a Naxal-prone state, the ratio of policemen to the public per 10,000 is a meagre 0.9, i.e. hardly one policeman for 10,000 people. Hence, there is urgent need to take corrective measures.

CONCLUSION

Today, there is no immediate solution to the Naxal problem. It will take time for the affected areas to normalise. The first priority should be to contain the tide of Maoist expansion and reinforce the writ of the law in the affected states. Adequate security should be assured in the affected regions first, then, development can follow. The maintenance of law and order is the responsibility and prerogative of the state and not of the citizens. The option of vigilant groups should be done away with. This can have adverse effects in the long-term. It is time to undertake administrative, electoral and judicial reforms to make the government machinery professional, accountable and proactive. There will never be a meeting ground between the state and the Naxals, as the ultimate objective of the latter is to uproot the former. Therefore, the government should not waste time and energy at the negotiating table and must stick to its policy of no talks until the Naxals lay down arms. The experience of the Army could be harnessed in imparting training, providing logistical support, medical services and technical equipment and expertise to the paramilitary forces that are deployed in Naxal affected areas.

29. Status Paper on Problem of LWE in India tabled by Union Home Minister Shivraj Patil, in Parliament on March 3, 2006.

Thus, the need of the day is to strengthen the civil administration and security forces i.e. the police and other paramilitary forces operating in the area to smoothen the transition of the situation towards normalcy and with the involvement of the local populace. This is a more desirable option.

The need to create an adequate security environment, especially in the districts where the Naxalites are said to run a parallel government, is a must. In areas where there is only a thin presence on Naxalites, developmental initiatives could be undertaken alongside. Once an adequate security environment and the rule of law are reinstalled, large scale developmental measures, with maximum accountability and efficiency need to be undertaken.

NEW FRONTIERS OF MILITARY LEADERSHIP: ENVIRONMENTAL FORAYS

MANOJ KUMAR

Traditionally, the role of the military has been envisaged to safeguard the country's borders—air, land and sea. It is rarely, if at all, that the common populace gets to see the social face of the military monolith of their country. This takes place when there is a natural calamity and the governments—provincial or federal—are overwhelmed. The military then interacts with its civil counterparts and reaps lavish praise for securing the affected population from the elements. As nature turns benign again, the military retracts till the time such an eventuality recurs. This 'on and off' facet of military-social interactions is being seen with growing regularity as sudden climatic events are visiting us with increasing frequency. Rarely do these instances of demonstrated military professionalism, discipline and leadership get etched in the memory of the country's inhabitants. As nature's fury abates, the people's memory also fades. Thus, an important facet of the military's social leadership never emerges from the shadows.

The senior echelons of the Indian Army take pride, and justly so, in protecting the endangered ecology of many difficult terrains by

Group Captain **Manoj Kumar** is a Senior Fellow at the Centre for Air Power Studies, New Delhi.

the use of their Eco Territorial Army Battalions¹. Planting of trees and thereafter maintaining them is a noble and traditional way of protecting the environment. However, there are many arguments for and against involving the military's decision-making body in this pursuit as it is not their primary objective. Planting trees also does not have an effect on the pursuit of any military objective. This evident lack of clarity and focus on the matter has put a stop in expanding the scope of the process to the other two Services i.e. the Indian Air Force (IAF) and Indian Navy (IN). Therefore, such forays by the Indian Army have not mirrored their leadership role in the social sector of environment protection, to be emulated by the other two Services. The questions that arise from the observations mentioned above are:

- How does one define leadership in the social domain within the military? What are the various components of this form of leadership that the military can demonstrate? What purpose would such demonstration serve for the military?
- Is there a need for the leadership in the Indian military to be seized of the matters of the environment and should they even consider these issues in their decision-making calculus?
- The pertinent question is whether environmental leadership in the military is any different from similar abilities of other organisations?
- What actions on the part of the Indian military could be considered a demonstration of its leadership in the protection of the environment?

This paper on environmental leadership focusses on the Indian Air Force (IAF) and it would attempt to answer the core issues related to the first three questions posed above. Further, an attempt would be made to answer the last and the most difficult question posed, on how this leadership process can be carried forward by actual implementation that would help the IAF to convert environmental forays into an opportunity to become more resource efficient.

1. For more information on the subject, readers may refer to Col P.K. Gautam (Retd) *Environmental Security: New Challenges and Role of Military* (New Delhi: Shipra Publications, 2010).

TRADITIONAL VERSUS ENVIRONMENTAL LEADERSHIP

There are many definitions of leadership by experts, with striking similarities. Some traits of leaders like drive, desire to lead, integrity, self-confidence, intelligence, and domain knowledge have been considered important enough to merit almost a ubiquitous mention wherever elements of leadership are discussed. Similarly, a few experts have focussed entirely on the inter-personal-relations or team-building abilities of a leader. They define leadership as an ability to influence the inter-personal relationships towards achievement of pre-defined objectives or goals. The question then arises as to why should a separate entity of environmental leadership be carved out? It is natural to question whether environmental leadership is a broader concept and not contained within the well defined allegory of leadership.

A contemporary environment leader does not necessarily fit the bill of traditional leaders like Mahatma Gandhi, Churchill, Mandela and many other greats of yore. These great leaders had the ability to carry the nation with them (and probably most of the globe), but not many environmental leaders can hope to achieve such heights of followers, considering the fractured state of the debate. In most cases, our knowledge of the environment is littered with contradictions and facts are difficult to master. The cause and effect paradigms do not always seem to converge. It would seem that in such a scenario, it would be highly improbable to locate a person with domain knowledge of the environment along with the ability to 'motivate the inter-personal relationships'. This is where an environmental leader is different from a traditional leader. An environmental leader is more of an epitome of personal drives, who works in the area of unknowns. As in an ecosystem, the boundaries are permeable, with matter and energy changing forms, an environment leader learns to work not only within but also outside the boundaries of the defined systems and paradigms, his/her own or those of society. The boundaries that are imposed by history, geographical features, human institutions and jurisdiction, probably present the biggest challenge to a leader working towards improving the environment. To overcome this challenge, a traditional leader would work

Working across boundaries rather than redefining them is an essential attribute to be possessed by an environmental leader.

towards redefining these boundaries in line with the aspirations of his/ her followers and their own beliefs; however, this approach may be redundant in matters of the environment. A classic example in this case is that of management of Ozone Depleting Substances (ODS) under the Montreal Protocol. The ODS banned under the protocol are being phased out and are required to be replaced by chemicals with a lower Ozone Depleting Potential (ODP). While moving to redefine this boundary, it was realised that the envisaged replacements of a few of these chemicals themselves have a very significant global warming potential, as the replacements, that is HFCs for CFCs/HCFs are capable of causing great harm to the environment due to their greenhouse effect. Thus, redefining boundaries is not always a suitable approach in environmental matters. Working across boundaries rather than redefining them is an essential attribute to be possessed by an environmental leader.

It must have been noted by now that one of the distinguishing facets of an environmental leader would be that it is an acquired mindset and ability. However, its prerequisite would be the possession of a vision as well as the ability to go beyond a value system. A major challenge that is normally faced by leaders is that of *uncertainty*. In environmental issues, this is paramount in its manifestation. Not only the future but even the history of environment change is being constantly debated and is still rather uncertain. When faced with such an opaque scenario, a cynical attitude would normally appear in weaker personalities. A leader has to dispel this thought process, first in himself and then propagate it in the followers and even in the naysayers.

The complexity of our ecosystem, coupled with the fact that the elements remain an enigma for even the greatest brains of our times, poses another challenge to the leaders. With limited know-how at one's disposal, it is an onerous task to be able to convince and lead the masses towards a safer habitat. The belief in the simplicity of actions that transcend science and

are observed in the region of common sense, is of utmost importance. The adage that 'you can't manage what you don't understand' is a thing of the past for an environmental leader. Managing change, much more than what the corporate 'change management' has taught, is an imperative for an environmental leader. The incredulity of the words, 'what you don't understand, you can't be doing,' is lost on such a leader. Working with a convergence of uncertainty, changes, boundaryless systems and an urgent need for actions, can only be observed in an environmental leader.

After explaining various attributes that go into the making of an environmental leader, a definition may be attempted. **Environmental**

leaders are those who can define environmental problems by rising above their own value system and, in the face of an uncertain, seamless environmental complexity, are able to carry hard decisions to their logical conclusions, with willing actions from their followers. It is worth mentioning here that an environmental leader has to possess the ability to be able to rise above his/ her beliefs and think of the global commons. It is a very intrinsic process, fairly ordinary and simple for the human psyche, and as an oxymoron, thereby, not easily achievable. This would be explained in little more detail and with specific examples when the issues of military leadership in environmental matters are discussed.

Environmental leaders are those who can define environmental problems by rising above their own value system and, in the face of an uncertain, seamless environmental complexity, are able to carry hard decisions to their logical conclusions, with willing actions from their followers.

ENVIRONMENTAL ISSUES: INVOLVEMENT OF THE MILITARY

Before we discuss the environmental leadership issues that the military may need to imbibe, it would be prudent to consider the drivers for the military to make forays in this, primarily, the social domain. Protection of the environment has long been seen as a subject that merits attention by the social leadership. The Indian military establishment has remained

aloof, almost a bystander, to the 'mitigation and adaptation' debate ranging around them. It has always been felt that regulations and policies on the environment are concerned with the ways of life that touch such social issues as pollution, forestry, land use, and energy conservation, etc. The security implications of environment change and, more importantly, the contribution of the military during their peace-time role towards jeopardising the environment, have not been visualised². The military has many serious issues of national security to ponder upon and an issue of social security such as environment protection obviously does not really count as a priority for them. These impediments to adopting environmental leadership would be considered later in the paper. However, it would be sensible to add here that this is not because of any adverse intentions on their part but due to the gap that exists in understanding the larger consequences of adopting environmentally sound processes in military operations.

Environmentally sound processes imply those procedures and systems that would be resource-efficient, thereby, cost-effective and overall easier to manage and control. These applications have a very large canvas. From a mundane activity such as waste disposal in a military installation to operational scenarios demanding optimum utilisation of fossil fuel and armaments, figuratively speaking, the field of vision is, therefore, 360 degrees. Some of these optimum procedures would have been implemented by the military organisations on their own, considering their efficacy. However, defining their environmentally sound implications would impress upon the military hierarchy that their implementation is essential from more angles than one. It is a win-win situation if their implementation actually results in an operationally stronger military organisation. This is the intention in defining these processes and describing how they can be made more resource efficient.

Military leadership would be truly demonstrated if they were to achieve not only the 'low hanging fruits' but also consider activities that demand bold and 'out of the box' actions. If a military commander is to carry out an energy efficiency and conservation study in his/her installation in India, he would

2. For more information on the subject, readers may refer to *Environment Change and National Security* by the author (New Delhi: KW Publishers, 2011).

most likely face the derision of his subordinates and superiors alike. However, if by implementing the recommendations of the same study, it is demonstrated that the formation had been able to cut its reaction time for deployment and also achieve cost cuts, the commander is likely to be lauded for the effort. This is not a trodden road for the Indian military but one which would have to be traversed often, considering the needs of the present times.

As already mentioned, the canvas of the correctly managed, environmentally sound procedures is very large. Therefore, a representative sample of the subjects that may be considered for immediate action, is mentioned below:

- Resources Management: Armament Inventory.
 - Dependence on Sensitive Material like ODS.
 - Energy Conservation and Efficiency.
 - Waste Management.
 - Environmental Training in the IAF.
- } In a typical IAF formation

ENVIRONMENTAL LEADERSHIP IN THE MILITARY

After having defined the requirements for environmental leadership, it is appropriate to **define the necessity to introduce such leadership at the desired levels of the military hierarchy**. Militaries in most of the developing countries are not yet actively taking adequate steps to address environment change. The social tag attached to the subject has proved to be a hindrance for it to be considered by the military hierarchy. Since its correlation with military matters has not been studied, it has not been emphasised upon sufficiently. The developed countries, on the other hand, have been actively focussing on the subject of carbon mitigation for quite some time. It started due to their respective governments' regulations requiring their departments to be compliant of energy and resource efficiency initiatives. Once the processes got optimised in line with the government's regulations, it was soon realised that the operational efficiency was a welcome by-product of such endeavours. With this realisation, a serious investigation of these issues was started by the top echelons of these militaries. Consider the policy issued on the subject by the US Army given below:

Box 1³

The Army Strategy for the Environment

“Sustain the Mission – Secure the Future”

The United States Army has long recognized that our mission is only accomplished because America entrusts us with its most precious resources – its sons and daughters. It is our obligation to ensure that our soldiers today – and the soldiers of the future – have the land, water, and air resources they need to train; a healthy environment in which to live; and the support of local communities and the American people.

The new Army Strategy for the Environment: Sustain the Mission – Secure the Future establishes a long-range vision that enables the Army to meet its mission today and into the future. Sustainability is the foundation for this strategy and a paradigm that focuses our thinking to address both present and future needs while strengthening community partnerships that improve our ability to organize, equip, train, and deploy our soldiers as part of the joint force.

Sustainability connects our activities today to those of tomorrow with sound business and environmental practices. We have learned over the past decades that simply complying with environmental regulations will not ensure that we will be able to sustain our mission. We must strive to become systems thinkers if we are to benefit from the interrelationships of the triple bottom line of sustainability: mission, environment, and community. To sustain the future Army, we must implement effective policies and practices that safeguard the environment and our quality of life in a manner that our nation expects of us.

The Army Strategy for the Environment does not pretend to dictate all the answers. It is only the starting point that commits Army leaders at all levels to certain goals and challenges them to develop innovative methods to achieve these goals. Achieving the vision outlined in this strategy will require a deep and personal commitment from every member of the Army team – every leader, every soldier, every civilian, and every family member. For the Army to be successful on its quest toward sustainability, we must all do our part to Sustain the Mission, Secure the Future!

-sd-

Peter J. Schoomaker
General, United States Army
Chief of Staff

-sd-

R.L. Brownlee
Acting Secretary of the Army

3. This policy statement has been reproduced from the site www.sustainability.army.mil/overview/ArmyEnvStrategy.pdf, accessed on December 7, 2010.

It is clear from the policy statement mentioned here that the US Army is actively taking into account mission accomplishment on the same page as environment protection. This throws open a new vista in perspective planning that is done by the Service Headquarters (HQ) in India. The focus on the community-military partnership, the individual soldier, and, most importantly, the need to sustain future missions by following environmentally apt practices, does require a deep understanding of the interactions of the environment with the military's working. The sustainability approach needs to be followed for 'military' reasons as different from purely social ones. This is the crux of environmental leadership in the military. Broadly, the objectives and benefits of demonstrating environmental leadership in the military are given below.

Strengthen Operational Efficiency

Following sustainable practices is bound to result in reduced dependence on fossil fuels, scarce resources, and energy. This has a cascading effect upon reducing the military's logistics tail during operations and training and on the cost of missions. With the reduced costs, the military would have more resources in their hands to deploy in priority areas of enhanced training levels and quality of life. Reduced logistics signature is also an operationally desirable feature of any military mission. This does not expose their vulnerabilities and is, thus, a much sought-after attribute by the military planners. To be able to deploy/move fast with the least encumbrances and with less worries related to availability of energy are achievable elements of sustainable mission planning.

Innovative Process

To reduce dependence on energy and resources, innovation in thinking and technology is essential. Militaries are normally committed to technological innovations as that gives them an edge over their potential adversaries. However, extending this commitment to innovative resource planning is a requirement of environmental leadership. Ensuring introduction of energy efficient processes, renewable sources of energy, and energy and resource

A military that adopts sustainability in its ethos would have a strategic advantage as it would be able to adapt to changes much faster than the one that doesn't.

conservation (as different from pure efficiency measures) methods would reduce costs while protecting human life and the environment. It would call for consulting professionals who have domain know-how, and also the relevant sectors of both government and private enterprises. This would result in commensurate benefits in expanding the scientific and technological base that would ensure buffering the military organisation from fast paced changes in these fields and allow it to remain potent and ahead. As an example, for captive power sources for communication equipment of the military, a change from diesel-based power generation to renewable energy sources may result in savings and operational benefits that are being mentioned here. Such opportunities exist in many facets of military operations; the requirement is to invest in commitment to innovative thinking. This is possible only if the military leadership is convinced of the process and its benefits. Showcasing environmental leadership is of the essence here.

Enhance Quality of Life

A safe and healthy environment is a sure recipe for a good quality of life, one that all of us aspire for. Military formations are inextricably connected to the local community that in a way sustains it. Whether deployed in a remote location or operating from a peace location, an Air Force formation undertakes operations that have an impact on the local community. From disposal of used Fuel, Oil and Lubricants (FOL) to lead contamination of ground water from the small arms firing ranges, all such activities would harm the health of not only the soldiers but also their families and the supporting local community. Environmental leadership within the military would enhance the knowledge of such actions, leading to empathy and, thus, support for innovative ideas on recycling and waste disposal. The close and collaborative nature of relations between the local community and military formation becomes a potential game-changer at the time of actual

operations. India learnt this well during the wars (including that of Kargil) that it had to fight. Since the military is already a source of leadership and inspiration for the masses, it is important that they treat this feature of community interaction with the necessary impetus that it deserves.

Sustainability Ethos

A military that adopts sustainability in its ethos would have a strategic advantage as it would be able to adapt to changes much faster than the one that doesn't. This advantage would be derived from the conditioning of its personnel in adopting a parsimonious approach towards utilisation of resources. Such a military organisation would also earn the respect of the nation and international acclaim. To inculcate this sustainability ethos, it would be essential for the leadership to introduce the relevance of safeguarding the planet and their nation—in that order—to their personnel.

It is essential to develop the sustainability ethos within the military as more and more conflicts in this world would take place due to dearth of resources. If the military organisations are going to further add to these scarcities, then the country would be caught in a downward spiral even as it tries to meet all the possible requirements of its military that are as it is considered sacrosanct in most countries. The important aspect to watch out for in the process of optimisation is that at no stage should the operational readiness of the military get adversely affected. Building efficiency through environmental audits and ingraining of a sustainability ethos is a possible way out. If the military can do more training at lower costs, it would benefit, as also the country.

Minimise Total and Life-Cycle Costs (LCCs)

Although this requirement of low cost inputs is an important part of environmental leadership and sustainability ethos, it is being mentioned separately, primarily to provide additional focus to the issue. Costs that are obvious are the ones that easily attract attention. For example, consider a hypothetical case wherein the cost of FOL at one of the border bases of

the Indian Air Force would be almost the same as in a peace location in another state, barring a little variation in taxes, etc. However, this would not take into account the costs involved—in monetary and environmental terms—for transporting the stores by the IAF aircraft/vehicles to the point of dispersion. This is also known as the fully burdened cost of FOL. The environmental costs would further get exacerbated if one takes into consideration the fact that owing to the remote location of this base, it may not have a proper disposal system for the used FOL, leading to unsafe disposal and thereby causing contamination of the ground water.

In the same context, the life-cycle costs of any military hardware may be much more than the capital cost of its procurement. The costs involved in carrying out preventive maintenance add to the total cost of operations of a military hardware. These costs include ease of maintenance, its frequency, parts change, transportation of these parts to and from the repair agency, their repair/maintenance, additional hardware or float needed to ensure that the numbers available do not deplete below a certain limit (lest it affects national security) and deployment of additional personnel to take care of these processes. Most of these costs are hidden and not accounted for when one calculates resource efficiency. This may induce a false sense of complacency due to inaccurate costing analysis and, thus, present an inaccurate picture.

MILITARY'S ENVIRONMENTAL STRATEGY

This debate now enters a crucial phase and brings us to the question of **how to define the strategy on environmental leadership that has to be adopted by the military?** Although the question may seem complex, the solution is simple as is the case with most of nature's creations. **The environmental strategy of the military can be defined as the optimisation of processes that are capable of ushering in the future at less comprehensive costs (environmental and life-cycle), combined with higher operational capability.** The words that need to be tagged here are 'processes', 'costs' and 'present-future' juxtaposition.

Processes that would have an impact on environmental costs and the operational capability of the military organisation would differ as per the

operating conditions. Certainly, the training methodology, maintenance procedures, inventory planning and management, and estate management are a few of the subjects that have an impact on operational readiness as well as environmental signatures of the organisation. Their optimisation can be achieved if one considers—and is willing to decrease—the cost of operations. In the US, pushed by federal legislative mandates and by the need to save money on energy costs, the US Navy reduced its overall traditional energy consumption level by 12 percent in 2008 with projects centred around wind energy generation, solar photovoltaic systems, geothermal systems, and ocean thermal energy conversion.⁴ Since the legislations demanded and the need of the hour (due to economic downturn) was such that these processes had to be introduced in the developed countries, the Indian military now needs to demonstrate a proactive strategy and be a role model for other similarly placed governmental and non-governmental organisations, in the national and international arenas.

Inventory mapping of the processes is normally the first step towards their optimisation. The US military spent \$20 billion in 2008, consuming 4 billion gallons of jet fuel, 220 million gallons of diesel and 73 million gallons of gasoline.⁵ Till such figures are compiled and compared on an year-on-year basis, a need would not be felt to engage in the optimisation process. The leadership would be seized of the matter only once the potential for making wholesome changes is seen. An environmental leader creates the opportunity by visualising these avenues. Any reduction in energy inputs, either by conservation or conversion to renewable sources has a cascading effect on reducing the dependence on a particular source—leading to energy security. This, in turn, allows for greater operational flexibility, reduced reaction time—a necessity for any military, and energy security. This becomes more and more important for operations in remote areas. Consider the following news article of a solar powered railway station published in *The Times of India*, New Delhi edition, on January 27, 2010.

4. <http://www.environmentalleader.com/2009/04/28/military-adopts-green-technologies/>, accessed on January 26, 2011.

5. Ibid.

Box 2

India Gets 1st Green Railway Station

New Delhi: Railways has inaugurated India's first green station at Manwal on the Jammu-Udhampur rail route.

With the tiny station facing frequent power cuts, it has been provided supply of solar power. "A request was made to J&K SEB for providing reliable electric power supply to this station...it was planned to generate onsite renewable energy through solar panels," said A.S. Negi, spokesperson, Northern Railway.

Sources said that now station lighting and fans are working on solar power. The state electric supply is a standby source, which can be used in case of any failure of the solar system. Electric load of S&T installations and one water cooler is on the state electric supply. Additional solar panels for increasing backup for power supply and standalone lights for complete platform lighting are planned to be provided for further improvement in the system after the trials are successful.

To reduce the existing load at the small station, some surplus fittings have been removed and energy efficient T-5 fittings, 60W fans, new exhaust fans (55 Watt) and CFLs have been installed. "We have used 28 solar panels (each 12V, 70W) that have been used in two groups of 14 panels each," said Negi.

"Station building load has been segregated in two portions. Each portion is being fed by one group of solar panels. The complete work has been done departmentally by arranging solar panels from Kapurthala rail coach factory and solar charge controllers have been purchased from the market. All wiring, installation, commissioning has been done departmentally, without any outside assistance," he said.

These measures of opting for renewable sources of energy, as explained above, can be easily replicated in the Indian military considering that they too operate in remote locations and face a similar dearth of energy, which most Indians have got used to. It is purely a matter of considering the alternative processes that are available to the leadership and then opting for one that (a) has the least environmental signature; (b) is easily adaptable; and; (c) is operationally suitable. The decision-making matrix of the military for optimising a process may be suitably modified to **focus on all the three mentioned variables**.

The juxtaposition of the present and future is very important in the making of an environmental leader. Presently, the environmental debate is

fractured and the future is uncertain, to say the least. In such a scenario, it is only the bold within the military who will consider decision-making with environmental implications, as a variable. The pragmatic approach would be to wait out the current controversy raging on the science of climate change and whether anthropogenic interventions have caused this state of affairs or not. But pragmatism in this case may be mirroring cynicism. Later may be too late. The timeframes of decisions may be allowed to be long when it is certain that the consequences of environment change may not be felt by us immediately. However, when sudden climatic events are affecting us with increasing and unpredictable regularity, it would be strategically important for a military leader to take these into account while planning operations. Another example of such prudence would be to consider the efforts that militaries all over the world (including India) have to launch whenever a natural calamity strikes. To cater to such eventualities, both in terms of training and material, would be a leadership decision even though such requirements may not be directly imposed upon the military by the civil administration as a routine.

Over and above the strategy and benefits of environmental leadership mentioned here, the need to demonstrate environmental concerns in the military flows from their proclivity to showcase the institution of the military as an outstanding example of excellence in all walks of life. The citizen of the nation expects and would emulate this 'lead from the front' ethos of the military in this crucial facet of social entity. When the Indian government has designed the National Action Plan on Climate Change (NAPCC)⁶ to prepare the country for meeting its commitments in reducing greenhouse gas emissions, it would be a leadership decision on the part of the Indian military establishment to come forward with their own plan, within the

The need to demonstrate environmental concerns in the military flows from their proclivity to showcase the institution of the military as an outstanding example of excellence in all walks of life.

6. http://pmindia.nic.in/climate_change.htm, accessed on February 2, 2011.

ambit of the NAPCC, for their organisation, thus, helping the country meet this commitment. The state governments in India have formulated and implemented their own action plans on climate change. Although these policies are applicable to military installations in that state also, they are not required to provide a feedback on the implementation generally owing to the unique position that the military occupies in India.⁷ This by no means absolves them from the responsibility of acting on the desired actions. It may prove to be a case of moral high ground for them to be proactive and act on these action plans even when they are not specifically called to do so. Only by demonstrating this kind of leadership can the military win the confidence and awe of the nation. Most of these plans have been so astutely designed that they are easily actionable and make economic sense too.

IMPEDIMENTS TO ENVIRONMENTAL LEADERSHIP IN THE MILITARY

It may be a little difficult to understand that there may be impediments to the formulation and implementation of environmental policies in the Indian military, since it makes eminent sense, operationally, economically and socially, to do so. Why has this not gained acceptance in a big way, similar to the militaries of the developed nations? To answer this, it is important to understand the contemporary leadership value system and priorities that are followed in most of the military establishments around the globe and India is no exception.

The Indian military, as also the nation, is passing through a transition phase wherein it is modernising and formulating a strategy commensurate to the major active role that the country is set to portray in the global affairs. The pace at which the transformation is taking place in the country's stature requires the military leadership to think 360⁰, even while observing and imbibing the model followed by other similarly placed military institutions. It has to charter a path with its own value system. Considering the geographical location of the country and its history, it is not surprising that uni-focus thinking on attaining military balance or superiority against its adversary

7. Readers may study the Delhi State Action Plan on Climate Change at http://moef.nic.in/downloads/public-information/Press_Delhi_NAP.pdf, accessed on February 3, 2011.

is of utmost importance. This superiority is achieved primarily by means of numerical and technological dominance. The Indian military establishment is wholly involved in building, modernising and training for achieving these two objectives. It is still on the upward slope of the growth graph and is focussed primarily on improving war-fighting abilities.

It has already been discussed earlier that the military establishments of the developed nations (like the US and UK, etc) have now shifted their focus equally to their environmental responsibility. Their objective is not only to ensure an operationally efficient establishment but the path being chartered takes into account the changed realities of modern economics. They are open to deliberation of their actions having an impact on the environment. They now go past their personal value system to observe the opportunity presented by following low energy intensity as well as a resource efficient and socially responsible path. Since 'environmental value' is comparatively a modern construct, the complexities associated with it have been appreciated early on by the countries that had a robust investment in scientific research. This is the underlying reason for the headstart that the developed countries have in the matter.

The policies on environmental management in different countries or communities are based on local interpretations of politics, economics, science, and culture, etc. This knowledge system is still evolving and is at different stages in different countries. These complexities make it difficult for the military leadership in emerging power centres of the world to accept this as an important paradigm. For them, the orthodox martial outlook is the only necessity. For the sake of a better definition, this may be called a 'traditionalist approach' towards the fast evolving discourse of environment management within the military. It should not be construed that this approach is wrong; rather, it may be a necessity considering the state of affairs in many countries. The present day asymmetry and complexities force the militaries to follow

The policies on environmental management in different countries or communities are based on local interpretations of politics, economics, science, and culture, etc. This knowledge system is still evolving.

the rationalist approach to security. However, it is the belief of the author that the Indian military establishment, being one of the largest in the world, is rightly poised to show leadership on this front now. The business case made out previously in this paper makes this vital for the Indian military establishment. The need is to rise above a set value system that has been handed down from one bureaucratic/ military hierarchy to another, keeping the benefits of environmental leadership in abeyance.

It is not an easy task to plan for unknown timeframes as is the case in environmental matters. A logical military approach would normally not work when we are dealing with matters where the enemy is not known and even the attack timelines and place are uncertain. Then it is easy to postpone a decision till clarity is built. The only argument against environmental forays, albeit weak, is that building process efficiency and thereby reducing costs does not need another strong driver for change. A military that has understood the concept of a lean and mean approach to operational readiness would embrace it openly. By going ahead on this path, a private enterprise might improve its balance sheet and since its prime responsibility is to its shareholders, it would earn kudos for the leadership demonstrated. A military organisation, on the other hand, does not have a profit motive. Therefore, if they adopt this leadership model, it would be akin to a private concern going beyond the regulatory requirements of following environmental bylaws. Why this happens, comprises a separate study in itself.⁸ This would normally happen either due to the top management's commitment or leadership on the subject or in a situation where the "policy-supporters" manage to convince the "non-believer" constituents of the long-term benefits and, thus, manage to tilt the leadership towards the subject. It is the advocacy of the problem and solution—the quantum of change being a large factor, which ordinarily convinces the leadership to accept or reject the proposal for an activity that is not immediately required to be acted upon.

It must be clear by now that overcoming the impediments to showcase environmental leadership in the military is a task which would have to

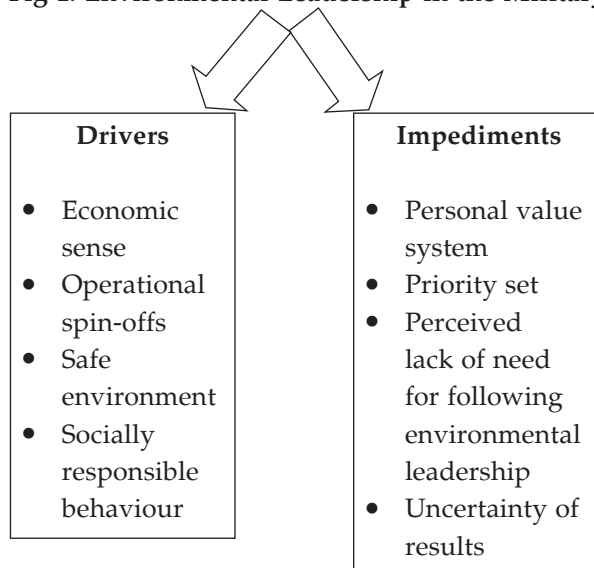
8. Readers may refer to Aseem Prakash "Why do Firms Adopt 'Beyond-Compliance' Environmental Policies?" in Neil Gunningham, ed., *Corporate Environmental Responsibility* (USA and England: Ashgate Publishing Limited, 2009), pp. 297-310.

be driven by extrinsic variables as the uncertainties involved are too large for adoption by a hierarchy that has been largely inured to the traditional model of growth. The role model militaries (read those of the developed countries) are still studying further avenues to incorporate environmental forays. They have started realising the comprehensive benefits that this approach has accrued to them only now. Therefore, it would be worthwhile, as it is not too late, for the Indian military establishment to start thinking of formulating their own strategies of environmental leadership.

COMPARATIVE ANALYSIS...

A closer look at the advocacy of environmental leadership in the Indian military would suggest subtle drivers and impediments. While the drivers are both extrinsic and intrinsic, the impediments are purely intrinsic. It is the self-driven organisational belief and value system that has not yet ensured development of this format of leadership. The following diagram would bring this argument in perspective (Fig 1).

Fig 1: Environmental Leadership in the Military



The order of stating the drivers or the impediments is not necessarily commensurate with the importance attached to each. This order would vary with different individuals or organisations and is dependent upon the value system that they are used to. So there may be a case where the requirement to leave behind a safe environment may be the biggest motivator to adopt environmentally friendly practices. On the other hand, a traditionalist may view the operational spin-off as the main achievement of following this path. In the same way, the impediments take priority, depending upon the individual's intrinsic thought process.

The need for environmental governance in the military cannot be overstated. Suffice to say that the mindset of the higher military echelons to further the cause of environment would now be counted as a strategic decision that would distinguish a modern military from one that is working towards it. The approach for adopting this paradigm would necessarily be innovative and customised for different military organisations. Various factors of input resources, geographical location, technological limitations and, above all, human will, would determine the approach that is finally undertaken whilst adopting an environmentally sound policy. Military leadership is looked up to in almost all countries. By adding another dimension to it, one that has social values and military ethos combined, the image of the military may see a positive transformation. Improving productivity within any business organisation is a priority of the top management, and the military is in the same mould. This could be the first step to strive for by an environmental leader in the military.

INDIA-IRAN RELATIONS UNDER THE SHADOW OF INDIA-US STRATEGIC PARTNERSHIP

ASIF SHUJA

INTRODUCTION

India has come under severe pressure from several quarters to clarify its position vis-a-vis its relations with Iran due to its voting three times against the country in the International Atomic Energy Agency (IAEA) resolutions. Since the US has been seen as the arch rival of Iran, and India has shared good relations with Iran from ancient times, it is argued that India has bowed down under the US pressure to tow the latter's line on the Iranian nuclear issue.

The Indo-US civil nuclear deal, signed in 2005, has been cited as the main bargaining plank by the US to bend India to its policy line vis-a-vis Iran. There has been no dearth of efforts by the opponents of the deal claiming that India has lost independence in its foreign policy. However, India has sought to clarify time and again that its vote against Iran was not due to the US pressure, and it is guided only by its own national interest.

This paper deals with this debate and tries to find out the extent of pressure by the US that India faced to change its Iran policy. Additionally,

Dr. **Asif Shuja** is a Research Associate at the Centre for Air Power Studies, New Delhi.

India should focus on how to balance its relations with both the US and Iran and not worry too much about the accusation of succumbing under the pressure.

the paper attempts to evaluate the merit of the debate itself and argues that delving too much in the discourse just to prove or disprove the pressure, if any, is a futile exercise. The main argument of the paper is that while circumstantial evidence indicates that India did come under the US pressure, there is no substantive proof of the same.

Nevertheless, India should focus on how to balance its relations with both the US and Iran and not worry too much about the accusation of succumbing under the pressure since in the current era of globalisation, no two countries can build their relationship entirely on bilateral considerations, disregarding the impact of third countries. In essence, in the current era, the absoluteness of an independent foreign policy is neither feasible nor desirable.

THE DEBATE

The Indo-US civil nuclear deal, which is the key to the Indo-US strategic partnership, became controversial mainly because of the linkages of this deal with the Iranian nuclear issue. Therefore, before going into the arguments and counter-arguments of the debate, it is imperative to first understand the nature of the deal itself and how it got linked with the Iranian nuclear issue, finally affecting the Indo-Iran relations.

The Indo-US Strategic Partnership

While falling on opposite sides of the Cold War, India and the US “grew closer in the last years of Bill Clinton’s presidency, and ties were further strengthened after New Delhi quickly backed Bush’s war on terror.”¹ The high point of this closeness was the 123 Agreement which brought the two countries closer like never before.

1. “India Dumps Old Friend Iran for US Nuclear Carrot,” September 26, 2005, URL: <http://www.expressindia.com/news/fullstory.php?newsid=55386>, accessed on: June 5, 2011, 1:38:50 AM.

The '123 Agreement²,' signed between India and the US serves as the bedrock of the Indo-US strategic partnership. This agreement is also known as Indo-US Civil Nuclear Cooperation or the Indo-US Nuclear Deal. The basis of this agreement is the joint statement of July 18, 2005, by Indian Prime Minister Manmohan Singh and US President George W. Bush. Although the deal was signed in 2005, it took almost three years to come into effect since it had to go through several complex stages, including amendment of the Atomic Energy Act of 1954, which is a US domestic law.

The July 2005 foreign policy initiative announced by President George W. Bush to attain "full civil nuclear energy cooperation and trade with India"³ was intended to "boost the US strategic partnership with India, a partnership that was an important priority for the Bush Administration."⁴ Nevertheless, India had lobbied hard for the deal. In fact, "in 2005, the Government of India hired the Washington DC-based lobbying firm, Barbour, Griffith & Rogers, to lobby the US Congress on behalf of the nuclear deal."⁵ This firm is headed by Robert Blackwill, who is a former US Ambassador to India and his firm, which "is known for its strong connections with the Republican Party and the White House,"⁶ was signed up by India "for \$700,000 a year to work as a lobbyist for 'developing, refining and expanding' relationships between Indian officials and the United States' foreign policy-making apparatus."⁷

India's closeness with the United States has helped India secure its future energy needs in terms of expanding its nuclear capability. The US has also promised India a permanent seat in the expanded Security Council, which, if realised, could boost India into the rank of a major global power.

2. This agreement requires India to separate its civil and military nuclear facilities and subject all its civil nuclear facilities to the International Atomic Energy Agency (IAEA) safeguards in exchange of the full cooperation by the US in the civil nuclear field.

3. Dinshaw Mistry, "Diplomacy, Domestic Politics, and the US-India Nuclear Agreement," *Asian Survey*, vol. 46, no. 5, September-October 2006, pp. 675-698, p. 675.

4. Ibid.

5. Harinder Sekhon, *India and the United States: Breakthroughs, Prospects and Challenges Ahead*, (Delhi: Macmillan India Ltd, 2008), p. 43.

6. Ibid.

7. Ibid.

With the progress of closer ties, India also hopes to use “American aid to deter a radicalizing Pakistan.”⁸

Linking the Deal with the Iranian Nuclear Issue

It was the requirement of the amendment of the US domestic law that brought the deal into controversy due to the linking of the deal with the Iranian nuclear issue. US Congressmen, who were needed to ratify the law, found in this deal an opportunity to leverage their efforts to further isolate Iran through India’s help. When the Congressmen threatened “that the India-US deal would be in danger if New Delhi did not oppose Iran, India had few options.”⁹ Interestingly, while the initial motivations behind the deal were the twin objectives of availability of a huge Indian nuclear market for US firms and containing an increasingly assertive China, the deal was soon entangled in the US domestic politics for which the most dominant theme of the time was bringing Iran to its knees.

During this time, the Iranian nuclear issue was to be referred to the UN Security Council in which India’s vote at the IAEA was crucial. The Indian surprise turnaround on the Iranian nuclear issue by voting against Iran in the September 2005 IAEA resolution gave rise to the suspicion that India had buckled under US pressure to change its Iran policy. For India, the event of voting at the IAEA turned out to be a testing time for proving its “credentials as a responsible nuclear power.”¹⁰

The first full-house testimony at the International Relations Committee on September 8, 2005, made it clear that India was required to swallow the bitter pill of the Iranian nuclear issue if it needed to get the Indo-US nuclear deal materialised. The difficult choice was presented very clearly when Tom Lantos, a committee member and an important member of the Indian lobby said, “New Delhi must understand how important their cooperation and support is for US initiatives to counter the nuclear threat from Iran. India must decide where it will stand: with the ayatollahs of terror in Tehran

8. Arsen Vartanyan, “The New Realities of Indo-Iranian Relations,” January 19, 2011, URL: <http://www.journal-neo.com/?q=node/3958>, accessed on: May 20, 2011, 4:02:08 PM.

9. n. 1.

10. Ibid.

or with the United States.”¹¹ Even the Chairman of the Committee Henry Hyde, “alluded negatively to India’s friendly relations with Iran.”¹²

This hearing was the clearest testimony of linking the Indo-US deal with the Iranian nuclear issue and carried the germs of the shadow that later fell on the Indo-Iran relations. “The committee hearing made it evident to India that US lawmakers were prepared to use the July 18 agreement, signed by Bush, to provide India with civilian nuclear reactors and some hi-tech equipment, as leverage to garner India’s support for the US against Iran.”¹³ The exact nature of that support was not clear at that time. However, with the Indian vote in the IAEA in September 2005, that too became evident.

In October 2005, US Under Secretary of State Nicholas Burns had acknowledged¹⁴ that India’s vote against Iran in the IAEA resolution had helped in alleviating the US Congressional opposition. He made this statement on the eve of his visit to New Delhi, the purpose of which was to work on the timetable that would ultimately result in the decisions in the US Congress to change the US domestic law in the course of the fruition of the deal. Both the content and timing of this statement prove a clear linkage of the Indo-US nuclear deal with India’s position on the Iranian nuclear issue.

Arguments Favouring the Allegation

The main argument that is presented to prove that India did come under US pressure is the sudden change of course of India’s stance towards Iran. When India voted against Iran in 2005, it was not on the expected lines— Iran had been confident that India would not go against Iran. However, a meeting between the Indian Prime Minister and the US President occurred immediately before the September 2005 voting and since the change of the Indian course occurred after this meeting, it is cited as proof of India coming under US pressure.

11. Quoted in Ramtanu Maitra, “India Bends Under US Pressure,” *Asia Times Online*, September 27, 2005, URL: http://www.atimes.com/atimes/South_Asia/GI27Df03.html, accessed on: May 24, 2011, 11:27:55 AM.

12. Ibid.

13. Ibid.

14. “India’s IAEA Vote Helped Gain Support for Nuclear Deal, says US Official,” October 19, 2005, URL: <http://www.indiadaily.com/editorial/5067.asp>, accessed on: June 5, 2011, 1:50:52 AM.

The second set of arguments is related to the letters of the members of the US Congress in which Indian companies, especially Reliance (RIL), were warned against doing further business with Iran. In December 2008, in a letter to the Chief of the US Export-Import (Ex-Im) Bank, eight US Congressmen “demanded¹⁵” that the \$900 million loan guarantees to RIL be suspended until it stopped selling its refined oil to Iran. It was argued that in a situation where the US is trying to pressurise Iran through economic and diplomatic sanctions to stop its nuclear programme, it is against the US national interest to facilitate any company which has trade relations with Iran.

Despite being rich in energy resources, Iran does not have a well-developed refinery industry and so it is compelled to import refined oil for domestic consumption. The fact that these Congressmen included Howard L. Berman who is the Chairman of the House Committee of Foreign Relations which is a powerful body, speaks volume of the force with which this request was made. This letter had followed another letter of just a month earlier, in November 2008, when two Senators had raised the same issue with the Ex-Im Bank.¹⁶

The termination of further contracts with Iran also speaks volumes about the misgivings against Iran. While in 2009, Iranian crude consisted of 10 percent of the total import of Reliance Industries, it decided against renewing the contract in April 2010 “reportedly because of pricing issues.”¹⁷

These events have been cited as a warning signal for the Indian government itself, which might have been convinced to fall in line with US policies. The oft-repeated statement of George W. Bush, “Those who are not with us are against us,” can also be cited as a reason for India coming under the US pressure.

Although there have been allegations against India, there has been no substantive proof of the same. However, the recent WikiLeaks and its

15. “US Lawmakers Want RIL Assistance Stopped on Iran Ties,” December 20, 2008, URL: http://www.thaindian.com/newsportal/business/us-lawmakers-want-ril-assistance-stopped-on-iran-ties_100133174.html, accessed on: January 27, 2011, 7:50:37PM.

16. Ibid.

17. Thomas Strouse, “Iran-India Oil Trade in Jeopardy,” January 25, 2011, URL: http://www.pbs.org/wgbh/pages/frontline/tehranbureau/2011/01/iran-india-oil-trade-in-jeopardy.html?utm_campaign=homepage&utm_medium=feeds&utm_source=feeds, accessed on: January 27, 2011, 7:38:09 PM.

association with a leading Indian newspaper, *The Hindu*, has provided much fodder for thought to the proponents of the argument of India coming under US pressure. The articles published by the newspapers, citing the leaked cables, have given credence to the fact that India did come under US pressure in voting against Iran. The proponents have cited these articles as proof of their viewpoint. However, it is difficult to consider these leaked cables as proof of such arguments. Nevertheless, they did indicate that there were efforts by the US to coerce India to tow its line against Iran.

The third set of arguments consists of the developments taking place much after the actual voting. The way India shied away from attending to Iran's wrath, caring little about the sidelined Indo-Iran gas pipeline, proves the Indian stance towards Iran a little more clearly. Further, the payment row between the Reserve Bank of India (RBI) and Iran gives further credence to the fact that India is under severe pressure.

In December 2010, the RBI, India's central bank, announced "that Indian companies could no longer use the Asian Clearing Union (ACU) to make oil and gas purchases from Iran."¹⁸ This payment dispute, having the potential of further eroding the Indo-Iran relationship, has also illustrated the level of practical difficulties for foreign companies in trading with Iran due to the US sanctions. "The United States has been pressuring India to close down this trade mechanism with Iran because it has provided Tehran with the ability to bypass restrictions on its financial dealings."¹⁹

"The ACU mechanism, set up in 1974, acts as a clearing house for bilateral trade between its nine member states. The transactions handled by the ACU are settled by the central banks of the respective countries, making it difficult to identify the individual companies involved."²⁰ This announcement of the RBI came close on the heels of President Barack Obama's visit to India in November 2010, which made it easy for Iran to link the RBI's move to the US pressure on India.²¹

18. Ibid.

19. Ibid.

20. Ibid.

21. Ibid.

Although some of these arguments are quite convincing, it is indeed very difficult to substantially prove that India actually bowed down to the US pressure.

The Counter-Arguments

Notwithstanding these arguments, India has vehemently denied any link of its IAEA vote with the Indo-US nuclear deal, due to the fear of a domestic political backlash.²² The Communist Party of India, that was supporting Manmohan Singh's government during the time of India's first vote against Iran in the IAEA in September 2005, had "asked the government to rebuff US demands for joining the anti-Iran bandwagon."²³

The chronology of events suggests that "India had to change its position on Iran under American pressure."²⁴ This "circumstantial evidence" illustrates the possibility of American influence on India on the IAEA vote. "Just hours before Prime Minister Manmohan Singh met George Bush in New York on the 13th of September 2005, David Mulford sent an urgent and desperate cable to Condoleezza Rice where he said Indian officials are being intransigent and he implored her to use her influence to get India to vote against Iran. Days after that meeting with Bush, India did precisely that."²⁵

However, in an interview²⁶ in March 2011, Shyam Saran, who was the Indian Foreign Secretary at the time of the Indo-US nuclear deal, while acknowledging that the US did influence India on the IAEA voting in September 2005, has maintained the official line that the American intervention "was not the only reason" for India's vote. Saran said, "Whenever you are taking a decision on a sensitive issue like this you have to consider a number of factors, and the US factor – that a friendly country which was very deeply

22. n. 1.

23. n. 11.

24. "WikiLeaks Cables not Entirely True: Shyam Saran," Interview of Shyam Saran by Karan Thapar on IBN Live, URL: <http://ibnlive.in.com/news/wikileaks-cables-not-entirely-true-shyam-saran/146560-3.html>, March 21, 2011, accessed on: May 24, 2011, 2:17:37 PM.

25. Ibid.

26. "US Influenced India's Vote on Iran: Shyam Saran," Interview of Shyam Saran by Karan Thapar on IBN Live, [URL: <http://ibnlive.in.com/news/us-influenced-indias-vote-on-iran-shyam-saran/146537-3.html>], March 20, 2011, accessed on: May 24, 2011, 2:23:23 PM.

concerned about the Iranian nuke programme was making that intervention with us was one of the inputs but there were other things as well.”²⁷

In reaction to David Mulford’s statement in which he said that he had made it clear to Shyam Saran “that if India did not vote against Iran, it would have an impact on the thinking of Congressmen in America who were not persuaded by the Indo-US nuclear deal and, therefore, that

could endanger the Indo-US nuclear deal,”²⁸ Shyam Saran said, “When we actually had the agreement with the United States of America to conclude an Indo-US civil nuclear deal, Iran was not one of the conditionalities [*sic*]. There were other things we talked about. How this agreement would go through but certainly what India’s position on Iran would be, was not an issue.”²⁹

When India voted in the IAEA against Iran in 2009, Iranian Foreign Minister Manouchehr Mottaki expressed his “disappointment”³⁰ through a letter to the External Affairs Minister S. M. Krishna in which he drew a parallel between the nuclear programmes of Iran and India. However, Krishna had rebuffed such claims by explaining how India could not be equated with Iran due to India’s good records in non-proliferation and commitment towards the IAEA. This has been a consistent official line where any link of the Indo-US civil nuclear deal with the Iranian nuclear issue has been vehemently denied.

Where Do We Stand?

An evaluation of arguments in favour of, and against, the debate suggests that although there are indications that India did come under the US pressure in voting against Iran in the IAEA resolutions, the evidence cannot

27. Ibid.

28. n. 24.

29. Ibid.

30. Shubhajit Roy, “IAEA Vote: Iran Sends Letter, India Defends,” *Indian Express*, Online Edition, December 31, 2009, URL: <http://www.indianexpress.com/news/iaea-vote-iran-sends-letter-india-defends/561765/>, accessed on: May 24, 2011, 1:00:06 PM.

be substantiated. Due to this fact, it is not easy to question the Indian official statements.

Nevertheless, the whole debate should be seen under the broader paradigm of national interest, focussing on the national security imperatives. However, the problem is that the concept of national interest itself is not very clear these days due to the ever changing nature of the world. Particularly, since the end of Cold War, the concept of non-alignment and the need of independence in foreign policy have become largely redundant. Still, the pressure groups, having a hangover of the Communist era, fail to appreciate this, and this is the main bloc which has come in full force in criticising the government for buckling under the US pressure. While their suggestion of retaining Iran as a friend is appreciable, it would be good for this bloc to see reason too and appreciate the genuine merits of the Indo-US civil nuclear deal.

While it is tempting to lambast the leftists and similar forces for behaving as a spoke in the wheel of progress, it would not be wrong to hold the government itself accountable for its own follies. It has already been mentioned that the government has been doing a tight-rope walk on the issue. However, the intensity of the protest could have been made less severe if the government had properly informed the masses about the rationale of its stance. The clarification or explanation on the part of the government is severely lacking, showing a clear disregard for the impact of the mass media on the political culture of the current era.

A number of illustrations can be presented in this regard. First and foremost among them is the issue of the Indo-Iran gas pipeline. The government is maintaining a deafening silence over the issue and even if explicit questions are asked, there is a lack of conviction on the government's part to clarify the doubts. The second example is dealing with the popular notion of India coming under the US pressure while voting against Iran. While all indications, though not verifiable, show that India came under US pressure, India has not been able to convincingly deny that accusation and has not been able to come up with logical answers to its critics. This shows apathy on the part of the

government and has the potential of putting even the genuine efforts of the government in doubt.

It would not be far-fetched to say that in the modern world, the government is not merely accountable to the masses in a democracy but a large number of its policies are directly guided by the opinion of the masses through the inputs via the modern form of the mass media. Therefore, the government should first be clear about its rationale to act in a particular manner and then communicate the same to the masses to whom it is accountable.

THE FUTILITY OF THE DEBATE

When we take into account the broader aspect of India's national interest, and look at the matter objectively, we find that devoting too much time on the debate is not a very fruitful exercise.

Independence in Foreign Policy is Undesirable

In the new world, after the end of the Cold War and the emergence of a unipolar world, it would be against the Indian national interest to be on the wrong side of the only superpower. Further, the logic of inter-relationships dictates that it is not always possible to completely isolate the bilateral relations from the relationship with a third country. Therefore, too much emphasis on independence in foreign relations does not do much good to a nation's interest.

The Reasons for Bowing Down to the US Pressure

Under the given circumstances, India has made its calculations to tilt in favour of the US, away from Iran. The fact that India has seemingly bowed down to the US pressure, can be explained by the sheer necessity of it. In the last couple of decades India has shown steady economic progress and has proved itself to be an emerging global power. Accordingly, India is now positively hopeful of getting a permanent seat in the extended Security Council. This feat cannot be attained without the support of the US. Therefore, India has fallen in line with the US thinking on Iran.

The correct approach to solve the dilemma of Indo-Iran relations coming under the Indo-US strategic partnership would be to look beyond the debate and focus on the ways to offset the negative impacts of the Indo-US relationship on Indo-Iran relations.

Another important reason is the aspiration of India to be a major player in the nuclear field. The US sanctions, due to the nuclear explosions in 1998, had effectively isolated India from the global nuclear field. This status quo was changed through the Indo-US civil nuclear deal of 2005. This deal has effectively cleared most of the stumbling blocks in the way of India emerging as a major nuclear player.

A word of caution, however, is required here against India taking the dependence route on the nuclear issue, leaving behind its traditional policy of indigenously building its nuclear capabilities. Severe allegations have been levelled against the deal, criticising it as one where India has fallen for bad bargains with the US companies, which are now eyeing the Indian nuclear market. Such allegations have found weight in the wake of the Fukushima nuclear accident in Japan. In this context, it is necessary to note that the present policy of keeping the nuclear transactions in the realm of defence matters, and maintaining secrecy, would not silence the critics. A necessary amount of transparency in the nuclear deals with the US companies would alleviate the genuine fears of the critics.

THE RIGHT APPROACH

The correct approach to solve the dilemma of Indo-Iran relations coming under the Indo-US strategic partnership would be to look beyond the debate and focus on the ways to offset the negative impacts of the Indo-US relationship on Indo-Iran relations. This can be made possible only by the realisation of the basic facts that Iran and the US are antagonistic to each other, and India and Iran have been friendly. Therefore, it is obvious that the US would like to coerce India to fall in line in dealing with Iran.

Distinguishing Between the Direct and Indirect Pressure

For a proper understanding of the implications of the US pressure on India to recast its Iran policy, we need to differentiate between the direct US pressure on India in the diplomatic realm and the indirect pressure emanating from the sanctions of the United Nations Security Council (UNSC) that are unilaterally imposed by the US in addition to its domestic laws on sanctions on Iran. It is interesting to note that while the diplomatic pressure is not easy to substantiate, the other kind of pressure, as a fall-out of the sanctions, is very clear to see. It is in this perspective that the issues of the Congressmen's letter and the ACU payment rows should be seen. These, along with the overall diminishing oil trade with Iran, should be distinguished from the diplomatic pressure. While the diplomatic pressure has generated a lot of heat and debate, these discourses sadly lack in appreciating the effect of sanctions that have started showing their impact on the relationship with Iran for any country, not just with India.

The Politics of Sanctions

The UNSC has imposed four sanctions on Iran, which are by nature in the order of increased strictness. The implementation of these sanctions, however, rests with the respective members of the United Nations. The United States has been lobbying with its allies such as the European Union, Russia, China and India to implement such sanctions. In this context that it is important to see how these sanctions are imposed and what the role of different countries in implementing the same, particularly the role of the United States, is.

"In the 1990s, the end of the Cold War and the rise of US dominance led to a sharp increase in the use of sanctions, as Congress felt less inhibited in encroaching on the President in foreign policy, and as the United States tried to use its economic might to advance international goals."³¹

31. Meghan L. O'Sullivan, "Iran and the Great Sanctions Debate," *The Washington Quarterly*, October 2010, 33:4, pp. 7-21, p.7.

“Iran has consistently been listed as a state sponsor of terrorism by the US Department of State since 1986.”³² The US sanctions on Iran, therefore, started much before Iran’s clandestine nuclear programme was revealed. “The first US sanctions on Iran were implemented in response to the 1979 seizure of the US Embassy in Tehran by Iranian students who proceeded to hold 52 US officials as hostages for more than a year.”³³

“The uneasy antagonism between the United States and Iran over the past three decades has largely avoided direct bilateral military action. Instead, despite the duration and depth of US concerns about Iran, US policymakers from both parties have typically relied on instruments other than military force, with several notable exceptions. Sanctions have long constituted a central tool in the US arsenal toward Tehran.”³⁴

“During the 1990s, largely under Congressional pressure abetted by the Israeli lobby, the United States adopted a series of legislative Acts with their edge pointing sharply at Iran that had the effect of inhibiting any serious American-Iranian dialogue.”³⁵ These Acts included the Iran Foreign Oil Sanctions Act³⁶ of 1995 and Iran-Libya Sanctions Act, also known as the D’Amato Act³⁷, which was signed in August 1996. These Acts stalled all progress in any rapprochement between the two countries.

The beginning of “D’Amato’s secondary sanctions regime targeting third countries that invested more than \$40 million in Iranian oil and gas”³⁸ started a new era in which the bilateral relations of the US and Iran were appended with the relationship with third countries. This ceiling was further lowered in August 1997 to \$20 million³⁹, tightening further the noose on Iran’s economy.

32. Alethia H. Cook and Jalil Roshandel, *The United States and Iran: Policy Challenges and Opportunities* (New York: Palgrave Macmillan, 2009), p. 100.

33. Suzanne Maloney, “Sanctioning Iran: If Only It Were So Simple,” *The Washington Quarterly*, 33:1, January 2010, pp. 131-147, p. 138.

34. *Ibid.*

35. Zbigniew Brzezinski, *Second Chance: Three Presidents and the Crisis of American Superpower*, (New York: Basic Books, 2007), p. 102.

36. *Ibid.*

37. Donette Murray, *US Foreign Policy and Iran: American-Iranian Relations Since the Islamic Revolution* (London: Routledge, 2010), p. 90.

38. *Ibid.*, p. 102.

39. *Ibid.*, p. 196, n. 91.

The US sanctions on Iran have not just affected the oil trade⁴⁰ but also the investment in the country by Indian companies, which serves as a symbol of closer ties between any two countries. The case of the Bandar Abbas refinery can be cited as an illustration of this point. In 2007, India's Essar had struck a deal with Iran to build a 300,000 b/d refinery in Bandar Abbas worth \$10 billion. This deal was hailed as a symbol of closer Indo-Iran ties. However, Essar was compelled to withdraw from the deal by the end of that year when its efforts at the same time of acquiring a steel company in Minnesota were threatened to be blocked by Minnesota Governor Tim Pawlenty.⁴¹

The stalemate in the South Pars gas deal is another glaring example of the effect of US sanctions hampering the Indian investment in Iran. In a deal signed in December 2007, India's Oil and Natural Gas Corporation (ONGC) and the Hinduja Group had agreed to purchase a 40 percent stake in phase 12 of Iran's South Pars gas field which was estimated to be worth \$7.5 billion. However, even after the lapse of three years, the consortium has not managed to secure funds from the banks for the investment, due to the US sanctions.⁴²

Energy Security Vs National Security

One factor adding weight to the debate is the obsession with energy security among the thinkers. Energy security should, however, be considered under the broader purview of national security. Once we take this approach, we can be in a better position to appropriately place energy security in the broader paradigm of national security. India's relationship with Iran is predicated mainly on its energy security imperatives. On the other hand, India's relationship with the US is predicated on its national security imperatives. Again, the traditional concept of national security needs be redefined and reformed. There is a growing need to appreciate the 'transformation in the strategy' thinking calculus among the functionaries of the national security establishment.

40. With about 13 percent of total crude oil import from Iran in 2010, India held the position of second largest crude oil importer of Iran. Mangalore Refinery and Petrochemicals Ltd (MRPL), a subsidiary of India's state-run Oil and Natural Gas Corp. (ONGC) and the privately owned Essar Oil are the two largest Indian importers of Iranian crude oil. See Strouse, n. 17.

41. Strouse, n. 17.

42. Ibid.

In the current time, “the most perplexing problems of security policy surround irregular rather than regular war.”⁴³ The concept of national security, therefore, has to be reevaluated and, accordingly, the security strategy should be reformulated. “Strategy has traditionally been concerned with attempts by states to influence both their position within the international system and the structure of the system itself.”⁴⁴

In recent times, there have been considerable changes in the international system, resulting in transformation in strategic thinking and, consequently, “the demilitarisation of inter-state relations, particularly among the great powers, and the expansion of the state system.”⁴⁵ A major consequence of decolonisation has been the emergence of a number of new states; quite a few of them are inherently unstable. This has led to an unstable international system and “often this instability leads to violence and brings irregular forces into being. Foreign governments must then decide whether to become involved in helping to restablishe the situation or to mitigate the consequences of failing to do so.”⁴⁶

THE WAY AHEAD

Once the distinction between the diplomatic pressure and the effect of sanctions is appreciated, the next step would be to evaluate the severity of these sanctions. A careful study of the chronology of the oil trade with Iran indicates that it has become increasingly difficult for Indian companies to conduct oil trade with Iran.

Recasting Energy Policy

Therefore, the need of the hour is to diversify the Indian energy trade and become less dependent on Iran for energy security. The facts on the table restrict us from being wishful thinkers and maintaining the traditional stance in terms of energy security. The stubborn attitude of

43. Lawrence Freedman, *The Transformation of Strategic Affairs*, Adelphi Paper 379 (London: International Institute of Strategic Studies, 2006), p. 7.

44. *Ibid.*, p. 9.

45. *Ibid.*

46. *Ibid.* p. 10.

Iran in its negotiations with the IAEA further accentuates this argument since this stance has the potential of further isolation of Iran from the rest of the world.

It is worth considering that Reliance has increased its imports from Venezuela in order to compensate for the shortfall in its oil imports due to the termination of the Iranian contract⁴⁷. Further, in 2010, India signed a “quadrilateral agreement”⁴⁸ with Pakistan, Afghanistan and Turkmenistan for building a regional gas pipeline, which resembles, and potentially replaces, the India-Pakistan-Iran gas pipeline. The apparent suspension of the India-Pakistan-Iran gas pipeline and the proposal for this new one indicate India’s search for new sources for its energy security.

The need of the hour is to diversify the Indian energy trade and become less dependent on Iran for energy security.

Balancing Relations with Both Countries

While all efforts should be made to maintain and nourish the recent closeness with the US, a shrewd approach should be adopted to prevent Iran from going tangentially away from India’s list of friends. Given the nature and severity of US pressure, this appears to be a daunting task. However, the acumen of diplomacy can bring out the desired result. Hope also lies in the fact that India as a large energy consumer, is needed as much by Iran as India needs Iran for its energy security. Nevertheless, there is no escape from maintaining this tightrope walk. The argument of totally shunning Iran is fraught with danger, as India needs Iran not just for its energy security but also for its strategic requirements.

It would be helpful to comply with the opinion that “New Delhi’s current ostentatious estrangement from Iran is probably nothing more than a tactical move in the context of India’s inability to resist American pressure.”⁴⁹ One sincerely hopes that the increasingly apparent approach

47. Strouse, n. 17.

48. Vartanyan, n. 8.

49. Ibid.

of “the Manmohan Singh government, with its mono-thematic focus on the India-US civil nuclear deal”⁵⁰ is a temporary phenomenon.

CONCLUSION

While the argument of Indo-Iran relations coming under the shadow of the Indo-US strategic partnership carries merit, the whole discourse is a fruitless exercise as independence in foreign policy is not something perpetually desirable. A more worthwhile exercise would rather be to explore the ways and means to offset the negative impacts of the Indo-US partnership on the Indo-Iran relations since India can ill afford to completely break its long standing good ties with Iran even when its closeness with the greatest power on earth is extremely desirable.

50 K.C. Singh, “Iran Won’t Forget,” *The Asian Age*, March 17, 2011, [URL: <http://www.asianage.com/columnists/iran-won%E2%80%99t-forget-179>], accessed on: May 19, 2011.

THE NEED FOR STRATEGIC CHANGE IN REGIONAL POWERS' POLICY TOWARDS AFGHANISTAN FOR POLITICAL STABILITY

K. N. TENNYSON

We cannot expect to have peace in the region if we don't have peace in Afghanistan.

— Asif Ali Zardari
President, Islamic Republic of Pakistan

Afghanistan is home to a host of different ethnic, religious, linguistic and tribal groups, situated in Southern Asia. The country is surrounded by Turkmenistan, Uzbekistan, and Tajikistan in the north, Iran in the west, Pakistan [Baluchistan province, Northwest Frontier Province (NWFP), and Pakistan occupied Kashmir (PoK)] in the east and south and in the extreme northeast by the Singkiang Autonomous Region of the People's Republic (PRC) of China.¹ It is geographically landlocked and economically weak. Therefore, the country has little economic value to the outside world. Yet, it has played an important role in the politics of the region for many centuries

Dr **K. N. Tennyson** is an Associate Fellow at the Centre for Air Power Studies, New Delhi.

1. "Afghanistan," *The New Encyclopedia Britannica*, 15th Edition, Vol. 1 (Chicago: Encyclopedia Britannica, Inc., 1977), p. 164.

because of its geo-strategic location.² It is because of the country's pivotal geographical location that the external powers frequently intervened in the politics of Afghanistan to take control of the strategic location. The reason being, "Anyone who controls Afghanistan, controls the land routes between the Indian subcontinent, Iran, and resource rich Central Asia. Almost every major power, therefore, wanted a slice of the pie."³

WHAT STALLED AFGHANISTAN?

In view of the fact that Afghanistan was invaded and occupied by external powers one after the other for centuries, successive migration of the people to and from Afghanistan took place. This, in turn, led some to integrate themselves with the indigenous population and they became part of the Afghans, thereby, transforming the ethnic composition of the country. As a result, today, we find the existence of a conglomeration of tribes and ethnic groups in Afghanistan like the Aimaq, Baluch, Hazaras, Kazibash, Nuristani, Pashtu, Tajik, Turkmen and Uzbek, etc. A disturbing aspect of the Afghan society is the different Afghan ethno-linguistic groups settled in different parts of the country, thereby, forming distinct unique socio-economic and political communities. For example, the Pashtuns, the largest ethnic tribal group in the country, settled in the eastern and southern parts of the country, where large numbers of them live across the Durand Line, in the Frontier areas of Pakistan. The Tajiks, the second largest ethnic community, are found in the eastern and northeastern parts, mainly concentrated in Badakhshan, around Kabul and Herat, and in Kohistan and the Panjshir valley. The Uzbeks have settled in the extreme northern plains adjacent to the Amu Darya (Oxus) river. The Turkomen are found in the northwestern corner. The mountainous central region of the country is inhabited by the Hazaras, and Nuristanis control the extremely rugged

-
2. Lt Gen K. Davar (Retd), "Afghanistan Conundrum: An Analysis and the Way Forward," *USI Journal*, vol. CXXXIX, no. 575, January-March 2009, at <http://www.usiofindia.org/Article/?pub=Journal&pubno=575&ano=309>, accessed on June 5, 2010.
 3. "Why Afghanistan is Important to India," August 30, 2005, at <http://www.rediff.com/news/2005/aug/30spec4.htm>, accessed on May 3, 2010.

northeast region, north of Jalalabad.⁴ In view of the fact that the different Afghans ethnic-linguistic groups settled in different parts of the country, they developed a strong feeling of ethnic affinity towards their own tribes. Rhea Tally Steward opines, "Since the world around [the Afghans] held so little of comfort, Afghans drew together toward the human beings they knew. The tribe was the world; the families were the microcosm...But beyond the jagged horizon out of the world of state and nation, an Afghan found little to grasp. Beyond his tribe, he gave his allegiance nowhere."⁵ Maj Gen Samay Ram, former Indian Military Attaché in Afghanistan (May 1982-March 1986) wrote that even to this day "[n]o Afghan calls himself an Afghan. While filling particulars for visas, they would mention their ethnic affiliation ([like] Pashtun, Tajik, Uzbek, and so on) against the column of [their] 'Nationality.'"⁶ As the Afghan ethnic communities have little association with one another, most of them do not have a sense of belonging to a larger common political platform. Thus, one often witnesses rivalry and armed conflict within and between different Afghan ethnic groups.

Another disturbing feature of the Afghan society is that most of the Afghan minor ethnic, linguistic and religious communities have sizeable populations (kinship) living in the different neighbouring countries, like the Turkmen in Turkmenistan, Uzbeks in Uzbekistan, and Pashtuns in Pakistan, etc, and they are more loyal to their ethnic, linguistic, tribal and religious identity than to the country they live in. Thus, the leaders of these groups often sought economic and military help and political support from those countries that are ethnically, linguistically and religiously related to them, rather than the nation's central authority. The external powers, taking advantage of the complex social and political structure of the Afghans, interfered in the political affairs of Afghanistan whenever their strategic and security interest were threatened, thereby, weakening the central (Kabul)

4. Nancy Peabody Newell and Richard S. Newell, *The Struggle for Afghanistan* (Ithaca: Cornell University Press, 1981), p. 19; for a brief history of the origin of the Afghans, see Martin Ewans, *Afghanistan A New History* (Lahore: Vanguard, 2001), pp. 1-9.

5. Rhea Tally Steward, *Fire in Afghanistan 1914-1929* (New York: Doubleday and Company, 1973), p. 3

6. Maj Gen Samay Ram, *The New Afghanistan Pawn of America* (New Delhi: Manas Publications, 2004), p. 24

Pakistan acted as a conduit of the US to the Taliban during the Taliban period and enthusiastically campaigned with the world community to legitimise the Taliban regime.

government, and at the same time, sowing the seeds of hatred and antagonism among the Afghans. For example, as most of the Taliban were from the Pashtun community with whom Pakistanis share ethnic and linguistic affinity, Pakistan acted as conduit of the US to the Taliban during the Taliban period and enthusiastically campaigned with the world community to legitimise the Taliban regime.⁷ To give another example, Uzbekistan backed Gen Abdul Rashid

Dostum, a former pro-Soviet fighter and the leader of Afghanistan's minority Uzbek community,⁸ while Ahmad Shah Masud (Lion of Panjshir) an ethnic Tajik was backed by Iran and Tajikistan, and Ismail Khan (Lion of Herat) of Tajik origin (member of the Jamaat-e-Islami Afghanistan) was supported by Iran to counter the influence of the Taliban.⁹ Because of such divisive policy adopted by the external powers in Afghanistan, there could not be any amicable political solution in the war-torn country.

Afghanistan is strategically located in Southern Asia, and it is through Afghanistan that most of the trade transit between the West and the Indian subcontinent took place in the olden days. Afghanistan's geographical location continues to hold an important place in the politics of the world even to this day. The major powers, therefore, wanted to take control of the country's geographical location for their economic and political interests. That is why the external powers frequently intervened in the politics of Afghanistan, but the disheartening fact about the attitude of the external

-
7. Pakistan supported the Taliban regime for two main reasons: (1) Pakistan wanted to install a pro-Pakistan regime in Kabul, as it wanted free access into the energy rich Central Asian countries through Afghanistan; and (2) Pakistan wanted to establish a strategic alliance with Afghanistan against India.
 8. "Profile: General Rashid Dostum," at http://news.bbc.co.uk/2/hi/south_asia/1563344.stm; also see "Abdul Rashid Dostum," at <http://www.globalsecurity.org/military/world/afghanistan/dostum.htm>, accessed on April 17, 2010.
 9. "Ismail Khan," at http://news.bbc.co.uk/hi/english/static/in_depth/world/2001/war_on_terror/after_the_taliban/i_khan.stm; also see, *Afghanistan's Other Neighbours: Iran, Central Asia, and China*, Conference Report, The Hollings Centre for International Dialogue and The American Institute of Afghanistan Studies, July 24-26, 2008, at http://www.bu.edu/aias/reports/aon_conference.pdf, accessed on May 13, 2010.

powers towards Afghanistan was that they were never committed to the welfare of the country and only sought their own interests. Marvin G. Weinbaum and Andrew Finkelman, pointing out one such example, wrote, "Russia and Great Britain focused their imperial attentions on Afghanistan in the 19th century, with each paying the nation's tribal leadership to hold the line against the other...However, when Afghanistan's strategic usefulness evaporated, so did the money."¹⁰ The policies of the Soviet Union and the US towards Afghanistan at the end of the 20th century were no different. The two superpowers, rather than devoting their resources to building peace and development in Afghanistan, were on the contrary, contributing to the escalation of war. And upon achieving their objective, "the [US] disengaged, the USSR disintegrated, and the international community turned its attention elsewhere."¹¹ Incidentally, the war on terror too seems to be moving in the same direction. The President of the US had assured the world community that the war on terror will not end "until every terrorist group of global reach has been found, stopped and defeated," but ten years have passed since then, and the US is still at war against terrorism. What is disturbing is the fact that the Taliban and other militant groups have reemerged and have become destabilising factors in the country, but the US and North Atlantic Treaty Organisation (NATO) countries are on the verge of withdrawing their troops from Afghanistan in response to the public support for the "war sapped at home," in their countries.¹²

AMERICA'S FRAIL AFGHANISTAN POLICY

On September 11, 2001, Islamic militants struck at the very heart of the US. The US stunned by the horrific attacks, expressed outrage and urged for punitive action. On the night of the terrorist attacks on America, President George W. Bush joined his countrymen in condemning the attack and

10. Marvin G. Weinbaum and Andrew Finkelman, "Rebuilding the Afghan State: The International Dimension," in K. Warikoo, ed., *Afghanistan The Challenge* (New Delhi: Pentagon Press, 2007), p. 4.

11. Barnett R. Rubin, *The Search for Peace in Afghanistan: From Buffer State to Failed State* (Karachi: Oxford University Press, 1995), p. 6.

12. Agence France-Presse, "Canada Heads for Afghan Exit," *Hindustan Times* (New Delhi), July 8, 2011.

Peace remains a distant dream for the Afghans, the reason being that the US launched the war against terror in Afghanistan without taking into consideration the intricacy of the political structure in the country.

furiously vowed to bring to “justice” those responsible for the carnage.¹³ Nine days later, on September 20, 2001, President Bush in his address to a Joint Session of the US Congress stated that America’s war on terror “will not end until every terrorist group of global reach has been found, stopped and defeated.” He further added that America will use, “every means of diplomacy, every tool of intelligence, every instrument of law enforcement, every financial influence, and every necessary weapon of war” to defeat and eliminate the global terror network.¹⁴

Subsequently, on October 7, 2001, President Bush launched a military operation, Operation Enduring Freedom (OEF) to eliminate, if not contain the Taliban regime and Al Qaeda militants from Afghanistan. Taking advantage of its superior armed forces and military technology (using its state-of-the-art technology), the US has successfully driven out the Taliban regime from power in Afghanistan, and Osama bin Laden, “the most wanted fugitive on the US list” was killed by the elite US Navy Seal team in a covert military operation from Pakistan¹⁵

Yet, peace remains a distant dream for the Afghans, the reason being that the US launched the war against terror in Afghanistan without taking into consideration the intricacy of the political structure in the country. The US policy-makers wrongly believed that with the removal of the Taliban regime from power and the installation of a Western democratic government in Afghanistan, the Taliban and Osama bin Laden’s Al Qaeda militants could be eliminated from the country. Thus, after the ousting of the Taliban regime from Afghanistan, the US diverted its policy towards Iraq without

13. Text of President Bush’s address after the terrorist attacks on New York and Washington, September 11, 2001, at <http://archives.cnn.com/2001/US/09/11/bush.speech.text/>, accessed on January 28, 2008.

14. “Text: President Bush Addresses the Nation,” September 20, 2001, at http://www.washingtonpost.com/wp-srv/nation/specials/attacked/transcripts/bushaddress_092001.html, accessed on January 28, 2008.

15. “Osama bin Laden Killed in Pakistan,” May 2, 2011, at <http://english.aljazeera.net/news/americas/2011/05/2011522132275789.html>, accessed on September 4, 2011.

bothering to stabilise the economically poor, militarily weak and socially disoriented Afghans. This action of the US led one to agree with what Maj Gen Y. K. Gera opined, “[W]hether Mullah Omar and Osama bin Laden live or perish, their legacy will live on until sustained international efforts are made to address the problems faced by Afghanistan, which continues to bear the brunt of the last great battle of the Cold War era.”¹⁶ The answer is not far to locate: since the Taliban were defeated, but not eliminated, they have regrouped, reequipped and came back to haunt Afghanistan. Today, there is no other greater challenge that the Afghans and the people of the region face than the resurgence of the Taliban in Afghanistan.

Ironically, the US and NATO forces used massive aerial strikes (drone strikes) to purge the Taliban and other militant groups in Afghanistan, but, on the contrary, these massive aerial strikes in Afghanistan led to an increase in the civilian casualties. Stephanie Nebehay, quoting UN reports wrote that more than 2,100 civilians were killed in Afghanistan in 2008, recording an increase of 40 percent from 2007 (in 2007 the figure stood at 1,523).¹⁷ The Afghan online newspapers and magazine *Khaama Press* reported that the number of civilians killed in Afghanistan in 2010 alone was above 2,400, which has been described as the “deadliest year for ordinary Afghans since the US-led invasion of 2001.”¹⁸ The large scale civilian casualties have aroused strong resentment among the Afghans, which, in turn, has provided opportunities to the militants to exploit the suffering of the locals to strengthen their positions. Consequently, the fatalities of the US armed forces too have increased considerably from 2001, despite using the state-of-the-art technology. According to icasualties.org (formally the Iraq Coalition Casualty Count website) record, in 2001, only 12 US armed forces personnel were killed, but in 2007, the numbers increased to 117, and in 2010, they further increased to 499.¹⁹

16. Maj Gen Y. K. Gera (Retd), “The Situation in Afghanistan and the Way Ahead,” *USI Journal*, vol. CXXXVIII, no. 574, October-December 2008, p. 540.

17. Stephanie Nebehay, “UN: 2,100 Civilians Killed in Afghanistan in 2008,” at <http://www.reuters.com/article/worldNews/idUSTRE5123KR20090203>, accessed on March 22, 2010.

18. Ghanizada, “NATO Air Raids Killed 50 Civilians, says Hamid Karzai,” February 20, 2011, at <http://www.khaama.com/nato-air-raids-killed-50-civilians-says-hamid-karzai>, accessed on September 21, 2011.

19. “Coalition Military Fatalities by Year,” at <http://www.icasualties.org/OEF/Index.aspx>, accessed on November 26, 2011.

The above makes clear that a counter-insurgency operation like the one in Afghanistan can never be won by brute force alone. "War in Afghanistan" did not originate with the Taliban coming to power and it is unlikely to end with their removal.²⁰ Historical evidence proves that military action has never brought about an amicable solution in Afghanistan. The British and the Soviets failed and the US is not likely to win either. Lt Gen Dr. D. B. Shekatker (Retd.), an Indian military expert on counter-insurgency, wrote, "Success in counter-insurgency operations should never be quantified by the number of insurgents killed but by the number of people brought back to normal life and the national mainstream."²¹ The external powers must know that "[n]o amount of military power [use of brute force], foreign or domestic, will gain much unless the Afghan government improves its capacity to control its territory, win the trust of the [local] people, and prevent infiltration and subversion from abroad,"²² because the goal of thwarting the militant might does not lie in using military force but in winning the hearts and minds of the locals. The US-led coalition forces failed to address this very pertinent issue of winning the hearts and minds of the Afghans in the war against terrorism in Afghanistan. Gen Stanley McChrystal, the then Commander of the US Forces Afghanistan (USFOR-A) and International Security Assistance Force (ISAF), admitting the short-sighted policy of the US in his confidential briefing paper written to US President Barack Obama in 2009, stated, "The weakness of state institutions, malign actions of power-brokers, widespread corruption and abuse of power by various officials, and [the US and] ISAF's own errors, have given Afghans little reason to support their government."²³ Of late, the US has realised that the use of high-handed techniques has exacerbated the political crisis in the country.

20. Adam Pain and Jonathan Goodhand, *Afghanistan: Current Employment and Socio-Economic Situation and Prospects*, InFocus Programme on Crisis Response and Reconstruction, Working Paper 8, March 2002, p. 44, at http://www.ilo.org/wcmsp5/groups/public/@ed_emp/@emp_ent/@ifp_crisis/documents/publication/wcms_16403.pdf, accessed on May 29, 2007.

21. Lt Gen Dr. D.B. Shekatker (Retd.), "Genesis of Insurgency," *Defence and Security Alert*, vol. 1, issue 9, June 2010, p. 17

22. Ali A. Jalali, "Afghanistan in Transition," *Parameters*, vol. XXXX, no. 3, Autumn 2010, p. 18.

23. Quoted in Peter Beaumont, "Same Old Mistake in New Afghan War," October 18, 2009, at <http://www.guardian.co.uk/world/2009/oct/18/afghan-war-soviet-invasion-mistakes>, accessed on July 13, 2010.

But the problem before the US policy-makers is how to regain the trust and confidence of the disgruntled locals (Taliban) and bring them to the negotiating table.

PAKISTAN AS A DETRIMENTAL FACTOR

Afghanistan and Pakistan are the two closest Southern Asian neighbouring countries that share ethnic, cultural and linguistic similarity, and are economically interdependent and geographically linked. However, the hope for friendly cooperation was blighted from the very beginning of the establishment of the Pakistani

state because of the Pashtun issue. Thus, Afghanistan-Pakistan relations oscillated between hostility and close cooperation throughout the Cold War period. With the launch of OEF (onslaught on the Taliban and Al Qaeda militants) by the US armed forces in October 2001, most of the Taliban and Al Qaeda militants escaped to Pakistan. The irony of Pakistan's Afghanistan policy is that Pakistan's President Pervez Musharraf had assured the US of Pakistan's "unsplintered cooperation" in the fight against terrorism;²⁴ but Pakistan covertly assisted and protected the Taliban and Al Qaeda militants by providing them sanctuary (safe havens). In this way, Pakistan's government misled the US policy-makers. Osama bin Laden having his hideout in Abbottabad in Pakistan, located just 61 km north of Islamabad, is a classic example.

Pakistan not only assisted and protected the Taliban and Al Qaeda militants, but also considered Afghanistan its legitimate sphere of influence, and, thus, tried to restrain other regional powers, especially India, from playing an active role in the rehabilitation and reconstruction work in Afghanistan. Pakistan actively campaigned with the world community to "stonewall" India's involvement in the politics of Afghanistan, despite the world community and Afghan President Hamid Karzai urging India to play

Musharraf had assured the US of Pakistan's "unsplintered cooperation" in the fight against terrorism; but Pakistan covertly assisted and protected the Taliban and Al Qaeda militants by providing them sanctuary.

24. Pervez Musharraf, *In the Line of Fire* (London: Simon & Schuster, 2006), p. 201.

a more proactive role in the rehabilitation and reconstruction of the war-torn country. The reason being that the Pakistani leaders fear that India's active participation in Afghanistan would be detrimental to Pakistan's strategic, security and political interests. The exclusion of India from the Istanbul Regional Conference on Afghanistan (January 26, 2010) at the instigation of Pakistan and Pakistan's clandestine action of trying to minimise India's role at the London Conference (January 28, 2010) are two such examples. There were also news report which stated that even on the eve of the November 2, 2011 Istanbul Conference on Afghanistan, Pakistan was trying to block "the establishment of a regional monitoring group to oversee cooperation on Afghanistan's economic and security future," because, Pakistan does not want to have "so many countries—primarily India—enjoy similar status [with Pakistan] in the contact group on Afghanistan."²⁵ This does not mean that Pakistan does not want a strong and stable government in Afghanistan; in fact, the policy-makers of Pakistan were aware of the spillover effect of the political crisis of Afghanistan on its domestic and foreign policy, but they want a friendly government in Kabul as a defence against India. Because of such aggressive policy adopted by Pakistan, the countries of the region too could not play any effective role in the Afghan peace process.

WHAT AILS AFGHANISTAN?

Afghanistan is undergoing a protracted political and humanitarian crisis. The reason being that decades of political crisis in Afghanistan have seriously challenged peace, stability and the socio-economic development of the Afghans, which, in turn, creates "widespread insecurity resulting from the conflict, with resulting displacement and reduced humanitarian access, limited institutional capabilities, destroyed health and education, non-cohesive partnerships, market volatility and Afghanistan's landlocked status."²⁶ Today, Afghanistan is one of the poorest countries in the world,

25. Indrani Bagchi, "Pak Resists Regional Solution in AF," *The Times of India* (New Delhi), October 30, 2011.

26. WFP, Executive Board First Regular Session Rome 8-11 February 2010, *Projects for Executive Board Approval*, Agenda item 9, at http://one.wfp.org/operational/current_operations/project_docs200063.pdf, accessed on August 19, 2010.

its basic infrastructure such as communication, transportation, health services, and education is at the world's lowest standing. The ranking of Afghanistan at 170 out of 174 countries in 1995 in the United Nations Development Programme's (UNDP's) Human Development Index²⁷ is a manifestation of this point. The condition of Afghanistan did not witness any significant change even in the late 2000s: Afghanistan stood as low as 181st position, just above Niger at 182, in all measures of human welfare in the 2009

A whopping 40 percent of the [development] aid that flowed into Afghanistan is returned to the donor countries in the form of corporate profits and consultant salaries.

Human Development Index.²⁸ What is disheartening is the fact that ten years have passed since the US launched Operation Enduring Freedom (OEF) in Afghanistan, yet, the country remains as chaotic, fragile and poor as ever before. Despite the world community investing billions of dollars in the rehabilitation and reconstruction of Afghanistan, the basic living conditions of the Afghans such as availability of clean drinking water, food and medical care are not available to most Afghans. The result of a Afghanistan national opinion poll commissioned by ABC News, BBC and ARD in 2010,²⁹ in which the Afghans expressed unhappiness about the overall socio-economic conditions of their country, speaks volume.

As the voice of dissent against the presence of the external armed forces in the country grows louder day by day, Afghanistan President Hamid Karzai reaffirmed to the international community on July 20, 2010, at the one-day international conference on Afghanistan at Kabul, that Afghan national security forces will take charge of the country's security by 2014, and "urged the international backers to distribute more of their development aid through the government."³⁰ President Karzai's declaration was not very

27. UNDP, *Human Development Report 1995* (New York: Oxford University Press, 1995), p. 146, at http://hdr.undp.org/en/media/hdr_1995_en_indicators1.pdf, accessed on January 26, 2010.

28. UNDP, *Human Development Report 2009* (New York: Palgrave Macmillan, 2009), p. 170.

29. See Afghanistan National Opinion Poll conducted for ABC News, the BBC and the ARD by the Afghan Centre for Socio-Economic and Opinion Research (ACSOR) based in Kabul, at http://news.bbc.co.uk/2/shared/bsp/hi/pdfs/11_01_10_afghanpoll.pdf, accessed on February 23, 2010.

30. "Karzai Reaffirms for Afghan-led Security," *The Times of India* (New Delhi), July 20, 2010.

surprising, because there were reports of large scale corruption and misuse of funds by the external powers, contractors and Afghan leaders. A report pointed out that “a whopping 40 percent of the [development] aid that flowed into Afghanistan” is returned to the “donor countries in the form of corporate profits and consultant salaries.”³¹ Pointing out how a substantial part of the funds given for the reconstruction in Afghanistan is misused, Kristina Wong, citing the audit reports of the Office of the Special Inspector General for Afghanistan Reconstruction (SIGAR), wrote, “[S]ix Afghan National Police facilities funded by the US Army Corps of Engineering in Kandahar and Helmand were so poorly constructed, they are currently unusable.” And further added, “[T]he US invested \$ 5.5 million to build the stations, and it would take an additional one million dollars to make the building usable.”³² It’s a sad reality; the war on terror is fought in Afghanistan and the Afghans bear the wrath of the war silently, while the external powers thrive.

AFGHANISTAN, AN INDISPENSABLE NEIGHBOUR

Hedayat Amin Arsala, former Vice President and senior adviser to the President of Afghanistan argued, “[T]here is little doubt that Afghanistan’s [geo-strategic] location will [cease] to have a significant influence on the [Asian] country’s future political and economic prospects.”³³ Amin Arsala’s statement is supported by the fact that Afghanistan is strategically located in Asia, and since the socio-economic and political conditions of the people of the region are inextricably intertwined with those of their neighbours, none could escape the spillover effect of the political crisis in Afghanistan. This indicates that if Afghanistan is in trouble, the countries of the region as a whole will be affected regardless of their location and government. For

31. Sonali Huria, “Failed States and Foreign Military Intervention: The Afghanistan Imbroglio,” *IPCS Special Report*, February 2009, at <http://www.ipcs.org/publications-spacil-details.php?recNo=237&pT=4>, accessed on May 22, 2009.

32. Kristina Wong, “Afghan Civilian Surge Lacks Integration with Military,” at <http://abcnews.go.com/International/afghan-civilian-surge-lacks-integration-military-report/story?id=11978132#.Tsy04Vbixkg>, accessed on September 4, 2011.

33. Quoted in K. N. Tennyson, “Reassessing India’s Role In Afghanistan,” *Centre for Air Power Studies, Issue Brief*, 53/11, July 29, 2011, p. 3.

example, the political condition of Afghanistan is in a flux and Pakistan is in chaos, a clear indication that “any worsening of the security situation” in one country (Afghanistan) will “directly spill over” to another country (Pakistan) in the region by “encouraging” the local militants in the neighbouring countries.³⁴ Indian Prime Minister, Manmohan Singh on the eve (May 11, 2011) of his recent visit to Afghanistan acknowledged that India too cannot remain unaffected by the political turmoil in Afghanistan. He said, “India cannot be immune to instability in Afghanistan as it will affect our progress, development and security.”³⁵ Ironically, despite the Pakistan’s military intelligence (ISI) being actively involved in carrying out covert activities to destabilise Afghanistan, Pakistan’s President Asif Ali Zardari too had expressed the view that peace cannot be expected in the Southern Asian region “if we don’t have peace in Afghanistan.”³⁶

Today, the most serious soft underbelly of Afghanistan lies in the security domain. Despite the fact the US and NATO forces have been in the war against terrorism in Afghanistan for about a decade, nothing seems to have changed much. The political crisis in Afghanistan continues to present a great challenge to regional peace and stability. Therefore, the need of the hour for the regional powers is to restructure their policies and engage more aggressively in Afghanistan, if they genuinely want the region to be stable and peaceful. Without peace and stability in Afghanistan, there can never be substantial peace and development in the region. What the countries of the region can do in these circumstances is assist the Afghan government in building strong and competent Afghan national security forces; without which, the country will remain weak and unstable, which, in turn, would impede peace, a prerequisite for socio-economic development of the people of the region. Therefore, mere use of soft power (materials and economic help) alone will not suffice. The regional powers need to help the

34. Melanie Hanif, *Indian Involvement in Afghanistan: Stepping Stone or Stumbling Block to Regional Hegemony?* GIGA Working Papers, no. 98, April 2009, at http://www.giga-hamburg.de/dl/download.php?d=/content/publikationen/pdf/wp98_hanif.pdf, accessed on June 5, 2009.

35. Sandeep Dikshit, “Indo-Afghan Ties to Reach a New Level: Manmohan,” *The Hindu* (New Delhi), May 12, 2011

36. “Pakistan President Zardari Meets Afghanistan’s Karzai,” June 10, 2011, at <http://www.bbc.co.uk/news/world-south-asia-13723251>, accessed on July 8, 2011.

Afghan government through the use of hard power (by providing logistic and military help, training of the Afghan National Army and police forces, etc) without interfering in the political affairs of the country. The external powers should not interfere in the political affairs of Afghanistan because the Afghans resent such actions in the political affairs of their country. It is because of this reason that Pakistan and the US are looked upon with suspicion and hatred by the Afghans though President Hamid Karzai has often described Pakistan as the twin brother of Afghanistan.

THE NEED FOR A STRATEGIC CHANGE OF REGIONAL POWERS' POLICY ON AFGHANISTAN

The Afghans view the presence of the US and NATO forces in their country as occupying forces, enabling the Taliban to extend their influence among the local Afghans by “successfully [framing] the war [against the external forces] as a *jihad* and a liberation war against (non-Muslim) foreign armies.”³⁷ Therefore, the only solution to the present political problems and crises in Afghanistan lies in the hands of the regional powers. Without the active support and cooperation of its neighbouring countries, mainly India, Iran, Pakistan, China and Central Asian countries, there can never be long-term peace and stability in Afghanistan. Hence, the regional powers need to cooperate rather than compete over Afghanistan, join together and help in improving the security and economic well-being of the Afghans. Today, what the Afghans need are not bullets but bread, butter and security. An early amicable political solution to the Afghan crisis is the only real guarantee for peace and security in the region. Until Afghanistan is stabilised and the Afghans are secured socially, economically and politically, the region as a whole will be affected.

However, in order for this to be achieved, the external powers must listen to the Afghan voices and allow space for the Afghan national leadership to take their own decisions and continue to build Afghanistan. The news report of the US and NATO forces repeatedly ignoring the request of President

37. Gilles Dorronsoro, “Focus and Exit: An Alternative Strategy for the Afghan War,” Carnegie Endowment for International Peace, *Policy Brief*, January 2009, p. 13, at http://www.carnegieendowment.org/files/afghan_war-Strategy.pdf, accessed April 21, 2010.

Karzai to stop air strikes in Afghanistan to avoid killing of civilians is very disturbing.³⁸ Gilles Dorransoro of the Carnegie Endowment for International Peace, having analysed the effect of the presence of external powers in Afghanistan wrote, "[T]he mere presence of foreign soldiers fighting a war in Afghanistan is probably the single most important factor in the resurgence of the Taliban."³⁹ This fact has been realised and even admitted by Adm Michael Mullen, Chairman, US Joint Chiefs of Staff, in his address to the House Armed Services Committee in September 2008. He said, "No amount of troops, in no amount of time can ever achieve all the objectives" the US seeks in Afghanistan. He added that the US armed forces "can't kill [their] way to victory."⁴⁰ This highlights the need for a strategic change in the policy of the external powers. A change from the use of force to winning over the heart and minds of the Afghans is needed, and one such way to win over the population is to provide them with a certain measure of security, and strengthen local governance.

Today Afghanistan faces three major challenges described as "a triple transition;" i.e., security, political and socio-economic transition.

Adam Pain and Jonathan Goodhand have commented that today Afghanistan faces three major challenges, which they describe as "a triple transition;" i.e., security, political and socio-economic transition. They are of the opinion, "There is a need for an overall peace-building framework in which these triple transitions should be linked to one another and occur simultaneously."⁴¹ This brings about major responsibilities on the part of the Afghan government to work earnestly and zealously with all the neighbours (China, India, Iran, Pakistan, Tajikistan, Turkmenistan and Uzbekistan) for lasting peace and stability in Afghanistan. Afghanistan's neighbours have a

38. "Karzai Issues 'Last Warning' to US," *The Times of India* (New Delhi), May 30, 2011; and "Won't Tolerate Strikes on Homes, Karzai tells Nato," *The Times of India* (New Delhi), June 1, 2011.

39. Dorransoro, n. 37.

40. AnnScottTyson, "Top Military Officer Urges Major Change in Afghanistan Strategy," September 11, 2008, at <http://www.washingtonpost.com/wp-dyn/content/article/2008/09/10/AR2008091001396.html>, on accessed May 1, 2010.

41. For a brief discussion on "Afghanistan Post-War Reconstruction and Employment" see, Pain and Goodhand, n. 20, p. 45.

large stake in ensuring the stability and development of the country. Since Afghanistan's political crisis is very complex, it requires "regionally focused solutions, addressing issues such as strained political relations, strategic vulnerability, and economic integration and cooperation in the spheres of [communication,] transport and energy" in the region.⁴²

But the problem with the regional powers (especially India and Pakistan) is that they are never united. It is for this reason the Brig Rahul K. Bhonsle, a senior defence security analyst, wrote that stability in Afghanistan and peace in the region will "predominantly depend on Islamabad's positive contribution translated in the form of improved Pakistan-Afghanistan and Pakistan-India relationships."⁴³ Expressing a similar view, Barnett R. Rubin, a leading expert on Afghanistan, and Ahmed Rashid, a renowned Pakistani journalist urged, "Unless the decision-makers in Pakistan decide to make stabilising the Afghan government a higher priority than countering the Indian threat, the insurgency conducted from bases in Pakistan will continue. Pakistan's strategic goals in Afghanistan place Pakistan at odds not just with Afghanistan and India, and the US objectives in the region, but with the entire international community."⁴⁴ Acknowledging this fact, President Karzai said in his speech at a Joint Press Conference on March 11, 2001, during his visit to Islamabad that "India has gone out of the way to help Afghanistan but Pakistan is the twin brother of Afghanistan. Without cooperation from Pakistan, there could be no stability in Afghanistan."⁴⁵ This is so because prior to the dethronement of Taliban regime, Osama bin Laden's Al Qaeda militants were "protected by an Afghan (Taliban) regime that was, in turn, supported [and protected] by the Pakistani military and intelligence services [ISI]."⁴⁶ And with the launching of OEF, Pakistan furtively provides sanctuary to the

42. William Maley, "Stabilizing Afghanistan: Threats and Challenges," Carnegie Endowment for International Peace, *Policy Brief*, October 2008, p. 7, at http://carnegieendowment.org/files/stabilizing_afghanistan.pdf, accessed on April 21, 2010.

43. Rahul K. Bhonsle, *The Impact of Geo-Politics of Southwest Asia on Afghanistan: A Medium Term Perspective*, CLAWS, No. 1, 2008, Kartikeya Paper, p. 26.

44. Barnett R. Rubin and Ahmed Rashid, "From Great Game to Grand Bargain," *Foreign Affairs*, November/December 2005, p. 40.

45. "Karzai: India Close Friend, Pak a Twin," *The Asian Age* (New Delhi), March 12, 2010.

46. Strobe Talbot, *Engaging India Diplomacy, Democracy and the Bomb* (New Delhi: Penguin, 2004) p. 117.

Taliban militants, thereby, enabling the Taliban to carry out covert actions against the US led anti-terrorist coalition groups from Pakistan.

Even to this day, the Taliban and other militant groups continue to cause disasters in Afghanistan with the covert assistance from Pakistan's military intelligence (ISI). Thus, one witnessed the non-state actors (Taliban and other religious fundamentalist groups) becoming extremely radical and aggressive, not only challenging the authority and legitimacy of the established government in Afghanistan, but in other countries of the region as well. Today, Afghanistan faces a variety of internal and external security challenges. Therefore, there is urgent need of peace and development in Afghanistan to save the country from further deterioration. But to bring about peace and development in the country, the external powers have to understand the unique composition of the social, economic and political conditions of the Afghans. The domestic politics of Afghanistan is very complex and highly fragile, because it is composed of various different ethnic and sub-ethnic groups. The world community, especially the US, therefore, needs to accept the unique political diversity and autonomy of the Afghans and "[e]ngage the tribal leaders across Afghanistan for their support in the reconciliation process in the political arena that is not based necessarily on Western democracy."⁴⁷ US Secretary of Defence, Dr. Robert Michael Gates rightly admitted, "It is neither necessary nor feasible to create a modern, centralised, Western-style Afghan nation-state—the likes of which has never been seen in that country."⁴⁸ A Western democratic political system imposed on the Afghans will be inherently weak and unstable. The collapse of the Soviet backed Najibullah government after the withdrawal of the Soviet Union from Afghanistan needs to be seriously kept in mind while formulating any future plans for Afghanistan.

Further, the international community needs to realise that peace and stability in Afghanistan do not lie with the central (Kabul's) authority

47. K.N. Tennyson "US Surge in Afghanistan," Centre for Air Power Studies, *Issue Brief*, 10/09, 15, May 2009, p. 4.

48. Quoted in Mata Chorev and Jake Sherman, *The Prospects for Security and Political Reconciliation in Afghanistan: Local, National, and Regional Perspectives*, A Workshop Report, May 2010, at <http://belfercenter.ksg.harvard.edu/files/reconciliation-afghanistan.pdf>, accessed on November 12, 2010.

alone. The external powers should accept the diverse geographical location, complex ethnic and tribal identity and not force the Afghans to adopt a unitary form of government. Without adopting a more pragmatic policy in Afghanistan, the international mission (which aims at rebuilding and stabilising the country) will remain fragile and unsuccessful. One such pragmatic approach could be the decentralisation of power between the central and provincial government and not the proposed plan of Robert Dean Blackwill, former US Ambassador to India (2001-03) and Deputy National Security Adviser for Strategic Planning (2003-04); to divide Afghanistan.⁴⁹ Such a partition plan is “dangerous and unfeasible.” The world community needs to know that though the Afghans have a strong feeling of ethnic and tribal affinity, none of the Afghan ethnic groups including the Taliban, or provinces has sought to bifurcate from the country.⁵⁰ The Afghans always joined hands together and violently resisted the external force whenever any external power intervened in their political affairs despite their internal differences. “Neither the heirs of Alexander the Great nor those of Genghis Khan, Timur, or Ahmad Shah were able to subdue the tribes permanently.”⁵¹ The British and the Soviet Union too came and left, having failed to subjugate the Afghans. The Afghans have never been suppressed nor has any external force been able to change their unique social-political-structural set-up.

49. Blackwill has elaborated in his article, “Why a De Facto Partition [of Afghanistan] is the Least Bad Option,” see Robert D. Blackwill, “Plan B in Afghanistan,” *Foreign Affairs*, vol. 90, no. 1, January/February 2011, pp. 42-50.

50. Pain and Goodhand, n. 20; and Jalali, n. 22, p. 23.

51. Centre for Joint Warfare Studies, *Afghanistan Past, Present and the Way Ahead*, Synodos Paper, p. 1.

RASHTRIYA RIFLES IN KASHMIR: INDIA'S COUNTER-TERRORIST FORCE

DEBALINA CHATTERJEE

Pakistan, being an 'Islamic state' and following the policy of the 'two nation-theory', refused to let Kashmir, which it claimed to be a Muslim state, coexist with India. Movements for independence, or *azadi*, like the Kashmir Freedom Movement and Jammu and Kashmir Liberation Front gained massive support from the local people. In the late 1980s, Kashmir became a victim of state sponsored terrorism perpetrated by Pakistan. This was confirmed by the Central Intelligence Agency (CIA) in 1999. This was, and continues to be, a 'low cost option' for Pakistan by which it could 'bleed India by a thousand cuts'. This operation was named Operation Topac. Praveen Swami lists terrorist groups like the Lashkar-e-Omar, Lashkar-e-Tayyeba, Jaish-e-Mohammad, Harkat-ul-Mujahideen, Harkat-ul-Ansar, Harkat-ul-Jihad-Islami and al-Badr as Pakistan-based Islamic organisations; the Hizb-ul-Mujahideen, Jamaat-ul-Mujahideen, as Pakistan-based, but mainly under Kashmiri leadership; and Jammu and Kashmir Liberation Front as a Kashmiri Islamist group.¹ Pakistan continues to encourage terrorism in Kashmir to engage the Indian armed forces in counter-terrorism or low intensity conflict, thereby degrading India's conventional force prowess by

Ms. **Debalina Chatterjee** is a Research Associate at the Centre for Air Power Studies, New Delhi.

1. Praveen Swami, "Terrorism in Jammu and Kashmir", in Sumit Ganguly, ed., *The Kashmir Question* (Great Britain: Frank Cass and Company Limited, 2003).

a process called “strategic fatigue”.² Thus, it not only makes India pay a military price but also an economic price. The *jihadis* were not just local insurgents following conspiratorial strategies but also Afghan *jihadis* also known as *mehman* (guests) militants who were ready to fight the Indian Army. Their belief was that the Muslims comprise the oppressed sections of the world and the oppressors are the non-Muslims or the infidels. Terrorism was conflated with other forms of violence. While the Kashmiri *jihadis* would “open up from more than 100 metres away, the Afghans would come in as close as 30 metres”.³ These religious *jihadis* would indulge in guerrilla warfare. Other tactics would include “bomb blasts, cutting lines of communication, attacks on patrols and the police”.⁴

GOVERNMENT’S REALISATION

It became essential for the Indian government to counter the long drawn cross-border terrorism and, hence, adoption of a comprehensive approach to terrorism was a desideratum. It was decided that attempts would be made to counter terrorism and not combat terrorism, and India would campaign against terrorism and not wage a war against it. The laws of armed conflict state that countries have the right to “resort to military action (*jus ad bellum*), provided that in the process, they can demonstrate just cause”.⁵ The Government of India tried to put substantial military pressures as one of the ‘three-pronged’ strategies to counter terrorism in Kashmir. In 1989, the security forces were given the task of “direct liquidation of the insurgents and their support base *within* Kashmir and the elimination of support of all kinds, especially of the influx of the armed insurgents, from sources *outside* the state”.⁶ The Army was never the first option for the government.

-
2. Gurmeet Kanwal, “Proxy War in Kashmir: Jihad or State Sponsored Terrorism?”, <http://pak-terror.freesevers.com/webarticle15.htm>, April, 1999.
 3. L.N. Subramanian, “CI Operations in Jammu and Kashmir”, *Bharat Rakshak Monitor*, vol. 3(2) September-October 2000.
 4. Victoria Schofield, “Hearts and Minds”, *Kashmir in Conflict: India, Pakistan and The Unending War* (New York: I.B.Taurus & Co Ltd, 2010).
 5. Quoted in Geraint Hughes, “The Military’s Role in Counterterrorism: Examples and Implications for Liberal Democracies”, *The Letort Papers*, May 2011.
 6. Robert G. Wirsing, *India, Pakistan and Kashmir Dispute: On Regional Conflict and its Resolution* (New York: St. Martin’s Press, 1994), p. 147.

However, the inability of the Central Reserve Police Force (CRPF) and the Border Security Force (BSF) and local police to prevent, detect, investigate and prosecute the terrorists coerced the government to deploy the Indian Army to take control over Jammu and Kashmir (J&K). However, it would be unfair to blame the CRPF and BSF for their inability to conduct counter-terrorist operations as neither force is trained for such operations.

It would be unfair to blame the CRPF and BSF for their inability to conduct counter-terrorist operations as neither force is trained for such operations.

CHALLENGES OF THE ARMY

The Army had to perform dual roles: to guard the Line of Control (LoC) and to counter terrorists in its own land. Counter-terrorism became the reality which the Indian Army had to face on a daily basis in Kashmir. Despite the successful strategies used by the Army during the low intensity conflicts in Sri Lanka and Punjab, the Indian Army had been cautious about using the same tactics and strategies in Kashmir also. The Army wanted to work on the idea of the grid system as it had done in Nagaland or so. However, the grid system appeared to be impossible in Kashmir due to its terrain. Counter-terrorism was a big challenge for the Indian Army as individuals from Kashmir would be in support of the terrorists and cooperate with them in the initial phases. The Indian Army's "prolonged employment in internal security duties" could hinder its preparedness for its most important role, that is, "safeguarding the territorial integrity of India's land borders by defeating aggression and fighting and winning conventional wars against the country's military's adversaries when necessary" and also to wear out "front line weapons and equipment" and put a huge burden on its defence expenditure.⁷ It is natural that "military measures, forces and capabilities that are best suited for counter-terrorism are apt to differ from those that are best suited for other types of contingencies".⁸ The Army had realised that 'physical domination' in an area is very important to counter terrorists. The Rashtriya Rifles was raised as a

7. Brig Gurmeet Kanwal, "Red Terror: Army Must Not Be Deployed", *India Strategic*, July 2010.

8. Cited in Durga Madhob (John) Mitra, *Understanding Indian Insurgencies: Implication for Counter Insurgency Operations in the Third World* (US Strategic Studies Institute, 2007).

paramilitary force, hoping to be funded by the Ministry of Home Affairs. However, due to the lackadaisical interest of the Ministry of Home Affairs, the Rashtriya Rifles was funded by the Ministry of Defence from the Army's budget at a time when the defence budget allocation was being reduced.

ABOUT THE RASHTRIYA RIFLES

The Rashtriya Rifles, the brainchild of Gen B. C. Joshi, was established in 1990 with the permission of then Prime Minister Rajiv Gandhi and is specialised in performing counter-terrorist operations. It was raised as a paramilitary force and is the only common force in which soldiers from all units operate together to counter terrorism in Kashmir. The soldiers and officers belong to the Army regular and, hence, are trained in all kinds of tactics and also in the use of all kinds of weapons. The force is self-reliant, holistic and extremely well structured for counter-terrorist operations. Realising the importance of the paramilitary force, from 1988-99, a separate portion of the defence budget started being allocated for it. The Rashtriya Rifles (RR) is a trained buffer force which not only conducts counter-terrorism operations but also assists the Indian Army during conflicts, as was seen during the Kargil conflict. Hence, not only is it handy for low intensity conflicts but can also provide support during limited conflicts too. The RR has provided active support to the Indian Army by countering terrorists, seeing to it that the roads and lines of communications are not blocked and locating and neutralising landmines. After the Kargil War, it was decided that the RR would conduct the counter-terrorist operations in Kashmir, supported by the BSF and CRPF and only during extreme situations would the Army be called in.

Areas of Operation

The RR has been active in the following areas of Kashmir: Pulwana, Srinagar, Anantnag, Doda, Ganderbal, Kupwara, Pattan, Bandipore and Poonch. The Army's Romeo Force operates in Rajouri and Poonch, Delta Force in Doda, Victor Force in Pulwama, Badgam and Anantnag, Kilo Force in Baramula, Kupwara and Srinagar, and Uniform Force in Banihal and Udhampur. The RR battalions are affiliated to different regiments. For example, 4RR

is affiliated to the Bihar Regiment, 7RR and 22RR to the Punjab Regiment, 10RR to Rajput, 11RR to Dogra, 12 RR to Grenadiers, 13 RR to Kumaon, 15RR to 1GR, 17 RR to Maratha, 21 RR to Guards, 32RR to GR, 36 RR to Garhwal Rifles. In the initial phases, the Assam Rifles was also deployed for counter-terrorist operations in Jammu and Kashmir and was eulogised for the commendable job it did under the Rashtriya Rifles, like 18 Assam Rifles was under the HQ1 Sector of the Rashtriya Rifles, 28 Assam Rifles was under HQ 6 Sector under Delta Force, 10 Assam Rifles and 3 Assam Rifles were under HQ 11 Sector Rashtriya Rifles, and 21 Assam Rifles under 7HQ Rashtriya Rifles.⁹

Table 1

Battalion	Approx Area of Operations	Battalion	Approx Area of Operations
1 RR	Pulwana	19 RR	Kupwara
2 RR	Srinagar	20 RR	Banihal
3 RR	Anantnag	21 RR	Kupwara
4 RR	Doda	22 RR	Sopore
5 RR	Ganderbal	23 RR	Kupwara
6 RR	Kupwara	24 RR	Kupwara
7 RR	Anantnag	25 RR	Surankote
8 RR	Doda	26 RR	Kishthwar
9 RR	Anantnag	27 RR	Poonch
10 RR	Doda	28 RR	Baramulla
11 RR	Doda	29 RR	Baramulla
12 RR	Doda	30 RR	Sopore
13 RR	Pattan	31 RR	Kistwar
14 RR	Bandipore	32 RR	Kupwara
15 RR	Bandipore	33 RR	Bandipore
16 RR	Poonch	34 RR	Badgam
17 RR	Poonch	35 RR	Badgam
18 RR	Kupwara	36 RR	Anantnag

9. Col Anil Shorey, "Assam Rifles in J&K: Great Job", Ministry of Defence, <http://mod.nic.in/samachar/july15-06/h9.htm>

The above table gives us a clear picture of the areas where the Rashtriya Rifles operate. The areas vary from urban to rural ones. All these areas come under the 'disturbed areas' and, hence, in all these areas, the Armed Forces Special Powers Act (AFSPA) has been implemented. This is a big challenge for the Rashtriya Rifles, as in urban areas like Srinagar, they have to implement urban warfare strategies, while in the other areas, they have to implement rural warfare strategies. Hence, they have to be very well trained. Due to the large population in urban areas, conducting counter-terrorism operations in places like Srinagar is a difficult task for the Rashtriya Rifles. Counter-terrorist operations in areas like Wadwan which is a remote area and a difficult terrain in Jammu and Kashmir, was a difficult task which was conducted meticulously by the Rashtriya Rifles.

Motto of the Rashtriya Rifles

With *dhridta aur virta* as its motto, over the years, the Rashtriya Rifles has encountered terrorists dauntingly which has had an incredible impact on the psyche of the militants who were ready for an 'armed crusade' against the Indian forces for an independent Kashmir. The RR was expected to be funded by the Ministry of Home Affairs, but it was funded by the Ministry of Defence. The counter-terrorism operations are performed by extremely well trained and well equipped troops. The Rashtriya Rifles ensured that the regular Army force was not diverted for counter-terrorism operations, thereby enabling the Indian Army to conduct its job of counter-infiltration and border defence.

The Irony

According to Brig Gurmeet Kanwal, the force had done "remarkably well in pursuing counter-insurgency operations to fight Pakistan's proxy war in Kashmir".¹⁰ He also mentioned that the Rashtriya Rifles is the world's "largest counter-insurgency force" and also played a "key role" but has "not got the recognition in the world".¹¹ This has been the biggest irony regarding the

10. Gurmeet Kanwal said this in an interview in News Live on January 15, 2011, in a short documentary on "Rashtriya Rifles- Saviours of Kashmir", by Vishal Thapar.

11. Ibid.

Rashtriya Rifles. It has been labelled as a counter-insurgency force while it does the job of counter-terrorism. Terrorism is defined as a “publicized program of episodic violence targeted upon non-combatant persons and property for the purpose of affecting political attitudes and behaviour”¹² which is prevalent in Kashmir. An insurgency is a political movement to overthrow the existing government, while terrorism is the violent tool used to pursue the goals of the political movement.

There is a thin line between counter-insurgency and counter-terrorism which the nation often fails to realise. Counter-terrorism is a component of counter-insurgency. The former focusses on combating the tactics and strategy of terrorism while the latter focusses on the responses to political violence carried out by minority groups.

An insurgency is a political movement to overthrow the existing government, while terrorism is the violent tool used to pursue the goals of the political movement.

Why Underrated?

The Rashtriya Rifles has achieved tremendous success in counter-terrorist operations. However, the force is often tagged as the ‘Indian Army’ and hence, it loses its individualistic identity. In J&K, RR is the subset of Indian Army operations as the Army also conducts counter-terrorist operations simultaneously. Very few people are aware of the fact that counter-terrorist operations in Kashmir are conducted by a well trained buffer force called the Rashtriya Rifles. Some of the counter-terrorist operations conducted by the Rashtriya Rifles are rated by many as violations of human rights. Organisations like the Red Cross and Amnesty International often highlight the human rights violation conducted by the military in Kashmir which had made the Rashtriya Rifles infamous amongst the Kashmiris and the human rights organisations. The recruitment of the Irish Republican Army increased considerably after vigorous British military actions against the suspects. In Israel, the killing of suspected terrorists resulted in the recruitment of more

12. Herbert K. Tillema, “A Brief Theory of Terrorism and Technology”, in Tushar K. Ghosh, Mark A. Prelas, Dabir S. Viswanath, Sudarshan K. Loyalka, eds., *Science and Technology of Terrorism and Counterterrorism* (New York: CRC Press, 2010).

terrorists. Hence, it was concluded that offensive military actions could result in recruitment of more terrorists in an organisation to fight for the cause of Azad Kashmir. However, not being proactive is not a solution.

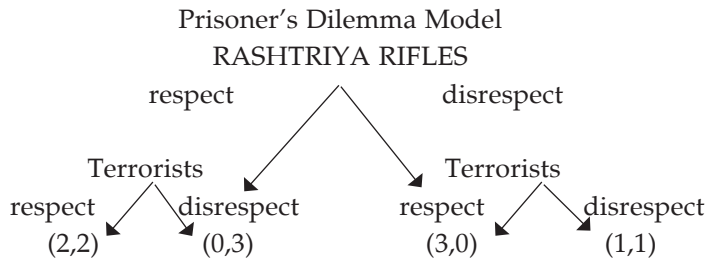
The Rashtriya Rifles employs tactics like “fire” strategies which could include aggressive searches of all the people passing through a check point. However, tactics which could cause collateral damage and are a component of the “fire” strategy are usually avoided unless they are necessary. “Water” strategies are also employed which include tactics which would follow the rules in the eyes of the general population like intelligence driven arrests. Let the strength of terrorist organisations be denoted by ‘x’ and aggressive use of fire strategies be denoted by ‘v’. Denoting that “fire” strategies increase recruitment could be done by $I(x, v)$ where $I_x > 0$, $I_x < 0$ and $I_v > 0$. It is not assumed that terrorism can be solely blamed on overaggressive counter-terrorist operations and, hence, we form $I(0, x) > 0$ as recruitment of new terrorists can occur even when there is no application of “fire” tactics. Elimination of fire tactics could reduce recruitment but does not eliminate recruitment.¹³ The ideal procedure is to employ both fire and water strategies in order to reduce the cost function to a minimum and then use the fire strategy to reduce recruitment.

The media has downplayed the role of the Rashtriya Rifles in counter-terrorist operations. This is because often the term counter-terrorism is confused with anti-terrorism. The media and common people forget that the role of the Rashtriya Rifles is not to implement anti-terrorism strategies which are defensive mechanisms but to implement counter-terrorism strategies which are offensive mechanisms. Sometimes, harm to civilians become unavoidable but unintentional, a doctrine of ‘double effect’ as stated by the military of the United States. Sometimes it might also be difficult and morally unfair to abide by the principles of International Humanitarian Law during counter-terrorist operations, especially when the terrorists are not doing the same which could lead to a situation of ‘dilemma (non) compliance’. Hence, soldiers are often in a dilemma about whether to

13. Cited in Jonathan P. Caulkins, Dieter Grass, Gustav Feichtinger, Gernot Tragler, “Optimizing Counter- Terror Operations: Should One Fight Fire with ‘Fire’ or ‘Water’?,” <<http://www.heinz.cmu.edu/research/292full.pdf>>

follow the laws of armed conflict which, if they do, would leave them with strategic disadvantages at times.

Modelling Counter-Terrorism for the Rashtriya Rifles



In the above model, the Rashtriya Rifles is taken as an example. The model represents the pay-offs between the RR and the terrorists. When both terrorists and the RR respect the laws of armed conflict, the outcome is (2,2) which never happens. When the RR respects the laws of armed conflict, and the terrorists do not, the outcome is (0,3) which is often the case. Hence, the pay-off for the RR then is 0, while for the terrorists it is 3. When the RR disrespects the laws of armed conflict and the terrorists abide by them, the pay-off is just the reverse, 3 for the RR and 0 for the terrorists (3,0). However, this is an impossible possibility. The last situation is the one in which both the RR and the terrorists do not abide by the laws of armed conflict. The pay-off is equal but less than that achieved if both abide by the laws of armed conflict. The pay-off, hence, is (1,1), 1 for the RR and 1 for the terrorists. This is a situation of the prisoner's dilemma where neither side knows what strategy each side would implement. In this case, mutual respect for the laws of armed conflict could result in a higher pay-off for both the RR and the terrorists, however, due to the threat dilemma and lack of information, this does not happen. Instead, either the RR abides by the laws or neither of them abides by the laws. As seen above, the best strategy for the RR is to disrespect the laws of armed conflict in order to gain better pay-offs when it knows that the terrorists would not abide by them. In spite of this, it is seen that the RR usually implements the second model in spite of less pay-offs, and difficulties in implementing it.

The Rashtriya Rifles could use the SIMULTANEOUS DEFEND ATTACK MODEL when both the terrorists and the paramilitary decide their own defences and attacks, without knowing the actions chosen by each other. It must be noted that if an attack model of a terrorist organisation has been successful in the past, it could be followed again in the future. The SEQUENTIAL DEFEND ATTACK DEFEND MODEL where the defender first uses defensive mechanisms and the attacker then attacks after observing the defensive actions and then the defender uses his might to recover from the attack might not be suited for the Rashtriya Rifles.

Since game theories are likely to succeed only in the initial phases, the concept of PROBABILISTIC INVERSION could also be conducive for the Rashtriya Rifles whereby they could estimate the success probability of an attack strategy which would be more likely to succeed or which are the targets which would be more attractive to the terrorists.

A Force for Good

The tactics used in terrorism are different from those used in conventional wars. Terrorists use tactics like kidnapping, assassinations, car bombs, hijacking and hostages and usually target political opponents, and the people at large. Other challenges include no special recognition of war zones by the terrorists and neither do they follow any international or domestic legal bindings. While the Indian Army was busy guarding the Line of Control (LoC) and the Line of Actual Control (LAC), there needed to be a special force raised to deal with terrorism in the interiors of Jammu and Kashmir.

It was important to raise a special counter-terrorist force as, in spite of fencing, sensor technologies, and three-tier deployments, terrorists were still found in Kashmir and arms and ammunitions were often recovered. A political solution for Kashmir seemed to be impossible. However, the region could not have been left in the hands of the less well equipped CRPF jawans. While the terrorist organisations possessed fin stabilised rockets, 60 mm mortars, automatic grenade launchers, advanced communication gear, high power sniper rifles with infrared scopes, and explosives, the Kashmir police was equipped with pistols, obsolete .303 Enfield rifles and bold action

7.62mm rifles.¹⁴ Therefore, there was a need for the Rashtriya Rifles to provide security in the region till a political solution was found. Attempts are always made for adequate integration of the local police forces with the Rashtriya Rifles so that the police forces' capabilities are upgraded and the local people do not consider it to be a war between the Indian government and the terrorists.

There was a tussle of conflict between the philosophies of fighting external enemies compared to internal conflicts. Countering terrorists required a different kind of strategy and, hence, there was a necessity of a specialised and well trained force. Absence of high-tech military advantages resulted in the RR forces being drawn into close range operations. Counter-terrorism was a challenge as it required distinguishing the local people from the terrorists, winning the hearts and minds of the common people and neutralising the anti-national sentiments. Thus, there could be no margin of error in these operations as the soldiers needed to be confident and sure as to whom and what they are firing at, and avoid collateral damage. While the irregular soldiers do not follow any humanitarian law, the RR is obliged to do so, thereby leading to a situation of 'moral asymmetry' which often complicates counter-terrorist operations. It was believed that the Rashtriya Rifles would be able to "protect the lines of communication and supplies from terrorist attacks in Jammu and Kashmir"¹⁵ in the event of a war. The Rashtriya Rifles' contribution to "peace and stability" in Jammu and Kashmir is "immeasurable" and the force has been able to create a situation favourable for civil governance.¹⁶ It has been able to uphold the national security objectives of India to "protect the lives and property of its citizens against war, terrorism, nuclear threats and militant

The Rashtriya Rifles' contribution to "peace and stability" in Jammu and Kashmir is "immeasurable" and the force has been able to create a situation favourable for civil governance.

14. Thesis by William Scott Latimer, "What can the United States Learn from India to Counter Terrorism", Naval Postgraduate School, March 2004.

15. Kanwal, n. 7.

16. Nitin Gokhale, "Unsung and Unheard, the Rashtriya Rifles Plays a Critical Role", Updated on October 19, 2011, on *Rediff News*.

activists, protecting the country from instability and religious and other forms of radicalism and extremism emanating from neighbouring states".¹⁷ However, the RR had always conducted counter-terrorist operations in its own territory and had not violated the territorial integrity of Pakistan which indulges in state sponsored terrorism in Kashmir, thereby abiding by Article 2(4) of the United Nations Charter. The effectiveness of the Rashtriya Rifles against militants has been more so due to the fact that they are "structured differently, having "six rifle companies" each as opposed to four in regular infantry battalions".¹⁸ The sub-conventional operations strategy of the Rashtriya Rifles has enabled it to get success. The command and control structure of the Rashtriya Rifles is under the loop of the Indian Army, which further enhances its potency. Its efficiency has increased due to the directive style of the command and control system. The troops are deployed dynamically and they conduct swift small team operations which have led to their success. The troops have been well trained in both covert and direct action.

The Rashtriya Rifles face enormous difficulties due to the difficult terrain where the counter-terrorist operations have to be conducted. Given the 1,22,000 sq km of area of operations, and a 700-km-long LoC to maintain, the security forces continue to do a commendable job in Kashmir. Some areas are densely forested, mountainous areas as high as 10,000 feet above sea level. Determined guerrillas would continue to launch attacks, and thereby weaken any kind of strategies laid down for counter-terrorist operations. Jungles could often prevent regular soldiers from applying overwhelming firepower and manoeuvre which was evident in the Vietnam War where the North Vietnamese forces and the Vietcong applied guerrilla tactics in jungle warfare against the South Vietnamese forces and the USA. It also becomes difficult to conduct counter-terrorist operations as the terrorists are heavily armed and well trained. For example, in November 1996, four hideouts, well equipped with arms and ammunition in the Haphruda forest of Kupwara district, were spotted and destroyed under Lt. Col. Rana. In March 2000,

17. "Indian Armed Forces", Ministry of Defence, <http://mod.nic.in/aforges/welcome.html>, accessed on November 18, 2011.

18. Rajat Pandit, "Army in Fix Over Rashtriya Rifles Battalions", *The Times of India*, August 1, 2005.

11 and 31 Rashtriya Rifles, with the help of rockets and 12.7mm machine guns dropped from Mi-17 helicopters of the Indian Air Force (IAF), were able to counter terrorists in the snow-capped mountains of Doda district. In December 2001, Lashkar- e-Tayyeba militants tried to storm the Rashtriya Rifles camp at the Pulwama district but failed in their attempts as the troops were alert and killed one terrorist. Post Kargil War, the security forces also had to deal with a new kind of threat of suicide bombing which was very popular in Kashmir till then. Other challenges could be that encounters are usually for longer durations which require a lot of patience and training. One of the reasons behind these long duration counter-terrorist operations could be that most terrorists find it better to bear arms to defend their religion and ideology than to surrender to humiliation. In January 2010, Army personnel from 52 Rashtriya Rifles and a local area commander of the Lashkar-e-Tayyeba, Abu Hamza, were killed in a 16-hour encounter.

Another major issue is that it is difficult to distinguish a 'disturbed area' from an undisturbed one in Jammu and Kashmir as terrorists could choose any area as a possible hideout. Hence, the RR needs to be omnipresent in Jammu and Kashmir. This often makes it unpopular amongst the civilians. The RR had always been as responsible as possible during counter-terrorist operations. There are times when the RR has refrained from countering terrorists in an area where civilians have been taken hostages, by waiting for the terrorists to wear out their resources, and then attacked them. This was because their main aim is to defeat the strategy of the enemy and not just the enemy.

A major advantage of the Rashtriya Rifles over infantry battalions is that the RR is deployed in 'disturbed areas', with no 'regular turnover'. This is unlike the infantry battalions that keep getting posted every two-three years. Thus, the RR is efficiently able to gather intelligence information quite successfully due to its prolonged stay in the region. This has also enabled the RR to become well acquainted with the terrain of the region. The Rashtriya Rifles has often carried out cordon and search operations. Often, the RR had faced difficulties in gathering intelligence reports and, hence, human intelligence, called *ikhwans* have been of great help to the Rashtriya Rifles. Ex-terrorists like Parray, Javed Shah, Setha Guggar and Sareer Khan

have not only surrendered but also encouraged other terrorists to give up terrorism. The militants who gave up their guns are also given monetary rewards and incentives. Soldiers have often recovered weapons like the AK-47s, AK-56s, sten guns, sniper rifles, machine guns, explosives, hand grenades, anti-tank mines, rocket propelled grenade launchers, infantry mortars and even anti-aircraft missiles.

Table 2: Jammu and Kashmir Fatalities: 2001-10

	Civilians	Security Force Personnel	Terrorists	Total
2001	1,067	590	2,850	4,507
2002	839	469	1,714	3,022
2003	658	338	1,546	2,542
2004	534	325	951	1,810
2005	521	218	1,000	1,739
2006	349	168	599	1,116
2007	164	121	492	777
2008	69	90	382	541
2009	55	78	242	375
2010	36	69	270	375

Proportionality is a major concern under the law of armed conflict. Hence, for counter-terrorist operations, the level of force used should not exceed the level of force proposed to be used by the terrorists. However, there is another interpretation of proportionality in that the defensive responses should be limited only to those actions which are necessary to defeat the armed attack. The AK-47 is the main personal weapon of the Rashtriya Rifles¹⁹ intended to “neutralise the enemy power”.²⁰ These AK-47s were provided to India by the Soviets. Utmost attention has been given to not allowing the use of heavy weapons, the artillery or the Air Force in

19. “The Remarkable Rashtriya Rifles”, Ministry of Defence, <http://mod.nic.in/samachar/16feb01/html/trish.htm>

20. “Avtomat Kalashnikov AK47”, *Global Security*.

order to prevent “disproportionate use of force and collateral damage”²¹ thereby using ‘minimum force’. The strategy is not about using ‘maximum firepower’, unlike the Army but about maximum effectiveness. This has enabled reduction of collateral damage in the densely populated Kashmir Valley. This is unlike counter-insurgency operations around the world where mortars, artillery and other heavy weapons are used. However, efforts have been made to provide the Rashtriya Rifles with “multiple grenade launchers and hand-held thermal imagers... long range reconnaissance and observation systems” and also “advanced counter-improvised explosive devices”.²² Finding the right alternatives to the AK-47s could be a good option. The jawans have not been very happy with the performance of the INSAS 5.56 which is an indigenous assault rifle. They found the rifle “ineffective” in counter-insurgency operations.²³ However, the CRPF has confirmed that the Israeli made TAVOR rifle is better than the AK-47 as it is more effective and lightweight²⁴. Laser fitted assault rifles would enable soldiers to target correctly. Efforts to modernise the equipment of the infantry and RR units are aimed at increasing their competence of “surveillance and target acquisition at night and boosting their firepower for precise retaliation against infiltrating columns and terrorists holed up in built-up areas”: 200 hand-held battlefield surveillance radars with ranges up to 7 to 8 km where there is a clear line of sight, 2,000 hand-held thermal imaging devices for “observation at night and stand-alone infrared, seismic and acoustic sensors with varying capabilities” have enabled domination over the Line of Control, resulting in a decrease in infiltration.²⁵

JUSTIFYING THE AFSPA

The Armed Forces Special Powers Act (AFSPA) of 1990 gave the forces special and unrestricted powers to carry out their operations under the

21. B. Raman, “Evolution of India’s Counter-Terrorism Capabilities”, *International Terrorism Monitor, South Asia Analysis Group*, May10, 2006.

22. Pandit, n. 18.

23. Shishir Arya, “Saddled with Insas, Army Wants New AK-47s”, *The Times of India*, September 7, 2009.

24. “Israeli Made Rifle TAVOR Better than AK-47: Official”, *One India News*, February 3, 2011.

25. Gurmeet Kanwal, “Modernising the Indian Army”, C:\Users\User\Desktop\599 Gurmeet Kanwal, Modernising the Indian Army.htm

'Disturbed Areas Act'. It could be said that the AFSPA violates the right to life under Article 21 of the Indian Constitution. However, removing the AFSPA from the disturbed areas would tie down the hands of the armed forces in conducting effective counter-terrorist operations. In 2001, the Belarus Parliament approved the Law of the Republic of Belarus on Fighting Terrorism giving counter-terrorist forces the right to enter houses, property and religious places at will, without warrants, in case they suspect these are terrorist hideouts. Every combatant, whether involved in a third generation war or a fourth generation war, has the right to enjoy the 'combatant's privilege', that is, to legally use lethal force against enemy combatants. Cordoning usually has to take place on the target house. Once the civilians are moved outside the house to be cordoned, the forces have to conduct a house entry drill and then the security forces have to look for the hideouts which could be below the kitchen or below an almirah, or in the cowsheds, or living rooms, to list a few. Ambush in counter-terrorist operations needs special skills and the need to apply the principles of *jus in bello* as the terrorists have to be distinguished from the local people. The art of ambush includes 'stealth', 'surprise', 'secrecy', 'devastating precision' which would be impossible if the armed forces are not given special powers to perform the operations. Under Section 4, the armed forces can shoot to kill, the Army can destroy property in case the property is an arms dump, can arrest anyone without a warrant, enter and search without any warrant to arrest or recover arms and ammunition. This has helped them to arrest several suspected terrorists. Under the *lex specialis* of International Humanitarian Law, even citizens may be detained, if they are suspected, and may be interned. Every country tries to combat terrorism within the legal framework, but sometimes human rights violations do take place. This could be seen in the case of Germany trying to combat the Rote Armee Fraktion in the 1970s, and Spain's attempt to combat the ETA. Removal of AFSPA is not a wise option as Kashmir would continue to remain a disturbed area due to Pakistan's state sponsored terrorism. Removing AFSPA could make these areas in Kashmir safe havens for the terrorists.

PARADIGM SHIFT

The use of conventional military doctrines had alienated the Rashtriya Rifles from the local population and the insurgents took advantage of this and, hence, there was a necessity for a new doctrine. The Army has realised the importance of winning the hearts and minds of the people with the help of an “iron fist in a velvet glove”,²⁶ Operation Sadbhavna, “through people friendly projects”.²⁷ The armed forces have undertaken major activities under different operations like Operation Maitree, Operation Sangam and Operation Ujala. Under these, numerous activities like “quality education, women’s empowerment, community development, infrastructure development and health care” have been provided.²⁸ The Rashtriya Rifles have donated books, computers and furniture to government schools. They have organised essay writing competitions for school children, trips to different places of tourist interest, organised sports events, and welfare activities for women so that they may become financially independent, constructed bridges, roads and micro hydel power projects. It is sad that such actions of the Rashtriya Rifles are never highlighted by the West or the organisations upholding the values of human rights.

THE FUTURE

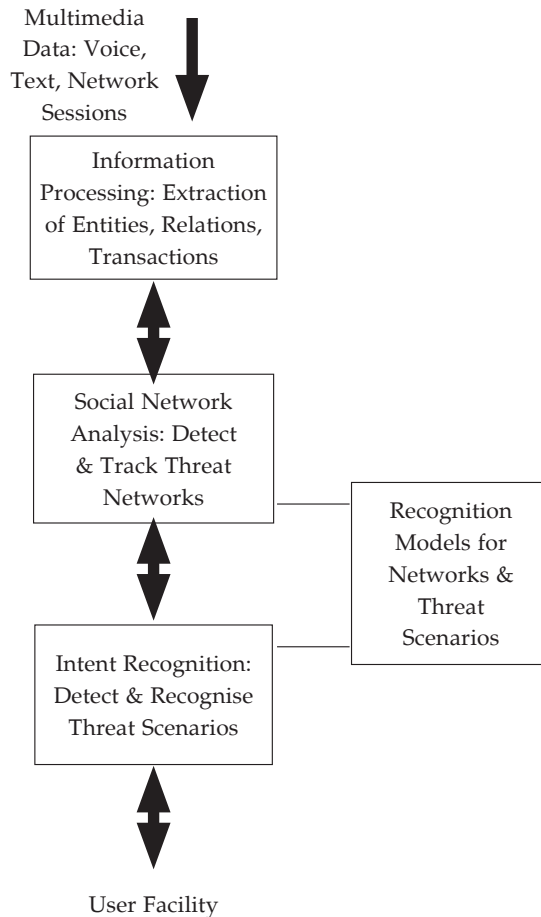
The Counter-Terror Social Network Analysis and Intent Recognition (CT-SNAIR) could be implemented where automated tools and techniques would be used to detect and track the dynamically changing terrorist networks and also for recognising the capabilities of the terrorists and their potential intents.

26. “Counter Terrorist Operations”, Northern Command, <http://indianarmy.nic.in/Site/FormTemplete/frmTemp2PRTRM4C.spx?MnId=mq8coVhi57DhADLPilZuKw==&ParentID=DKWYbpO03emHdmtZsgiaJw==>

27. “Operation Sadbhavna”, Ministry of Defence Report, <http://mod.nic.in/samachar/march1-06/h11.htm>

28. “OP Sadbhavna”, Northern Command, <http://indianarmy.nic.in/Site/FormTemplete/frmTemp1PRT3C.aspx?MnId=vDV972EAC0rj7ijDQk6wwA==&ParentID=nP5JQ3H/1obKeZyBPfjmYQ==>

Fig 1



The Rashtriya Rifles have to deal with a divided Kashmir—Shias, Sunnis and Backerwals—though under a single religious umbrella: Islam. The Rashtriya Rifles has to realise that what started as a movement for an ‘independent Kashmir’ has now altered into an ‘Islamic *Jihad*’ to install the rule of Allah. Often, the local people consider the troops to be outsiders, while the troops consider the local Muslims to be “supportive of the militancy”.²⁹

29. Surinder Singh Oberoi, “Ethnic Separatism and Insurgency in Kashmir”, <http://www.apcss.org/Publications/Edited%20Volumes/ReligiousRadicalism/PagesfromReligiousRadicalismandSecurityinSouthAsiach8.pdf>

The Rashtriya Rifles would face serious challenges in 2014 once the US moves out of Afghanistan and there is a power vacuum. There could be serious threats to Kashmir from the belligerent Taliban. Pakistan could use the Taliban as a tool to counter Indian influence in Central Asia and Afghanistan by causing disturbances in Kashmir. In case the state of Pakistan collapses, there could be a struggle for power, a governance deficit, and the scenario could be even worse. There could be an increase in terrorism, small arms proliferation, drug trafficking, child trafficking, money laundering, etc.

The Rashtriya Rifles needs to train itself not just as a counter-terrorist force but also as a Weapon of Mass Destruction (WMD) counter-terrorist force due to the emerging threats of such weapons falling into the hands of terrorist organisations. Use of Improvised Explosive Devices (IEDs) is very common among terrorist groups. However, in the future, the IEDs could possibly be used in combination with chemical toxics, biological toxins and radiological materials. This could be a big challenge for the RR to deal with. The catastrophic effect of these IEDs could be enhanced by coupling where one IED is linked with another, or boosting where explosive devices are kept one on top of another and the bottommost device is used to fuse, or daisy chaining or by shaped charges. Microwave blasts, radio frequency jammers and chemical sensors could be used as counter-measures to IEDs. Other counter-measures might include laser induced breakdown spectroscopy systems. The Rashtriya Rifles must strategise an effective I&W (Indication and Warning) model for counter-terrorism operations. There is need of an effective Intelligence, Surveillance and Reconnaissance (ISR) system to improve the efficiency of the RR.

A major dilemma in a counter-terrorist operation is whether to kill the leader or the foot soldiers. Killing the leader or the commander is more effective than killing foot soldiers as the leader is more valuable to the organisation and, hence, killing him could jeopardise the command and control mechanisms which could disrupt further terrorist attacks. For instance, the Rashtriya Rifles, along with Kashmir's police had killed Abdullah Uni, the chief operational

commander of the Lashkar-e-Tayyeba (LeT) in September, 2011.³⁰ However, killing the foot soldiers prevents them from becoming leaders in the future or becoming masterminds of various other plots.

Dilemmas can also occur regarding whether to employ active counter-terrorism methods or passive ones. Active methods could include destruction of terrorist training camps, infiltrating terrorist groups or freezing terrorist assets. Defensive mechanisms could include erecting technological barriers, and securing the borders, to list a few. Application of the game theory in counter-terrorist operations could be one of the best options, though confined only to the initial decision-making.

With sophistication in technology, the RR might have to face challenges which they have never faced before. These may include having to deal with dangerous bombs like thermobaric bombs, neutron bombs, and electromagnetic pulse bombs. These can cause severe damage and loss of life and are cheaply available.

With the success of the Rashtriya Rifles in Kashmir, the Home Ministry has persuaded the Union Cabinet to deploy the force even in the Naxal affected areas of Chhattisgarh, Jharkhand, and Maharashtra. For instance, Home Minister Chidambaram wanted to deploy these forces for “static”³¹ duties in these regions. The Rashtriya Rifles would be present there to boost the morale and efficiency of the central paramilitary forces. This is because not only has the Rashtriya Rifles conducted successful operations but has motivated the CRPF and local J&K Police force to perform effectively in counter-terrorist operations. The CRPF commandos now are an asset to the RR and the local police. The CRPF actively took part in the encounter of commanders Abdullah Uni and Abdul Rehman. Even the J&K Police actively take part in the counter-terrorist operations along with the Army and sometimes on their own. The Army however, does not want to disturb the Rashtriya Rifles and divert them to the Naxal affected areas. The Army has suggested that instead of diverting RR troops from Jammu and Kashmir, new RR troops be raised.

30. Srinivasan Jain, “Kashmir: The Riddle of AFSPA”, *NDTV*, November 21, 2011.

31. Quoted in Shishir Gupta, “Rashtriya Rifles to Move from J&K into Red Zone”, *Hindustan Times*, December 2, 2011.

It could be argued that there is no military solution to the problem of Kashmir. While soft power options are always preferred, they could take a lot of time to bring about any change. Terrorism is a politicised term and, hence, to gain widespread support for elimination of terrorism by way of the 'stick approach' rather than the 'carrot approach' might not be possible. However, the situation in Kashmir is such that the consequences of military action are not going to be worse than the consequences of military inaction. With both India and Pakistan becoming nuclear weapon states, nuclear deterrence has worked well in the region based on the concept of mutual assured destruction. This nuclear deterrence has been exploited by Pakistan in its national security strategy to alter the status of Kashmir by using proxy war as a medium. Pakistan knows well that nuclear deterrence had restrained India from launching a conventional offensive against Pakistan. Pakistan's proxy war has time and again been exploited by the dragons to serve Beijing's strategic purposes. The Chinese nuclear and missile shield has enabled Pakistan to continue with its proxy war in Kashmir without getting worried about an Indian retaliation.

Hence, there is a need for an effective counter-terrorist force to prevent India from crossing the limits of its tolerance towards the quotidian proxy war that India is a victim of. It could be said that it is because of a special counter-terrorist force in Kashmir that it has been possible for the Indian Army to be patient regarding the upsurge there and not get involved in a limited conflict with Pakistan. Donald Rumsfeld had once said that terrorists have all the advantages of launching offensives and the only solution is to battle them and root them out as a right to self-defence.

The problem in Kashmir is terrorism, and counter-terrorism needs offensive solutions. Under sustained counter-terrorist operations, the capability of the terrorists is a likely to remain low. The RR might not be a better replacement to infantry battalions of the Indian Army, but they are definitely a good replacement for the BSF and CRPF for performing counter-terrorist operations. One might argue that there could be peaceful means to solve the problems, like bringing about development in the region, and so on. However, people fail to realise that in the present situation, without military pressure on the terrorists,

no development work can take place in the region. One must understand that Pakistan as a state that has sponsored terrorism, would not want any kind of development in the region as that would mean the local people becoming benevolent towards the Indian government.

SHIFTING STRATEGIES AND TACTICS OF THE US/NATO FORCES AND THE TALIBAN IN THE PRESENT AFGHAN WAR

SHELLY JOHNY

It has been a decade since the United States invaded Afghanistan and toppled the Taliban regime in response to the September 2001 terrorist attacks by the Al Qaeda against targets in America. The initial ground assault by the Northern Alliance and US Special Forces, backed by an air campaign, led to the quick collapse of the Taliban. But a decade on, a ferocious insurgency is being waged by the Taliban and their supporters as the US plans to withdraw most of its forces from Afghanistan by 2014, which will surely be followed, or even preceded, by its North Atlantic Treaty Organisation (NATO) allies, without America being able to stabilise the country or achieve all of its political objectives. This paper will try to understand the changes that have occurred in the strategies and tactics of both sides during the course of the war. The nature of the Taliban insurgency will be looked at and the attempt will be made to understand if the insurgency is purely a guerrilla war or something else. The present war would be briefly compared with the Afghan War of the 1980s and also the Taliban's military campaigns till 2001. Before going into these

Shri **Shelly Johnny** is an Associate Fellow at the Centre for Air Power Studies, New Delhi.

details, it is important to look at the kind of warfare that was adopted by both sides.

LINEAR AND NON-LINEAR WARFARE

While the most commonly used classification of warfare is attrition warfare and manoeuvre warfare, what is increasingly being preferred is the classification of warfare as linear and non-linear as it explains the full range of options available to fighting forces all over the world. While linear refers to a line or lines, then linearity in the context of warfare can be regarded as tactics that use linear tactical formations such as lines. Linear formations especially became common after the introduction of gunpowder.¹ At the same time, linearity is not just about the shape of formations and armies. It is more about the number of directions that fighting occurs in. An army uses linear tactics if it normally trains to conduct offensive operations on a single continuous front at the tactical-operational level.² Most modern-day armies are mostly trained to fight in the linear manner. On the other hand, non-linear warfare consists of operations in which units move and fight in multiple directions, are widely separated and are capable of supporting each other by concentrating mass or fires.³ While linear warfare is more static, methodical, attrition-based and siege-like, non-linear operations are fragmented, dynamic and manoeuvre-based. Armies or units that use linear tactics generally are better protected (heavier), less mobile, possess greater close combat power, and rely on thicker and more stable lines of supply than armies that normally use non-linear tactics. In non-linear warfare, there is no line of adjacent friendly units stretching left and right, no stable front, flanks, and rear.

There are three kinds of non-linear warfare. They are (a) manoeuvre; (b) guerrilla and other special operations; and, finally (c) swarming. As opposed to the attrition/manoeuvre classification, manoeuvre warfare here is just one of three different non-linear war-fighting methods. Manoeuvre

1. Sean J. A. Edwards, *Swarming and the Future of Warfare*, PhD. Thesis (Santa Monica: RAND Corporation, 2005), p. 29.

2. *Ibid*, p. 31.

3. *Ibid*, p. xviii

warfare has been mostly used by certain nation-state armies during the 20th century, resulting in highly successful military campaigns. Typically, armies using manoeuvre tactics did not advance as a line against the opposing linear front.⁴ Rapid advances were made by mobile troops bypassing enemy centres of strength. The focus was on combined arms, developed battlefield command, mobility and the avoidance of static warfare.⁵ Examples of the use of manoeuvre warfare include by the Germans during the two World Wars, including the *blitzkrieg*, the Deep Operation Theory of the Soviet Red Army which was developed during the 1920s and 1930s but could not be implemented during the early stages of World War II due to Stalin's purges, the Operational Manoeuvre Groups (OMGs) of the Soviets during the 1980s and, finally, the Air-Land Battle Concept of the United States during the 1980s and the 1990s. These concepts are relevant in the Afghan context to the strategies and tactics adopted by the US and NATO forces.

In guerrilla warfare, the emphasis is on movement and evasion over direct and sustained confrontation. Guerrillas rely on stealth to conduct surprise raids and ambushes and then quickly withdraw because they do not have heavy weapons or armour. Guerrillas do not maintain a linear front nor do they rely on major lines of communication. They fight a war without fronts. Guerrilla fighters need bases and sanctuaries for units to recover from battles, reorganise and rest. It is these areas that need access to a steady flow of supplies, not the mobile units in the field.⁶ The presence of safe and secure bases in Pakistani territory had allowed the Afghan Mujahideen to fight the Soviets during the 1980s and currently enables the Afghan Taliban to fight US/NATO forces. The final type of non-linear warfare is swarming. Swarming has been studied in detail by John Arquilla, David Ronfeldt and Sean J. Edwards of the RAND Corporation. According to Edwards, "Swarming occurs when several units conduct a convergent attack on a target from multiple axes."⁷

4. Ibid, pp. 49-50.

5. John Buckley, "Land Warfare: Attrition and Maneuver", in George Kassimeris & John Buckley, eds., *The Ashgate Research Companion to Modern Warfare* (Surrey, England: Ashgate Publishing Ltd, 2010), pp. 96-97.

6. Edwards, n. 1, pp. 62-63.

7. Ibid., p. xvii.

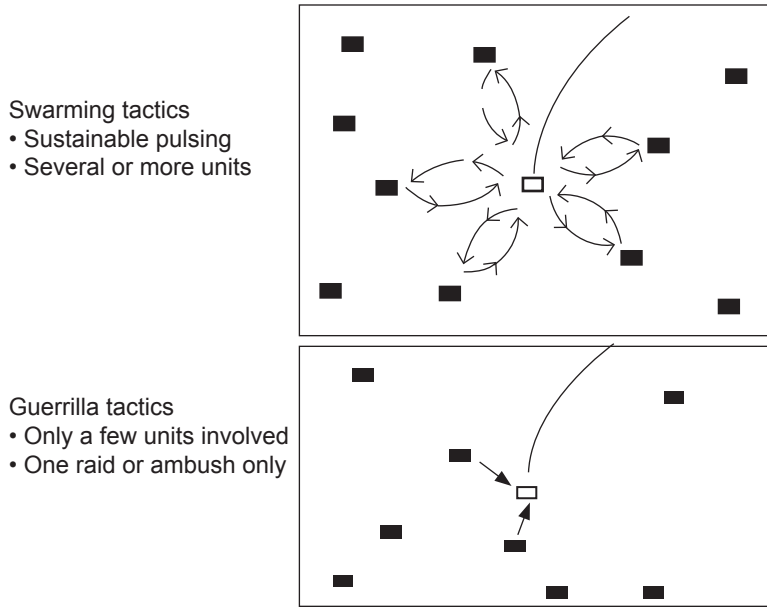
Swarming involves the convergent actions of several units that continue to attack by dispersing, manoeuvring, and reinitiating combat (pulsing).

Swarming refers to a convergent attack by many units as the primary manoeuvre from the start of the battle or campaign not the convergent attacks that result as a matter of course when some unit becomes isolated and encircled because of some other manoeuvre like linear warfare. Swarming involves running battles of encirclement, in other words, a moving battle where the surrounded force can continue to move as a whole. Swarming units do not attempt to maintain a static perimeter around a defender, they tend to give ground when counter-attacked and maintain a looser flexible encirclement. Swarming involves the convergent actions of several units that continue to attack by dispersing, manoeuvring, and reinitiating combat (pulsing). In other words, swarming usually involves sustained pulsing rather than sustained close combat. Pulsing is what distinguishes swarming from guerrilla ambushes. Guerrilla attacks usually involve only one or two units that conduct a raid or ambush and then disperse to end the battle.⁸ According to John Arquilla and David Ronfeldt, "Examples of swarming can be found throughout history, but it is only now able to emerge as a doctrine in its own right. That is largely because swarming depends on devolution of power to small units and a capacity to interconnect those units that has only recently become feasible, due to the information revolution."⁹

8. Ibid., pp. 66-68.

9. John Arquilla & David Ronfeldt, *Swarming & the Future of Conflict* (Santa Monica: RAND Corporation, 2000), p. vii.

Fig 1: Differences Between Swarming Tactics and Guerrilla Tactics



Source: Sean J. A. Edwards, *Swarming and the Future of Warfare*, PhD. Thesis (Santa Monica: RAND Corporation, 2005), p. 69.

Swarming, according to Arquilla and Ronfeldt, involves “sustainable pulsing” of either force or fires. The introduction of precision-guided munitions does not mean that swarming will be done merely by fires.¹⁰ This is most evident by the wars and conflicts that have taken place after the Gulf War of 1990-91. Swarming has been used by insurgent groups and militias against more powerful conventional armies with more firepower during the 1990s and the 2000s.

US AND NATO MILITARY STRATEGY AND TACTICS

The Bush Administration

When the US decided to attack the Taliban regime in 2001 for its sheltering of Osama bin Laden and the Al Qaeda, the Afghan entity was very different from what it is today. The Taliban were conventional actors with tanks

10. Ibid., pp. 21-22.

and artillery that occupied traditional fighting positions. Linear warfare capitalising on superior firepower was used against an enemy that presented a lucrative array of targets.¹¹ Special Forces directed precision fires against Taliban positions and assistance was provided to the Northern Alliance which was conducting the ground campaign. But once the Taliban collapsed, they ceased to become a conventional enemy. As the war became unconventional, the US response became more conventional. There was a need to shift from linear to non-linear warfare. The military theoretician, Edward Luttwak, has noted that all armed forces combine elements of linear warfare and non-linear warfare. The closer a military is to linear warfare, the more inward is the focus. Internal administration and operations receive the most attention, and the organisation is much less responsive to the external environment comprising the enemy, the terrain and the specific phenomenon of any particular conflict. On the other hand, non-linear warfare is more externally focussed. Studying the enemy, identifying his weaknesses, and configuring one's own capabilities to exploit those weaknesses achieves victory.¹²

The linear style warfare of the US, which includes heavy aerial bombardment, has been criticised as it has resulted in civilian casualties which, in turn, has antagonised the population and contributed to swelling the ranks of the insurgents. While the US chain of command was advantageous for unconventional warfare before the collapse of the Taliban, it became more conventional when the need was exactly the opposite. The ever increasing size of the military command and control system in Afghanistan created delays in getting permission for Special Forces operations. In this manner, the initiative is lost to the insurgents. The conventionalisation of the US campaign in Afghanistan was the result of the creation of Combined Joint Task Force 180 under the command of a regular army General, a development which marginalised the Special Operations Forces.¹³ The focus on linearity has resulted in less attention on providing

11. Hy. S. Rothstein, *Afghanistan and the Troubled Future of Unconventional Warfare* (New Delhi: Manas Publications, 2006), p. 12.

12. *Ibid.*, pp. xiv-2.

13. Antonio Giustozzi, *Koran, Kalashnikov, and Laptop: The Neo-Taliban Insurgency in Afghanistan* (New York: Columbia University Press, 2008), p. 189.

security to the local population. Intelligence is the principal source of information on insurgents. But the lack of safety and assurance about the fact that the insurgents are losing has prevented the population from providing intelligence. The lack of unity of effort among the government agencies has further increased the problem. Wave after wave of coalition forces from different units and organisations invaded the villages and towns of Afghans in pursuit of the same objectives, earning the displeasure of the population.

The Bush Administration had no political strategy for Afghanistan because of its preoccupation with Iraq.

There are also differences in the approach of the US Army units and the Special Forces. While both forces were involved in Operation Mountain Sweep in August 2002, the US Army's lack of awareness about the local culture resulted in the loss of whatever the Special Forces had achieved in the previous six months in terms of counter-insurgency and intelligence operations.¹⁴ The US strategy during the early years of the war in Afghanistan under the Bush Administration was based on a 'Light Footprint Strategy' which focussed on putting a smaller number of troops on the ground in Afghanistan to attain objectives. This was on the basis of the need to avoid the experience of the Soviet Union. But it resulted in lack of adequate numbers of troops to stabilise Afghanistan. The war in Iraq diverted attention away from Afghanistan which allowed the Taliban insurgency to gain strength. The Bush Administration had no political strategy for Afghanistan because of its preoccupation with Iraq. Rather than an increase in the Special Forces component, most of the Special Forces soldiers were soon pulled out of Afghanistan to serve in Iraq. There has also been a downsizing in vital air assets like helicopters. US troops in the southern parts of Afghanistan were forced to respond to minor Taliban attacks in Humvees. With an average overland speed of 5-10 miles an hour over rocky terrain, Taliban insurgents are long gone before the US forces arrive.¹⁵

The International Security Assistance Force (ISAF), which is a multinational coalition, was in the first four years of the war, mainly based in Kabul and had

14. Rothstein, n. 11, p. 140.

15. Kathy Ganon, *I is for Infidel: From Holy War to Holy Terror: 18 Years Inside Afghanistan* (New York: Public Affairs, 2005), p. 16.

While NATO assumed command of the ISAF, the nature of deployment of troops by individual NATO member nations reflected differences in the way they looked at their mission in Afghanistan.

little or no presence in the provinces. Only in 2006 did the ISAF contingents begin to be deployed in the south under the NATO command. With the increasing role of the ISAF, there were two separate commands operating in Afghanistan: the US-led Operation Enduring Freedom (OEF), the main aim of which was to fight the Taliban and Al Qaeda and the ISAF Command, tasked with Afghan reconstruction. US Special Forces were placed under Operation Enduring Freedom.¹⁶ The operation of two separate commands created complications in the counter-insurgency effort in Afghanistan. US forces under OEF conducted operations in ISAF territory without informing NATO commanders.¹⁷ The US handing over the security of the southern provinces to NATO increased doubts about America's commitment to Afghanistan as NATO was not trained in counter-insurgency operations.¹⁸ While NATO assumed command of the ISAF, the nature of deployment of troops by individual NATO member nations reflected differences in the way they looked at their mission in Afghanistan. Deployments came along with what is termed as 'national caveats' whereby each NATO member decided on the number of troops to be stationed, the area in which they were to be deployed, and the nature of their duties. The United States, Britain and Canada are the main countries involved in counter-insurgency operations against the Taliban in the south and east of Afghanistan. Germany, France, Italy, Spain and Greece are deployed in the more stable areas and are not involved in combating the insurgency.¹⁹

In the case of Afghanistan, the United States and NATO have committed the least number of troops for any peace-keeping mission since World War II.

16. Antonio Giustozzi in Caroline Holmquist-Jonsäter and Christopher Coker, eds., *Novelty is in the Eye of the Beholder: Understanding the Taliban in Afghanistan* (Oxon: Routledge, 2010), p. 60.

17. *Ibid.*, p. 60.

18. Seth G. Jones, "Averting Failure in Afghanistan", *Survival*, vol. 48, no. 1, Spring 2006, p. 111.

19. Caroline Wyatt and Rob Watson, "Nato at Pains to Dismiss Afghan Tensions", *BBC*, accessed from http://news.bbc.co.uk/2/hi/south_asia/7233971.stm on 10-1-2011.

The ratios of peace-keepers to citizens in the missions in Bosnia and Kosovo were better than in Afghanistan. There were differences in the approach of NATO member nations in their counter-insurgency activities in Afghanistan. The Canadians pursued war-fighting methods as they believe that there should be security before development. They send convoys to the farthest regions to assert their presence. On the other hand, the Dutch strategy in the province of Uruzgan focussed on supporting the local government. They exercised caution and set up far away from the villages. They negotiated with the elders as well as the Taliban. The Dutch acted as honest brokers for villagers whose relatives had been captured by the coalition forces.²⁰ But doubts have been raised about the viability of the Dutch approach. They mainly remained confined in the region of Tarin Kwot, sheltered from some of the Taliban's largest concentration of forces by a mix of US and Australian troops. The Dutch were also reported to be not doing very well in terms of delivering reconstruction to Uruzgan, even compared to the US.²¹ Because of domestic politics, the Dutch withdrew all their troops from Afghanistan in 2010.

Obama's Surge and Covert War in Pakistan

By the time Barack Obama became the US President in the beginning of 2009, there was a full-blown insurgency in Afghanistan mainly concentrated in the south and southeast of the country and was termed as the "Taliban Resurgence". Regular terrorist attacks were also conducted against the Afghan government and coalition troops in cities like Kabul and Kandahar. Recognising the drawbacks of the previous Bush Administration's "Light Footprint" strategy which led to the strengthening of the insurgency, Obama called for a surge in the number of US troops in Afghanistan. In December 2009, Obama announced that an additional 30,000 troops would be sent to Afghanistan and there would be a shift from the earlier emphasis on counter-terrorism to a counter-insurgency strategy. They were to be mainly deployed in the south and southeast of Afghanistan, including the provinces of Helmand,

20. Patricia Hartnagel in "Canada's Role in Afghanistan: Submissions to the Manley Panel, Compiled by Richard McCutcheon and John Derksen, *Peace Research: The Canadian Journal of Peace and Conflict Studies*, vol. 39, no. 1-2, 2007, p. 108.

21. Guistozzi, n. 13, pp. 199-200.

Kandahar, Paktia, Paktika and Khost. It also called for the rapid expansion and development of the Afghan security forces. The strategy developed in 2009 divided the main insurgency affected areas into two. The first area is the south, including Helmand and Kandahar provinces, the stronghold of the Quetta Shura Taliban. The second area is the east which contains Khost, Paktia and Paktika provinces and is the stronghold of the Haqqani network.

The implementation of the counter-insurgency strategy in both areas simultaneously would have required 40,000 troops in addition to the 70,000 US troops already deployed in Afghanistan. As only 30,000 troops were going to be deployed, the 2009 plan was to be implemented in a two-phase manner. In the first phase lasting from 2010 to 2011, most of the 30,000 troops were to be sent to the south where a counter-insurgency strategy would be implemented. The coalition forces would clear the Taliban from key population areas. The Afghan national security forces would hold the cleared areas. A smaller number of troops would be sent to the east where a counter-terrorism strategy was to be adopted rather than a counter-insurgency one because of the smaller number of troops. Coalition troops would not clear population centres. Rather, the momentum of the Haqqani network here would be halted and prevented from spreading into the adjacent provinces and Kabul. The growth of the Afghan national security forces would be accelerated so that they could hold the cleared areas in the south. In phase two, lasting from 2012 to 2013, the Afghan national security forces would hold the major population centres in the south after they had been cleared of insurgents, leaving coalition troops free to be sent to the east. A much smaller coalition force would be left behind to advise and assist the Afghan forces in the south.

With enough troops in the east during the second stage, the counter-terrorism strategy would convert to a counter-insurgency strategy to clear insurgents from major population centres which would then be handed over to the Afghan security forces. The Afghan national security forces would continue to grow until they were capable of holding not just the south and the east but the whole of Afghanistan by the end of 2013, allowing a large number of coalition troops to withdraw by 2014, leaving only a force of about

10,000 to 20,000 troops to assist and advise the Afghan national security forces and conduct counter-terrorism operations.²² The obvious complication with the implementation of the 2009 plan was that the insurgents would move away from an area where there is a strong presence of US/NATO troops, build up in another area and come back when the coalition troops withdrew. By mid-2011, though most of the south had been cleared, areas in northern Helmand and Kandahar are still contested. The east is still contested by the Haqqani network which has also infiltrated Ghazni, Zabul, Logar and Wardak. The situation in the northeastern provinces of Kunar and Nuristan has deteriorated since the coalition troops began withdrawing troops from the region. Though sparsely populated, it has been infiltrated by the Taliban, Al Qaeda and other groups, and is now largely controlled by them. They have set up bases and have staged attacks into adjacent areas in both Afghanistan and Pakistan. In the northern provinces of Kunduz, Baghlan and Takhar, the Taliban and allied Islamic Movement of Uzbekistan have expanded their influence and established safe havens. Suicide training camps have also been identified in Samangan and Sar-i-Pul.

In June 2011, Obama announced that the withdrawal of US troops would begin in the present year instead of 2014 and that all the troops used for the surge, which comprised more than 30,000, would be withdrawn by September 2012. The second phase of the 2009 plan, which is the conversion of the counter-terrorism strategy to the counter-insurgency strategy in the east, will not take place. It will be the responsibility of the Afghan armed forces to take charge of the fighting which would not include clearing the area of insurgents. Instead, what is expected is a long-drawn battle of attrition between the Afghan forces and the Haqqani network which would last longer than phase one of the 2009 plan.²³ It is doubtful if the Haqqani network would fight a linear campaign against the Afghan state in an environment where US Special Forces and Central Intelligence Agency (CIA) drones operate in the area as part of counter-terrorism efforts.

22. C.J. Radin, "Analysis: US Military Strategy in Afghanistan Shifts as Forces Draw Down", *The Long War Journal*, August 3, 2011, accessed from http://www.longwarjournal.org/archives/2011/08/the_military_strateg_1.php on 1-2012.

23. *Ibid.*

Since 2004, the United States has been involved in covert operations in Pakistan targeting the Al Qaeda and Taliban leadership and members.

Since 2004, the United States has been involved in covert operations in Pakistan targeting the Al Qaeda and Taliban leadership and members, using pilotless Predator and Rapier drones operated by the CIA. The tribal areas on the Pakistan side of the Afghan-Pakistan border, called the Federally Administered Tribal Areas (FATA), are being used by the Afghan Taliban and their allies to take shelter, train and rearm and as staging areas for attacks against US/NATO troops in Afghanistan. The US is also concerned about the increasing attacks by Pakistani insurgents against US and NATO logistics most of which passes through Pakistan. The covert air campaign was conducted as the US Administrations under Bush and Obama felt that Pakistan was not actively cooperating in targeting the Afghan Taliban as high ranking officers in the Pakistan Army and Pakistani intelligence, Inter-Services Intelligence (ISI) Directorate continue to see the Taliban as a strategic asset in a post-US withdrawal phase in Afghanistan. The earlier strategy with regard to dealing with the Afghan Taliban sheltering in the FATA areas was to use the 'hammer and anvil' approach, with Pakistani forces closing in on FATA from the east and the NATO/Afghan forces closing in from the west.²⁴ Obama's surge in troop numbers in 2009 was accompanied by a drastic increase in drone strikes against Taliban and Al Qaeda targets in Pakistan. The CIA also built up an intelligence network within Pakistan for intelligence collection which led to incidents like the Raymond Davis affair but also contributed to the assassination of Osama bin Laden in May 2011.

MILITARY STRATEGY AND TACTICS OF THE TALIBAN AND AL QAEDA

Organisational Structure of the Taliban and Allied Groups: Strategy and Tactics

Apart from the Afghan Taliban known as the Quetta Shura Taliban, other

24. Michael O'Hanlon and Bruce Riedel, "Plus A-Minus for Afghanistan", *The Washington Quarterly*, vol. 34, no. 1, Winter 2011, p. 127.

groups like the Hezb-i-Islami of Gulbuddin Hekmatyar, and the Haqqani network are involved in the insurgency against US and NATO troops in Afghanistan. While the Haqqani network accepts Mullah Muhammad Omar as its spiritual leader, it conducts its operations independently from the main Afghan Taliban in their area of influence. There is no unity and not even good relations between the leadership of the Taliban and Hezb-i-Islami but there is cooperation at the tactical level. This is because some local Hezb-i-Islami commanders work closely with the Taliban or also because certain ex-Hezb-i-Islami commanders or their relatives are presently commanders of the Taliban.²⁵ Below the leadership level i.e. Amir Mullah Muhammad Omar, and the Leadership Council that direct day-to-day operations in certain geographical areas, there are four insurgents' councils. They are the Quetta Shura for "Greater Kandahar" and the areas further west up to Herat, the Peshawar Shura for Eastern Afghanistan, the Haqqani-led Miramshah Shura for Loya Paktia and provinces north towards Kabul, and a separate Shura for the north and northeast.²⁶ Commanders operate at the regional and provincial levels.

Below the top-level command and control structure, the insurgency is divided into civilian support, the underground, guerrillas and front commanders. The civilian support includes individuals who assist the guerrillas by acquiring supplies, conducting intelligence campaigns, operating medical facilities, recruiting new guerrillas or supporters, operating the communications system and acquiring and maintaining equipment. The underground includes the insurgency's political and financial network. The guerrillas are the armed insurgents who conduct the military and paramilitary operations. The front commanders provide strategic command while tactical and operational control is given to the guerrilla units. The foreign Islamist radicals are also organised like the other insurgents, with the smaller units having tactical and operational autonomy,

25. Mohammad Osman Tariq Elias, "The Resurgence of the Taliban in Kabul, Logar and Wardak" in Antonio Giustozzi, ed., *Decoding the New Taliban: Insights from the Afghan Field* (London: HURST Publishers Ltd, 2009), p. 53.

26. Thomas Ruttig, "Loya Paktia's Insurgency: (i) The Haqqani Network as an Autonomous Entity" in Giustozzi, ed., *Ibid.*, p. 61.

while taking strategic guidance from senior Al Qaeda commanders. While most Taliban and Hezb-i-Islami insurgents are part-time fighters and do civilian jobs by day, the foreign Islamist radicals are professional fighters. The foreign fighters are much better equipped, trained and motivated than the other insurgents.²⁷

The Haqqani network mainly operates in the Loya Paktia or Greater Paktia region. The Loya Paktia consists of the provinces of Paktia, Paktika and Khost. The Afghan Taliban has no influence in the Loya Paktia region. On the other hand, in contrast to the Taliban and the Hezb-i-Islami, the Haqqani network did not have influence beyond the southeast. But there has been a change in this situation at least since 2008 when the Haqqani network began launching spectacular commando-style terrorist attacks against targets in Kabul, including the Serena Hotel and Indian Embassy.²⁸ This is because Loya Paktia is the Pashtun region closest to Kabul. The network uses the Shah-i-Kot mountains as a hideout and staging area. This range of mountains links the Afghan areas to Pakistan allowing the network to maintain relations across the border. The Haqqani network has among its members not just Pashtuns but also Uzbeks, Pakistanis, Chechens, and Arabs in contrast to the more national orientation of the Afghan Taliban which is predominantly Pashtun. The Haqqani network was originally led by the veteran Afghan Islamist and Mujahideen commander Jalaluddin Haqqani. Due to his old age and illness, Jalaluddin's son Serajuddin Haqqani has taken over the day-to-day operations of the network from his father.²⁹

The Haqqani network in the 1970s developed close relations with the Pashtun tribes of the FATA area of Pakistan, the Pakistan Army and ISI, and various Pakistani Islamist political parties. These links were reactivated after 2001. After the US invasion of Afghanistan in 2001, Jalaluddin Haqqani retreated to Pakistan where he resided in a suburb of the town of Miramshah in North Waziristan in the neighbourhood of the Pakistan Army's 11th Corps

27. Jones, n. 18, pp. 116-117.

28. *Ibid.*, pp. 58-59.

29. *Ibid.*, p. 63.

HQ with its ISI office.³⁰ Jalaluddin Haqqani was the first Afghan Mujahideen commander who welcomed and incorporated Arab *jihadi* volunteers into his group during the Afghan War of the 1980s. He also had close relations with wealthy Saudis and the Saudi intelligence service. One of Haqqani's two wives comes from the United Arab Emirates. The network also has strong links to Kashmiri and sectarian Punjabi *jihadis*. It receives a large portion of its financial support from the Arabian Peninsula and Pakistan. The Haqqani network mainly uses terrorist and guerrilla tactics and only exceptionally engages in open combat operations. They have frequently used Improvised Explosive Devices (IEDs) and suicide bombings. The Haqqani network is the typical Afghan resistance group that emerged during the Afghan War of the 1980s that had close relations with a variety of actors unlike the Afghan Taliban that emerged in the specific conditions of southern Afghanistan during the early 1990s. This has implications for the kind of insurgency that is currently being fought in Afghanistan and the turns that it can take in the future. This will be explored in the last section of this paper.

The Afghan Taliban and the Hezb-i-Islami have different political objectives in Afghanistan. While both groups wish to drive out the foreign troops from Afghanistan and topple the present Afghan government led by Hamid Karzai, their ultimate political objectives are different. While the aim of the Afghan Taliban is to reestablish the Islamic theocratic government with Mullah Muhammad Omar as *Amir-ul-Mominin* or leader of the faithful, the Hezb-i-Islami wishes to establish an Islamic republic with Gulbuddin Hekmatyar as the leader. The military strategy for attaining these objectives included attacking US and NATO troops in the Pashtun dominant areas of south and southeast Afghanistan, preventing reconstruction efforts, attacking Afghan Army troops and police, government representatives including provincial and district Governors, and threatening the local population against cooperating with the government or coalition forces. Once the surge in US and NATO troops took place in 2009, the Afghan Taliban shifted their attention to attacking soft targets like government development programmes and Non-Governmental Organisations (NGOs).

30. *Ibid.*, p. 66.

As a part of undermining government influence, the Taliban have begun establishing their own judicial system in areas where they dominate and have targeted schools and educational institutions.

The war in Afghanistan had not ended with the fall of Kabul to the Northern Alliance. Sporadic action by the insurgents against the US forces, separate from the major US initiated campaigns like Operation Anaconda, had continued even after the main Taliban force had been decimated. Examples of such attempts include the attack on a US helicopter near Gardez, capital of Paktia province, and the rocket attack on Khost air base which was held by US troops. Both these attacks took place in March 2002, and the first incident resulted in the deaths of six US soldiers.³¹ It is understandable that the frequency of attacks against US and NATO troops has increased only since 2006. The Taliban needed more time to regroup, gain new recruits to replace those who were killed and develop base camps in a sanctuary away from the main area of fighting. The insurgency led by the Taliban has adapted according to the changing conditions. In 2004, US and coalition forces noticed a change in the size of the guerrilla units, from large bands of up to a hundred fighters to much smaller units of less than ten. This has enabled the guerrillas to evade detection by coalition forces and allowed them to blend into the population when necessary. But in 2006, it was noticed that there was again a change from the hit-and-run tactics by small groups of guerrillas to frontal assaults on government security posts by groups of more than 100 fighters.³²

There are certain differences between the Afghan War against the Soviets of the 1980s and the present Afghan insurgency. The Afghan Mujahideen of the 1980s received the support of a superpower i.e. the US and a coalition of nations. In contrast, the Taliban do not receive the overt support of Pakistan. This is because of the fear the Pakistani military elite have regarding the political and military consequences of providing direct support to the Taliban against US and NATO forces. This does not mean that Pakistan has

31. Sreedhar, "The Taliban-Al-Qaida after One Year of War", *Aakrosh*, vol. 5, no. 17, October 2002, pp. 57-62.

32. Thomas H. Johnson and M. Chris Mason, "Understanding the Taliban and Insurgency in Afghanistan", *Orbis*, vol. 51, no. 1, Winter 2007, p. 81.

abandoned its policy of gaining strategic depth in Afghanistan. It provides covert support to the Taliban, the nature of which is discussed in the next section. Because of this reason, the Taliban do not have access to sophisticated weapons systems like the shoulder-launched Stinger air defence missiles unlike the Afghan Mujahideen. But the effectiveness of the Stinger missiles should be measured in terms of the limitations placed on the anti-guerrilla operations of Soviet air assets rather than the number of Soviet fixed-wing and rotary-wing aircraft shot down.³³ US and NATO helicopters are also vulnerable to ground fire in the present Afghan insurgency.

The differences in circumstances also mean that the Taliban did not receive all their weapons from a single source. There is a significant rise in the price of weapons in the arms bazaars in northern Afghanistan when the Taliban conduct the spring offensives in the south and east. There are also reports that Northern Alliance militias have sold new weapons to the Taliban through arms dealers as they get little in return for surrendering weapons to the central government and the US/NATO forces. The Taliban also get access to arms and ammunition from the arms markets in the NWFP of Pakistan.³⁴

The lack of nation-state support for the Taliban has been compensated by assistance from the global *jihadist* network. The increasing expertise of radical Islamist groups in conducting insurgency operations is having its impact on the conflict in Afghanistan. The Al Qaeda in Iraq has gained plenty of expertise in conducting attacks against US troops. It is now understood that these skills are being passed on to the insurgents fighting in

The Taliban do not receive the overt support of Pakistan. This is because of the fear the Pakistani military elite have regarding the political and military consequences of providing direct support to the Taliban against US and NATO forces.

33. The Russian General Staff, *The Soviet-Afghan War: How a Superpower Fought and Lost*, translated and edited by Lester W. Grau and Michael A. Gress (Kansas: University Press of Kansas, 2002), p. 222.

34. Guistozzi, n. 13, pp. 25-26; Maqbool Ahmed, "Awash in Weapons", *Herald*, vol. 38, no. 3, March, 2007, pp. 70-71.

Afghanistan. Afghan insurgent groups are using this assistance to construct increasingly sophisticated IEDs, including remote control detonators. There are Al Qaeda-run training facilities and IED factories in North and South Waziristan. There is also evidence that a smaller number of Pakistani and Afghan militants have received training in Iraq. The insurgents usually slip behind NATO frontlines and set off these roadside bombs.³⁵ Another effective device that is used is the 'TV bomb', first developed by Iraqi groups. It is a shaped-charged mechanism that can be hidden under a bush or debris on a roadside and set off by remote control from more than 300 metres away. A major tactic of the insurgents is suicide bombing which was not the norm in Afghanistan. This tactic has been used in major cities like Kandahar and Kabul.³⁶ The number of suicide attacks increased from one in 2002 to two in 2003, six in 2004 and 21 in 2005. There were over 100 suicide attacks in Afghanistan in 2006, more than the total committed in the entire history of the country. Suicide attacks allow the insurgents to achieve maximum impact with minimum resources. Such attacks have increased the level of insecurity among the Afghan population.

Guerrilla Warfare and Military Swarming in the Afghan Context

During the Afghan War of the 1980s, the Afghan Mujahideen mainly fought a guerrilla war against the Soviets. Tactics consisted of ambushes, raids, shelling attacks, mining roads, sabotage and terrorist attacks along with defensive and offensive actions.³⁷ Swarming also played a role during the war. According to John Arquilla and David Ronfeldt, the Soviet Red Army conducted a lot of swarming by fires, while the Mujahideen regularly implemented swarming by force.³⁸ While this is right with regard to the Red Army, it is doubtful if the Mujahideen actions can be described as military swarming. In his more detailed explanation of the characteristics of swarming, Sean J. A. Edwards refers to a convergent attack by many units

35. Alastair Leithead, "Long Haul Fight to Defeat the Taliban", *BBC*, accessed from http://news.bbc.co.uk/2/hi/south_asia/6237290.stm on 11-1-2012.

36. Brian Glyn Williams, "Suicide Bombings in Afghanistan", *Jane's Islamic Affairs Analyst*, September, 2006, p. 7.

37. n. 33, pp. 62-65.

38. Arquilla and Ronfeldt, n. 9, p. 37.

as a primary manoeuvre from the start of the battle and not encirclement that occurs because of some other manoeuvre like linear warfare or even guerrilla warfare. The Mujahideen mainly fought a guerrilla war and encirclements would have taken place as a result of Soviet positions being overrun. At the same time, Arquilla and Ronfeldt are right in claiming that the Soviets tried swarming by force while the Mujahideen attempted swarming by fire. Soviet Special Forces tried to conduct swarming against the insurgent forces. The Mujahideen set up “Stinger traps” for the Soviet fighters and helicopters in the rough, mountainous terrain of Afghanistan. The Stinger missiles would be fired from all directions upon enemy aircraft that strayed into their fire traps.³⁹

The withdrawal of Soviet troops in 1989 brought a change in the situation. As the opposing forces became more balanced after the Soviet withdrawal, non-linear warfare changed over to linear warfare. It was ISI Director Hamid Gul who decided that the Mujahideen should move from guerrilla tactics to linear or conventional warfare. The first target was the city of Jalalabad, on the road from the Khyber Pass to Kabul. The siege that followed was a terrible mistake. The Afghan Communist Army held off the Mujahideen and the Pakistani effort was a massive failure.⁴⁰ Nevertheless, the Afghan conflict after this event continued to be of the linear type. After the defeat and downfall of the Afghan Communist government of Najibullah in 1992, the civil war between the various Mujahideen militia groups was of a linear nature, with shifting frontlines and massive bombardment of Kabul and other cities by rockets. Whoever put greater numbers and more firepower on the field would have the upper hand. When the Taliban emerged, Pakistan’s ISI provided munitions, fuel and food to the militia. The Pakistan Army and Air Force fought in Afghanistan along with Taliban forces.⁴¹ Pakistan’s strong support to the Taliban reduced the area controlled by the opposing

39. Ibid., p. 38.

40. Bruce Riedal, *Deadly Embrace: Pakistan, America, and the Future of the Global Jihad* (Washington: Brookings Institution Press, 2011), p. 39; Vinod Anand, “Pakistan as a Factor in Afghan Stability” in R.K. Sawney et al, eds., *Afghanistan: A Role for India* (New Delhi: Centre for Land Warfare Studies, 2011), p. 146.

41. Seth G. Jones, *In the Graveyard of Empires: America’s War in Afghanistan* (New York: W. W. Norton & Co., 2010), p. 63.

When the Taliban emerged, Pakistan's ISI provided munitions, fuel and food to the militia.

The Pakistan Army and Air Force fought in Afghanistan along with Taliban forces.

Northern Alliance to a small sliver of territory in the Panjsher valley in northcentral Afghanistan. This was the situation on the ground on the eve of the US invasion of Afghanistan in the end 2001.

The present Taliban insurgency predominantly follows the classical guerrilla style of warfare. This could be because the Taliban continue to receive advice and intelligence from serving and retired Pakistani ISI and Army officers. These officers have had long standing experience with regard to the Afghan situation from the 1980s and even before that period when they trained the Afghan Mujahideen against Afghan government troops. This has led to the Taliban following traditional guerrilla tactics in comparison to the insurgents of Iraq.⁴² Military swarming in the 20th century, be it in Somalia, Chechnya or Iraq, has been mostly conducted in urban environments. In the Afghan context, be it during the 1980s or the present insurgency, the insurgents mostly left urban population centres to the occupying force while fiercely contesting the countryside. Here, it is necessary to at least briefly compare the insurgencies of Iraq and Afghanistan to understand how varied military, political and social environments lead to very different kinds of insurgencies against foreign occupying forces. The Iraqi insurgency is especially important for the Afghan context because of the influence that the former has over the latter through the medium of foreign Islamist fighters.

When the Americans planned for the invasion of Iraq in 2003, they expected the Iraqi Republican Guards to be the main opposing force capable of putting up a tough fight. But Saddam Hussein, in anticipation of several Iraqi uprisings breaking out against him when the invasion began, had prepared the Baath Emergency Plan. It was expected that the Saddam Fedayeen, led by Saddam's son, and other militias would contain any uprising long enough for the Republican Guard units to arrive and crush the opposition.

42. Giustozzi, n. 13, p. 25.

Each village, town, and city would become a small semi-independent citadel. Fedayeen local weapons caches included light weapons like AK-47s, machine guns, mortars, and RPGs under close guard by the Baathists. With the melting away of the Iraqi Republican Guards and other Iraqi Army units in the face of the invasion, the Fedayeen would turn out to be the core of the insurgency against the Americans.⁴³ Iraq had no dearth of infantry weapons even after the Gulf War of 1990-91 as it had become the fourth largest army by the end of the Iran-Iraq War due to weapons supplies from a wide variety of sources. The Fedayeen had a decentralised command and control structure which was fit for swarming operations. Its base of operations was dispersed throughout the towns and cities of Iraq.⁴⁴

The present Taliban insurgency predominantly follows the classical guerrilla style of warfare.

There were other factors that contributed to the spread of the Iraqi insurgency. The Coalition Provisional Authority that was formed by the US to govern Iraq immediately after the invasion released the de-Baathification order that led to the disbanding of Saddam's army and regulations which prohibited ex-officers of the rank of Colonel and above from joining the newly formed Iraqi armed forces.⁴⁵ The joblessness and alienation of almost 300,000 Iraqi troops, including highly skilled officers, led to the rapid spread of the insurgency. Besides, the Iraqis, several hundred trained Syrian paramilitary troops were allowed by the Syrian government to cross the border and support the Iraqi government to fight the invasion force. The insurgency, though mainly led by ex-Baath military and paramilitary forces later on, included Sunni Arab tribes, radical Islamist groups, with members from Iraq and Arabs from other countries and the Mahdi Army of the Shia cleric Moqtada al-Sadr. All these disparate insurgent groups gained access to the weapons buried in different parts of the country. The Bush Administration failed to keep Iraq's several weapons depots secure.

43. Michael R. Gordon and General Bernard E. Tainor, *Cobra-II: The Inside Story of the Invasion and Occupation of Iraq* (New York: Pantheon Books, 2006), p. 505.

44. *Ibid.*, p. 499.

45. *Ibid.*, p. 484.

The Taliban movement, mainly composed of seminary students, is only now being trained to fight an insurgency against a foreign occupying force after mainly fighting linear battles against rival militias during the 1990s.

Many were left unguarded for months after the invasion. The insurgents helped themselves to a huge supply of explosives, mortars, and artillery shells.⁴⁶

This means that swarming operations in the Iraqi context were conducted by highly trained and motivated personnel who had access to a wide range of weaponry. Swarming need not be always conducted by highly trained military personnel as was proved by the attacks by untrained Somali militias against US peace-keeping forces by using the urban terrain to their utmost advantage. We have already seen how the Afghan insurgents have limited access to sophisticated weapons in comparison to the Afghan War of the 1980s. The Taliban movement, mainly composed of seminary students, is only now being trained to fight an insurgency against a foreign occupying force after mainly fighting linear battles against rival militias during the 1990s. Unlike the decentralised nature of the command and control in Iraq where different insurgent groups and cells operated in their respective locations, making swarms more effective, the command and control of the Afghan Taliban is more centralised in nature. On the other hand, the logistics systems and weapons depots of the Taliban resembled those of the Iraqi insurgents. Weapons and ammunition would be stored beforehand in different areas and the insurgents would infiltrate the region later without carrying weapons and using the main roads. This was unlike the Mujahideen of the 1980s. The Taliban depended on a thick network of small bases, where heavier weaponry such as heavy machine guns, recoilless rifles, and mortars as well as ammunition would be stored, allowing the fighters to move around without cumbersome equipment and maintain a high degree of mobility.⁴⁷ This could have been done to evade US and

46. Zaki Chehab, *Iraq Ablaze: Inside the Insurgency* (London: I.B. Tauris & Co. Ltd., 2006), p. 57; Peter W. Galbraith, *The End of Iraq: How American Incompetence Created a War Without End* (London: Simon & Schuster Ltd., 2006), p. 180.

47. Giustozzi, n. 13, p. 101.

NATO detection capabilities which are more advanced than those of the Soviets rather than a plan to fight an insurgency in a more decentralised fashion.

This does not mean that swarming has not been used in the Afghan context. The Taliban and Al Qaeda fighters are described as having used swarming tactics against US forces in Shah-i-Kot valley in March 2002 during Operation Anaconda.⁴⁸ This could be possible because of Al Qaeda's close relations with Somali and Chechen insurgents and even limited participation in the respective insurgencies. It should be kept in mind that this was even before foreign *jihadi* fighters had gained experience in Iraq. Instead of conforming to American expectations that insurgents would flee the valley during battle, insurgent fighters kept flooding into the area.⁴⁹ Operation Anaconda was the last major battle which was fought together by the Taliban and Al Qaeda. The Taliban and Al Qaeda commanders and fighters who fled Shah-i-Kot valley, fled to different areas of Pakistan. While the Taliban fled to areas surrounding Quetta and other parts of Baluchistan, Al Qaeda sought shelter mainly in the South Waziristan and North Waziristan tribal agencies of FATA.⁵⁰

Al Qaeda developed close relations with the Pashtun tribes of FATA and also with the Haqqani network which was operating in southeast Afghanistan from the very areas where Al Qaeda had settled in FATA. The result was that the first swarm operations in Afghanistan were conducted in Kabul against the Afghan government and foreign installations by the Haqqani network which was soon followed by the Quetta Shura Taliban in other parts of Afghanistan. Even during the Afghan War of the 1980s, Haqqani was considered the most impressive battlefield commander by CIA officers in Islamabad. The CIA relied on Haqqani to experiment with new

48. Edwards, n. 1, p. 6.

49. Richard Kugler, *Operation Anaconda in Afghanistan: A Case Study of Adaptation Battle*, Case Studies in Defence Transformation, No. 5 (Centre for Technology and National Security Policy, National Defense University, Washington, 2007), p. 7, accessed from <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA463075> on January 2, 2011.

50. Anne Stenerson, "Al-Qaeda's Allies: Explaining the Relationship Between Al-Qaeda and Various Factions of the Taliban After 2001", *New America Foundation*, April 2010, Counterterrorism Strategy Initiative Policy Paper, p. 1, accessed from <http://counterterrorism.newamerica.net/sites/newamerica.net/files/policydocs/stenersen2.pdf> accessed on January 13, 2012.

tactics and weapon systems.⁵¹ The Haqqani network, as mentioned earlier, is more prone to using suicide attacks and terrorist strikes than the main Afghan Taliban movement. In most of these attacks, a group of attackers, armed with assault rifles, grenades and suicide bomber vests, blast their way into the installation through the main gate or side walls. The remaining fighters enter the building and fan out in different directions to inflict maximum casualties. The first of such spectacular attacks was conducted in 2008, after which the Taliban commanders, with close relations to Al Qaeda, conducted their own attacks in Kandahar, Zaranj, which is the capital of Nimroz province in southwest Afghanistan, and other locations. In later attacks, more than one target was attacked simultaneously by separate groups of attackers.

Swarming, as it is used in Afghanistan, has not been exploited to its utmost advantage as most of the targets are fixed or stationary and not mobile like the units of the US/NATO troops. But used as a part of terrorist attacks, it has helped in creating maximum impact and drawing international attention to the war in Afghanistan. Many high-profile terrorist attacks in Afghanistan are conducted using suicide-car bomb blasts not involving swarm type attacks by armed insurgents. The main campaign in Afghanistan continues to be fought by the insurgents using guerrilla tactics though this can change as the Afghan Taliban gain more experience and receive better help from foreign militants of Al Qaeda and Pakistani militant groups like the Lashkar-e-Tayyeba. In some ways, the cooperation between the Afghan insurgents and foreign Islamist *jihadis* can be seen as a symbiotic relationship. The Afghan War of the 1980s provided the first opportunity for radical Islamists from different parts of the Islamic world to establish relations with each other and establish extremist organisations at the national and transnational levels. Presently, the skills that these fighters have learnt in different conflicts are being passed on to the Afghans and it can be expected that military swarming will also be used more commonly in the future.

51. Jones, n. 41, p. 104; Ruttig, n. 26, p. 73.

SELF-RELIANCE AND SYNERGY IN AEROSPACE SECTOR: THE ROAD AHEAD

S.N. MISRA

India is the second major military spender on acquisitions globally¹ (around \$ 13 billion annually) and the growth in the acquisition budget over the last ten years is significantly higher than the growth in both central government expenditure and defence expenditure. The aerospace sector accounts for 50 percent of our modernisation budget. Though we have acquired substantial military manufacturing capability in the aero sector through technology transfer during (1963-2006), we are still critically dependent on imports for aircraft and their propulsion, sensors and weapon systems, with weak synergy between the design agencies and production houses, and an unedifying record in terms of design capability of fighters and transport aircraft and engines.

This paper seeks to provide an indication of the gaps in critical technology that is contributing to our low Self-Reliance Index (SRI) (around 30 percent) and tries to provide a roadmap in terms of policy and partnerships to improve military industry capability and self-reliance.

Shri **S. N. Mishra** is former Joint Secretary, Aerospace, Ministry of Defence, Government of India.

1. *SIPRI Yearbook* 2010.

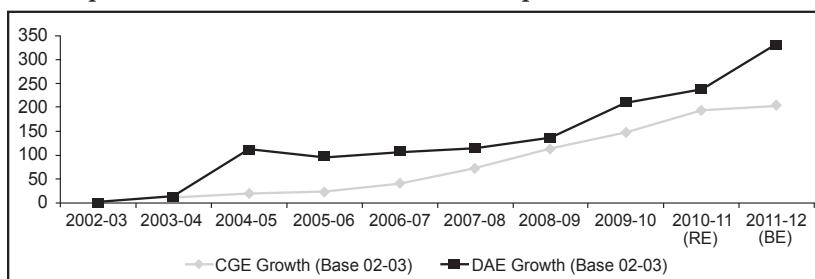
MILITARY MALTHUSIASM

The increased focus on modernisation of the defence forces is evident from the faster increase in the acquisition budget in comparison to total Central Government Expenditure (CGE). Between 2002-03 and 2011-12, the acquisition budget has been increased by nearly 330 percent, in comparison to 203 percent growth for CGE—a phenomenon known as ‘Military Malthusiasm’ where increase in acquisition outstrips increase in CGE. In terms of inter-Service escalation in annual acquisition of platforms and systems, the aerospace systems and products are likely to be of the order of 30 percent, far outstripping the expected annual escalation of the Navy (20 percent) and Army (15 percent).

Table 1: Trend of CGE & Defence Acquisition (in Rs. crore)

Year	CGE	CGE Growth (Base 02-03)	Defence Acquisition Expenditure	DAE Growth (Base 02-03)
2002-03	4,14,162	0	12,939	0
2003-04	4,71,368	13.81	14,584	12.71
2004-05	4,97,682	20.17	27,209	110.29
2005-06	5,06,123	22.20	25,491	97.01
2006-07	5,83,387	40.86	26,900.44	107.90
2007-08	7,12,671	72.08	27,903.42	115.65
2008-09	8,83,956	113.43	30,614.64	136.61
2009-10	10,24,487	147.36	40,367.72	211.98
2010-11 (RE)	12,16,576	193.74	43,799.21	238.51
2011-12 (BE)	12,57,729	203.68	55,604	329.74

Graph 1: Trend of CGE & Defence Acquisition (in Rs. crore)

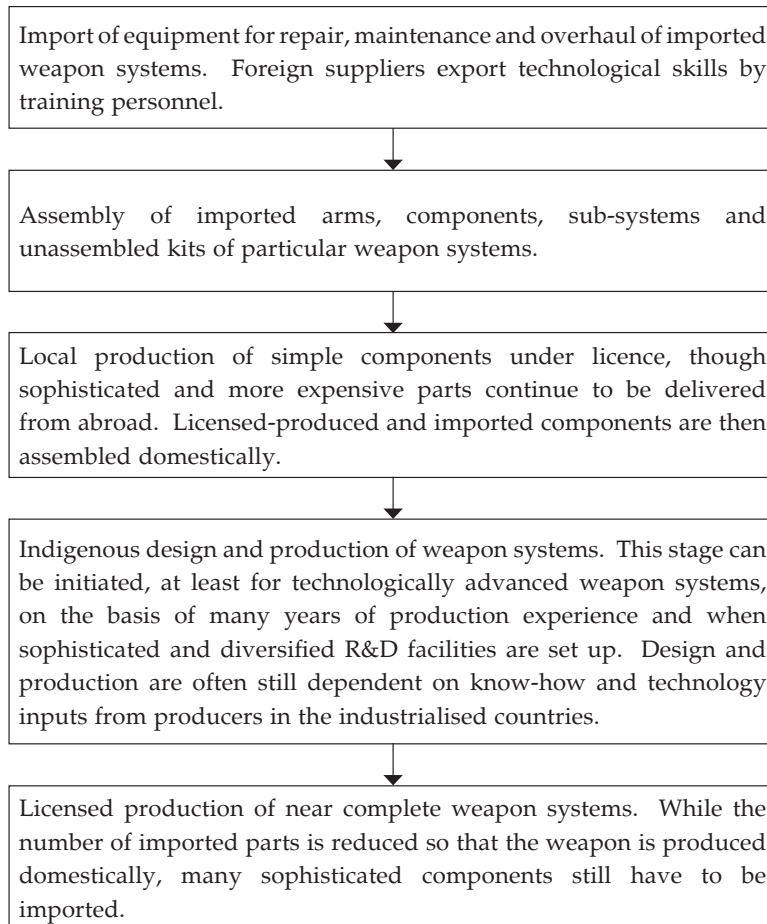


Source: Prepared by the author, based on budget papers and Defence Services Estimates.

INDIGENOUS DESIGN AND PRODUCTION OF AIRCRAFT AND WEAPON SYSTEMS

Herbert Wulf, while examining defence industrialisation in the developing countries, mentions five major stages that they have to traverse. As shown in Table 2 below, the process proceeds from off-the-the shelf purchase to co-production to licensed production and, finally, indigenous design and production of weapon systems.

Table 2 : Stages of Defence Industrialisation²



2. Herbert Wulf, "Arms Production in the Third World", in *SIPRI Yearbook 1985* (Oxford: Oxford University Press, 1985), p. 330.

India's Defence Industrial Base (DIB) has gradually progressed from stage 1 to stages 2 and 3, with the assembly of armoured vehicles and local production of certain automotive and aerospace components. However, the country's defence industrial capability is limited in stage 4 and almost non-existent in stage 5 i.e. complete indigenous design and production of weapons. The two substantially indigenous platforms viz Light Combat Aircraft (LCA) and Main Battle Tank (MBT) are, however, dependent on imports for their propulsion systems and weapons.

The areas in which there are critical gaps in technology are as given in Table 3 below:

Table 3: Critical Technology Gaps³

Sr. No.	Systems	Gaps
1.	Gas Turbine Engine	Single crystal and special coating in turbine blades FADEC
2.	Missile	Uncooled FPA seekers
3.	Aeronautics	Smart aerostructures Stealth technology
4.	Material	Nano material, carbon fibres
5.	Sensors	AESA, radar, RLG, INGPS
6.	Communication	Software defined radio
7.	Avionics	Gen III, II Tubes
8.	Surveillance	UAVs, satellites
9.	Weapons	Air-to-air missiles, ATGM

The major technologies in defence platforms are the **seeker, Focal Plane Array (FPA), Active Electronically Scanned Radar (AESR), Ring Laser Gyro (RLG), stealth technology, seekers and single crystal blade, and they cut across the requirement of all the Services.**

A brief overview of each technology is given below.

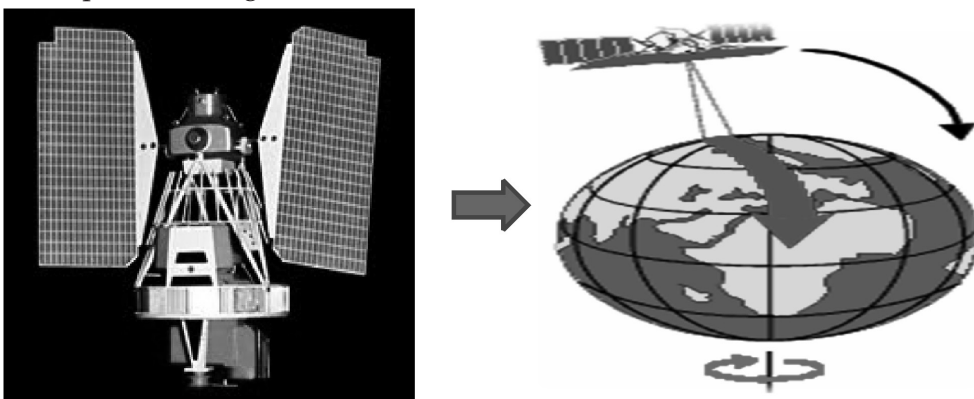
3. Based on discussions with DRDO scientists.

Focal Plane Array (FPA)

Focal Plane Arrays (FPA) are detectors which consist of a linear or two-dimensional matrix of individual elements. They are used at the focus of imaging systems e.g. satellite imagery, etc.

FPA's are used in astronomical imaging, aerial reconnaissance, aerial mapping, spectrographic analysis, star tracking, machine vision, X-ray diffraction and measurement applications. They can be visible, near Infrared (IR), mid IR and far IR. The linear array consists of a single line of pixels and the area array consists of rows and columns of pixels.

A pictorial diagram of the FPA is as under:



AESA Radar

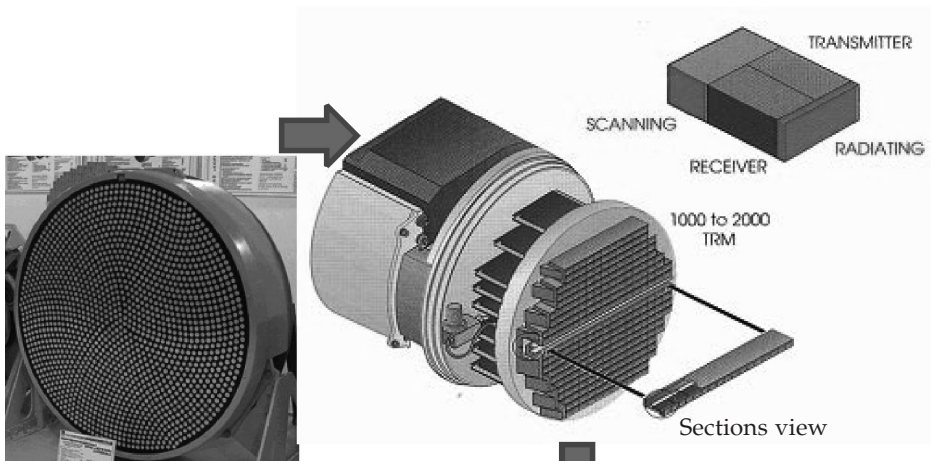
The AESA radar is a type of phased array radar whose transmitter and receiver functions are composed of a number small solid state TR (Transmit/Receive) modules.

AESAs aim their “beams” by broadcasting radio energy that interfere constructively at certain angles in front of the antenna. They improve on the older passive electronically scanned radars by spreading their broadcasts out across a band of frequencies, which makes it very difficult to detect over background noise. AESAs allow ships and aircraft to broadcast powerful radar signals while still remaining stealthy.

The advantages of AESA radars are low probability of intercept, high jamming resistance, replacing a mechanically scanned array with a fixed AESA mount which can help reduce an aircraft’s overall Radar Cross-Section (RCS).

Presently, Northrop Grumman/Raytheon use it for the F-22 Raptor, Falcon F-35.

A pictorial diagram of an AESA radar is given below.



Assembled AESA Elements

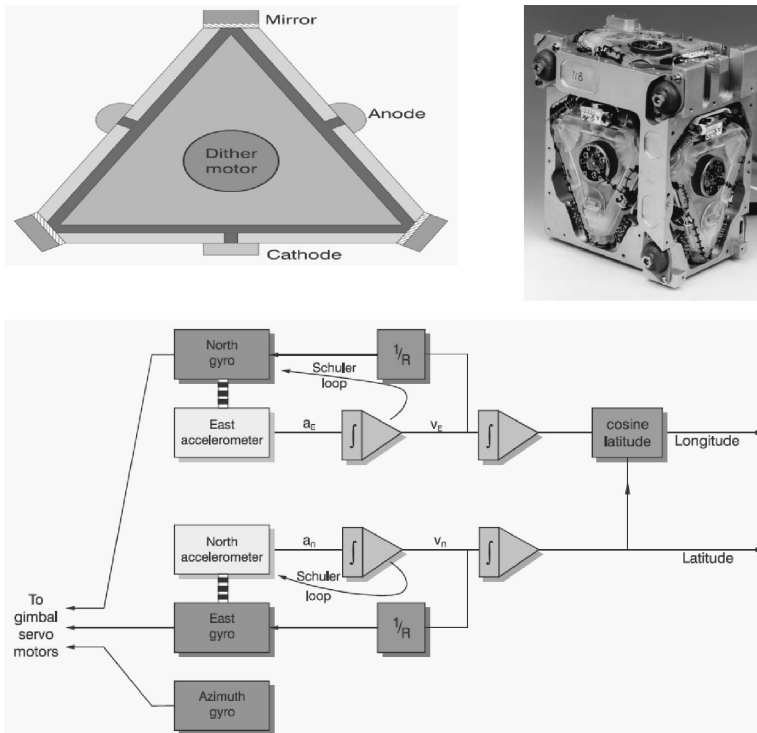


Unmovable Eye of Platform to cover more than 300 km in all weather conditions

Ring Laser Gyro

An RLG consists of a ring laser having two counter-propagating modes over the same path in order to detect rotation. It operates on the principle of the Sigma effect which shifts the nulls of the internal standing wave pattern in response to angular rotation. Interference between the counter propagating beams, observed externally, reflects shifts in that standing wave pattern, and, thus, rotation.

A schematic diagram is placed below.



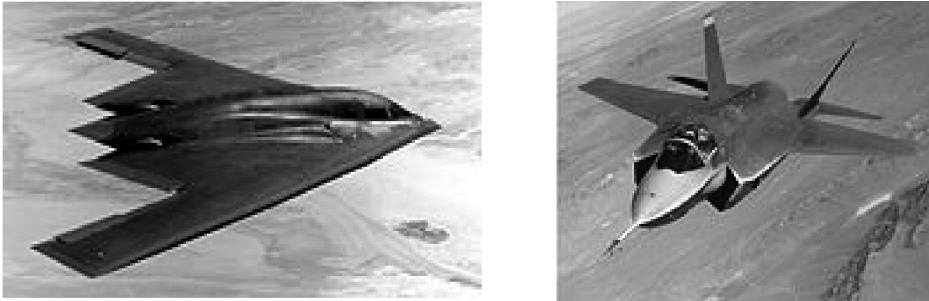
Stealth Technology

It enables an aircraft to be partially invisible to radar or IR signature. In simple terms, stealth technology allows an aircraft to be partially invisible to radar or any other means of detection. This doesn't allow the aircraft to be fully invisible on radar. Stealth technology cannot make the aircraft invisible to enemy or friendly radar. All it can do is reduce the detection range of an aircraft. This is similar to the camouflage tactics used by soldiers in jungle warfare.

The principle of reflection and absorption makes a vehicle "stealthy", deflecting the incoming radar waves into another direction and, thus, reducing the number of waves, which return to the radar. Another concept is to absorb the incoming radar waves totally and redirect the absorbed electromagnetic energy in another direction. Whatever may be the method used, the level of stealth a vehicle can achieve depends totally on the design and the substance it is made of. The technology used is reflected waves,

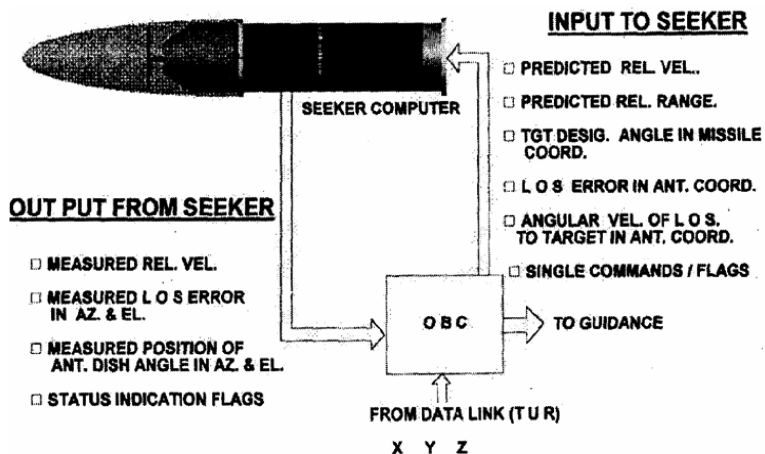
infrared (heat), wavelength match, Over-The-Horizon (OTH) radar and special coating.

Presently, the F-22 Raptor, F-35 are using this technology. This is also under development as the Fifth Generation Fighter Aircraft (FGFA) programme by India Sukhoi in collaboration with the Design Bureau.



Seeker Technology

Seekers are the eyes of the missiles which help in guiding them towards targets. A seeker has a transmitter, radome, antenna, stabilisation system, waveform design, receiver and signal processing unit. Seekers can be semi-active, active or passive. The type of seeker varies with the mode of operations which can be air-to-air, air-to-ground, ground-to-ground, and ground-to-air. It can be either X-band (monopulse), Scene Correlation Area Navigation (SCAN) and multi-spectral. The seeker operates with an onboard computer.



Single Crystal Blade Technology

In the late 1990s, single crystal blades were introduced in gas turbines. These blades offer additional, creep and fatigue benefits through the elimination of grain boundaries. The transverse creep and fatigue strength is increased, compared to equiaxed or Directionally Solidified (DS) structures. The advantage of single-crystal alloys (SX) compared to equiaxed and DS alloys in low-cycle fatigue life is increase by about 10 percent. In the case of the single crystal, a single grain occupies the whole component space. This casting process goes one step further by completely eliminating all weaker grain boundaries. In single-crystal material, all grain boundaries are eliminated from the material structure and a single crystal with controlled orientation is produced in an airfoil shape. By eliminating all grain boundaries and the associated grain boundary strengthening additives, a substantial increase in the melting point of the alloy can be achieved, thus, providing a corresponding increase in high-temperature strength. The transverse creep and fatigue strength is increased, compared to equiaxed or DS structures.

The advantage of single-crystal alloys compared to equiaxed and DS alloys in low-cycle fatigue (Lef) life is increase by about 10 percent. This process has made it possible to cast a complete turbine airfoil in a single crystal super alloy. SX turbine blades have been used as replacement for DS alloys for the past 20 years due to their higher creep strength and thermal and mechanical fatigue tolerance. Using the SX casting, the metal temperature can go up to 1,150°C and with Thermal Barrier Coating (TBC), the metal temperature can go up to 1,250°C.

ROADMAP FOR BOLSTERING INDIA'S DEFENCE AEROSPACE MANUFACTURING CAPABILITY

R&D Capability

For bolstering manufacturing capability in defence, the critical areas would be our R&D policy and design capability. Our weaknesses in core technology areas are clearly known. A coordinated effort needs to be made to bolster R&D

investment by both the private and public sector players and Defence Research and Development Organisation (DRDO) to at least 10 percent of their sales⁴. This will facilitate quicker absorption of high end technology.

The military spending on R&D of a few countries reveals a significant positive correlation between R&D spending and equipment capability. Dr. Rama Rao (2011)⁵ contends that private industry's share in R&D in India is only 23 percent, which is far below that of the advanced countries like France and the USA. The R&D spending of India, China and USA would show that while India spends less than 1 percent of Gross Domestic Product (GDP) on R&D, China and the USA spend around 2 and 3 percent respectively.

The following table would show the military R&D expenditure incurred by the developed countries and India (Table 4).

Table 4: Defence R&D Expenditure: Global Trend⁶ (\$ billion)

Countries	R&D Exp.	% to Total Mil Exp
USA	90	(14%)
RUSSIA	7	(11.5%)
FRANCE	6.1	(11%)
UK	4.7	(9%)
INDIA	2.0	(6%)

Further, Table 4 would show global leadership in terms of various parameters of R&D.

Table 5 : Global Leadership Against Various Parameters of R&D

Sl. No	Parameter	1 st	2 nd	3 rd	4 th
1.	R&D Exp % GDP	Israel	Sweden	Finland	France
2.	Skilled Labour	Denmark	Iceland	Israel	Austria
3.	Qualified Engineers	India	Finland	Israel	Japan

4. Recommendation of the Parliamentary Standing Committee on Defence (2009-10).

5. Seminar in the College of Defence Management, Hyderabad (January 2011).

6. Keith Hartley, "Defence R&D: Data Issues", *Defence and Peace Economics*, vol. 17, no. 3, June 2006, pp. 169-175.

4.	Technology Readiness	Israel	USA	Finland	Sweden
5.	Quality of Scientific Institution	USA	Sweden	Israel	Finland
6.	Utility Patents	USA	Japan	Taiwan	Israel

It would be seen from the above that the USA leads in terms of quality of scientific institutions, patents and technology readiness, while Israel is a frontrunner in terms of R&D expenditure. **Interestingly, India is the global leader in terms of qualified engineers.** However, to realise the preeminence enjoyed by countries like the USA, Israel and Finland, we must invest handsomely in R&D and improve the quality of our scientific institutions so that our technological readiness is at a higher level.

No single country can contend with the demand of R&D and high technology system development. Fusion energy and human genome development are, therefore, multi-country projects. Finland, a small country, which was largely a forest-based economy, has become a technology powerhouse by spending 1 percent of its GDP on R&D related production development of Nokia, and the results are there for all to see. In the area of design and development, the challenge would include multiple options like creation of a “National Technology Fund” to support the private sector and academia, joint R&D initiatives with reputed design houses abroad, setting up of design institutes and fostering national R&D, as countries like Israel and France have done.

India’s experience in the case of design and development of major programmes like the LCA and MBT clearly reveals our inadequacy to develop critical systems. The engine and radar for the LCA are sourced from the USA and Israel. The engine for the MBT is sourced from Germany. The FCS (Fire Control System), GCS (Gun Control System) and Night Vision Devices (NVDs) are sourced from abroad in the case of the MBT. National commitment to R&D, joint technology development and higher R&D investment by the private sector will be needed to bolster self-reliance in critical sub-systems.

India's experience in the case of design and development of major programmes like the LCA and MBT clearly reveals our inadequacy to develop critical systems.

A Defence Technology Fund should be created which will provide the funding needs of Defence Public Sector Units/Ordnance Factories (DPSUs/OFs) private sector, academia and lab(s). The recommendations of the Defence Production Policy (2011)⁷ must be operationalised early.

Concurrently, a **Defence Modernisation Fund** needs to be created in the Ministry of Defence to support the infrastructure and capacity build-up requirement of the DPSUs/OFs/private sector.

Such initiatives would particularly help the shipyards that are in acute need of modernisation and upgradation of facilities. Areas for investment in technologies are summed up in the table below (Table 6).

Table 6 : Areas for Investment in Technologies⁸

- Intelligence Terminal Guidance
- Supersonic and Hypersonic Propulsion
- Hydrodynamics
- Ceramic and Metal Matrix Material
- Sensors
- Lasers
- Radars for Stealth Detection
- Active Arrays
- Fibre Optics
- Heavy Particle Beams

Synergy Among Design Houses, Production Houses and Users

Air Cmde Jasjit Singh (Retd) brings out (2011)⁹ how the aerospace power of Russia is largely due to the design house being in charge of the production plants and ensuring realisation of technology. A committee under Subramaniam in the 1960s had also recommended, in the context

7. See Ministry of Defence website www.mod.nic.in.

8. Discussion with members of the Self-Reliance Committee (1993).

9. Jasjit Singh, *Indian Aircraft Industry* (New Delhi: Knowledge World, 2011).

of the gas turbine engine for the fighters, that the production agency should be in charge of design and development. Sadly, such recommendations merely gathered dust in the corridors of power. The Rama Rao Committee (2008) also made similar recommendations in the context of the design, development and production of the engine for the LCA.

The serious hiccups in the Kaveri gas turbine engine programme in the LCA are largely attributable to the lack of synergy between the engine designers in GTRE and the production agency (HAL) and lack of foresight to have a partnership with engine majors abroad. On the other hand, missile programmes like the Prithvi have seen success due to proper synergy between DRDL, the development agency, and BDL, the production agency.

Though the issue of putting the design agency under a production agency is a sensitive policy issue, it has to be addressed, and single point accountability brought in. Given the plethora of aircraft programmes in the pipeline like the MLH, FGFA, MRTA, MCA, RTA and SARAS, it is high time that all the aerospace sector related laboratories like GTRE, LRDE, DARE, ADE, NAL and ADA and production agencies like HAL are brought together under one umbrella/agency, with overall accountability in terms of major deliverables.

The government has to play a pivotal role in bringing to the table each major stakeholder viz. the Ministry of Defence (MoD), Services, DPSUs/OFs, DRDO, private sector and Original Equipment Manufacturers (OEMs) and Ministry of Civil Aviation that have a tendency to indulge in the blame game. Achievement of self-reliance in design, development and production of major sub-systems and platforms has to be a concerted national effort.

The government has to play a pivotal role in bringing to the table each major stakeholder viz. the Ministry of Defence (MoD), Services, DPSUs/OFs, DRDO, private sector and Original Equipment Manufacturers (OEMs) and Ministry of Civil Aviation.

FDI Policy and Technology Transfer

There is an urgent need to review the Foreign Direct Investment (FDI) policy in defence and upscale it to at least 50 percent from the present cap of 26 percent. Successful Joint Venture (JV) models like the Brahmos buttress such suggestions. It would be interesting to recount China's experience with a liberal FDI policy. FDI moved into China in a big way from the early 1990s (\$5.5 billion to \$67.3 billion by 2007) and has been directed towards manufacturing, providing capital and technology and skills.

Some of the FDI has been centred on high technology operations such as semi-conductors, telecommunication, optic fibres, Information Technology (IT) and aviation. FDI has been viewed as far more important than portfolio capital, venture capital or commercial bank finance.

At the heart of policy efforts to promote FDIs were the Special Economic Zones (SEZs) which provided an open economic environment conducive to business. Intellectual Property Rights (IPR) projections remain a challenge, but World Trade Organisation (WTO) membership ensures that the authorities are committed to strengthening measures to protect IPR.

Hand in hand with such liberalisation has been the changing structure of FDI – i.e. moving from contractual JV operations to joint development projects to equity joint ventures providing a template for long-term relationships/partnerships. This has encouraged greater access to foreign technology. With more market-based structures, the policies have promoted FDI in wholly owned subsidiaries of foreign corporations.

The downside of FDI is that the foreign enterprise exploits the host economy's markets, promoting little in the way of skilled labour and sub-contractor's value.

China joined the WTO in 2001, by embracing globalisation. Since then, it has attracted a cumulative \$ 400 billion in FDI of which 51 percent is in manufacturing, followed by real estate (21 percent). Currently, China accounts for 8.4 percent of total manufacturing and has concentrated on export oriented manufacture. Its share in global exports has increased from 3.9 percent in 2000 to 9.7 percent (\$ 1,202 billion) as against only 1.4 percent by India.

Similarly, technology transfer has to be part of the offset policy and suitable multipliers applied to key technology. Dual use technology in areas like cryptology, robotics, artificial intelligence, sensors, nano technology, and strategic defence electronics should be our thrust areas. There should be a single point agency to monitor inflow of new desirable technologies and an appropriate mechanism put in place to check the quality and value of the technology being transferred.

It would be useful to look at the successful technology transfer experience in the case of the Embraer aircraft and Agusta Westland helicopter, as given in Tables 7 and 8 below.

Table 7: Successful Technology Transfer: Embraer Aircraft¹⁰

- | |
|--|
| <ul style="list-style-type: none"> ● Formation of Embraer as an aircraft manufacturer (1969) ● Licence for the Aermachhi, Italy-produced Xavarite Armed Trainer (1971) ● Licence from Piper, USA production of Seneca Light Planes, EMB 312 (1978) ● Government encouraged JVs between overseas arms companies and local companies and technology transfer. ● Strong foundation on R&D <ul style="list-style-type: none"> ○ Financial support for R&D ○ Recruitment of research staff of aviation technology centre ○ Tax for companies buying Embraer’s shares ● Encourage civilian industrial base |
|--|

Table 8: Successful Technology Transfer : Agusta Westland Helicopter¹¹

- | |
|--|
| <ul style="list-style-type: none"> ● Licence to build the S-51 helicopter (Westland Dragon Fly) in the UK (1947) ● Further licence to build the S-61 (Seaking) (1959) ● Sold to the UK armed forces and substantial exports ● Company build D&D capability in helicopters (1967) ● Three types of helicopter developed ● Became equal partner with Agusta (Italy) EH 101 Merlin Helicopter ● Westland selected to build Boeing Apache helicopter (1995) ● Collaborated with Rolls Royce for the engine ● Agusta Westland merged – presently world class helicopter company |
|--|

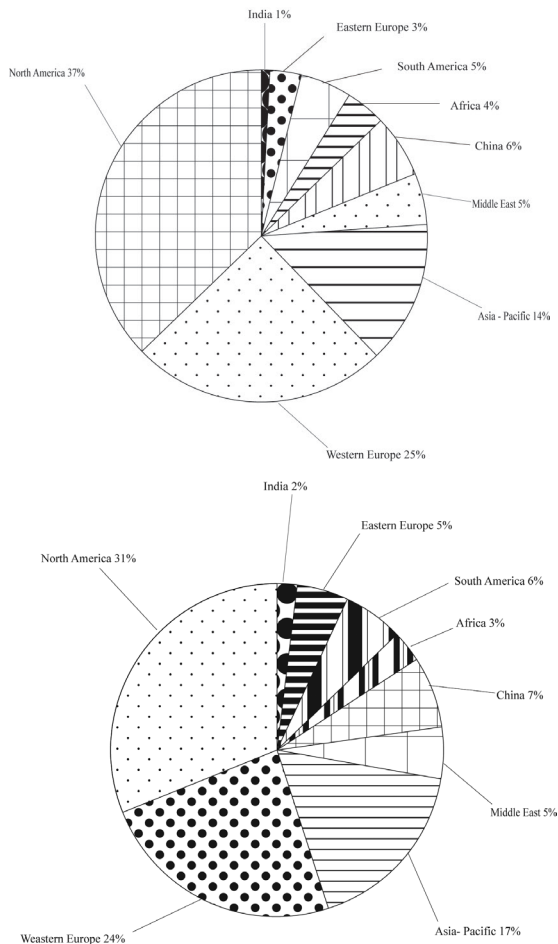
10. Sam-Perlo Freeman, “Offset and Development of Brazilian Arms Industry”, 2004.

11. Table prepared by the author, based of the study on effect of offsets on development of EDA and market, 2007.

Providing Capability to Maintain, Repair And Overhaul

The Kelkar Committee (2005)¹² had identified acquisition of deposit maintenance technology as a thrust area. Maintenance, Repair and Overhaul (MRO) constitutes a \$40 billion global market. More is spent by an organisation on MRO than on manufacturing. It is critical for facilitating life-cycle extension of an existing fleet and keeping operational costs in check.

The market is currently dominated by North America and this trend is likely to continue in the near future, though with a smaller market share.



Source: The Global MRO Forecast A Look Forward, 2007-17.

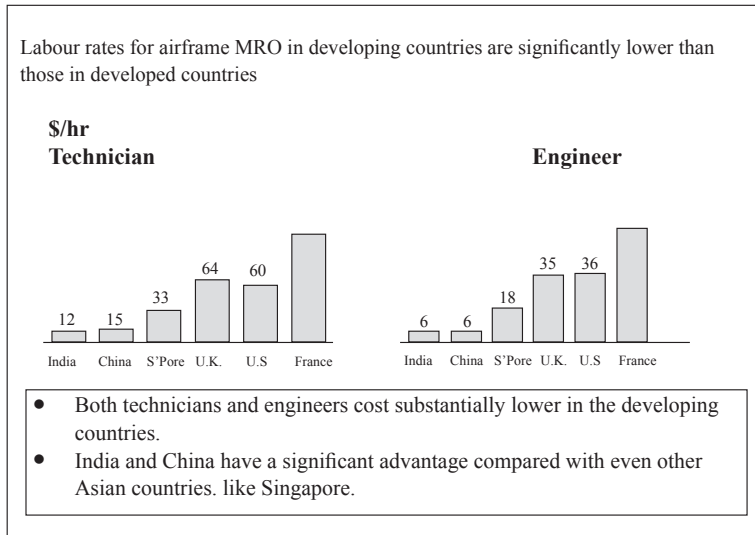
12. Towards Strengthening Self-Reliance in Defence Preparedness, April 2005.

There are four key factors for building a successful airframe MRO business:

1.	Significant technical capability	<ul style="list-style-type: none"> • Significant technical expertise is needed to get the certifications required for setting up an airframe MRO • Turnaround time is the most important criterion used by airlines for selecting an airframe MRO service provider and it depends on technical expertise.
2.	Robust talent pipeline	<ul style="list-style-type: none"> • Airframe MRO demands a strong pipeline of skilled manpower. • This industry is characterised by high attrition* rates as a result of a globally mobile workforce.
3.	Sustainable cost advantage	<ul style="list-style-type: none"> • Airframe MRO is a relatively commoditised business and, therefore, having enduring cost competitiveness, is the key to attracting and retaining customers.
4.	Assured baseload	<ul style="list-style-type: none"> • Non-sticky customers and high fixed costs make locked-in demand essential to de-risk the business.
<p>* High attrition is a phenomenon witnessed only in the developing countries, with dynamic labour markets; in the developed countries, it is often a career choice and attrition rates are low</p>		

Globally, labour accounts for 70 percent of the cost of airframe MRO and countries like India have a substantial cost advantage in terms of labour rates, despite lower productivity (around 50 percent) compared to the Western countries.

Fig 1: Cost Advantage in MRO for India



Sources: Watson Wyatt, Global Remuneration Planning Report, growth adjusted (2004); U.S. Social Security Administration; expert interviews

The offset policy introduced in 2005 by Malaysia has facilitated development of local maintenance, repair and overhaul capacity. Out of the offset contracts concluded so far, there are three contracts viz. MiG-29 upgrade and VVIP helicopters and Globemaster where HAL and other private sector players will benefit in terms of MRO capability.

The position is as under:

Table 9: Offset Credit for MRO

	Acquisition	Contract Value	MRO Credit
1.	Upgrade of MiG-29	3,856 crore	235 crore
2.	Medium refit helicopter	5,600 crore	585 crore
3.	VVIP helicopter	4,227 crore	1,268 crore

Source: Collected by author from DOFA, MoD.

This will ensure that for periodic repair and overhaul of aircraft, India does not have to go to OEMs and would be able to do ROH in a cost effective manner. HAL can be a frontrunner in acquiring such technology

as it has done for ROH for MiG services, aircraft and engines. There is a huge opportunity for MRO for both the civil and military aircraft as they have to be overhauled at least four times during their life-time.

Public-Private Sector Partnerships

Public-private partnerships would need to be consciously nurtured. It has been a very successful model in the national highway programme. Partnerships between HAL and Tatas for aero-structures and Unmanned Aerial Vehicles (UAVs), OFs with Mahindra and Mahindra for the FICV, 155 mm guns, MDL and GRSE with Pipavav, L&T and ABG for patrolling vessels, and frigates should be forged.

To fill in the capability gaps, suitable OEMs should be identified for JV arrangements for both design and development and manufacturing. The government must encourage and enable creation of Tier I and Tier 2 companies in the country. In critical areas such as flight controls, landing gears, composites, support for formation of JVs with established industrial players in Europe and North America would be extremely beneficial.

In the field of aviation, these facilities are expensive and would need regular calibration, upkeep and upgradation. Most of the Small and Medium Enterprises (SMEs) cannot afford to own these facilities in-house. It is suggested that these costly facilities are established through government funding but managed on the GOCO (Government Owned Company Operated) principle and made available for industry's use. These test facilities should be approved not only by internal agencies such as CEMILAC/DGAQA/DGQA but also by major outside OEMs such as Boeing/Airbus and certification agencies such as FAA/EASA. Availability of certified facilities will help the industry to provide fully tested products to the indenting agencies in India and abroad, enhancing the value of the products supplied and reducing the time cycle for delivery.

A number of Indian engineering service providers have undertaken design and engineering services for manufacture of components. Most of the sub-contractors were SMEs. Big industries such as L&T and Godrej have participated but purely as sub-contractors. In the sphere of aviation

China is targeting itself as a major supplier of wings, landing gear and composite structures and is a first tier supplier of fuselage sections.

in India, there are no Tier 1 and Tier 2 companies with adequate strength in design, development and manufacture, and willingness to be risk sharing partners. Industries such as TCS, HCL, Infosys, Wipro, and Mahindra Satyam have entered the engineering services domain in the last one decade and have done engineering tasks for OEMs/Tier 1/Tier 2 manufacturers of Europe and North America. These companies, along with their sister companies, are trying to enter the engineering and manufacturing domains to meet the changing requirements of customers who are now demanding not only design and engineering services but also manufactured parts. However, their experience, expertise, systems and processes are inadequate.

The SMEs have experience of manufacturing mechanical, structural components, electrical looms/connectors/LRUs to a specified drawing. As regards avionics equipment, a few of the industries have developed the capability to develop equipment to a given specification. None of these industries have heat treatment/other process facilities and are dependent on OEMs for these facilities. Similar partnerships are possible in the shipbuilding sector and defence electronics also.

Partnerships Between Public Sector Entities

The DPSUs, despite enormous complementarities in their production capability, rarely synergise. For instance, HAL and BEL can be very effective partners in the areas of communication, defence electronics visual display devices, radars, software defined radio. Synthetic aperture radars and various payloads like the FLIR for UAVs and the airframe for UAVs and integration thereof can be excellent areas of cooperation among HAL, BEL, DRDO and OEMs. Presently, we are dependent on M/s IAI, Israel, for all our requirements of UAVs by the three Services.

Similarly, Mishra Dhatu Nigam (MIDHANI) can be a major source of supply for super alloys like titanium steel which can be used for engine components manufactured by HAL, as MIDHANI has already absorbed

the technology successfully from Russia. Ironically, these components are being sourced from Russia. MIDHANI's capacity can be ramped up which will reduce the import dependence of HAL substantially.

Joint Ventures and Joint Technology Development

Given the enormous gaps in indigenous manufacturing of major systems and design capability gap vis-à-vis reputed global majors, the most viable option to leapfrog is not by reinventing the wheel but by forging partnerships with global companies. Brahmos, in which we have a 50: 50 JV partnership with Russia for manufacturing cruise missiles, is a major success story. There are major partnerships in the offing with Russia for the design, development and production of a stealth and transport aircraft. With the French also, such co-development arrangements are in the pipeline for short range and medium range missiles. However, the process of selecting the OEM/design house as a partner should be through a process of due diligence.

China is targeting itself as a major supplier of wings, landing gear and composite structures and is a first tier supplier of fuselage sections. In comparison, India's exports are limited to the supply of doors to Airbus, wiring harnesses, uplock boxes and detailed engineering drawings. In order to graduate to a higher level of presence in global aerospace, China's aviation major Aviation Industry of China-I (AVIC-1) is having an alliance with Bombardier on the ARJ 21 and with Airbus for the final assembly of the A320. Similarly, though Russia has considerable design and production capability of fighter and transport aircraft, its major design house, NPO-Saturn, is having a JV with France's Safran for building an engine for the regional jet (SAM 146) in competition with GE. These are major lessons for India's aviation majors like HAL that are engaged in export of small items like doors, wiring harnesses and uplock boxes.

NATIONAL MANUFACTURING POLICY AND MILITARY INDUSTRY CAPABILITY

The following recommendations were made by the Prime Minister's (PM's) group (2008)¹³ on the growth of the Indian manufacturing sector.

- Promote competitiveness
- Domestic value addition as a core endeavour
- Private sector main driver of manufacturing growth.
- FDI policy to encourage development of domestic technological capability for long-term growth.
- Priority treatment to be given to strategic manufacturing sectors viz. aerospace, shipbuilding, IT and electronic hardware, capital goods and solar energy.
- Create Technology Acquisition Fund for use by SMEs.
- Identify technology from general technological development and strategic view-point.
- Identify specific areas of technology where FDI should be attracted, including Transfer of Technology (TOT). It should be designed to leverage the huge domestic market available for foreign companies.
- Offset policy should mandate technology transfer in addition to manufacturing.
- Create strong industry-science linkage to facilitate commercialisation of scientific advancement.
- Establish linkage with technologically advanced countries through trade and investment to pass on the benefits of innovation, upgradation.
- Invest heavily in research in future technologies like nano manufacturing, solar and hydrogen technologies and intelligent manufacturing technologies.

There is an urgent need to dovetail the military industry capacity and capability with national manufacturing policy. Though the share of the manufacturing sector in the Gross Domestic Product (GDP) has gone up in India from 15 percent in 1950-51 to 26 percent now, it is still substantially lower than in countries like China (40 percent), which has become a global manufacturing hub for consumer goods, aerospace and shipbuilding.

13. Measures for Ensuring Sustained Growth for Indian Manufacturing Sector, September, 2008.

The share of different sectors since the First Plan is as under:

Table 10: GDP Share : Major Sectors¹⁴

	Agriculture	Industry	Services
1950-51	56	15	29
1990-91	33	25	42
2009-10	17	26	57

China's substantive manufacturing capability and cost-effectiveness have ensured a substantial share in exports globally (9.7 percent) as against India, whose share is 1.3 percent only. Redeemingly, the new manufacturing policy (2011) seeks to increase the share of manufacturing in GDP to 35 percent and create 100 million new jobs by 2022. This is a welcome development. The defence industry capability plan must be a sub-set of the national manufacturing plan as they are closely interlinked. Many sectors like aerospace, shipbuilding, electronics, avionics, and telecom have a lot of commonality in terms of components, material used and sub-systems. The offset policy, by including all these sectors, can have a significant impact for such capability build-up.

As a definite step during the 12th Plan (2012–17), if our import content is reduced to 60 percent i.e. a modest reduction of 10 percent from the present level, additional indigenisation procurement would be to the tune of about \$ 2 billion and create an additional employment opportunity of 1.3 lakhs every year, as per the table given below.

Table 11: Impact of Reduction in Imports on Domestic Defence Production and Employment¹⁵

Year	Acq. Budget (Rs. crore.)	Import Content (% to Acq)	Indigenous Procurement (% to Acq)	Addl. Indigenous Procurement (Rs. crore)	Addl. Employment
2011-12	46,000	32,200 cr (70%)	13,800 cr. (30%)	-	-

14. *Statistical Outline of India 2009-10 Tata Services Ltd.*, Department of Economics and Statistics

15. Based on calculation by the author, from inputs from Indian industry associations.

2012-13	53,000	34,450 cr. (65%)	18,550 cr. (35%)	2,550	36,000
2013-14	60,950	39,617 cr. (65%)	21,332 cr. (35%)	3000 .	43,000
2014-15	70,092	42,055 cr. (60%)	28,036 (40%)	7036	98,000
2015-16	80,606	48,363 (60%)	32,242 (40%)	8242	1,20,000
2016-17	92,697	55,618 (60%)	3,70,788 (40%)	10,000	1,30,000

Some of the policy issues that also need to be addressed are licensing, export and removing the protectionist bias towards DPSUs/OFs.

(a) Rationalising Licensing Requirement

The present process for issuing an industrial licence is complicated and does not give any advantage to effectively assess the suitability of an individual company for meeting the technical requirements of the products of an overseas buyer company. It is only after multiple on-site assessments by the specialists that an overseas company approves an Indian firm as a potential candidate for receiving outsourced work for offsets. Since it is the responsibility of the overseas company to pick up the right partners who have adequate means to produce items for export as defence offsets, the responsibility is more on them to select suitable and capable partners.

At present, the MoD maintains a list of licensed companies for offsets. Many of the overseas representatives feel that it is misleading, limiting and lacking in clarity. Further the Industrial Licensing Policy does not have any clear definition of defence equipment. Industrial licensing requires a National Industrial Class (NIC) code but it has no specific entries in defence equipment, thereby necessitating clarifications from the Ministry of Defence, with inherent delays. Companies engaged in IT require industrial licences and are subject to an FDI cap of 26 percent. This is not only retrogressive but discriminatory. The industrial licence granted under the IDI Act, 1956, applies to manufacturing and not to services like IT: 100 percent FDI on the automatic approval route is available to IT which has made it a global powerhouse. The licensing requirement for IT products and 26 percent FDI

cap for IT companies will seriously hamstring the IT sector. The Department of Defence Production has circulated a list of dual use products. This will roll back liberalisation as it seeks to reintroduce the Licence Raj. Ironically, it includes items like uniforms, ready to eat foods, etc. instead of including items based on lethality.

(b) Export Policy

While the offset policy envisages a surge in defence exports, the export policy for defence goods is mired in red tape, and is cleared on a case to case basis. There is no clarity about which products and to which countries are restricted. This anomaly would need to be resolved. The Kelkar Committee (2005) had also called for a relook into the negative list maintained by the Ministry of External Affairs (MEA) and evolving a product strategy for exports. India's products like the Advanced Light Helicopter (ALH), Brahmos and small arms have immense export potential and must be actively pursued with countries that are on the look-out for cost-effective exports.

(c) Removing Protectionist Bias Towards DPSUS/OFs

The present arrangement of the Department of Defence Production (DDP) overseeing the interests of both public and private sector entities is flawed as there is a built in bias to protect the interests of the DPSUs/OFs to ensure their capacity utilisation. This is often at the cost of economy, quality and timely delivery. It has been amply demonstrated in the case of patrol vessels that an upcoming shipyard like Pipavav sells deliverables at a much lower rate, given an opportunity to compete, which DPP-2011 now provides.

The infant industry argument would no longer hold water for DPSUs/OFs and they would need to be time-compliant and cost-effective. In many cases, they can be Tier I partners to the DPSUs/OFs. For low technology items like clothing and shoes, there appears to be no justification to carry on with the present arrangement of producing them through the OFs. Also

The MoD maintains a list of licensed companies for offsets. Many of the overseas representatives feel that it is misleading, limiting and lacking in clarity.

The present arrangement of the Department of Defence Production (DDP) overseeing the interests of both public and private sector entities is flawed as there is a built in bias to protect the interests of the DPSUs/OFs to ensure their capacity utilisation.

in the 'B' vehicle segments' continuation with the existing arrangement of VFJ without much value addition does not make any sense. The Nair Committee (2000) had strongly recommended privatisation of these items to ensure quality, cost-effectiveness and timely delivery. There is a strong case for greater private industry participation in the categorisation mechanism of the Ministry of Defence. This is a long standing demand by various industry associations.

CONCLUDING THOUGHTS

There are no easy shortcuts to fill up capability gaps in design and manufacturing of aircraft and their systems. In an oligarchic market, with a handful of design houses, and IPR hiccups, governmental policy and mentoring would be critical for fostering joint technology partnerships, joint ventures in manufacturing and public-public and public-private partnerships. All stakeholders, including the private sector, must upscale their R&D allocation substantially as technology transfer of key systems will be hard to come by.

Liberalisation in defence is still mired in prevarication and red tapism. Both in terms of policy facilitation and implementation, we need to take a leaf out of Brazil's successful tryst with Embraer Aircraft and China's preeminence in the manufacturing sector. The temples of modern India viz, the Indian industry, must rise to this challenge in a globally networked environment.

AIR DOMINANCE OVER THE OCEANS

JASJIT SINGH

Air power has acquired a significantly increased salience over the past century. However, its impact against surface targets, both on land and at sea, had been far less than in air-to-air warfare because of the inaccuracies involved, requiring area attacks even when the sighting systems had improved. This was one reason why strategic bombing had become necessary with the “thousand bomber” raids and area targeting during World War II. Notwithstanding this limitation, naval air power played a critical role in shaping the outcome towards victory during crucial battles like at Pearl Harbour, Battle of the Midway, etc. Looking at the macro-trends, especially in future weapons and sensor technologies, it is obvious that air dominance – in both air-to-air as well as air-to-surface warfare – would play a strategically dominant role, making the difference between victory and defeat on land and the oceans.

It is not surprising, therefore, that China has launched the first of its many planned aircraft carriers and specifies its strategy for winning future local border wars through (i) command of the sea; (ii) command of the air; and (iii) strategic counter-strike—the three interlinked capabilities of future wars. It is interesting that the term “command of the air” has been used by China in the official declaration of its doctrine, while the term was last used by Douhet in 1923 and even the US Air Force (USAF) does not lay claim to such capability. On the other hand, we need to note that all

Air Commodore **Jasjit Singh** is the Director, Centre for Air Power Studies, New Delhi.

Air power, by its very nature, is capable of exercising strategic effect. Since it operates in the medium of air and space, it has an intrinsic capability to influence and even control the movement and capabilities of surface forces.

three components form a composite approach to war-fighting which would have a unique impact on air and (conventionally armed) missile power in the coming years, especially in terms of the effect of these capabilities in future wars in the maritime environment. But more of it later.

LOOKING BACK TO SEE THE FUTURE

Air power, by its very nature, is capable of exercising strategic effect. Since it operates in the medium of air and space, it has an intrinsic capability to influence, and even control, the movement and capabilities of surface forces, whether on land or at sea, while they, in turn, have only a limited capability to influence, leave alone control, air operations except in a narrow area of terminal point defences limited in height. Inevitably, aerospace power is highly technology intensive. Hence, with the exponential advances in aviation and space technology in recent years, it was inevitable that the capacity and capabilities of air power to achieve strategic effect on surface forces would also correspondingly increase. This places it in a crucial niche among the armed forces of every country that can afford modern air power.

But before looking at some of the essential issues of air power in the maritime milieu, it would be useful to briefly look at the role and effect of naval aviation in operations in the past, which, I am sure, naval aviators are fully aware of. The war in the Pacific started with the Japanese surprise air strike on Pearl Harbour that sank most of the US' capital ships, except for the aircraft carriers which were away on an exercise and, hence, survived to fight back later. The Japanese possessed a much stronger naval force than the Allied combined strength in the Pacific and Indian Oceans. But they realised that US industrial strength would tilt the balance against them. Their 3-phase plan was to (i) neutralise the US Pacific Fleet through a surprise attack; (ii) simultaneously seize the strategic areas with resources in Southeast Asia

and establish a defensive parameter around it; and (iii), defeat and destroy any Allied efforts to penetrate the perimeter.

The Japanese fleet that targeted Pearl Harbour in the first phase was composed of six aircraft carriers with 408 aircraft. After an advance aerial reconnaissance confirmed the location of the US naval fleet, Adm Chuichi Nagumo launched almost all his aircraft, holding back only 48 on the carriers for possible defence. The first wave was composed of 180 torpedo carrying bombers that targeted US warships in the harbour; and the second wave of 180 light bombers, fighters and dive bombers targeted the harbour installations, fuel depots, airfields, and so on. In spite of sufficient information at the Pentagon's highest levels of the likelihood of Japan launching a war, the US leaders failed to alert their subordinates. The strategic surprise was complete although at least one US radar operator had picked up signals of the incoming attack. The US Navy suffered a crippling loss: of the 8 battleships present, 3 were sunk, another capsized and the remainder were seriously damaged. On land, only 166 USAF aircraft (out of the total 231 deployed) remained intact or reparable; of the navy and marine corps, only 54 out of 250 aircraft remained. But all three aircraft carriers, the total deployed by the US Navy in the Pacific, survived since they were out on an exercise and the Japanese were ignorant of this fact.

Within three days of the Pearl Harbour disaster, the Allies suffered another major strategic setback, with Japanese aircraft sinking capital ships without a naval engagement. This was done by Japanese naval aircraft sinking the two capital ships – HMS *Repulse* and HMS *Prince of Wales* of the Royal Navy on December 10, 1941, in the South China Sea. The *Prince of Wales* was among the most powerful gun-carrying naval platforms in the world at that time, and incorporated the latest in anti-aircraft and anti-torpedo defences, including both guns and specially designed underwater armour against torpedoes. Prime Minister Winston Churchill believed that the two heavily armed warships to the east of Singapore would deter the

The Allies suffered another major strategic setback, with Japanese aircraft sinking capital ships without a naval engagement.

Japanese from attempting any movement toward the British colonies in the region. The battleships were to be accompanied by one aircraft carrier, the HMS *Indomitable*, but it was under repairs and, hence, could not accompany the capital ships, and no land-based British air power was in range. No naval engagement took place, but a total of 86 Japanese aircraft operating from airfields around Saigon carried out persistent air strikes with torpedoes and bombs against the two capital ships and their escorting destroyers. The Royal Navy suffered heavy loss of life and except for three US aircraft carriers, the Allies were left with no serviceable capital ship in the Pacific and Indian Oceans. Both Pearl Harbour and the sinking of the Royal Navy capital ships witnessed no naval engagement or for that matter air-to-air engagement; the war was between aircraft in the air and capital warships on the surface of the ocean where the latter lost grievously. The air-to-surface dominance was well demonstrated.

After these dramatic air strikes which left the Indian Ocean undefended, the Japanese exercised control over both the Pacific and Indian Oceans, all made possible and achieved by the employment of air power in the maritime environment. For some time at least, control over both oceans passed into Japanese hands. The Japanese fleet sailed through to the Indian Ocean, bombed Madras (where the British Governor ordered total evacuation), Vishakhapatnam, Kakinada, Calcutta and other ports before — curiously — turning back to the Pacific. Japan lost the opportunity to control the Pacific Ocean after the Battle of the Coral Sea in May 1942, and even more important, the Battle of Midway, a month later, to the US Navy and its carrier naval aviation force.

The Battle of the Coral Sea (May 7-8, 1942) was the first naval battle as such, but the naval forces never even sighted each other. The US Navy had two aircraft carriers against three Japanese carriers. The Americans meticulously planned the air strikes on the Japanese carriers to catch them when they would be refuelling and being turned around (a strategy Israel was to follow with dramatic success a quarter century later against the Arab Air Forces). The Americans lost more ships, but the Japanese lost more aeroplanes and this battle halted the Japanese advance southward.

During the Battle of Midway, once again, the Japanese had four aircraft carriers (with 254 aircraft embarked) against three with the US Navy with a total of 362 aircraft (including nearly 100 based on land). By the time the Battle of Midway ended, all four Japanese carriers were sunk, compared to one of the American carriers, all without a direct naval engagement; and the US regained complete control of the Pacific Ocean while the backbone of the Japanese Navy was broken. The US Navy lost 132 aircraft against 275 by the Japanese. One direct effect was that Washington immediately cancelled the construction programme for 5 large battleships (of nearly 58,000 tons displacement between them), and the aircraft carrier became the capital ship of the navy, replacing the battleships!

By the time the Battle of Midway ended, all four Japanese carriers were sunk, compared to one of the American carriers, all without a direct naval engagement; and the US regained complete control of the Pacific Ocean .

On the other side of the globe, the experience in the Atlantic Ocean was no different and naval aviation (along with submarines) played a major role in ensuring that the Allied life-line in the war was kept open in spite of German submarines making many heroic attempts to interdict the merchant convoys.

After World War II, the most significant role played by naval aviation was during the 1982 Falklands War. Argentina possessed an old 20,000-ton aircraft carrier, the *Veinticinco de Maya*, which could embark Super Etendard and/or Skyhawks. On May 1, 1982, it was about to launch five Skyhawks against the British task force about to invest the Falklands, but heavy seas (or lack of sufficient head winds) prevented the aircraft being launched. The next day, the British nuclear-powered submarine sank the Argentine cruiser *General Belgrano* and the aircraft carrier was not put out to sea.

During the short war, at least five British warships were sunk or seriously damaged by Argentine Skyhawks employing the Exocet anti-ship missiles and a few more with iron bombs delivered at low altitude. The number might have been larger if Argentina had more than the stock of six Exocets! The

British carriers HMS *Hermes* and HMS *Invincible* had to be withdrawn east of the Falklands well outside the range of the land-based Skyhawks during day-time. In more recent times, the US aircraft carriers and naval aviation played a significant role in the 1991 Gulf War, the 2001 Afghanistan War and the 2003 Iraq War by using the aircraft for strikes against land targets.

The foregoing would no doubt give some idea of the role and effectiveness of naval aviation, especially embarked on aircraft carriers (which were generally 20,000 to less than 40,000 tons displacement during World War II). With larger and faster jet aircraft, the aircraft carriers also increased in size and capabilities. A counter-view of the foregoing brief summary comes surprisingly from the internationally recognised authority on military history and strategy, Martin Van Creveld, in his 500-page obituary of air power in his recently published book, *The Age of Air Power*. He concludes, "The record of the use of naval aviation at sea, in anti-submarine warfare, or against an opponent of its own kind is equally unimpressive. In fact, though there were some incidents and an occasional shot may have been exchanged, during the entire period since 1945, only rarely was naval air power, whether land- or sea-based, employed in a real war against a real enemy able and willing to respond."¹ He may be only partially right because there was no hostile air power to challenge the carrier aviation and, consequently, there was no real major war in the classical sense after World War II which was fought between colonial powers with their empires, and others aspiring to the same status and capacity. This is unlikely to be replicated if for no reason other than the demise of imperial colonies across the world. But what is certainly possible is a more limited military-to-military war (and the ever present risk of nuclear weapons exchange) which could alter the regional and future balance of power. We, in India, cannot plan our future naval capabilities on the assumption that since the Western powers would be engaged only in constabulary wars, this is the global trend. Hence, even if anti-piracy may persuade some of this being the primary role of our Navy and Air Force, we need to reflect, expect, and rely seriously on, regular warfare under the nuclear overhang.

1. Martin Van Creveld, *The Age of Air Power* (New York: Public Affairs, 2011), pp. 267-268.

It is not surprising that in recognition of the role of air power over the oceans, President George H. W. Bush has written, "One of the first questions I always asked as Commander-in-Chief when American interests were threatened around the globe was 'Where are our aircraft carriers?' (emphasis in original) The ability to project power from the sea — free from the restrictions of international political manoeuvring — has repeatedly played a key part in crisis management and in securing vital US interests."² This cannot be carried out without air dominance of the oceans.

If the past is any indicator, air power, whether land- or sea-based, would have to be employed in an overwhelming proportion of the instances as compared to the land forces.

Martin Van Creveld has almost completely ignored in his expansive study the role of military power for coercive diplomacy and/or "operations other than war" and the contingencies and vital interests that the former President of the United States has highlighted. Two important studies³ on US coercive diplomacy during 1947-82 indicate that the US employed its military forces for coercion without war to achieve political objectives at an average of 7-8 incidents per year; and the frequency has, if anything, increased since then. In nearly 75 percent of the cases, the aircraft carrier and the embarked air power was the primary instrument of choice, with air and naval forces individually accounting for another 15 percent of the cases.

In the world of tomorrow, with the political landscape changing with the shift of power from the West to the East primarily due to the rise of China and India, there will be additional demands on the Indian armed forces to apply force for protecting and promoting our national interests without necessarily having to enter into a war. If the past is any indicator, air power, whether land- or sea-based, would have to be employed in an overwhelming proportion of the instances as compared to the land forces.

2. Douglas V. Smith, ed., *One Hundred Years of U.S. Navy Air Power* (Annapolis: Naval Institute Press, 2010), p. xi.

3. Barry Blechman, Stephen Kaplan, et al, *Force Without War: US Armed Forces as a Political Instrument* (Washington DC: Brookings Institution, 1978) and Philip Zelikow, "Force Without War, 1975-82," *The Journal of Strategic Studies* (London), Vol. 7, No. 1, March 1984, pp. 29-54, which updates the earlier study.

We can already see the extensive role for the Indian Navy in tracking piracy and making the Indian Ocean safe for commercial uses. This obviously requires extensive employment of available air power like the helicopters embarked on most of our warships.

FUTURE OF AEROSPACE POWER

Aerospace power has acquired a significantly increased salience, especially in the maritime environment during the past three decades. As noted above, even during crucial battles earlier, naval air power had played a critical role in shaping the outcome towards victory. Looking at the macro-trends into the future, it is obvious that air dominance would be the crucial capability required for effective outcomes of our land, sea and air operations. The earlier concept followed in our armed forces of “favourable air situation” was conceptually flawed. This is not the place to go into the whys and wherefores of how that came about. Air superiority was the essence of warfare in the past ever since heavier than air flight came into being; and it will continue to be so in the future.⁴ But air superiority has its limitations and so has air supremacy, a notch above air superiority. Both were perceived in terms of air-to-air superiority and differed from each other only in detail. Beyond Visual Range (BVR) combat and struggle for dominance had led to all weather day and night capabilities, far beyond the line of sight air warfare soon after World War II. Hence, air dominance in the air-to-air role is certainly available to most modern air forces and is a capability that is not restricted to the developed countries only.

However, one of the greatest limitations of air power in the past was that the air-to-surface air warfare had remained limited to “line of sight” air warfare. A partial exception was the use of air power in the maritime environment with somewhat longer range weapons, essentially because a naval target could be sighted quite some distance away and, hence, the torpedo was the weapon of choice in World War II which had given way to anti-ship sea-skimming missiles by the time the Falklands War was

4. See Jasjit Singh, *Air Power in Modern Warfare* (New Delhi: Lancer International, 1985), chapter titled “Air Superiority: The Struggle for Dominance”, pp. 1-34.

fought in 1982. The target on land, however, had to be visually sighted before a weapon could be fired. This, in turn, also meant the attacking aircraft having to practically fly over the target area by the time it expended its weapons. In turn, this provided a tremendous incentive for strengthening air defence of the battlefield area, in turn, raising the cost of air-to-surface warfare. All this is changing, particularly for countries that are willing to invest in the available/emerging technologies, especially those for beyond visual range Reconnaissance Surveillance and Target

Acquisition (RSTA) and precision guided weapons for long-range strike. This alters the long prevailing limitations on air-to-surface warfare and provides the means for air dominance in this domain also. The new technological capabilities, like the fourth/fifth generation combat aircraft, Unmanned Aerial Vehicles (UAVs) especially for surveillance and reconnaissance, and in particular induction of supersonic cruise missiles and anti-ship ballistic missiles (including those with manoeuvrable reentry warheads, etc.) would define the contours of air warfare in the maritime domain in the future.

It is in this context that we need to reflect on some of the technological and doctrinal changes that are taking place. It needs to be recalled that ballistic missiles were not very accurate and the inaccuracies increased with range. Hence, they were useful only against area targets and, consequently, nuclear weapons became the inevitable choice as the missile warheads. In turn, the ballistic missiles came to be associated with nuclear weapons and the search started for defence against ballistic missiles leading to the 1972 Anti-Ballistic Missile (ABM) Treaty [later scrubbed when Ballistic Missile Defence (BMD) technically appeared more feasible]. But by the mid-1980s, the US Global Positioning System (GPS) was getting installed. A major study by Albert Wholstetter and nine other leading strategists of the United States had come to the conclusion that even Intercontinental Ballistic

Leading strategists of the United States had come to the conclusion that even Intercontinental Ballistic Missiles (ICBMs) would be capable of accuracies of less than 10 metres by the turn of the century.

Missiles (ICBMs) would be capable of accuracies of less than 10 metres by the turn of the century.⁵ This assessment has come true and ballistic missiles of lesser range like the Intermediate Range Ballistic Missiles (IRBMs), in fact, are highly accurate at ranges of 1,600 km or more. At the same time, advances in technology have made it possible to exploit the so far unusable band of altitude of around 25-125 km and, hence, these are becoming usable even with conventional warheads. In addition, technological advances have now made it possible to exploit the reentry vehicles for manoeuvres before impacting on the targets. This appears to make the BMD already redundant, and offence may again be dominant over defence in the missile domain in the coming decades, especially at the strategic level.

To the changing ballistic missile capabilities, we also must add the changes taking place in cruise missiles. The current trends have already enhanced the cruise missiles to supersonic speeds though the range of most new ones is limited to around 300-km in order to remain within the limitations imposed by the Missile Technology Control Regime (MTCR).⁶ Such missiles are capable of being launched from the ground, sea and air against surface targets. Defence against even the 300-km range cruise missiles would pose serious challenges, especially when they are launched from an aircraft, particularly a fourth-generation supersonic aircraft.

It is these three specific capabilities that form the backbone of China's so-called "Anti-Access Strategy" against the US Navy to try and extend the proverbial sea denial capability far beyond that of the earlier days, and amounts to extended sea denial-cum-control capabilities. All this is sought to be achieved by exploitation of aerospace characteristics, technology and capabilities. The implication of the changes can be gauged from the fact that even in defending against a 60-70 km anti-ship sea-skipping missile like the Exocet or the Harpoon, the optimum defence against such "mini-cruise" missiles was to intercept the launch platform before weapon release. With a 300-plus km supersonic cruise missile, the distance from the defending fleet would be enormously expansive. This is in keeping with the general

5 Albert Wholstetter, et. al., *Discriminate Deterrence* (Washington DC).

6. For a detailed study, see Sitakanta Mishra, *Cruise Missiles* (New Delhi: KW Publishers).

trend in warfare where we are experiencing the expansion of space and contraction of time, thus, fundamentally altering the nature of warfare. Nowhere is this problem more acute than in China's war-fighting aims, objectives and capabilities.

POWER PROJECTION WITH AIR POWER

The foregoing clearly indicates the increasing vector of air dominance over the oceans. Global trends since World War II indicate that wars between military forces, where they have taken place, have generally been limited in aim, scope and conduct. The Korean War is now accepted as a "limited war." By 1985-87, China had defined its military strategy in terms of future wars to be "local border wars." All the wars that the People's Republic of China (PRC) had fought after the civil war had indeed been limited and no doubt had played a major role in the formulation of the local border war doctrine and strategy. But we also must recognise that military logic makes it clear that in a limited and/or local border war, the land forces would normally be restricted to areas close to the border and not attempt a deep strike and penetration, especially if the other country possesses nuclear weapons since escalation to nuclear levels would then be almost inevitable.

China has been placing great emphasis on the role of air power in such wars based on the experiences of wars since the end of the Cold War. As it is, the history of wars leads to unambiguous conclusions that air power played the dominant role in achieving victory.⁷ Once China adopted the doctrine of local border war, its dependence on air power naturally increased. However, it still did not possess the technology for modern air power systems. But the collapse of the Soviet Union opened up new unprecedented opportunities for acquisition of selected high-technology weapon systems for China's military modernisation. As a consequence of new capabilities coming in, the air force leadership sought higher budgets (which were provided by slashing the strength of the land forces) and clearly started to expound their plans in public.⁸

7. John Andreas Olson, ed.. *A History of Air Warfare* (Washington DC: Potomac Books Inc., 2010), besides many others.

8. "PLA Officer Complains About Budget," *FBIS-CHI-1999-0309*, March 9, 1999.

Chinese Air Force is the only branch for which the 2008 Defence White Paper identifies offensive capability.

By the end of the 1990s, the Chinese Air Force Commander was publicly expounding the new strategy for the air force. He publicly sought a greater role for the People's Liberation Army (PLA) Air Force declaring that the Chinese Air Force will strive for a transformation from the air defence type to an offensive and defensive type as soon as possible. He announced, "At the turn of the century and in the early part of the new century, the Air Force will have a batch of new-types of early warning aircraft, electronic-equipped fighter planes, and ground-to-air missiles" and that the "Air Force must give more prominence to air offensive, gradually integrate offensive and defensive, and build up a crack, first-rate air strike force"⁹ (emphasis added). His forecast goal can be seen to have generally materialised by now. It is not surprising, therefore, that a study by Germany's leading think-tank, SWP, has concluded that the "Chinese Air Force is the only branch for which the 2008 Defence White Paper identifies offensive capability."¹⁰ However, the centre of gravity of the Chinese military will remain the army because of its predominant role of underpinning the supremacy of the Chinese Communist Party, thus, making it primarily domestically oriented. Projection of military power outside the state, however, would rest with the air force, navy and strategic forces.

This aspect could be clearly seen a decade later in China's bold and unambiguous announcement of its military strategy in its 2004 White Paper on National Defence. The crucial section candidly stated is reproduced below:¹¹

-
9. "Air Force Commander Liu Shun Yao on Air Force Transformation" *FBIS-CHI-1999-1107*, dated November 7, 1999.
 10. Sophie-Charlotte Brune, Sascha Lange and Janka Oertel, *Military Trends in China: Modernising and Internationalising the People's Army* (Berlin: Stiftung Wissenschaft und Politik, February 2010), translated by Meredith Dale, pp. 13-14.
 11. "Revolution in Military Affairs with Chinese Characteristics" in *White Paper on China's National Defence in 2004*, Chapter III, p.1, published to illustrate China's national defence policies and the progress made in the previous two years, *China Daily*, December 28, 2004, at http://www.chinadaily.com.cn/english/doc/2004-12/28/content_403913.htm.

While continuing to attach importance to the building of the Army, the PLA gives priority to the building of the Navy, Air Force and Second Artillery Force to seek balanced development of the combat structure, in order to *strengthen the capabilities for winning both command of the sea and command of the air, and conducting strategic counter-strike*" (emphasis added).

At the same time, China has focussed heavily on (ballistic and cruise) missiles and modernised them. It has developed the Manoeuvring Reentry Vehicle (MaRV) in addition to the earlier Multiple Independently Reentry Vehicle (MIRV) capabilities for the reentry vehicle warheads for its ballistic missiles. It has also been developing and testing its own BMD system based on the Russian supplied S-300 and S-400 air defence and anti-missile systems. In January 2007, China destroyed its own obsolete satellite at around 700-km altitude by a ground-based missile mainly to showcase its Anti-Satellite (ASAT) capabilities.

For at least more than a decade, the Chinese Navy would be able to play only a limited role in the Indian Ocean (except with submarines and possibly by long range highly accurate and/or with manoeuvrable reentry capability) primarily due to the limitations of naval assets to operate so far away, even though ports like Gwadar, etc. may be available. Little politico-military advantage is likely to accrue to China by attempting naval warfare in India's backyard. Similarly, a major contradiction of the local border war doctrine is the shape and mission of the Chinese Air Force, naval aviation and strategic missile capabilities in the future, since they all represent targeting hundreds of kilometres beyond the border region, thus, negating the concept of local border war. Incidentally, this suits the Chinese fairly well since they keep claiming a doctrine of local border war (which represents strategic restraint) and, hence, supportive of its posture that it seeks to focus on peace and development in the future.

The second contradiction of the local border war doctrine is the long-range strikes by the strategic forces with IRBMs armed with conventional warheads and MaRV (which would pose serious challenge to BMD when it becomes operational) which is the upcoming deep strike instrument with

or without nuclear weapons, with range of around 1,500-km against fixed targets (especially air bases) essentially for interdiction of road/railway lines and junctions to restrict the movement of logistics and reinforcements. China is already reported to have deployed over 1,000 such missiles on the east coast against Taiwan/USA to deny access to a US naval armada.¹² These are mobile missiles and there is no reason to believe that a large number cannot be deployed on the Indian frontier. This emerging threat with conventionally armed MaRV missiles requires that the Indian Air Force (IAF) moves its key assets for offensive action into the great strategic depth that is available.

It is not surprising, therefore, that the United States, which had planned to drastically cut back its naval power after the Cold War, now maintains 11 aircraft carrier-based task forces, roughly equal to the Cold War period; and China has launched the first of its many planned aircraft carriers, and specifies its strategy for winning future local-border wars through "*command of the sea and command of the air*," the two interlinked capabilities in the maritime environment *supported by strategic counter-strikes*, as noted earlier. This combined arms capability is believed to be central to the anti-access strategy against US naval power in the Pacific Ocean. The US, in turn, is formulating its new "Air-Sea Battle" strategy which demonstrates that air power would play a major role in the maritime environment in its response to China's anti-access strategy. It is worth recalling that the Chinese Central Military Commission (CMC), the ultimate authority for employment of military power, by 1985, when it took the decision to cut back the ground forces by one million people, had concluded: "Air power and precision strike are now the primary means of conducting warfare, with ground operations remaining secondary."

The foregoing also must be viewed in the context of the strategic nexus between China and Pakistan under which China has been supplying not only the bulk of conventional weapons in Pakistan's military inventory, but also in terms of nuclear and missile capabilities. China has also constructed and launched satellites for Pakistan. Most of the ballistic and cruise missiles

12. *Pentagon Annual Report to the Congress 2011*, issued in March 2011 at Washington DC.

in Pakistan have their origin in China. It is, therefore, reasonable to assume that China may also supply the more accurate ballistic missiles besides those fitted with manoeuvrable reentry warheads to enable Pakistan to put in place its own “anti-access strategy” in the Indian Ocean.

This leads us back to the question of aircraft carriers. Their vital necessity arises from the basic factor of the criticality of air power in the maritime environment. India’s national interests are expanding faster than its economic growth and consequent trade and the efforts to acquire energy and other resources. We have a large expatriate population abroad, most of them in politically volatile regions of the world (there are 4.8 million Indians in the Arab states of the Gulf region alone) who may have to be provided support in times of danger. Land-based aircraft without air bases will be of little utility beyond their operational combat ranges.

Looking closer home, we need to carefully monitor the potentially hostile capabilities being created in naval air power, ballistic missiles, and space that can be brought to bear on us. The Indian peninsula has historically not been an area of great air defence concern; but with hostile aerial refuelled long-range strike aircraft (even if land-based) and/or ballistic missiles, it could now become India’s Achilles’ heel. Cruise and anti-ship ballistic missiles are likely to dominate the vastly expanded maritime battlefield; and future aircraft armed with supersonic anti-ship/cruise missiles would have to be neutralised before weapon launch. In short, the scope, extent and quality of air dominance in the maritime environment would also require much closer coordination between the Indian Navy and Air Force, not to talk of adequate numbers of fourth/fifth generation combat aircraft embarked on larger aircraft carriers for autonomous operations further away. In turn, this would require aircraft carriers of around 60,000-ton class to embark adequate resources to function effectively across the Indian Ocean. At another level, BMD capabilities on warships would need to be seriously considered; and,

China has also constructed and launched satellites for Pakistan. Most of the ballistic and cruise missiles in Pakistan have their origin in China.

at the same time, ballistic missiles usable with conventional warheads and manoeuvrable reentry warhead equipped missiles (even with conventional warheads) would be necessary for deterrence through offence.

INDEX

VOL. 1, NO. 1. MONSOON 2004 (JULY-SEPTEMBER)

1. A Great Leap Forward: Air Operations at Sea
Admiral Arun Prakash PVSM AVSM VrC ADC 1-11
2. The Trinity of Air Power: Doctrine, Strategy and Technology
Air Marshal Ajit Bhavnani AVSM VM 13-41
3. The Essence of Aerospace Power: What Leaders Need to Know
Col Dennis M. Drew USAF (Retd) 43-55
4. Air War in Kosovo
Air Marshal Vinod Patney SUYAM PVSM AVSM VM (Retd) 57-77
5. Air-land Warfare: The Imperatives of Jointness
Lt Gen V.G. Patankar PVSM UYSM 79-87
6. Air Power in Afghanistan War
Air Vice Marshal Kapil Kak AVSM VSM (Retd) 89-108
7. Pakistan's Nuclear Threshold and India's Options
Brig Gurmeet Kanwal (Retd) 109-124
8. China's Space Programme: An Overview
Sq Ldr K. K. Nair 125-156
9. Some Reflections on The IAF
Air Cmde Jasjit Singh AVSM, VrC, VM (Retd) 157-179

VOL. 1, NO. 2. WINTER 2004 (OCTOBER-DECEMBER)

1. Force Modernisation Planning Challenges
Air Cmde Jasjit Singh AVSM, VrC, VM (Retd) 1-28
2. Nine Decades of Air Warfare
Air Vice Marshal B.K. Bishnoi AVSM VrC & Bar (Retd) 29-48
3. Strategising Aviation Industry
Air Marshal S.R. Deshpande PVSM AVSM VM (Retd) 49-72
4. Future Wars and Aerospace Power
Air Marshal Vinod Patney SUYSM PVSM VM (Retd) 73-98
5. Naval Policy and Strategy of Pakistan
Cmdr.(Dr.) V. Sakhuja (Retd) 99-123
6. China's Aircraft Carrier Ambitions: Seeking Truth from Rumours
Prof. Ian Storey and You Ji. 125-146
7. Weaponisation of Space
Dr. Manpreet Sethi 147-167
8. Indo-Russian Cooperation in Military Aviation: An Overview
Air Marshal Bharat Kumar PVSM AVSM (Retd) 169-193

VOL. 2, NO. 1. SPRING 2005 (JANUARY-MARCH)

1. Network-centric Warfare: SME Fundamentals

INDEX

<i>Dr Prem Chand</i>	1-24
2. Space Theory and Doctrines <i>Sq Ldr K.K. Nair</i>	25-52
3. Air Power in Land Operations <i>Brig Gurmeet Kanwal (Retd)</i>	53-71
4. Satellite Imagery for Air Operations <i>Air Cmde D.N. Ganesh</i>	73-90
5. Russian Aviation Industry Trends <i>Dr Deba R. Mohanty</i>	91-112
6. Strategic Leadership: Defining the Challenge <i>Col. Michael Guillot USAF</i>	113-128
7. Pakistan's Space Capabilities <i>Sq. Ldr Ajey Lele</i>	129-148
8. Arms Trade Offsets: The Key to Energise Our Defence Industry <i>Air Cmde Jasjit Singh AVSM, VrC, VM (Retd)</i>	149-177

VOL. 2, NO. 2. SUMMER 2005 (APRIL-JUNE)

1. Precision Strike and Its Influence on Future Wars <i>Air Marshal V. Patney SYUSM, PVSM, AVSM, VM (Retd)</i>	9-24
2. RMA and Aerospace Technologies (Part I) <i>Air Cmde M.Matheswaran VM</i>	25-46
3. Kashmir, Covert War and Air Power <i>Air Cmde Jasjit Singh AVSM, VrC, VM (Retd)</i>	47-67
4. Air Power and Special Operations <i>Saikat Datta</i>	69-95p.
5. Mackinder in the Aerospace Age <i>Air Marshal Anil Trikha PVSM, AVSM, VSM (Retd.)</i>	97-117
6. Strategic Planning for the Air Force <i>Deborah L. Westphal, Richard Szafranski and Dr. Gregory S. Parnell</i>	119-139
7. Shrinking, Flourishing or Both? Global Defence Industry in Transition <i>Shri Deba R Mohanty</i>	141-160
8. Time: The Critical Dimension in War <i>Capt. Ajay Singh</i>	161-179

VOL. 2, NO. 3. MONSOON 2005 (JULY-SEPTEMBER)

1. Indo-US Relations in a Changing World <i>Shri K. Subrahmanyam</i>	1-21
2. IAF and UN Peace-keeping Operations <i>Air Vice Marshal Kapil Kak AVSM VSM (Retd)</i>	23-36
3. The Congo Diary <i>Flt. Lt. Charanjit Singh</i>	37-47
4. RMA and Aerospace Technologies (Part II) <i>Air Cmde M. Matheswaran VM</i>	49-71
5. Network-Centric Warfare <i>Gp. Capt Rohit Varma VM</i>	73-90
6. Merging Frontiers of Air and Space <i>Sqn Ldr K.K. Nair</i>	91-115

INDEX

7. Planning to Win
Lt Col (Retd) J.P. Hunerwadel USAF 117-157
8. Nuclear Strategies in the Age of Missile Defences
Dr.(Ms) Manpreet Sethi 159-184

Vol. 2, No. 4. Winter 2005 (October-December)

1. Indian Air Force in the Evolving Security Environment
Air Chief Marshal S.P. Tyagi PVSM AVSM ADC 1-15
2. Joint Operations in Modern Warfare: Place, Role, and Impact of Air Power
Wg. Cdr Sartaj Bedi 17-33
3. Static Principles of War in a Changing World
Capt. Sanjay J. Singh 35-55
4. Planning Military Power for the Future
Air Cmde Jasjit Singh AVSM, VrC, VM (Retd) 57-72
5. Centres of Gravity: Relationship with Effects-based Operations and Campaign Planning
Gp. Capt A.S. Bahal 73-90
6. Air Power and Asymmetric Challenges to India
Gp. Capt T.D. Joseph VM 91-112
7. ISR for Air Operations
Air Marshal T.M. Asthana PVSM AVSM VM 113-128
8. ISR Doctrine, Technologies and Organisation for Air Operations
Air Marshal Bharat Kumar PVSM AVSM VM 129-154
9. China's Nuclear Command and Control
Lt. Cdr Stephen Polk, USN 155-174

Vol. 3, No. 1. Spring 2006 (January-March)

1. Joint Operations in Modern Warfare
Brig. M. Sabharwal SM 1-30
2. Brahmastra of Future Wars "The Brahmos"
Lt. Gen R.S. Nagra PVSM, VSM (Retd) 31-42
3. International Defence and Military Cooperation
Col. A. Muthanna 43-61
4. Trends in Defence Expenditure: India, China and Pakistan
Wg. Cdr V. N. Srinivas 63-82
5. Military Modernisation in China: Some Implications for India
Gp. Capt T.D. Joseph VM 83-109p.
6. Pakistan's Conventional Arms Acquisitions: Priorities and Prospects
Ms Shalini Chawla 111-133
7. Indian Civil Aviation: A Revolution in the Making
Gp. Capt R. Chidambaram (Retd) 135-150
8. In Search of High Ground: Air Power Trinity and the Decisive Potential of Air Power
Lt. Col David K. Edmonds UAF 151-177

VOL. 3, NO. 2. SUMMER 2006 (APRIL-JUNE)

1. Management of Our Defence: Role of the COSC
Air Cmde Jasjit Singh AVSM, VrC, VM (Retd) 1-28
2. Budgetary Reform for Sustained Modernisation

INDEX

<i>Shri Amiya Kumar Ghosh</i>	29-58
3. Indian Defence Industry: Insulation Gradually Melting <i>Shri A. Vinod Kumar</i>	59-84
4. Satellite Reconnaissance, ISR and Counter-measures <i>Gp. Capt A.S. Bahal</i>	85-101
5. UAVS: Capabilities and Trends: A Case Study of the USA, Europe and Israel <i>Wg. Cdr Rajiv Goyal</i>	103-131
6. Beyond Utility Targeting: Toward Axiological Air Operations <i>Lt. Col W.W. Wijninga and Col. (Retd) Richard Szafranski</i>	133-155
7. Ethics and Values in Military Leadership <i>Gp. Capt Arjun Subramaniam</i>	57-176

VOL.3 , NO. 3. MONSOON 2006 (JULY-SEPTEMBER)

1. Indo-US Strategic Relations: The Nuclear Dimension <i>Dr.(Ms) Manpreet Sethi</i>	1-26
2. India-China Relations: An Overview <i>Air Vice Marshal Kapil Kak AVSM VSM (Retd)</i>	27-47
3. China's War Concept <i>Brig. Gurmeet Kanwal (Retd)</i>	49-74
4. RMA with Chinese Characteristics <i>Brig. Vinod Anand (Retd)</i>	75-94
5. Doctrine, Strategy and Nuclear Weapons <i>Dr. Rajesh Rajagopalan</i>	95-108
6. Military Aerospace Supply Chain <i>Wg. Cdr Samir Chabra</i>	109-121
7. Indian Defence Procurement Policy <i>Wg. Cdr V.N. Srinivas</i>	123-138
8. The Epistemology of War Gaming <i>Prof. Robert C. Rubel</i>	153-178

VOL. 1, NO. 2. WINTER 2006 (OCTOBER-DECEMBER)

1. A Vision of India's Maritime Power in the 21 st Century <i>Adm Arun Prakash PVSM, AVSM, VrC, VSM, ADC (Retd)</i>	1-12
2. Strategic Role of Air Power: How we Need to Think, Train and Fight in the Coming Years <i>Gp. Capt Arjun Subramaniam</i>	13-32
3. Interpreting the Lebanon War of 2006 <i>Air Cmde Jasjit Singh AVSM, VrC, VM (Retd)</i>	33-61
4. Leveraging Space Capabilities for India's Defence <i>Air Vice Marshal D.C. Kumaria VM, VSM</i>	63-87
5. Defence Manpower in India: Some Salient Issues <i>Brig. Gurmeet Kanwal (Retd)</i>	89-107
6. Nuclear Security: Critical for Future Nuclear Expansion <i>Dr Manpreet Sethi</i>	109-134
7. Logistics Management Practices <i>Brig. Rahul K. Bhonsle (Retd)</i>	135-153
8. Has IT worked? The Goldwater Nichols Reorganisation Act <i>Mr. James R. Locher III</i>	155-182

INDEX

VOL. 2, NO. 1. SPRING 2007 (JANUARY-MARCH)

1. Future of Aerospace in India: Status and Strategy
Shri M.M. Pallam Raju 1-14
2. Aerospace Power and Integrated Operations
Air Marshal N.A.K. Browne AVSM, VSM 15-36
3. Strategic Roles of Air Power: Think, Plan, Equip and Train for IT
Gp. Capt. A.S. Bahal VM 37-56
4. Interpreting China's National Defence Policy
Brig. Gurmeet Kanwal 57-85
5. Offensive Air Power in the High Mountains
Gp. Capt R.G.Burli VM 87- 105
6. AWACS: The Pivot of Aerospace Power
Wg Cdr Atul Kumar Singh VSM 107-137
7. Pakistan's Defence Spending: Some Trends
Ms Shalini Chawla 139-157
8. The Essence of Coercive Power: A Primer for Military Strategists
Dr. Karl Mueller 159- 174

VOL. 2, NO. 2. SUMMER 2007 (APRIL-JUNE)

1. The Challenges Ahead for India's Foreign Policy
Shri Shivshankar Menon. 1-10
2. Strategic Reach - Strategic Depth and the Question of the IAF's Strategic Posture
Air Cmde Jasjit Singh AVSM, VrC, VM (Retd) 11-26
3. India's Nuclear Doctrine: The Basis for Credible Deterrence
Dr. Manpreet Sethi 27-56
4. China's ASAT Test: Implications and Options
Wg. Cdr K. K. Nair 57-74
5. Force Multipliers and Transformation of Air Defence
Wg. Cdr Atul Kumar Singh VSM 75-106
6. Military Power and Strategy of Iran
Shri Shelly Johnny 107-132
7. US Defence Industry Trends
Dr. Ashok Sharma 133-156
8. The Impact of New Technologies in the Military Arena: Information Warfare
Capt. Paulo Fernando Viegas Nunes 157- 178

VOL.2 , NO. 3. MONSOON 2007 (JULY-SEPTEMBER)

1. Aerospace Power in a Changing National Security Environment
Air Chief Marshal F.H. Major PVSM, AVSM, SC, VM, ADC 1-12
2. Winning the Next War-Jointly
Air Cmde Jasjit Singh AVSM VrC VM (Retd) 13-28
3. Principles of War: Do They Require a Rethink?
Air Marshal A.V. Vaidya VM 29-44p
4. Effect-Based Operations
Air Marshal Vinod Patney SUYSM, PVSM, AVSM VrC (Retd) 45-58
5. From Winning to Deterring: China's Changing Discourse on Defence

INDEX

<i>Prof. Srikanth Kondapalli</i>	59-74
6. Pakistan's Nuclear Doctrine and Strategy <i>Dr. (Ms) Manpreet Sethi</i>	75-109
7. Iranian Political System and the IRGC <i>Shri Shelly Johny</i>	111-137
8. Russia's Air Defence Strategy <i>Wg. Cdr Atul K. Singh VSM</i>	139-162
9. The Information-based RMA and the Principles of War <i>Major Leonard G. Litton, USAF</i>	163-180

VOL. 2, NO. 4. WINTER 2007 (OCTOBER-DECEMBER)

1. Financing Force Modernisation <i>Shri Vinod K. Misra</i>	1-11
2. Airspace Management: A Synergised Approach <i>Wg. Cdr Atul K. Singh VSM</i>	13-35
3. Roles and Missions of the Indian Air Force-2032 AD <i>Air Marshal Vinod Patney SUYSM, PVSM, AVSM VrC (Retd)</i>	37-55
4. Change and Continuity in Warfare: An Indian Experience <i>Brig. P.K. Mallick</i>	57-77
5. Disinformation and National Defence <i>Air Marshal V.K. Verma AVSM, VM, VSM</i>	79-94
6. Network-Centric Warfare and its Strategic Implications <i>Air Cmde M. Matheswaran VM</i>	95-119
7. Leveraging Outer Space for National Security <i>Dr.(Ms.) Ranjana Kaul</i>	121- 145
8. Pakistan's Nuclear Posture: Implications of Indo-US Cooperation <i>Prof. Peter R. Lavoy</i>	147-174

VOL. 3, NO. 1. SPRING 2008 (JANUARY-MARCH)

1. National Governance and Internal Security <i>Shri N.N. Vohra</i>	1-16
2. Joint Capability Requirements of India's Armed Forces: 2008-2033 <i>Air Vice Marshal Kapil Kak</i>	17-32
3. Military Manpower: Managing Quality and Costs <i>Vice Admiral Verghese Koithara</i>	33-60
4. Defence Finance <i>Air Marshal A.V. Vaidya</i>	61-76
5. Towards Continuous Military Education in the IAF: a Need for Yesterday <i>Wg. Cdr M. Misra</i>	77-105
6. Space Security: Some Issues of Militarisation and Weaponisation <i>Wg. Cdr Kaza Lalitendra</i>	107-135
7. Interface Between Conventional and Nuclear Deterrence: A Case for the Indian Subcontinent <i>Maj. Gen. G.D. Bakshi</i>	137-157
8. False Gospel for Air Power Strategy? A Fresh Look at Giulio Douhet's "Command of the Air" <i>Michael D. Pixley</i>	159-178

INDEX

VOL. 3, NO. 2. SUMMER 2008 (APRIL-JUNE)

1. Indian Air Force in the Decades Ahead
Air Chief Marshal F.H. Major PVSM, AVSM, SC, VM, ADC 1-8
2. Force Structuring and Doctrines of the IAF
Dr. Bhashyam Kasturi 9-25
3. Strategic Role of Air Power
Gp. Capt Sanjeev Bedi 27-45
4. Electronic Warfare in the 21st Century
Wg. Cdr Sanjay Poduval 47-73
5. Modernisation of the Pakistan Air Force
Ms Shalini Chawla 75-96
6. Inside the Labyrinth: NATO's Mission in Afghanistan and Continuing Relevance of Pakistan
Shri Shelly Johny 97-122
7. Survivability of the Arsenal: The Essence of Successful Nuclear Deterrence
Dr Manpreet Seth 123-146
8. Planning for Legitimacy: A Joint Operational Approach to Public Affairs
Major Tadd Sholtis 147-168

VOL. 3, NO. 3. MONSOON 2008 (JULY-SEPTEMBER)

1. Aerial Warfare: the Indian Way
Air Marshal V.K.Verma 1-13
2. Use of Air Power in Sri Lanka: Operation Pawan and Beyond
Air Cmde Arjun Subramaniam 15-35
3. Army Aviation in India
Lt. Col Rajeev Ghose 37-63
4. Dragon in Space: Implications for India
Wg. Cdr Kaza Lalitendra 65-98
5. Nuclear Deterrence and Conventional War: A Test of India's Nuclear Strategy
Dr. (Ms) Manpreet Sethi 99-118
6. Defence Procurement Challenges and New Paradigm Shift
Gp. Capt J.V. Singh 119-144
7. Leveraging Offsets in Arms Trade: Options for India
Wg. Cdr V. N. Srinivas 145-170

VOL. 3, NO. 4. WINTER 2008 (OCTOBER-DECEMBER)

1. The Rocky Road to Full Jointness
Benjamin S. Lambeth 1-34
2. Indian Air Force: Building Indigenous Research Capability
Air Marshal T.M. Asthana (Retd) 35-50
3. Why and How of Air Dominance
Air Marshal A.V. Vaidya (Retd) 51-66
4. Pakistan's Navy: New Capabilities, New Roles?
Ms Shalini Chawla 67-93
5. Weaponisation of Outer Space and National Security: Faultlines in the Law
Dr. G.S. Sachdeva 95-115
6. Ballistic Missile Defence: Strategic Issues and Dilemmas
Wg. Cdr Anand Sharma 117-149

INDEX

7. Defence Transformation: An Appraisal
Brig. P.K. Mallick 151-179

VOL. 4, NO. 1. SPRING 2009 (JANUARY-MARCH)

1. National Defence and Aerospace Power
Air Chief Marshal Fali H. Major, PVSM, AVSM SC VM ADC (Retd) 1-5
2. Building Air Dominance
Air Marshal T. M. Asthana, PVSM, AVSM, VM (Retd) 7-21
3. Future Shape, Size and Role and Shape of Indian Air Force
Air Marshal P.K. Mehra, PVSM, AVSM VM (Retd) 23-42
4. Analysis and Assessment of Military Operational Requirement of AWACS in IAF
Wg. Cdr A.B.S. Choudhry 43-62
5. China's Space Power
Prof. Srikanth Kondapalli 63-78
6. Missile Defence: Concepts and Technologies
Wg. Cdr Anand Sharma 79-111
7. The Evolution of the Cruise Missile Discourse: A Conceptual Construct
Shri Sitakanta Mishra 113-140
8. Transformation in Military Logistics
Gp. Capt J.V. Singh 141-174

VOL. 4, NO. 2. SUMMER 2009 (APRIL-JUNE)

1. Employment of Aerospace Power: Regional Imperatives for Change
Air Chief Marshal Fali Homi. Major, PVSM SC VM ADC (Retd) 1-8
2. India's Tibet Problem
Shri Prem Shankar Jha 9-22
3. China's Air Force in the Coming Decades: Trends and Implications
Lt Col Rajiv Ghose, SM 23-50
4. Force Modernisation: Principles and Practice
Cmde. S. Sammadar 51-71
5. History and Evolution of Network-Centric Warfare
Wg Cdr Sanjay Poduval 73-97
6. Focussed and Dynamic Response Logistics
Gp. Capt J.V. Singh 99-132
7. Air Dominance: Concept and Practice
Air Marshal Vinod Patney 133-148
8. Air Dominance in 4th Generation and Irregular Warfare
Air Cmde Arjun Subramaniam 149-165

VOL.4, NO. 3. MONSOON 2009 (JULY-SEPTEMBER)

1. North Korea's Nuclear Tests
Shri Jayadeva Ranade 1-16
2. Six Decades of Peacekeeping
Wg Cdr E.R. Rajappan 17-51
3. Lowering the High Ground for Effect-based Operations
Wg Cdr Kaza Lalitendra 53-90
4. AWACS and Aerostats: Roles and Missions

INDEX

- Wg. Cdr A.B.S. Chaudhry 91-115
5. The Revolution of Cruise Missile Technology
Shri Sitakanta Mishra 117-143
6. Review of the Defence Budget
Shri Amiya Kumar Ghosh 145-192

VOL. 4 NO.4. WINTER 2009 (OCTOBER-DECEMBER)

1. Implications of China's Navy Modernisation
Shri Jaydeva Ranadev 1-16
2. The Chinese Concept of Comprehensive National Power: An Overview
Dr. P.K. Ghosh 17-54
3. Integrated Perspective Planning
Air Marshal A.V. Vaidya PVSM, VM, (Retd) 55-71
4. Counter-Terrorism
Lt. Col. Rajiv Ghosh SM 73-100
5. CTBT Exhumed: Need India Worry?
Dr.(Ms) Manpreet Sethi 101-124
6. Military–Media Relations: Can the Media be a Force Multiplier?
Brig. P.K. Mallick 125-155
7. The Most Dangerous Nation
Dr. Amarjit Singh 157-176

VOL. 5, NO.1. SPRING 2010 (JANUARY-MARCH)

1. Air Power in Sub-Conventional Wars in the South Asian Region
Lt. Col Rajiv Ghose, SM 1-30
2. Towards 'Intelligent' Cruise Missiles: Contours of Innovation
Shri Sitakanta Mishra 31-54
3. Cyber Space Vulnerabilities and Challenges: Threats to National Security Dynamics
Wg. Cdr M.K. Sharma 55-90
4. NCW: the Double-edged Sword
Wg. Cdr Sanjay Poduval 91-115
5. Combat Support Operations in the Indian Air Force: A Historical Appraisal
Wg. Cdr A.B.S Chaudhry 117-135
6. Climate Change and National Security: Contrarian or Interrelated?
Wg. Cdr Manoj Kumar 137-152
7. India-Afghanistan Relations During the Soviet Intervention in Afghanistan
Dr. K.N. Tennyson 153-183

VOL. 5, NO.2. SUMMER 2010 (APRIL-JUNE)

1. On Air Power
Wg. Cdr K.K. Jumbo Majumdar 1-3
2. Air Dominance and the Future of Air Power
Air Cmde Jasjit Singh AVSM,VrC,VM (Retd) 5-24
3. Integration of MoD and Defence Planning
Wg. Cdr R. Venkataraman 25-51
4. Asia in the Debate on American Grand Strategy
Dr. Michael J. Green 53-72
5. Defence Cooperation: A Case Study of India and Singapore

INDEX

<i>Pankaj Jha and Rahul Mishra</i>	73-96
6. Afghanistan and the American Strategic Perspective <i>Dr. Sanjeev Bhadauria</i>	97-115
7. Challenge for the Indian Military: Managing Ozone Depleting Substances <i>Wg Cdr Manoj Kumar</i>	117-150
8. Geo-politics of the Gulf 1971-1991 <i>Cmdr M.R. Khan</i>	151-177

VOL. 5, NO. 3. MONSOON 2010 (JULY-SEPTEMBER)

1. Force Modernisation Challenges <i>Air Marshal PK Mehra PVSM, AVSM, VM(Retd)</i>	1-16
2. Indigenisation of Air-Launched Weapons <i>Gp. Capt S. Bhanoji Rao</i>	17-35
3. PLAAF in Transition 1979-93 <i>Wg. Cdr Vishal Nigam</i>	37-75
4. China's Electronic and Cyber Warfare Capabilities <i>Wg. Cdr Sanjay Poduval</i>	77-111
5. Towards a Nuclear Weapon Free World: Indian Perspectives <i>Prof. Swaran Singh</i>	113-128
6. National Security Mechanism and the HDO <i>Wg. Cdr R. Venkataraman</i>	129-153
7. Technology: A Historical Perspective <i>Wg. Cdr A.K. Singh</i>	155-183

VOL. 5, NO. 4. WINTER 2010 (OCTOBER-DECEMBER)

1. China's Defence Industry: Organisational Reforms <i>Wg. Cdr Vishal Nigam</i>	1-30
2. Defining Strategic Culture <i>Wg. Cdr Arjan Sen</i>	31-54
3. Likely Demands on Future Leaders <i>Lt. Col. Rajiv Ghose, SM</i>	55-78
4. Deception in Strategic Thinking: a Diagnosis <i>Shri S. Rajasimman</i>	79-105
5. India's Civil Nuclear Network: A Reality Check <i>Shri Sitakanta Mishra</i>	107-132
6. Pakistan's Nuclear Delivery Systems <i>Ms Shalini Chawla</i>	133-158
7. China's Military Strategy: Perspectives from the White Papers on National Defence <i>Ms Shikha Aggarwal</i>	159-179

VOL. 6, NO. 1 SPRING 2011 (JANUARY-MARCH)

1. The Iranian Nuclear Issue: India's Response <i>Dr. Asif Shuja</i>	1- 26
2. Interpreting China's Grand Strategy <i>Gp. Capt J.V. Singh (Retd)</i>	27-57
3. Chinese Space Programme: Influence of Chinese Strategic Culture on its Development <i>Wg. Cdr. Manu Midha</i>	59-103

INDEX

4. Defeating Pakistan's Nuclear Strategy
Dr. (Ms) Manpreet Sethi 105-122
5. China's Aircraft Carrier Ambitions
Nan Li and Christopher Weuve 123-146
6. Security Structures in the Gulf: Past and Present
Cmdr. M.R. Khan 147-173

VOL. 6, NO. 2 SUMMER 2011 (APRIL-JUNE)

1. Impact of Offset Policy on India's Defence Industrial Capability and Policy Issues
S. N. Misra 1-25
2. ATOMS FOR PEACE: Balancing the Promotion of Nuclear Energy and Non-proliferation
Hina Pandey 25-46
3. Chinese Defence Forces: Modernisation After 1980
J. V. Singh 47-78
4. Contours of India's Nuclear Safety
Sitakanta Mishra 79-114
5. Domestic Politics Surrounding the Iranian Nuclear Programme
Asif Shuja 115-142
6. Nuclear Weapons Proliferation in Asia: The Twenty-First Century Pattern
Yeon Jung Ji 143-168
7. Understanding China's Military Strategy: A Study of the PLAAF
Shikha Aggarwal 169-193

VOL. 6, NO. 3 MONSOON 2011 (JULY-SEPTEMBER)

1. Some Aspects of Our Wars in Future
Jasjit Singh 1-24
2. Air Power in Stability and Anti-Terrorist Operations
Arjun Subramaniam 25-52
3. Air Power as an Instrument of Coercive Diplomacy
M. Bahadur 53-68
4. The Barriers to Military Transformation
Rajiv Puri 69-92
5. China's Civil Aviation Industry
Vishal Nigam 93-112
6. Information Warfare: Elements and Forms
Rakesh Arora 113-144
7. The Changing Patterns of Global Climate Change Architecture
Dhanasree Jayaram 145-162
8. West Asia: Ongoing Conflicts and India
Sharad Srivastava 163-194

VOL. 6, NO. 4 WINTER 2011 (OCTOBER-DECEMBER)

1. How to Minimise the Proliferation Impact of Nuclear Deterrence
Sverre Lodgaard 1-28
2. Patterns of Insurgency: Strategies and Doctrines
A. V. Chandrasekaran 29-50

INDEX

3. Effect of Weather and Terrain on Airlift Operations <i>Ashok K. Chordia</i>	51-80
4. Training Future Environment Leaders <i>Manoj Kumar</i>	81-104
5. Political Islam, Democracy and Arab Spring <i>M. R. Khan</i>	105-128
6. Nuclear Doctrine and Deterrence: A Chinese Perspective <i>S. Rajasimman</i>	129-152
7. The Rise of China and South Korea's Strategic Flexibility <i>Yeon Jung Ji</i>	153-169

Note: For current issue see Contents Page.

RESEARCH FELLOWSHIPS – 2011-2013

Centre for Air Power Studies, New Delhi, invites applications from Indian citizens for research fellowships to undertake a 2-year study on Indian defence and aerospace issues, including China's military modernisation and Pakistan's military, at three levels:

- (i) **Senior Fellow**, with a Ph.D. and over 5 years research experience or 15 years experience in defence;
- (ii) **Research Fellow**, with a Ph.D or 10 years experience in defence; and
- (iii) **Associate Fellow** with minimum 3 years experience in research or 5 years experience in defence. Remuneration according to experience and expertise (within the scales of Rs. 14,300-450-22,400; 12,000-375-18,000 and 8,000-275-13,500 respectively).

Applications along with a Project Proposal of not more than 1,500 words must be sent to **Director, Centre for Air Power Studies, P-284, Arjan Path, Subroto Park, New Delhi-110 010** not later than **March 31, 2012**, by post or Email to diroffice@aerospaceindia.org complete with the bio-data giving full details.

NOTES FOR CONTRIBUTORS

Articles submitted to *Air Power Journal* should be original contributions and should not be under consideration for any other publication at the same time. If another version of the article is under consideration by another publication, or has been, or will be published elsewhere, authors should clearly indicate this at the time of submission.

Each typescript should be submitted in duplicate. Articles should be typewritten on A4/ Letter paper, on one side only, **double-spaced (including the notes)** and with ample margins. All pages (including those containing only diagrams and tables) should be numbered consecutively.

There is no standard length for articles, but 5,000 to 8,000 words (including notes and references) is a useful target. The article should begin with an indented summary of around 100 words, which should describe the main arguments and conclusions of the article.

Details of the author's institutional affiliations, full address and other contact information should be included on a separate cover sheet. Any acknowledgements should be included on the cover sheet as should a note of the exact length of the article.

All diagrams, charts and graphs should be referred to as figure and consecutively numbered. Tables should be kept to a minimum and contain only essential data. Each figure and table must be given an Arabic numeral, followed by a heading, and be referred to in the text.

Articles should be submitted on high-density 3~ inch virus free disks (IBM PC) in rich text format (RTF) together with **an exactly matching double-spaced hard copy** to facilitate typesetting; notes should be placed at the end of each page. Any diagrams or maps should be copied to a separate disk separately in uncompressed TIF or JPG formats in individual files. These should be prepared in black and white. Tints should be avoided, use open patterns instead. If maps and diagrams cannot be prepared electronically, they should be presented on good quality white paper.

Each disk should be labelled with the journal's name, article title, author's name and software used. It is the author's responsibility to ensure that where copyright materials are included within an article, the permission of the copyright holder has been obtained. Confirmation of this should be included on a separate sheet included with the disk.

Copyright in articles published in *Air Power* rests with the publisher.

STYLE

Authors are responsible for ensuring that their manuscripts conform to the journal style. The Editors will not undertake retyping of manuscripts before publication. A guide to style and presentation is obtainable from the publisher.

Current Journal style should be followed closely. Dates in the form January 1, 2000. Use figures for 11 and above. British spellings are to be used. Authors should provide brief biographical details to include institutional affiliation and recent publications for inclusion in About the Contributors. Sub-headings and sub-sub-headings should be unambiguously marked on the copy.

NOTES

Notes should be **double spaced** and numbered consecutively through the article. **The first line of a note must align with subsequent lines. Each note number should be standard size and have a full point.**

- a) References to books should give author's name: title of the book (*italics*); and the place, publisher and date of publication in brackets.
e.g. I. Samuel P. Huntington, *The Common Defense* (NY: Columbia UP, 1961), Ch. 2, pp. 14-18.
- b) References to articles in periodicals should give the author's initials and surname, the title of the article in quotation marks, title of the periodical (*italics*), the number of the volume/issue in Arabic numerals, the date of publication, and the page numbers:
e.g., Douglas M. Fox, "Congress and the US Military Service Budgets in the Post War Period," *Midwest Journal of Political Science*, vol. 16, no. 2, May 1971, pp. 382-393.



AIR POWER

Journal of Air Power and Space Studies

Centre for Air Power Studies, P-284, Arjan Path, Subroto Park, New Delhi 110010



AIR POWER

Journal of Air Power and Space Studies

Centre for Air Power Studies, P-284, Arjan Path, Subroto Park, New Delhi 110010



SUBSCRIPTION FORM

In India

- Rs. 275/- per copy
 Rs. 1100/- per annum (4 Issues)

Overseas

- US \$ 35 per copy
 US \$ 130 per annum (4 Issues)

PLEASE PRINT

Name.....

Complete Address.....

.....

.....PinPhone.....

Please find enclosed cheque/draft number: dated.....drawn on..... favouring KW Publishers Pvt. Ltd., for Rs US\$.....

Please mail this form to: KW Publishers Pvt. Ltd., 4676/21, Ansari Road, Daryaganj New Delhi 110 002 T: +91.11.23263498 / 43528107
E: mail@kwpub.in / knowledgeworld@vsnl.net W: www.kwpub.com



SUBSCRIPTION FORM

In India

- Rs. 275/- per copy
 Rs. 1100/- per annum (4 Issues)

Overseas

- US \$ 35 per copy
 US \$ 130 per annum (4 Issues)

PLEASE PRINT

Name.....

Complete Address.....

.....

.....PinPhone.....

Please find enclosed cheque/draft number: dated.....drawn on..... favouring KW Publishers Pvt. Ltd., for Rs US\$.....

Please mail this form to: KW Publishers Pvt. Ltd., 4676/21, Ansari Road, Daryaganj New Delhi 110 002 T: +91.11.23263498 / 43528107
E: mail@kwpub.in / knowledgeworld@vsnl.net W: www.kwpub.com