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# DSA™



THE ONLY INDIAN DEFENCE AND SECURITY MAGAZINE  
AVAILABLE ON INDIAN AIR FORCE (IAF) INTRANET

EXCLUSIVE INTERVIEW  
GOVERNOR OF GOA  
**SMT MRIDULA SINHA**



# WOMEN IN DEFENCE AND SECURITY

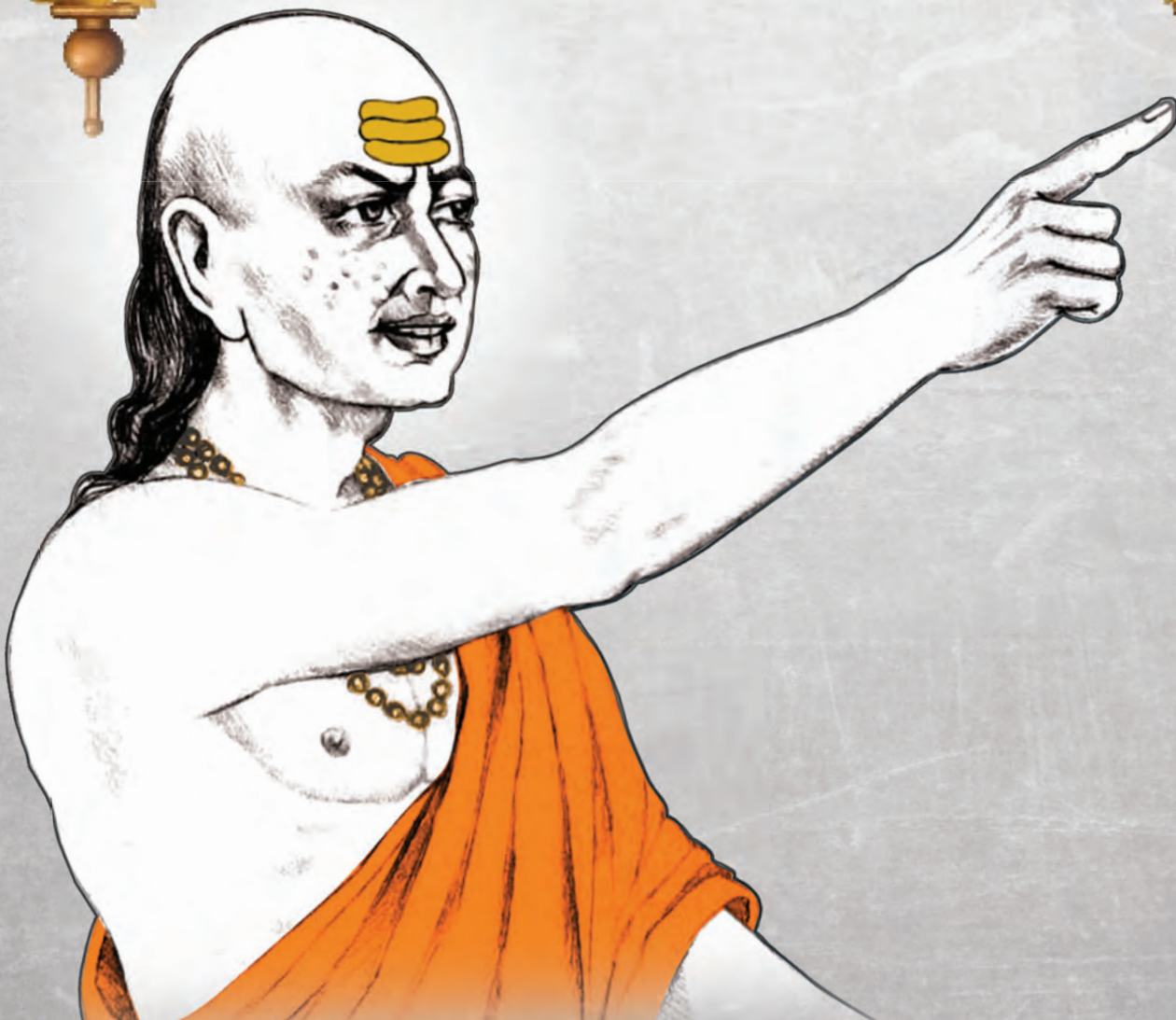
**TIME FOR  
MILITARY INDUSTRIAL COMPLEX**

**DSA™**

## **MISSION**

*The power of a King lies in his mighty arms ...  
Security of the citizens at peacetime is very important  
because State is the only saviour of the men and women  
who get affected only because of the negligence of the State.*

**— Chanakya**





# DSA is as much yours, as it is ours!

Prime Minister Narendra Modi has repeatedly stressed 'Make In India' as one of the core initiatives of his government. All departments and ministries echo his sentiment to make India into a manufacturing hub. It is in fact the mantra of the current BJP-led National Democratic Alliance government. It is really the governing principle. The driving force, the vision, being that only an expanded manufacturing base will see India emerge as a global economic power. Even as the services sector has provided immense benefit to the country, the unrealised dream of India as a manufacturing power holds back the country from fulfilling its true potential.

'Make In India' cannot fully succeed without the emergence of a military industrial complex in the country. Even as other sectors take small, hesitant, but important steps towards realising that dream, the defence and security industries remain beset with problems unique to them. The potential is there and it is enormous. But to achieve that potential requires greater effort, clarity of purpose, consistent policies, incentives and suitable taxation regimes. It is not a question of asking for the moon, simply giving a boost to a sector that has always played a vital role in safeguarding national interests, but at a cost that is uneconomical to the country.

A vibrant military industrial complex will pave the way for providing employment to thousands of bright young Indians who want to play a part in making India a success story. Employment to the youth is key to a safe and secure India, for it is unemployment that leads to endless social and political problems. And there are enough examples in India to provide all the data to prove that point. Expanding military industries will provide just the right outlet for job opportunities to the talented Indian youth who now have to look at other sources of work, or even other countries to fulfil their ambition of working in the high-technology fields.

A military industrial complex is entirely dependent on a dynamic research and development culture in the country. It is alright to transplant technologies from other countries and manufacture their products in India, for it would still be providing manufacturing capabilities. But these wouldn't be Indian facilities, simply a transfer of technology arrangement. This has always been happening and it hasn't gotten the country far. It continues to cost India valuable foreign exchange to transfer that technology and there are recurring costs to pay for the licenses involved. And most important of all is the fact that it doesn't add to Indian knowledge, research, design or development capabilities. Therefore, it is vital to encourage a research and development culture in the country as a stepping stone to an emerging national military industrial complex.

Indian owned and managed military industries will greatly help in the vision of self-sufficiency in the country. There is no pride in being the largest importer of weaponry in the world, even when the country can succeed in sending a Mars orbiter mission. This obviously means the talent and capabilities are there in the country. What is lacking is a consistent set of policies to realise that vision of military industries making in India. The government would do well to put in place a tax regime that encourages increased outlays for defence research and development. Incentives to set up the related industries and encourage the commercialisation of various defence and security products that have applications for the civilian world.

For all that to happen the Indian private sector has to be the key participant. An Indian military industrial complex is a non-starter if the domestic private sector has no place in it. For far too long it has been the monopoly of the state and its limitations are plain to the eye. The vibrant military industrial complex has not emerged and neither has all the talent been tapped. For that to happen the state sector has to shed its stand of doing all and providing all. It has not been able to thus far and it will not be able to in the foreseeable future. Only a level playing field that does not discriminate between the state and private and which allows talent to flower, will enable India realise its dreams. Of making in India, by Indians and providing for Indian needs. That is why the time for a military industrial complex is now, right away.

**Manvendra Singh**



**WOMAN POWER!**

**H**istory has repeatedly proved that women have always played a pivotal role in the development of any civilisation. Reservations, hurdles and challenges of consorting in strictly men oriented disciplines of life have instilled a compelling momentum and bolstered her level of commitment to emerge victorious.

Defence and Security have been two such verticals where induction of women has always been considered a taboo, other than medical and nursing corps where postings are largely behind the front lines of battle. However, the last couple of decades have seen a paradigm shift with women officers participating effectively in aviation, logistics, law, engineering and executive cadres. The question is ... If European, American and Israeli defence forces have women in combat roles, why is India still apprehensive for this metamorphosis!?

In retrospect, the disposition of our most agonisingly persistent adversary, Pakistan and its proclivity to inflict brutal torture on prisoners of war / combatants, appears to be the root cause of our apprehension in allowing women into the combat zone. Another argument reflected in military ethos is the prevailing civilian attitude of menfolk drawn from the rural areas of India who are unprepared to deal with a greater role of women in society.

In India, this process has been exceedingly slow and women in higher ranks are rare. I still remember my interaction with the first woman Air Marshal of the Indian Air Force, Ms Padmavathy Bandopadhyay who was interviewed for the inaugural edition of **DSA** in October 2009. It was fascinating to talk to a lady who has become a trailblazer through sheer determination, dedication, commitment and hard-work and became a role model for the younger generation.

This edition of **DSA** is dedicated to 'Woman Power' and the indispensable role she plays as a mother, a sister, a wife, a daughter and above all ... a soldier! Experts and stalwarts have beautifully encapsulated their roles, their challenges and their perceptible contributions. Almost all operations of defence and security are now witness to their phenomenal success. However, the bottleneck of antiquated policies is still a marathon that needs to be sweated out.

Defence and security segment in India has become skewed by the predominance of public sector in the production of military wherewithal. With the present government insisting on 'Make in India', we feel emboldened to suggest measures for creating the gravely needed and viable Military Industrial Complex with an active policy of public-private participation and productive and profitable partnership. With Aero India 2015 recently concluded, expectations of a clear road map from our Prime Minister are soaring as we feel he understands the paramountcy of much contemplated exponential escalation of indigenous defence production capabilities. I know it is not going to happen overnight but with transparent policies reinforcing this vision, India can expeditiously affirm an upswing in GDP, strengthening and self-reliance of defence and security and generation of jobs and foreign exchange.

Almighty has bestowed a woman with the power to create and I firmly believe that she has the ability and competence to elevate India to the pinnacle of developed nations. As we celebrate International Women's Day, I look forward to the day when the world says, 'Behind every successful Woman, there is a Man!' May the festival of colours adorn your lives with the vibrant hues of happiness. Happy Holi!!

Jai Hind!

**Pawan Agrawal**

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 Global Terrorism  
 Trends and Prospects**



**The Rise of ISIS and  
 its impact on India's security**

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# Special Issue March 2015

# Contents

## ARTICLES

- Is A Combat Role Waiting?** Lt Gen Syed Ata Hasnain (Retd) **18**
- Women Are Equal But Different** Maj Gen Raj Mehta (Retd) **22**
- Role Of Women In Ensuring Women Safety** Meeran Chadha Borwankar IPS **26**
- Nari Shakti A Grand Display Or Much More?** Deepshikha Hooda **28**
- Essence Of Being A Woman** Urvashi J Agrawal **32**
- Women Captive In The Dark, Captive In The Light** Uma Sudhindra **34**
- Women Warriors Past Glory, Present Valour, Future Power** Kriti Singh **38**
- National Security Threats, Challenges And Solutions** Lt Gen BS Pawar (Retd) **42**
- Naval Modernisation Funding The Indian Navy** Dr Vijay Sakhuja **46**
- Make In India For Indian Defence** Dr Laxman K Behera **50**
- Time For A Military Industrial Complex In India?** Shrikant Paranjpe **54**
- Establishing The Military Industrial Complex** Team DSA **57**



**Modernisation Of India's Central Armed Police Forces** Pratap Heblkar **60**

**The Assam Rifles At 180 Humanitarian And Professional Achievements** Col Rajiv Krishan **63**

**Put Policy Framework In Place To Support Make In India In Defence** Nitin A Gokhale **66**

**'Make In India' Mission And Defence Industry Hubs** Maj Gen Dr Mrinal Suman (Retd) **68**

**Budget 2015-2016 Financing India's Defence Needs** Amit Cowshish **71**



## FEATURES

**Sneak Peek** **3**



**Exclusive Interview** Smt Mridula Sinha Hon'ble Governor Of Goa **6**

**Know The Chief** Indian Navy **11**

**Exclusive Interview** Arvind Ranjan IPS Director General CISF **12**

**Know The Chief** National Police Academy **31**

**BRAHMOS Exemplifies MIC In India** Sudhir Sharma CEO And MD, BrahMos Aerospace **37**

**Teaming Up With India, For India** Lars-Olof Lindgren CMD, Saab India Technologies Pvt Ltd **41**

**Private Sector For Strategic Stability** Samir Advani VP, Mahindra Defence Systems **49**

**Get Connected** **75**

# EXCLUSIVE INTERVIEW

## WITH HON'BLE GOVERNOR OF GOA

### SMT MRIDULA SINHA

**S**mt Mridula Sinha, Hon'ble Governor of Goa is an iconic author and poet of India. She has been Chairperson of Central Social Welfare Board and Prabhari, BJP Mahila Morcha. She has authored more than 46 books on various subjects and has won many national and international literary awards.

She has been Member, Rajbhasha Samiti, Ministry of Home Affairs; Member, Hindi Salahakar Samiti, Ministry of Steel; Member, Rajbhasha Samiti, Ministry of Railways; Member, Delhi Commission for Women, Government of Delhi. She has also been Member, National Executive, Bharatiya Janata Party (BJP); Convener, NGO Cell, BJP; Vice President, All India BJP; President, BJP Mahila Morcha; Co-Convener Women Cell, AIBJP; Election Incharge, New Delhi, Parliamentary Constituency; Election Incharge, Muzzaffarpur, Parliamentary Constituency; Active Participant in Samagra Kranti led by Jai Prakash Narayan; Member of BJP Disciplinary Action Committee for two terms; President, Surya Sansthan Noida: 2010-Till date; President, Rajmata Vijayaraje Scindhia Smriti Nyas, Delhi (till August 2014); Vice-President, Akhil Bhartiya Sahitya Parishad; Founder and editor: (i) Panchva Stambh magazine (ii) The Fifth Pillar magazine; active participant in more than 500 programmes of All India Radio and Doordarshan on literary, political and social issues. She has travelled to Germany, Manila and New York for various conferences and paper presentations and has participated in Vishwa Hindi Sammelan in England, Suriname, South Africa and Mauritius over a period of many years.

**Defence and Security Alert:** As a woman in an important position, what is your view on the safety of women in India?

**Smt Sinha:** For the last four decades, I am examining the problems of women in India, rural and urban both. Earlier the women were facing the problems of education, health and others, but today security has become a vital concern. Women have excelled in various fields and professions and their presence has made us proud but the sense of insecurity be it at home, workplace or public place has to be pondered upon. The society and government have to work in tandem for safety and security of women.

**DSA:** Do you think it is only the government's job to protect women or do you think the society as a whole needs to look after the security of women?

**Smt Sinha:** The government is a vital part of the society, but not the whole. It's a two edged responsibility, society and government need to have symbiotic relationship and understanding to provide security and safety to women. After the independence people have become more dependent on government. In traditional India, family and village or locality owned the responsibility of safety and security of women and now it's missing. There is deterioration in ethics and value based education in the society. The society needs to inculcate value based education in the children. The government also needs to sensitise the public about various steps taken by the government to protect the women.

**DSA:** What would you suggest the government do to increase safety and security of women in India?

**Smt Sinha:** To make strict laws against crime against women, separate courts dealing with such cases should come up in every district. Moreover, the concept of Rape Crisis Centre will be resourceful for women and girls in need. Above all we need to understand that it's our duty that we should not give a blind eye to any kind of violence and atrocities against girls and women in family, society, office or anywhere.



**DSA:** India faces multiple threats from different elements inimical to its rise as a major power. One of the major threats is of infiltration of terrorists from the sea. As Governor of a coastal state like Goa, what in your view should be done to secure the vulnerable coastline to prevent terrorist attacks like 26 / 11 Mumbai?

**Smt Sinha:** Coastal security has assumed serious concern for us after the Mumbai terrorist attack, which was a horrendous incident in the history of our country. We cannot even think of recurrence of any such unfortunate incident. India has a long coastline, the protection of which is very important. We have a huge population living in cities, towns and villages on the coastal regions. Many vital installations and institutions are situated on the seashore, all of which need full protection. The government of India has taken concrete steps to enhance the coastal security. The Coastal Police Stations with the necessary manpower and logistics have been set-up to pay undivided attention to this area of national security. This is apart from the Navy and the Coast Guard, who shoulder the basic responsibility of our nation's safety and security from the seafront. Our security agencies should always be alert and should keep continuous vigil on the sea, in order to prevent any anti-national and anti-social elements from entering our country with ulterior motives to disrupt peace and order. We should adopt the latest technologies in our security

set-up which will enhance the ability of the security agencies in carrying out their duties. Our force is vigilant and fully prepared to counter or mitigate any such threats.

**DSA:** Goa witnesses massive arrival of tourists from different parts of the world. There is always a danger of terrorists disguising themselves as tourists and creating trouble. What steps do you suggest to prevent such an eventuality?

**Smt Sinha:** Goa receives lakhs of tourists every year from different parts of the world. We cannot rule out the possibility of anti-national elements coming here in the garb of tourists. Here, the responsibility lies not only on the security agencies, but the people at large. Those who provide accommodation to tourists should take full details of the customers and verify their identity. Doubtful cases should be reported to the Police. They should also keep a watch on the movement of tourists, their behaviour, the people whom they meet etc. Now that security has become supremely important in our national life, there should be foolproof systems put in place to detect suspicious elements. There should be CCTVs at important places where tourists visit and stay. The police have an intelligence wing and also Anti-Terrorist Squad to deal with anti-social elements disguised as terrorists. Government is creating IT enabled structure which will help to identify such elements.



Smt Mridula Sinha with Urvashi J Agrawal, President of DSA magazine

**DSA:** What advice would you offer to the law enforcement agencies in Goa when dealing with tourists?

The law enforcement agencies should be very polite, courteous and professional while dealing with the tourists and at the same time they should keep watch on anti-social elements.

**Smt Sinha:** Genuine tourists should be treated as our honoured guests. Goa is well known for its hospitality towards the tourists. We should ensure their safety and security and provide them all possible facilities and comforts. However, we cannot take things for granted. Our law enforcement agencies should discharge their duties properly. While they should be helpful to the genuine tourists to enjoy their stay in the state, they should take utmost care to ensure that if anybody breaks the law, they are dealt with as per the law of the land, whether they are foreign or domestic tourists. But, there should be no harassment to genuine tourists. They have to handle the tourists with due care.

**DSA:** Is there a need for Goa to increase the strength of its Marine Police wing and give special attention to improving their capabilities?

**Smt Sinha:** In Goa there are seven Coastal Police Stations. A proposal for India Reserve Battalion for Coastal Police has been sent to Home Ministry. The Coastal Security needs to be modernised. The government of Goa has implemented the first phase of coastal security measures laid down by the Ministry of Home Affairs, government of India. The implementation of the second phase is in progress. Out of the 7 Police Stations sanctioned in the 1st and 2nd phase, 6 have already been made



Smt Mridula Sinha in conversation with Pawan Agrawal, Publisher and CEO and Urvashi J Agrawal, President of DSA magazine

operational. The government has established an Anti-Terrorist Squad. They are keeping constant checks along the coastline. It is advisable to enhance the coastal security with specialised / well-trained manpower and technologically-advanced logistics, so that the Coastal Police Force can function more efficiently and effectively. Goa being a high profile tourist destination visited by people from world over and considering the intelligence inputs received that citizens of US, UK and Israel visiting Goa as tourists are also on the hit list of terrorists, it is advisable that enhanced coastal security is put in place to avert any unforeseen incidents, like the Mumbai terror strike. The MHA has sanctioned 13 interceptor boats, out of which 9 are operational. The remaining boats are yet to come. There should be proper coordination between the Coastal Police, Navy and Coast Guard. Security set-up, especially coastal security, should be perpetually enhanced in keeping with the national and international security scenario.

**DSA:** Is government of Goa raising any specialist force for coastal surveillance of Goa?

**Smt Sinha:** There is already special mechanism in the name of Coastal Security Police Stations in the state of Goa. These seven coastal police stations need to be modernised with gadgets and equipment and the government is working on it. The government of Goa has taken steps to ensure the coastal security in the state. It is implementing the 2nd phase of the MHA's guidelines, in order to make the security set-up foolproof. The Coastal Police personnel are being trained by the Coast Guard, National Institute of Water Sports and the Captain of Ports. The Coastal Police are holding regular meetings with the people living in coastal areas, especially fishermen and water sports operators who are spread on almost all beaches of Goa and the members of Agency DRISHTI who are engaged in saving lives of tourists on beaches due to drowning. **DSA**



## Admiral Robin K Dhowan

### PVSM, AVSM, YSM, ADC

### Chief of the Naval Staff

**A**dmiral RK Dhowan is an alumnus of the National Defence Academy, the Defence Services Staff College and the Naval War College, Newport, Rhode Island, USA.

His illustrious career began with being adjudged as the Best Cadet and winning of the coveted 'Telescope' during sea training on-board INS Delhi. He was commissioned in the Navy on 01 January 1975. He went on to bag the Sword of Honour for his course. Consequent to earning his Watchkeeping ticket on erstwhile Delhi, his first tryst with Navigation was as the commissioning Navigator of INS Bhavnagar. As a young Lieutenant, armed with his sextant and the keen eyes of a mariner, he sailed Bhavnagar from the port of Riga in the Baltic Sea to the shores of Mumbai. This baptism culminated in his specialising in Navigation and Direction. Post specialisation he went on to navigate IN ships Talwar and Ganga. With the induction of the Sea Harriers, he was selected to undergo the Sea Harrier Direction course at Yeovilton, United Kingdom. His tenures at INAS 300 and Vikrant shaped the future of direction specialisation within the Navy.

Important staff appointments held by him at Naval Headquarters during his illustrious career include Deputy Director Naval Operations, Joint Director Naval Plans, Assistant Chief of the Naval Staff (Policy and Plans) and Deputy Chief of Naval Staff, Integrated Headquarters, Ministry of Defence (Navy). He has also served as the Senior Instructor at Defence Services Staff College, Wellington.

The Admiral has commanded front line warships of the Western Fleet namely Khukri, Ranjit and Delhi. Besides serving as Indian Naval Adviser at the High Commission of India, London he has also served as Chief Staff Officer (Operations), Headquarters Western Naval Command.

The Admiral had the proud privilege of commanding the Eastern Fleet as Flag Officer Commanding Eastern Fleet and he subsequently took over as Chief of Staff at Headquarters Eastern Naval Command, Visakhapatnam. The Admiral also has the distinction of commanding the prestigious National Defence Academy, his alma mater as the Commandant before serving as the Deputy Chief of Naval Staff. He became Vice Chief of the Naval Staff on August 11 and has assumed charge as the 22nd Chief of the Naval Staff on 17 April 2014.

The Admiral has been appointed as Principal Honorary Naval ADC to the President of India with effect from 17 April 2014. **DSA**





# EXCLUSIVE INTERVIEW

## WITH DIRECTOR GENERAL CISF

### ARVIND RANJAN, IPS

The Director General of CISF Arvind Ranjan is a 1977 batch IPS officer of Kerala cadre. He is a postgraduate in Physics and Electronics from Allahabad University and during his distinguished career spanning 36 years, he has held many important and sensitive portfolios. He was ADC to Governor of Kerala and Director of BSF Academy, Tekanpur. Before taking over the charge as Director General, CISF, he was Director General of NSG. He has been decorated with Police Medal for Meritorious Service in 1997, Police Special Duty Medal in 2002 and President's Police Medal for Distinguished Service in 2006. Here in an exclusive interview with DSA he shares his views and vision for CISF.

**Defence and Security Alert:** What is the biggest challenge that CISF faces in today's environment?

**Director General CISF:** CISF is deployed in every nook and corner of the country to protect and safeguard the vulnerable critical infrastructure, sensitive establishments in core sectors which are contributing immensely in our national development. Each establishment is different from others in view of locational vulnerability, threats of various kinds and tough terrain etc. For example, seaports, few atomic energy establishments and other installations are located at sea coast. These are exposed to the water fronts and face threat from seaside. Accordingly, our men guard the water fronts in our area of responsibility and carry out patrolling by the boats equipped with required weapons and gadgets.

Today, CISF has the largest public interface dealing with lakhs of people throughout the country daily. This is also a challenge before us to deal with the general public with due courtesy and politeness coupled with firmness on security matters. On an average 26-27 lakh commuters travel in Delhi Metro and 5.1 lakh passengers move through the airports. About 31-32 lakh passengers are travelling daily in the secured environment provided by CISF. Our women personnel are also deployed at the places where we have to deal with women passengers / employees etc. Our women personnel undergo Pre-Commando course soon after the completion of Basic Training and thereafter they are imparted specialised training in martial art which makes them fit and confident to neutralise any opponent in odd

hours. In this manner, our women personnel instil the sense of security amongst women passengers and employees of establishments.

The transnational terrorism, naxalism and anti-national outfits are posing a serious threat to the national security besides conventional internal and external threats viz theft / pilferage, white collar crime, sabotage, espionage, subversion etc. This makes our task more diversified and challenging which requires high order of professionalism and multi-skilled capability. On account of these challenges our mandate has broadened. CISF is no longer a PSU centric force as responsibility of security in the field of VIP security, Govt Building security, Heritage Monuments, Airports, Delhi Metro and sensitive installations etc has also been added. Constant technical modernisation, upgradation of gadgets and weaponry, extensive use of dog squads and BDDS, well equipped QRTs, manual and CCTV surveillance, specialised training to our personnel has enabled the force to stand forth and protect the installations of immense importance in a befitting manner. We constantly review and update our operational plans which are differently made for different sectors like airports, seaports, atomic energy, space establishments etc. CISF has transformed into a highly professional, premier multi-skilled and tech-savvy security agency to handle and neutralise any kind of challenge in our area of responsibility.

**DSA:** Your force is responsible for Delhi Metro and all airports' security. What is the specific threat that the Delhi Metro faces and how do you deal with it?



**DG CISF:** Airports and Delhi Metro Rail are considered to be the soft targets for terrorist activities. The occurrence of even a small incident at these places has far-reaching ramifications. The volume of previous attacks and recent plotting against mass rapid transit system and aviation sector overseas has demonstrated continued strong terrorist interest in targeting these sectors.

Delhi Metro Rail is world's 13th largest metro system in terms of length and the network consists of 07 lines with a total length of 191.08 km with 141 Metro stations including Airport Express Line spinning Delhi, Gurgaon and UP. Almost 26-27 lakh commuters are using Delhi Metro network everyday of which about 3 lakh are lady commuters. Today, Delhi Metro is known as 'lifeline' of Delhi NCR. The concept of **Delay, Deter** and **Detect** are the hallmarks for security matrix for DMRC. Delay by preventive physical security parameters in technological security upgradation. Deter by physical manpower positioning in the metro network with the concept of dynamic deployment. Detect through proactive observation and immediate intervention strategy. We have the proper approved plan to handle the man-made or natural contingency through participation of all the stakeholders (DMRC, Delhi Police, UP Police, Gurgaon Police, NSG, DDMA and Delhi Administration). Our dedicated teams keep surveillance through manual and CCTV network about all the activities and movements at the Metro stations which has enabled the unit personnel to swiftly come into action during any kind of requirement. The whole components of CISF unit DMRC such as well-trained men and women contingents, QRTs, Dog Squad and BDDS etc are dedicated round the clock to ensure security at Delhi Metro stations. Our women commandos are specially trained in Filipino martial art 'Pekiti Tirsia Kali' which makes them strong and fit to ensure the safety of women commuters as well as themselves against any opponent.

**DSA:** *The number of Air travellers is increasing by the day. Is the CISF stretched thin because of the increased demand on its resources and expertise?*

**DG CISF:** It is true that there has been rapid increase in number of passengers travelling through the airports. The enormous escalation in air travel has made every airport a potential terror target and it is now a key area where extreme security is an absolute requirement. It is ongoing process to review the threat perception and functioning of the Aviation Security Group of the CISF at regular interval so that necessary arrangements are put in place to meet the requirement. At the same time, it is responsibility of the airport operator to create enough space and provide basic security infrastructure as per the BCAS norms to handle the flow of passengers in correct manner.

**DSA:** *What special training do you impart to your personnel and how do you upgrade training of your personnel to keep them up to date with new, emerging threats?*

**DG CISF:** CISF has constantly kept abreast of the need for matching professionalism in security dispensation through specialised training of personnel, upgradation of knowledge and managerial skills, besides induction of sophisticated gadgetry in aid to the security of installations as the CISF Academy known as National Industrial Security Academy (NISA) was established in Hyderabad in 1990 to upgrade the professional skills of the force. CISF training college, initially established at Partapur (Meerut) in 1969 was shifted to Shivrampally, Hyderabad in 1971. In 1987, the college moved into the present premises at Hakimpet, Secunderabad (AP) and was upgraded into an Academy on 8 December, 1990.

NISA was declared 'Centre of Excellence' by the Ministry of Home Affairs (GoI) in the field of Industrial Security on 30.09.1999.

Keeping in view the importance of training, modern training aids have been provided at CISF Academy (NISA) as well as at the six other RTCs (Regional Training Centres). At each of the 6 RTCs, we have developed additional training skills for specialising in a particular aspect of security. NISA has been developed as a premier institute in the country and is imparting training not only to the Force personnel of CISF, but also to others like IRS, Indian Air Force, Navy, ONGC, Nepal Police etc.

After selection, CISF officers and personnel are imparted basic training in their respective ranks like all Central Armed Police Forces, at CISF training institutions. Pre-Commando course of about six weeks is also conducted for all personnel immediately after Basic Training. Besides Basic training CISF conducts various in-service courses to sharpen the multitasking capabilities and professional efficiency of its personnel. Before induction to the various fields / sectors, CISF personnel undergo specialised training like advance Commando training, VIP Security, QRT, WT & Field Craft Tactics course, specialised courses on Aviation Security, Seaport Security, Atomic Energy Establishments and Space Units oriented requirements etc. Each CISF Unit has a component of Crime & Intelligence Wing, personnel of this wing are imparted specialised training in the field of intelligence also. Each CISF training institute has been assigned to train force personnel in a particular stream of specialisation.

**DSA:** *What is the biggest irritant your men and women face at airports?*

**DG CISF:** The Aviation Security Group of CISF is well-trained in operational aspects (access control, anti-hijacking and sabotage duties). They are also imparted soft skill training and it is ensured that



**The Director General CISF with Pawan Agrawal, Publisher and CEO, DSA magazine**

our personnel are polite and courteous to the passengers and general public but firm on security duty. The endeavour of our personnel is to protect and safeguard not only the airport and aviation interest but also to ensure security to the passengers and employees working at the airport. Sometime, few people do not understand the objective of the security measures and take it as an inconvenience to them. If, everybody understands the requirement of security measures and cooperates, our personnel would complete the mandatory screening very quickly without causing any kind of inconvenience to them. When CISF personnel greet everyone with the 'Good Morning' etc approaching the airport entry / security check points, he expects atleast the good behaviour from the visitor. Bad behaviour / rudeness on the part of our men is unacceptable, we ensure proper and courteous behaviour by our men.

**DSA:** *What suggestions do you have for increasing tendency among air passengers to forget / lose their belongings at the security point?*

**DG CISF:** The data shows that total 43,049 numbers of items worth ₹ 20.04 cr were recovered in the year 2012, it increased during the year 2013 as 51,040 worth ₹ 23.12 cr leftover items were found and it reached as total number of items 52,978 worth ₹ 32.06 cr in the year 2014. It reflects that passengers forget to collect their belongings not from the security check point but they left their items in other areas of the airport. Our men

continuously endeavour to restore the leftovers to their rightful owners. For this purpose, extensive use of CCTV system was also made to find out the items and correct persons. We have also introduced a system wherein our force personnel requested the passengers to write their name and mobile on the baggage tag in order to restore the same immediately to its owner in case the item is found left anywhere at the airport. Keeping in view the trend, the lost and found link on CISF website [www.cisf.gov.in](http://www.cisf.gov.in) has been immensely helpful to thousands of passengers in reclaiming of their lost articles at Indian Airports.

**DSA:** *Is an expansion of CISF required?*

**DG CISF:** The demand for deployment of CISF in new establishments is being received regularly at CISF HQs / MHA. In view of the future requirement, we plan our expansion through the recruitments in various ranks. During the year 2014-15, we have received 43 requests from Govt Sectors and 10 requests from Private Sector for deployment of CISF. As per the policy and guidelines from MHA, deployment is made through proper surveys and other prescribed formalities.

**DSA:** *Your personnel also guard vital installations like mines, refineries et cetera? How do you cope with such varied demands?*

**DG CISF:** As I have already mentioned that each operational sector is different from others. Besides,

common Basic Training courses as specified for all ranks and other courses exclusively meant for force, we impart specialised training developed for the specific sector before deployment of our personnel. The dynamics of change has dictated several novel initiatives within the CISF which has constantly helped us to achieve the objective. The diversified role of CISF enriches the capability of our personnel as multiskilled force personnel to cope with enormous varied challenges.

**DSA:** *It is said terrorists and anti-national elements are always two steps ahead of security forces in thinking of ways to overcome stringent security. How does CISF keep up with the latest threats and what special steps do you take to overcome them?*

**DG CISF:** Our strategies and SOPs are regularly reviewed and updated in view of the threat perceptions and prevailing security environment. Technological modernisation and skill upgradation has ensured qualitative performance of the force. We carry out mock exercises regularly on various situations which may occur in our area of responsibility. Joint exercises are also conducted with the elite and special forces. In order to sharpen the professional efficiency of our personnel we have focused on specialised trainings like One Minute Drill, special martial art training like Krav Maga and Pekiti Tirsia Kali to our men and women personnel. We have also developed capabilities to impart Parkour training and it is being included in the training syllabus for all ranks. The parkour training makes the force personnel more fit and capable to swiftly meet any challenge in the urban dwelling. At the same time, our units maintain close liaison and coordination with all the stakeholders and sister organisations for smooth coordinated action. The Quick Reaction Teams, Marshals in uniform / plain clothes and surveillance system keeps an eye on the activities and respond quickly as per the situation.

**DSA:** *Do your officers and men undergo specialised training in anti-sabotage and anti-terror drills? Is there a need to co-opt best practices from around the world?*

**DG CISF:** We are always open to learn and adopt the best practices to strengthen our security matrix. As I have mentioned earlier that our officers and men are trained in Anti-Sabotage and Anti-Terror Drills to neutralise any nefarious attempt. We have well-trained dog squads and BDDS teams.

**DSA:** *We see the manual screening of passports / identity cards of passengers entering the airports. Don't you think that this is practically impossible for a CISF officer to identify a person having an old passport / identity card and markedly changed countenance?*

**DG CISF:** In India, we have adopted security hold plan. As such, mandatory security check is carried out at security hold area. Entry to airport terminal in India is regulated by CISF personnel at CISF guarded airports, it is felt prudent to exercise control on the entry to the terminal as a security measure. In order to allow bonafide air traveller and employees working at the airport to enter the terminal buildings, it is necessary to check the travelling documents / ID proof to avoid entry of unwanted persons. BCAS is the regulatory agency to identify and implement the procedures / equipment or gadgetry required at Indian airports as per International Civil Aviation Organisation recommendations.

CISF personnel are rotated from one duty to another to avoid monotony. Yes, it is possible that passengers / persons may enter airport terminal through the forged documents, as such we have implemented a procedure wherein a particular gate is designated for the exit of such persons who are offloaded at the last minute and they are accompanied by the concerned airline staff to confirm the same. After proper documentation they are allowed to exit the airport. Through this procedure our personnel have apprehended number of persons who gained entry through the forged ticket and they were handed to local police for necessary legal action. We have also introduced a proper profiling system and random screening of suspicious items / persons at the entry points.

Similarly, different gates are earmarked for entry / exit of employees working at airports. Their Airport Entry Pass contains certain security features and it is very easy to detect any forged Airport Entry Pass.

**DSA:** *CISF also provides consultancy in the field of security and fire protection. What are the features for this specialised service?*

**DG CISF:** In the year 1999, an amendment was carried out in the CISF Act vide Act No 40 of 1999 which enlarged the charter of CISF to include:

- Providing technical consultancy services relating to security of any Govt / Private sector establishments.
- Protect and safeguard the organisations owned or funded by the Govt and the employees of such organisations as may be entrusted by the Central Government.

The CISF has four decades of hands-on experience of designing, implementing, reviewing and improving security systems of a myriad sectors including atomic energy, space, power, steel, seaports, oil and petrochemicals, mines, airports, government and heritage buildings, Delhi Metro Rail etc. CISF has so far provided consultancy in security and fire to 90 government, semi-government and private establishments. Some of the clients are – TISCO Ltd, Hero Honda Motors, Bangalore Metro, IIT Chennai and Kharagpur, IDBI and ICICI Banks, India Bulls, Thermal Power Projects, Manganese Ore India Ltd, NMDC Integrated Steel Plant, Tata Power, Paithan Dam, LBS National Academy of Administration, Mussoorie,

NSG Headquarters, Allahabad High Court, Tirumala Tirupati Devasthanams, Tirupati, Golf Link Business Park, Bangalore, Control Data Centre Mumbai, British High Commission, New Delhi, Karnataka and AP Assemblies, UP and AP Secretariats etc.

Recently a new strategy of aggressive marketing of consultancy service has been formulated and changes made to make the consultancy report more comprehensive and client oriented in the light of rapidly changing security environment, which has brought heartening results. There was an unprecedented increase in revenue collection. CISF consultancy wing generated more than ₹ 1.45 crore revenue for the Central Government, 13 consultancy reports have been provided to the clients and 25 are under process. It has been possible due to qualitative upgradation of entire gamut and sincere efforts of our officers involved in the process.

**DSA:** *What is the system in CISF regarding various welfare measures to the force personnel and their families?*

**DG CISF:** At Headquarters level, we have the proper set up of welfare branch to ensure the welfare measures like grant of scholarships, financial help, CPC canteen facility etc to the force personnel, their families and wards, WARB is also active in this regard. CISF Wives Welfare Association 'Sanrakshika' has also extended a helping hand to ensure the welfare measures in the force. Since last 14-15 months, new crèche and playschools have been established, force personnel and their families are actively participating in Swachh Bharat Mission. Various welfare activities continue to take place in the unit for conduct of useful talks on medical issues, skill development, cultural activities, sports and games, tree plantation, donation of clothes to needy people during winter, literacy programmes on financial matters, workshop on cyber-crime, self-defence specially for women and girls etc.

**DSA:** *What are the new initiatives recently adopted in CISF for improvement of the performance of the force?*

**DG CISF:** Keeping in view the present security scenario across the world and future requirements of the force, certain new initiatives have been taken to sharpen the multitasking ability of its personnel which is the core capability of the force. The initiatives are – One Minute Drill on 10-15 different situations for quick and decisive action in a very short time, Soft Skill Training, Martial Art Training (Pekiti Tirsia Kali for Women and Krav Maga for Men), Joint exercises with NSG / other CAPFs and special forces of the state, quality mock drills, capacity building of BDDS teams, workshops, standardisation of electronic gadgets and equipment, new HR policy, new induction norms, qualitative improvement in consultancy services, set-up of cyber security cell etc.

Modernisation process for this tech-savvy force gained momentum when we carried out the identification and standardisation of equipment / gadgetry with required QRs in different operational sectors with special thrust on proper maintenance facility. The special focus was given on optimal use of multiskilled manpower and sophisticated / modern gadgets with the integration of entire security matrix for the fail-proof security. The endeavour for this entire gamut is under process and when we are able to establish the integrated security solution system completely, the CISF will become the best lean and thin, more efficient and professionally competent force. The new initiatives have brought out the perceptible change in the attitude and performance of the force personnel to achieve the futuristic objectives.

MHA has approved our proposal to establish an 'Integrated Security Gadget Evaluation Centre' at Pragati Maidan for field trial of security gadgets to assess their suitability. It will provide a platform to the manufacturers and client organisations to select the best gadgets available in the market as per their need. The modalities to establish the centre are being finalised with the ITPO officials and I am sure very soon this project will become functional.

**DSA:** *As an IPS officer with such long and distinguished career, what has been your most memorable experience and what advice would you give to those who are just entering the service?*

**DG CISF:** I completed my postgraduation in Physics and Electronics from Allahabad University, thereafter I joined IPS in the year 1977 at the age of 22. I was allotted Kerala cadre. I served in various capacities during my service in Kerala police. I was ADC to the Governor of Kerala. On central deputation I have served with SPG, CISF as DIG then IG, ADG and Spl DG in BSF. During central deputation, my views and ideas were broadened which helped me a lot in discharge of my duty in letter and spirit.

I still remember a case when I was DIG (Crime) in Kerala. It was a case of a young girl murdered in a village. The suspect murderer was a neighbouring boy. The case remained blind for many years. I studied the entire case and advised the investigation team as to how to carry out systematic investigation. Subsequently, the case was cracked and I went to the house for spot inspection. I met the family members of the girl also. On knowing the success of police team to have found the murderer of the girl, the way her old mother and members of the family cried and showered their blessings on me, that itself was a reward to a police officer. It gave me a deep satisfaction and encouraged me to work hard for the general public.

I would advise the youngsters that there is no short cut to success in life. Do not hesitate to sweat as it would definitely bring results. Serve the people of the country in true manner, it will give sense of satisfaction and help to earn the goodwill and honour. **DSA**



## IS A COMBAT ROLE WAITING?

**Women officers have always aspired for a career which will afford them command assignments and subsequent competitive progressions up the ranks. This is not possible if they remain a part of only the support cadre. At the same time the Army can ill afford the expansion of its main cadre because a skewed ratio between main to support cadre exists. Ideally it should be 1:5; in the Indian Army's case it is the other way around.**

**I**t is good to have an Army in which women are represented. That statement itself sets the tone for this article. The historical bit is also important to get the background right. In all three Services there are no women in the ranks below officers. Women form an important element of the Police Forces of India where there was an early recognition of the need for handling women by women, in police related requirements. Women officers have been in the armed forces for about 85 years and served with competence and distinction. They were inducted in the Military Nursing Service in 1927 and in the Medical Officers

Cadre since 1943. The terms and conditions of women in the Medical Services continue to be different to other women officers and they should not be confused with those in the Arms and Services of the Army. Women officers were inducted in selected branches of the three Services since 1992. It was a progressive step towards gender equality but restrictions applied in terms and conditions, with commission being restricted to Short Service Commission (SSC) for five years.

The performance of women officers has definitely been of a high order although there has been continuous resistance towards expanding their role

and granting them Permanent Commission to form a part of the *main cadre* as against the *support cadre*. While there is a large base in favour too, it is only fair that readers must get the rationale of both sides. These terms need a brief explanation. In most armies of the world, officer cadres (including male officers) are managed by dividing them into a lean *main cadre* where they serve till superannuation and a large *support cadre*. The *main cadre* is kept lean in view of the limited scope for promotion due to the steep pyramidal structure; the smaller strength ensures better promotion prospects, higher selection ratios for select ranks and longer tenures in appointments. As against this there is a need for a larger *support cadre* comprising officers who largely occupy only non-select ranks and specialist appointments. They serve for a designated term of contract and do not compete for select ranks. However, women officers have always aspired for a career which will afford them command assignments and subsequent competitive progressions up the ranks. This is not possible if they remain a part of only the support cadre. At the same time the Army can ill afford the expansion of its main cadre because a skewed ratio between main to support cadre exists. Ideally it should be 1:5; in the Indian Army's case it is the other way around.

### Permanent Commission Conundrum

As far as the issue of Permanent Commission is concerned it is this trade-off between main and support cadres which remains crucial. On continuous representation the tenure of service in SSC has been increased to ten years and then fourteen years (for all officers) but that is a half measure and does not fulfill the aspirations of the women who obviously look towards a proper career at par with their male counterparts. A legal battle has been on for some years on this issue. To further complicate the issue women officers have been demanding for some time extension of their services to the 'combat arms' (the definition of this term as against 'combat support arms' has been mired in controversy within the Army and is not being discussed here) so that they have a front line leadership role in combat and management of all other connected aspects of operations, logistics and administration. Their right to demand this cannot be denied. The debate on this must be an informed one and deserves to have all the factors squarely laid out to arrive at some conclusions which are without any emotions or other baggage. Thus far it is emotions more than rationale which has dominated the exchanges. To the Army's credit, during the tenure of General Bikram Singh, former COAS, a serious effort towards understanding the nuances was made in the form of a comprehensive study by the HQ

South Western Command. This was discussed at length but the outcome is still vague. An analytical examination is laid out in subsequent paragraphs.

### Analysis Of The Problem

Women officers are already being inducted into Judge Advocate General and Army Education Corps (AEC) on Permanent Commission. They form a part of the SSCO cadre in all other Arms and Services except Infantry, Armoured Corps, Mechanised Infantry and Artillery. Other Arms, Army Air Defence, Engineers, Signals, Army Aviation and Intelligence Corps are employing them for all duties (Army Aviation restricts them to Air Traffic Control duties only). An odd exception may exist where more due to personalities of their local superiors, than anything else, some restrictions may be laid. But this is not about such restrictions or any assessed inability of women officers to perform the designated duties; it is about assumption of select ranks in these Arms and in turn in the Services, Army Service Corps (ASC), Army Ordnance Corps (AOC) and the Electrical and Mechanical Engineers (EME). If Permanent Commission is granted, then legally women officers in all these Arms and Services will have to be put through promotion boards for select ranks; that means for the rank of Colonel and above. This also means involving them in the responsibility of command, in the hallowed appointment of Commanding Officers (COs).

### Women In Sub-conventional War

Naysayers argue that up to the responsibilities of a sub unit women officers can perform but the responsibility of command is a huge weight with an exponentially larger charter. The Army likes to call itself a 'command oriented' organisation. There are different connotations of this term with one explanation emphasising that the Army functions with its focus on field orientation giving primacy to the command channels. On these channels rests its structure of responsibility. Commanders and COs are responsible for everything in their command, be it operations, administration, welfare or contingencies involving either or all three. It is to these channels that the combatants and others look to for direction, orientation and motivation, all ingredients of the

**In peacetime conditions these responsibilities can still be assumed without risk but then we are not in the game of changing COs when units are being mobilised for operations**



**Lt Gen Syed Ata Hasnain**  
PVSM, UYSM, AVSM, SM, VSM & BAR (Retd)

The writer is a former Corps Commander of the Srinagar based 15 Corps and Military Secretary, who has extensively dealt with issues concerning women officers.



front line leadership. This school of thought doubts the ability of women officers to assume this onerous responsibility especially in conditions of a regular or irregular operational environment where the pressure can be intense and the need for mental and physical robustness is high. Command decisions, it must be remembered, involve life and death. In peacetime conditions these responsibilities can still be assumed without risk but then we are not in the game of changing COs when units are being mobilised for operations. In addition to this the cadre management and career progression issues arise. Male officers and women officers will have to compete for the limited command vacancies for career progression. This competition can either be open or through allocation of some vacancies exclusively for women officers. The latter would militate against all aspects of gender equality, something those in support of gender equality would never favour. Will the competition then be shorn of bias and will the criteria for performance in appointments in ranks below Colonel, enable fairness and balance during selection. This is a moot point which has not found too many answers. Supporters of gender equality do speak of initial hiccups in the implementation of selection norms but argue that these will be ironed out over time as the first experiments with command by women officers are undertaken.

**Blurred Distinctions**

Those who are against any such experimentation point towards the secondary responsibility of the Combat Support Arms (CSA) and of the Services in the conventional combat zone; this extends to local protection and security, including convoy security. In the case of the Corps of Engineers it extends to the holding of ground in the form of defended localities. That means a virtual combat role for women officers which in command translates into full operational responsibility. The Corps of Engineers, in particular, has multiple tasks in conventional operations which include close support tasks. The CO of an engineer regiment requires omnipresence in different parts of the area of operations; possibly the most dynamic role among all Commanding Officers. A woman officer as CO Engineers, for example, would be a real challenge. In irregular warfare operations the Combat Support Arms are expected to mothball their equipment and undertake counter-insurgency tasks in which women officers could be in the direct line of fire; perhaps they could, under current orientation, perform duties of unit staff. Command of units in such an environment may involve robust responsibility. The supporters of gender equality would counter this by mentioning that women officers need to be given a chance to prove their mettle in such operations which remain essentially of low intensity.

**If command itself is such an intractable issue the question of induction of women officers into Combat Arms (Infantry, Armoured Corps, Mechanised Infantry) becomes even more complex**

That is where the arguments, the long and the short, rest. If we have not been able to arrive at a consensus on the entire issue of command by woman officers perhaps a mid-point of compromise could be the setting aside of some vacancies of Colonels for women officers and allowing their progression on staff. That would of course militate against gender equality and effectively prevent women officers from entering into the command cadre of officers. Further progression would be only in staff channels where too command experience is necessary before higher staff appointments can be made available to them.

**Ground Realities**

Thus if command itself is such an intractable issue the question of induction of women officers into Combat Arms (Infantry, Armoured Corps, Mechanised Infantry) becomes even more complex. The age-old arguments remain firmly entrenched: that in contact operations gender becomes a hindrance. The Infantry, Mechanised Infantry and Armoured Corps are involved in intense and close contact battles requiring physical privations of an extreme order. Then, there is the problem of prisoners of war, hand-to-hand combat, attrition battles, evacuation of casualties and other constraints. Some put forth the argument that in the case of Artillery, women officers can always be restricted to the role of Gun Position Officers (GPOs) leaving the observer duties to be undertaken by male officers. However, this again is simplistic not realising that professional gunners are adept at both responsibilities and much more. In fact an officer cannot be a battery commander unless he has experience at both the gun and observer ends.

**Not By Judicial Intervention**

If we presume that many of the arguments above are actually mindsets of an era gone by and women officers could hold their own under all conditions, it would call for a very bold experiment. In the Army such transformational experiments understandably are carried out gingerly and decisions for that are difficult to take. More importantly it is lives we are dealing with and national security. It would not be in the fitness of things that such decisions are forced through judicial intervention because a reluctant organisation is the worst entity for experimentation. Grounds will have to be prepared perhaps by first allowing some women officers to serve units of Combat Arms in peace stations in staff appointments, gradually moving towards being a part of sub units. Attachment of women officers of the Services with Infantry units in field could be another step to ascertain the veracity of claims that

women officers would not be a liability in such conditions. However, career progression in these Arms is a virtual No-No under the prevailing conditions and mindsets.

What is the experience of officers who have served with or have had women officers under their command? There are wide variations. My personal take is that women officers many times outperform their male counterparts in sheer dedication and dynamism. However, there is a shade of opinion which strongly believes that there is a fade effect as women officers progress in service. As far as physical stamina and ability to withstand rigours I have personally been witness to woman officers commanding dozer detachments near the LoC in high altitude areas and convoys through the most dangerous towns of J&K; I could never find them wanting. However, generalisation from these examples may not always be right and more critical examination of this should be done on the basis of experience of more field commanders.

**Via Media**

What is important is that everyone involved in this long debate must be extremely well informed about the nuances of Service conditions in the Army as well as the genuine aspirations of women officers in sync with the need of the times. Gender equality is a major human sensitivity all over the world and the Army cannot shut its eyes to it. At the same time national security and lives of our soldiers are not things which can be dealt with on the basis of emotions. A compromise solution, which satisfies genuine aspirations, caters to the requirements of the organisation and ensures maintenance of national interest is the answer. This answer needs to be arrived at the soonest.

The last word must be on at least one aspect of the management of women officers by the Military Secretary's (MS) Branch. As an MS, I was always sensitive to their needs even though I was accused of pandering to them. The demand for more spouse



coordinated postings as against the guaranteed 'every third posting', was I felt most genuine. I do feel that there is a long way that male officers have to travel to come to terms with accepting the presence of women as equals. There is a degree of insensitivity to their needs even as they are treated as equals. These mindsets have to be overcome just as a sincere effort was made to guarantee women officers better than every third posting as a spouse coordinated posting.

On International Women's Day on 08 March 2015 with which this issue of **DSA** is coordinated, it would do the Army good to do some introspection and be more forthcoming on where it stands on women's issues. No doubt this is an issue in progression (I love that term) but progressively increasing transparency on it may also do us all some good.

Very pertinently summed up by one of my ex-staff officers to whom I always turn for staff advice. He says – "Egalitarian societies in all progressive areas of the world have come to be defined by almost complete classlessness. However, the armed forces, by the very virtue of their task and national responsibility are not a standard pension earning 9 am to 5 pm desk bound job. Standard yardsticks such as definitions of gender neutrality, caste based reservations, SC / ST policies, inductions for differently-abled people etc cannot be applied here in equal measure". The debate will no doubt go on; it must, however, remain an informed one. **DSA**

**Attachment of women officers of the Services with Infantry units in field could be another step to ascertain the veracity of claims that women officers would not be a liability in such conditions**

# WOMEN ARE EQUAL BUT DIFFERENT

Plainly put, once measured through metrics that don't measure women by men's standards but by theirs, women shine. They possess superior communication skills, ethics, values, discipline, propriety, moral values, toughness and grit. This aids leadership roles, remarkably facilitates multi-skilling and multitasking skills. In the armed forces which have been short of officers for decades there are many jobs, short of close quarters combat, that can be handled by women competently.

*"The duality in male thinking is galling: Knowledge [Sarasvati], Power [Durga] and Wealth [Laxmi] are worshipped as female Goddesses; wives labelled as 'Ardhangini' [Better halves] yet women are routinely undermined, patronised; considered an adjunct to men. These mindsets must change."*

— Dr Ms Minnu Bhonsle, Psychologist

US President Barack Obama's visit as Guest of Honour for Republic Day 2015 was a historic first to which media gave unprecedented coverage. During this blitz the government's positioning of uniformed women officers as symbolic of emerging India received prominent coverage. This was best exemplified by Wing Commander Pooja Thakur presenting the combined Services Guard of Honour to President Obama at Rashtrapati Bhavan. The uniqueness of the setting and the *elan* and *panache* of the Commander drew worldwide praise.

Against the backdrop of the Indo-US nuclear energy and 'Make in India' technology negotiations that were concurrent, the portrayal of uniformed women in traditionally male-only space finally seemed to serve as relief; no more. Keen observers have, however seen a sliver of hope for taking women's empowerment forward – provided that the government stays on track.

This article proposes to examine how women in general and particularly women in uniform if treated as equal but different can become key to transforming India and earn it a seat at the world's high table.

## The Curse Of Manu

Going back into the past to unlearn mistakes is always a good idea. In our case, the secrets of masculine duality lie interred in the epic Laws of Manu which were codified between 1250-1000 BCE. It is an ancient treatise on law, polity, societal norms and

pleasure which still impacts on Indian society. The document has legal merit but is more identified by its unapologetic misogyny. Apologists say that it contains some positive references to women too; that it simply and accurately mirrored those misogynistic times. While these statements are true, they aren't very helpful in deworming today's crippling anti-woman mindsets.

Some quotes serve to illustrate this bias: Manu IV 148 states that *"In childhood a female must be subject to her father, in youth to her husband, when her lord is dead to her sons; a woman must never be independent"*. Manu IX 17 / V 47, 147 states: *"Woman is an embodiment of the worst desires, hatred, deceit, jealousy and bad character"*. The same sections justify female feticide. Section IV 148 says: *"Woman is the source of sorrow. At birth she makes her mother weep. At the time of the puberty she makes her parents weep. At the time of the marriage she makes all her family members and relatives weep"*. Manusmriti IV 78 demands that *"Every woman must be loyal, faithful, obedient and honourable to her husband even if he is blind, deaf, dumb and old; a debauch, gambler or woman-beater, the prescribed punishment being abandonment"*.

## Numbing Reality

The ominous male duality that psychologist Dr Minnu Bhonsle writes about is nowhere more visible than in the national capital, Delhi. While the Goddess Saraswati-Durga-Laxmi trinity continues to be worshipped, the misogyny mindset remains as

unrepentant as it was in ancient India. It seems ironic that Singapore President Tony Tan Keng Yam has just concluded a visit to India with India seeking Singapore's assistance in converting Delhi into a 'smart and clean (*Swachh*) city'. On a 2013 visit to Singapore, this writer saw for himself the exceptional freedom with which women moved safely by all means of transport to work, shop, have fun in all modes of wear, including western wear without the men raking them with obscene eyes, harassing or molesting them. The ironic part was that this writer was staying across Mount Elizabeth Hospital where young braveheart Nirbhaya breathed her last in 2012 after being gang-raped in urban Delhi. Doubtless the process of becoming a smart and clean city will be facilitated if Delhi chooses to give up its duality ... If its men choose to invest in mental hygiene along with physical hygiene ... Surely a more meaningful interpretation of *Swachh* India.

## Subtext Of Republic Day 2015

Naysayers carp that Republic Day 2015 and its women-centric theme was just a surreal publicity spectacle. Some however feel that it signalled a dawning realisation that women are the 'critical mass' without which India cannot sup at the world's high table. This wish to display emerging India's newfound resolve was skillfully played out in front of President Obama. It conveyed the feeling that women's right to equality; acceptance of differences and national progress are synonymous.

Feisty Presidential Honour Guard Commander, Wing Commander Pooja Thakur whose father is ex-Army and is from the AFA-2000 batch candidly stated post event: "I am an officer first; a woman later ... I wasn't chosen because I'm a woman, but because I was capable and smartly turned-out. Being an officer is a way of life." A para-jumper, Pooja will retire in six months because current rules don't allow women

Permanent Commissions except in selected fields.

Captain Divya Ajith who led the 144 strong Army women officers RD contingent is the only female awarded the coveted Sword of Honour in open competition with male peers. An Army Air Defence officer, she has served in Kashmir and is now Instructor at OTA, her *alma mater*.



Capt Divya Ajith leading the Army women officers' contingent

By far the most staggering performance was that of Major Neha Bhatnagar, (Army Engineers) and Capt Smitha L (Signals) two among seven women who climbed Mount Everest (8,848 metres) successfully in May 2012. All women were awarded the VSM by the President of India. This writer, as Chief of Staff at a Corps Headquarters, watched these women officers grow in 2005-2006 as focused Adjutants of their units; an early indication of future brilliance and grit. Neha, now Aide-de-Camp (ADC) to the Eastern Army Commander – another first for a lady officer – recalled her pride when the RD Everest tableau went past with women and men excitedly giving thumbs up approval.



The gritty seven women Mount Everest summiters

She recalled that she was commissioned as a 20-year old rookie in 2002; male officers wondered whether women had better usage than becoming

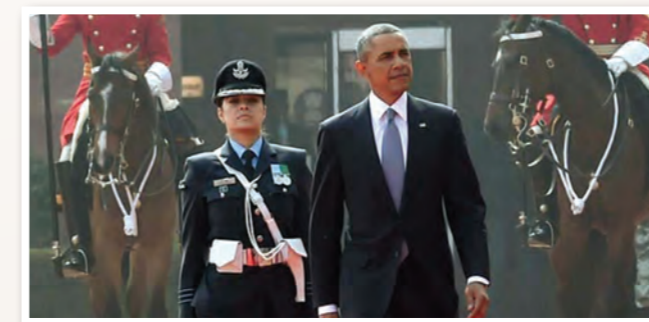


Maj Gen Raj Mehta AVSM, VSM (Retd)

The writer has held varied command and staff assignments; an important one being a Brigadier in Military Operations Directorate. He has served as Chief of Staff in two Corps Headquarters and has had a number of command and staff assignments in J&K. He has taught at the National Defence Academy and the Defence Services Staff College. He has done Masters in English and in Defence Studies and completed two MPhil qualifications; in Strategic Studies (Madras University, 1996) and in National and Global Security (National Defence College, 2001).



Squadron Leader (later Wing Commander) Pooja Thakur in 2014





'food members' in the Officers Mess. She says that while the officers were apprehensive, her real grooming and training was done by her men who taught her leadership in their unique ways. "Soldiers aren't judgemental", she said candidly. "They aren't bothered that you can't run as fast as them. They simply want you to be fair, impartial, strict and correct. Respect them and they respect you. They call you 'Sa'ab' the way they call male officers but after you earn their respect."



**Major Neha Bhatnagar** a pioneer, she did path-breaking work as an administrative officer in various key assignments. Soon enough her officer peers realised that she was equal but different and those differences had to be respected. Today, she says with a laugh, that things are far more congenial though a small percentage still counts women officers' flaws more than their enviable qualities of head and heart. **With typical feminine savvy she says "I merely smile at them and say there is no big deal in having flaws ... everyone has them."** *Touché!*

Continuing the RD experience, the Naval tableau had Lt Cdr Shweta Kapoor and Lt Vartika Joshi representing the stunning achievement of four Naval women officers who sailed from Goa to Rio de Janeiro in their sailing vessel *Mhadei*.

Let's now turn to young widow Indhu Vasanth. When she walked up to the President to receive her braveheart husband Major Mukund Varadarajan's Ashok Chakra, she did not cry. Informed late night on 25th April 2014 about his death in an encounter at Qazipathri, South Kashmir after killing three terrorists, she did not cry then too. Asked later, she stated she was stoic by choice; her husband had asked her to be strong and she had complied. Instead she sat down that lonely night to write an elegy, recalling their halcyon days ... Its concluding lines:

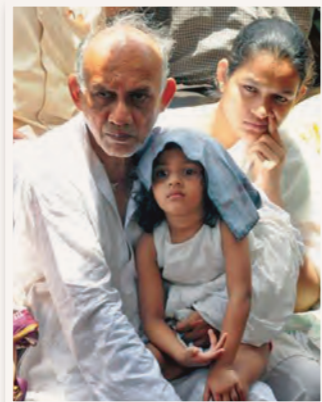
"But now I wait for he is with god.  
I know this for sure ...  
One day I will meet him and he will give me that warm strong hug of his;  
I know this for sure ...  
And I will not complain (this time) that I can't breathe,  
I know this for sure ...  
You can hug me; hug me all you want ..."

It was another matter that when her four-year old daughter, Arsheya, said "Goodnight and goodbye

Daddy" as the cortege left their home, some braveheart peers did cry ... Ms Indhu is special. Women often are.

**So What Do Women Bring To The Table?**

Major Neha Bhatnagar, who comes across as an astute thinking professional puts it right when she says that unlike some men, "most women who join the Defence forces aren't looking for employment. They're highly motivated women keen on breaking the stereotype ... women seeking a powerful, challenging, well paid and dignified career. Women will bloom, more so if provided a level playing field."



**Arsheya with her Grandpa and strong Mother**

Plainly put, once measured through metrics that don't measure women by men's standards but by theirs, women shine. They possess superior communication skills, ethics, values, discipline, propriety, moral values, toughness and grit. This aids leadership roles, remarkably facilitates multi-skilling and multitasking skills. In the armed forces which have been short of officers for decades there are many jobs, short of close quarters combat, that can be handled by women competently.

It will help to look around and note that a **Revolution in Women's Affairs (RWA)** is already taking place in non-military disciplines across India - in the academic, educational, corporate, industry and communication / media, HR space with women leaders like Indra Nooyi (CEO PepsiCo), Kiran Mazumdar-Shaw (Biotech), Chanda Kochhar (CEO ICICI), Sudha Murthy (Writing / Philanthropy) who have broken the glass ceiling. It is therefore time to shed archaic mindsets and move on for the good of the country.

**Examples From The Recent Past**

A few examples from this writer's experience further serve to illustrate their quality. On a 2003 visit to the Israeli Defence Forces with the then Army Chief, it was enlightening to discover that male soldiers are routinely taught equipment, tank and weapon handling almost exclusively and competently by young women soldier instructors. The Indian team saw demonstrations of warlike equipment including successful firing of *Spike* anti-tank missiles by young women soldiers. The men, when quizzed, cheerfully said they worked harder because they didn't want to lose face ... A proper use of male ego!

• As a Division Commander in North Kashmir in 2004 he rushed to the site of a *fidayeen* attack which had targeted a military bus carrying officers and soldiers. One injured person hit by the blast shrapnel was 20-year old Lt Babita, an Education Officer. Still conscious, this gutsy young officer murmured in Haryanvi "Sir, Manne Badla Lena Hai" (I will take revenge). She recovered in weeks and is happily married to a male peer.



**Capt Sukkriti Shukla, Intelligence Corps**

When this writer was Chief of Staff at Srinagar in 2005, the snow tsunami happened which took over 300 lives. Post the destruction, Capt Sukkriti Shukla, a young Army Intelligence GIS expert liaised wisely with National Remote Sensing Agency and Snow and Avalanche Study Establishment at Hyderabad and Chandigarh for flood and earthquake zoning of the Valley drawing their praise. Overall, during 2003-2006 this writer came across over a dozen young women officers working in the war zone and found all without exception walking the extra mile. Not directly related but the writer recalls a Limca Book of Records that lists Lt Cdr Rajeshwari Kori as the first Indian woman to serve on a seagoing ship *INS Jyoti* in 1997-1998. She is now Commandant, Civil Defence Staff College, Maharashtra. Women have displayed competence across uniforms and need our respect and cheerful acceptance.



**Lt Cdr Rajeshwari Kori**

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**Male Mindsets / "Resistance Discourses"**

India has Manu and his misogyny to contend with but biases against women in uniform. Leading Israeli writer Martin Van Creveld doesn't hesitate to conclude in his book *Men, Women and War* that uniformed women are physiologically, mentally and physically handicapped. Brig Gen Yehudit Grisaro, the IDF Adviser on Women's Issues however provides insight by stating that the problem is with poor metrics: testing women using 'masculine' tests tailored to assess male fitness. That isn't all. The Israeli Defence Forces (IDF) are anchored on three values: The male body, masculine identity and male relationships. The construct is that male virility overcomes all obstacles by display of masculine traits such as aggression, determination, stamina and willingness to die; the ability to overcome the ultimate challenge: Battle.

**Femininity has no place in this construct except for serving as the 'other' whose negation is the building block of masculinity.**

The three 'resistance discourses' stated above are universal mindsets: the **physiological** discourse claims that a woman's body cannot withstand wartime stresses; the **identity** discourse claims a lack of killer instinct in battle; the **relationship** discourse claims that presence of women ignites sexual instincts, unsettling male camaraderie.

**A Contrary View**

Brig Gen Grisaro asserts that women have superior skills in discipline, motivation, functional alertness, task management and weapon handling. They also have genuine problems due to male-oriented equipment (bulletproof vests, boots, helmets that don't fit), heavy loads. Women are equal but different and men must respect these differences if women in uniform are to excel. Women should be discouraged from **repeatedly switching from male to female identities** as a mandatory job requirement, leaving them confused and insecure.

**Does The Military Need Uniformed Women?**

The facts speak for themselves. The authorisation of officers in the Indian Defence forces is 69,000. Parliamentary records of 2012 indicated an overall shortage of 13,100. Twentyone years since induction of women officers began, the Army and Air Force have less than 1,300 each with the Navy having 302 officers; short of five per cent of male officer authorisation. In comparison, USA has 14 per cent of its officer / enlisted strength as women and even Pakistan has 4,000 women officers.

That isn't obviously the full story. These women are currently allowed a Permanent Commission only in law, education and medical streams. For the rest it is a Short Service Commission (5+5+4 years) without pension. The Defence Minister has however just announced a slew of attractive material benefits in this category. It may be noted that even under the current lopsided dispensation, the three Services have always a vast array of highly educated motivated women to choose from. It says a lot for the quality of women officer inductees.

In conclusion it is worth remembering that Manu has caused national loss of almost half of India's workforce by being taken literally by his male readers. Fortunately a Malcolm Gladwell like Tipping Point may drive the nascent **Revolution in Women's Affairs** that perhaps started on Republic Day 2015. It now needs to become viral and owned equally by men and women.

As for women in general it is good to recall Najm Hosain Syed's wise words **"A woman stands outside the cycles of time and society"**. This prescient reflection means that women can choose to be helpless votaries of an accepted convention; bowing before the acknowledged power of an unchanging order ... They can also **assume the power of choice and rejection** by standing outside the cycles of time and society - and winning - for the Idea of India.

**It will help to look around and note that a Revolution in Women's Affairs (RWA) is already taking place in non-military disciplines across India**

# ROLE OF WOMEN IN ENSURING WOMEN SAFETY

All of us have a role to play in the safety of women; from creating culture of gender equality and respect for women to specific initiatives for financial, emotional, psychological and physical safety of women. Being of the same gender and having trod the same path, our knowledge about where the shoe pinches is better than men. Therefore, more responsibility lies on us and I have not seen any woman grudge it.



**S**afety of women has become an issue attracting regular media and public attention, though action in field is yet to show significant improvement. TV debates and print media articles encourage a culture of gender equality; give strong signals against harassment of women in public and private places. But creating or changing a culture is a slow and long process. It has to be paired with immediate strong measures for safety of women and not physical safety only; it has strong emotional, psychological and financial connotations.

Changing India has changed its women and men too, though missing girl child is a burning issue. The current sex ratio in India is unfortunately 943 females to 1000 men. But let us not negate the strides that we have made. One such concrete step has been to educate our girls and encourage more women in positions of authority. As per Wikipedia, literacy rate of women in India today is 65.46 per cent. It signals

that society values the knowledge, skill and talent of women and also a paradigm shift in perception about their role in families and outside world. But is an empowered woman now able to help a needy one? Can she take concrete steps for the security of her gender? Can she walk the talk? I mention a few areas below where we as women can definitely set the ball in motion.

### Gender Equality At Home

As mothers and sisters we can change the childhood messages that children of both genders get. We can bring up our boys respecting girls. By giving positive strokes to girls, we can increase their confidence and self-esteem. Gender equality has best chance if it is inculcated amongst children from early age. Women can certainly ensure it at home and later in schools and colleges. We can encourage girls to take up science, accounts, martial arts and other subjects or careers that in the past were considered



not 'suitable' for girls. Women as mothers, homemakers, teachers have a very vital role in creating a gender secure atmosphere and contribute to the emotional security of a girl child.

If the 'Grameen Bank' of Bangladesh understood the need for financial security of women and valued them as clients, why did we hesitate for so long? Women self-help groups and emphasis on inclusiveness by banks has indeed changed the scenario in rural India, yet much more needs to be done. I know of 'Mann Deshi Mahila Sahkari Bank' in Maharashtra that lends only to women and has mainly rural women as its clients. Started by Ms Chetna Sinha in a drought prone taluka of Satara district, she has an all women team that has provided financial security to mainly women in villages. The bank is now expanding in urban pockets also.

### 'Don't Mess With Girls' Policy

Then there is the need for physical security. Here one strong message that 'you cannot mess with girls' needs to be given in most clear terms. We seem to be failing to do so, despite umpteen changes in the Indian Penal Code, special courts for trial of offences against women and induction of women in Police, prosecution and judiciary. Law is on the side of women but awareness about it is low. Girls and women thus continue to be harassed by husbands and in-laws, thinking that suicide is the only option. Harassment at workplace, public places continues unabated as most girls / women fear to complain. Police stations are still considered out of bounds despite women police officers and staff being present there. Scenario has changed to an extent in metros and cities but most rural women continue to suffer in silence. Offences against women eg rape, eve-teasing continue to rise, some of which is because many who preferred to remain silent earlier, come out and register cases now. Here women police officers, lawyers, prosecutors, doctors can play a vital role. Fast trial and conviction of accused in crime against women

**Women as mothers, homemakers, teachers have a very vital role in creating a gender secure atmosphere and contribute to the emotional security of a girl child**

shall definitely lead to reduction in crime and harassment of women. For prevention of crime against women, it is the role of women as mothers and teachers that helps. Thus in all aspects of physical security of women, from prevention, detection, investigation to successful prosecution, women can contribute.

### Mentoring

Women can also contribute to a culture of professional development, physical fitness and crisis management by women. Those in position of authority can and have been mentoring the younger ones. Today Confederation of Indian Industry (CII), Federation of Indian Chambers of Commerce and Industry (FICCI) have women wings that take up mentoring of women and develop corporate culture of gender equality. I know of many women in the Indian Police Service who have been mentoring their juniors. Women working at different levels in corporate sector can ensure that substantial portion of their Corporate Social Responsibility (CSR) budget is earmarked for projects initiated by women or which have high women presence. Lila Poonawalla, the former Chairperson of Tetra Pak India Ltd and Alfa Laval India Ltd has been providing scholarship to girls and nurturing them through her Fellowship programme. Anu Aga and her daughter Meher Pudumjee of Thermax Ltd have been equally active in encouraging girls and women to reach their full potential.

To conclude, all of us have a role to play in safety of women; from creating culture of gender equality and respect for women to specific initiatives for financial, emotional, psychological and physical safety of women. Being of the same gender and having trod the same path, our knowledge about where the shoe pinches is better than men. Therefore, more responsibility lies on us and I have not seen any woman grudge it. Various forums and collaborations across different streams have been formed by women for this cause; some have been noticed while others have been working quietly. More concrete action in formal and informal sectors, urban and rural areas especially in latter can be the game changer. Amen! **DSA**



**Meeran Chadha Borwankar IPS**

The writer is Additional Director General of Police, Maharashtra State Prisons. She belongs to the Indian Police Service of 1981 batch and has done her MA in English literature, LLB and PhD in Organisational Management. She is recipient of President of India Police Medal for Meritorious Services 1997 and President of India Police Medal for Distinguished Services 2006.





# NARI SHAKTI

## A GRAND DISPLAY OR MUCH MORE?

Women officers were called upon pan India to participate in the display of Nari Shakti on Republic Day. Grand as the gesture was, these women need to be really empowered with a sense of belonging. While these officers do not need to win the best marching contingent to garner respect, a significant acknowledgement in the form of Permanent Commission can surely lift spirits. This move will bring more mileage to the Prime Minister's Nari Shakti emphasis.

A slight drizzle was falling on the morning of 66th Republic Day Parade, as people craned their necks to catch glimpses of tableaux lined one after the other. But for a special moment, the rain didn't bother the crowds, as three all-women contingents, each comprising 150 officers or more, from the Army, Indian Air Force and Indian Navy marched powerfully down the Rajpath. It was nothing short of historic.

This move fitted perfectly with the Prime Minister Narendra Modi's 'Nari Shakti' focus, which was also the theme for the Republic Day. Women officers were called up for participation from all three Services in the month of January for gruelling practice drills. Some of these women were on active duty serving in semi-combat areas while the others were performing duties in peace stations.

It would be naive to believe that the US President Barack Obama's presence at the parade had nothing to do with the move to highlight women officers in the forces. Moreover it is hard to forget that, in an unprecedented move, it was a lady officer, who led the ceremonial Guard of Honour for the visiting President. While it is encouraging that Modi chose to emphasise on 'Nari Shakti' for this year's theme, the women officers would feel great disappointment if their presence does not translate from a mere cheer into something more.

### Present Situation

In the Indian Army, women have held permanent commissions in the medical arms even prior to independence. It began as induction into the Military Nursing Corps in the late 1920s and then they were commissioned as officers in the Army Medical Corps beginning 1943.



After a period of almost 50 years, in 1992, the defence Services began inducting women officers in supporting arms and logistics branches. Specifically, in the Army it was arms like Signals, Engineers, Air Defence, Army Ordnance Corps (AOC), Army Service Corps (ASC), Electronics and Mechanical Engineers (EME), Army Education Corps and Judge Advocate General (JAG) that saw the influx of women officers. In the Indian Navy, Observer, Air Traffic Controller, Naval Constructor and Infrastructure branches saw the entry of women officers. However, they are not allowed ship crew duty as the environment at sea is not considered to be conducive enough for a crew involving both men and women cadres.

The Indian Air Force has proved to be a more integrating force for women officers in terms of inductions. Women officers hold positions in all Ground and Technical Duties along with the Flying branch that includes helicopter and transport streams, but they are excluded from the fighter stream.

Today there are almost 3,000 women officers in the three Services but a large number of them, are denied permanent commission. In a 2006 study conducted in tandem by the three forces, it was recommended that women officers be accorded Permanent Commission in supporting arms. However, the study also recommended women officers remain excluded from induction into combat arms or any branch that brings them into contact with the enemy.

It can be said that the NDA government has a favourable stance on the issue of women officers holding commanding positions (after Permanent Commission) in some selected arms and logistics units. The Army Chief General Dalbir Singh, who held an event for women officers a day after the parade, stated that the Army is working towards optimistic steps for ensuring greater accreditation of women officers in the force. However, it is yet to be translated into a policy decision. With such

positive reinforcement coming from the government along with Modi's push for 'Nari Shakti' the women officers are hoping for a better future.

### Issues In The Forces

Are the armed forces prone to patriarchal handicaps? The answer is yes and much more than one would believe. Today women officers suffer from a number of issues in the forces ranging from denial of Permanent Commission in the Services to lack of acceptance in commanding roles. Capt Divya Ajith led the Indian Army's contingent in the parade and was also the first woman officer to receive the prestigious sword of honour (an award given to the top cadet) at the Officers Training Academy (OTA) in Chennai. She is nothing short of an exemplary officer; except she will

be asked to leave the force after completion of 14 years and she cannot expect a commanding officer position.

A friend, recently commissioned in the Air Force, shares her new life. This confident woman, now a Flight Lieutenant, speaks of how she may be short-changed in a few years. "I give the most productive years of my life to this force and don't even receive Permanent Commission."

While issues like Permanent Commission raise serious legal concerns, worries like equal acceptance from soldiers for women officers and ensuring zero sexual harassment are often glossed over without serious discourse. Then there is the issue of pension that sticks out like a sore thumb.

Women were initially allowed to serve 5 years as Short Service Commission cadre; this term was then extended to ten years. Today women officers can serve for a minimum of ten years and a maximum of 14 depending on their service appraisals.

The bracket of 14 years becomes all the more interesting if one considers the fact that it is only after 15 years that one qualifies for pension in the three forces. Another year and these officers would be sanctioned pensions. But the issue of Permanent Commission is less for the requirement of pension and more for the reason that they wish to serve longer. Their claim speaks of nothing less than an inherent desire to continue in the profession they give their absolute best to.



Deepshikha Hooda

The writer is a freelance writer and co-author of the book titled 'Gujjars and Bakkarwals of Jammu and Kashmir: In the Shadows of Conflict'. She was formerly with IDSA and her areas of interest include Conflict in Jammu and Kashmir, Military Affairs and Internal Security.

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**The Legal Battle**

Women officers have fought a long legal battle against what they perceive as discrimination against them. In 2008, the Defence Ministry decided to surpass all existing women officers for Permanent Commission. This move did not go well with some women officers who challenged the move in the Delhi High Court through Public Interest Litigation. In 2009, Gopal Subramaniam, Solicitor General of India, spoke his mind at the case hearing stating that anything beyond Short Service Commission in the supporting arms for women is out of the question.

In March 2010, The Delhi High Court judgment gave out an order to reinstate 52 officers who had petitioned for Permanent Commission in the Army as well as the Air Force after being relieved by their respective organisations. Moreover, the court rejected the Ministry's decision to allow Permanent Commission only for officers inducted in the future.

The order also stated a time limit of two months for implementation. Soon after, something interesting took shape. The Air Force decided not to appeal and granted Permanent Commission to the 22 air officers who had won the petition. The Army implemented the order only partially. They agreed to Permanent Commission in the JAG and Education branches but not in the other arms and services. Twelve lady Officers were granted Permanent Commission in the JAG and Education Corps the same year.

Dissatisfied with the Army's nonchalant reaction to the court order, the petitioning Army officers filed a contempt plea in the High Court. The plea was directed against the then defence top guns. Following this contempt plea, the Army filed a review petition of the Delhi High Court order in the Supreme Court.

In 2011, the apex court upheld the judgment of the High Court, while staying the High Court contempt notice for not acting within two months. The Supreme Court ordered the Indian Army to reinstate officers who wanted to continue service.

Pending a final decision in the Supreme Court, women officers continue to serve beyond 14 years but the issue of Permanent Commission remains unresolved. The affidavit submitted to the Supreme Court in 2012 by the government citing reasons for not granting Permanent Commission to women is revealing. This discouraging document presented to the apex body cited explanations ranging from soldiers being unable to take orders



from a woman to women officers refusing to go on unit exercises for family reasons.

**Marching Forward**

The tussle between the Supreme Court and the armed forces has clearly brought out two polarising views on the issue of Permanent Commission for women in defence Services.

India is not the first Army to struggle with the integration of women in its armed forces, but it is demonstrating a surprising degree of nonchalance in the matter. The first sign of this is the long pending Supreme Court case that is still awaiting a verdict. A positive verdict will go a long way in empowering women officers and ensuring a liberal and open-minded force which is non-discriminatory. The only relief in the interim is that till a decision is not announced, the Army and Air Force cannot relieve the petitioning women officers even after the completion of 14 years of service. However, this is only a brief victory.

Women officers were called upon pan India to participate in the display of Nari Shakti on Republic Day. Grand as the gesture was, these women need to be really empowered with a sense of belonging. While these officers do not need to win the best marching contingent to garner respect, a significant acknowledgement in the form of Permanent Commission can surely lift spirits. This move will bring more mileage to the Prime Minister's Nari Shakti emphasis, that has till now remained an apparent glorification of women empowerment in the Defence Services of the country. **DSA**

**The affidavit submitted to the Supreme Court in 2012 by the government citing reasons for not granting Permanent Commission to women is revealing**

# Aruna Bahuguna IPS

PRINCIPAL, NATIONAL POLICE ACADEMY

**A**n IPS officer of the 1979 batch from Andhra Pradesh cadre, Ms Aruna Bahuguna has created history by becoming the first woman selected by the Union Public Service Commission since its inception in 1948 to head Sardar Vallabhbhai Patel National Police Academy, India's premier training institute for IPS officers.

Determined to be a trailblazer, when Ms Bahuguna reported to duty along with 54 colleagues, her officers were baffled. It was the first time that a woman had donned the uniform of a police officer and she was the only one to do so for another four years at least. What, they wondered, were they to do with this sprightly young woman!? Her journey as the first woman IPS officer was a challenge in itself. All the more challenging was her struggle to follow her heart and deal with the stereotypical attitudes aiming barbs at her. She enjoys the challenge of dealing with deviants, understanding the experiences of the different worlds of criminals and to be a change maker.

An exemplary officer of the rank of Director General of Police, she was adorning the designation of Special Director General of Central Reserve Police Force, the country's largest paramilitary force with a strength of three lakh, before accepting the reins of National Police Academy. Ms Bahuguna has successfully capitalised her leadership skills to grace the important positions of the Chairman of Andhra Pradesh Police Housing Corporation and Joint Commissioner of Police in Hyderabad.

A graduate in History and Economics from Madras University, she has efficiently and seamlessly held prestigious ranks of Superintendent of Police, Visakhapatnam Rural, Vizianagaram, Women Protection Cell, CID, Vijayawada and Intelligence; Assistant Director, Intelligence Bureau, New Delhi; Central Intelligence Officer at Hyderabad from 1988 to 1993; DIGP, Intelligence; IGP Police Computer Services & Human Rights Cell; Controller of Legal Metrology; IGP Coordination; ADGP Coordination; Director General, Special Protection Force; Director General, State Disaster Response & Fire Services; ADGP Training; ADGP & Commissioner, Printing and Stationery; ADGP APSP Battalions; DGP and Chairman, AP State Police Housing Corporation, Hyderabad.

She was decorated with the Indian Police Medal for Meritorious Service in 1995 and the President's Police Medal for Distinguished Services in 2005.

An extraordinary and admirable combination of guts and musical harmony, Ms Bahuguna is extremely fond of western classical music, poetry and philanthropic activities, along with being an accomplished piano and guitar player. She is a keen golfer and actively participates in almost all outdoor activities at the Academy. **DSA**





# ESSENCE OF BEING A WOMAN

**M**argaret Thatcher, Former Prime Minister of the United Kingdom has beautifully encapsulated the real essence of being a woman. “If you want something said, ask a man; if you want something done, ask a woman”. I remember an amusing cartoon I once saw, where a board at a work site says ... “Men at Work”. A little girl asks her mother about it and her mother, very coolly answers ... Women work all the time ... But when men work, they need to put up signs! Women have always been instrumental in building and developing civilisations and continue to do so effortlessly without resentment and receiving due credits.

International Women’s Day, celebrated all over the world on 8th March honours womanhood and pays tribute to the indomitable spirit of women across the world. Its root lies in the early 1900s when oppression

and inequality was spurring women to become more vocal and active in campaigning for change.

International Women’s Day is about recognising the achievements of women and appreciating the progress made towards equality. But most importantly, it’s about highlighting that we still have a long way to go to rid our society of entrenched inequality. This day is a time to reflect on progress made, to call for change and to celebrate acts of courage and determination by ordinary women who have played an extraordinary role in the history of their countries and communities. It is an opportunity to applaud some of these staggering accomplishments, successes and triumphs – all a testament to the incredible progress women are making across continents.

In retrospect, don’t we feel that celebrating a day for women has simply become a ritual!? We have always heard that a society that is unable to respect,

protect and nurture its women and children loses its moral moorings and runs adrift! Ironical!!!

Women have gone through many social and economic struggles and are still struggling, mainly due to men’s perception about them as inferior. Women especially in the less developed countries face this every day and the best way to overcome this misfortune is to eradicate this perception from the society. Time has helplessly watched women suffering in the form of discrimination, oppression, exploitation, degradation, aggression and humiliation. The Vedas have glorified women as the mother, the creator and worshipped her as a Goddess. But sadly, their glorification has been restrained to mythologies, as we see Indian women totally suppressed and subjugated in a patriarchal society because it believes in clinging on to orthodox beliefs and Indian women have to bear the brunt of violence – domestic as well as public – physical, emotional and mental.

A script from the Vedas says, “Yatra naryastu pujiyante ramante tatra Devata, yatra itaastu na pujiyante sarvaastatrafalaah kriyaah”! This means that divinity blossoms where women are worshipped and where women are dishonoured, all actions; no matter how noble, remain unfruitful. It is disheartening and shameful that in a country where women were respected like goddesses in ancient times has stooped to a level where we need

to discuss and work towards ensuring their security!!

The status of women in India is a paradox. The level of atrocities and exploitation of women is evident in every walk of life and my apprehension is that women ought to be celebrated with each and every breath of life instead of parroting a script for a photograph to be clicked on a particular day. Is it humanely possible to comprehend a day of our life without the existence of women? Woman is a word that conjures up a lot of images in our minds and brings out varied emotions of selfless love, nurturing and caring attitude. Within her is the power to create, nurture and transform. Understanding a woman is a mystery and it needs lots of perseverance and knowledge. A woman is the epitome of love, sacrifice, care and ability to nurture life. The ability to nurture life makes woman the most powerful and the strongest being. She can play different roles with ease be it that of a dutiful wife, obedient daughter, caring mother or adoring sister. In addition to that I consider woman the source of life, giving birth to both man and woman.

Our mindsets need an exemplary transformation. The Secretary General of United Nations, Ban Ki-moon paraphrases the role of women most effectively ... “Countries with more gender equality have better economic growth. Companies with more women leaders perform better. Peace agreements that include women are more durable. Parliaments with more women enact more legislation on key social issues such as health, education, anti-discrimination and child support. The evidence is clear: equality for women means progress for all”.

The fastest way to change society is to mobilise women of the world. India has emerged as a powerful land since women have started playing phenomenal and significant roles for the development of our nation. The evolution and transition of women is worth mentioning. Once considered as being the masters in the art of homemaking they are now respected for their abilities and contributions that shape a country. The hands that affectionately rock the cradle are now passionately ruling the world where people are progressive and enlightened!!

Today, it would be preposterous and irrational to believe that a woman is naive or innocent and doubt her courage or her toughness. A society needs guts and courage to treat her with reverence. A woman of substance is a woman of power, a woman of positive influence and a woman of meaning. Strong, Smart, Sensual, Caring, Giving, Surviving, Tolerant and Powerful ... She is a WOMAN! **DSA**



**Urvashi J Agrawal**  
The writer is President of **DSA** magazine. She is a writer, a poet and an entrepreneur.



# WOMEN

## CAPTIVE IN THE DARK, CAPTIVE IN THE LIGHT

**In societies where men are truly confident of their own worth, women are not merely tolerated but valued. I, once read somewhere, “in order to rise from its own ashes, a Phoenix first must burn”. The Indian woman has done enough of burning. The time has come to rise.**



**C**J Roberts once said, “People often believed they were safer in the light, thinking monsters only came out at night. But safety – like light – is a facade.” Instead of people, I will say women. And we all know the monsters. It’s just that we don’t recognise them.

For a country that has had a woman Prime Minister, President, Chief Ministers and a lady super cop, our record of women’s safety is dismal, pathetic! Global surveys for the last four years continuously have put India as the third or the fourth most unsafe place for women to live and travel. When I travelled abroad earlier and met women who were travelling to India, I remember they were given a checklist to follow in order to be safe in our country. I used to feel mortified that foreigners thought my country unsafe. Today, every Indian woman and girl feels the same.

How did this happen? How did we, from a nation that worships goddesses and has had kings and emperors fighting for and protecting their women,

become a nation of Nirbhayas? The ‘rape map’ of India shows that Uttar Pradesh, West Bengal, Madhya Pradesh, Chhattisgarh, Andhra Pradesh and Maharashtra rank among the highest states for registered rape / sexually harassed cases. New Delhi closely followed by Bangalore, Hyderabad, Vijayawada, Kota, Kollum and Asansol are cities that have recorded the highest number of rape cases. And the percentage increases every year. (Statistics from: [www.indiastat.com/](http://www.indiastat.com/) [www.prsindia.org](http://www.prsindia.org))

As a woman writing this article, it is painful for me to think about these numbers. We all understand why crime against women happen. The reasons are the same everywhere. Today, we do not have solutions that can be implemented. Worse, we do not have people to implement them. Let’s take a look at what happens when a sexual crime is committed against a woman.

**Step One.** Assuming, the woman is left alive, she should go to the police station to register a complaint. **Hurdle One:** Police refuse to lodge a

complaint / police ask her such derogatory questions that she feels violated all over again / in some cases, she does get violated again.

**Step Two.** If she is lucky enough to register a complaint, investigations take a long time in our country. **Hurdle Two:** By the time the criminals are caught, they have used the loopholes in the law to get an anticipatory bail or they bribe the local cops to get away. **Hurdle Three:** The woman’s family is threatened with dire consequences and are silenced with either money or thoughts of ‘shame and humiliation’ they go through in society.

**Step Three.** In a small number of cases, where the criminals are brought to court for a hearing, the case can swing anyway. **Hurdle Four:** Bail granted for various reasons, out of court settlements to avoid society casting aspersions on the woman.

**Step Four.** In case of conviction, appeal to the higher court by the criminal / s. **Hurdle Five:** The woman has to go through the same agony again, with no guarantee that the criminal / s will be punished. All of this can take years.

The above is just a small illustration of what happens. Most often, the woman and her family spend half their lives either running from court to court or live in social hiding, fearful of a stigma. Where is justice for the lot that men have sworn to protect?

As a woman, as a mother of two daughters and as someone who has endured and retaliated to stares, whistles, catcalls and brushing of men, these issues were on my mind for the longest. When I went through unpleasant encounters with men, I definitely did not want my daughters or nieces to face the same. And I wanted some kind of an action plan that we could use to keep ourselves safe. Priya Varadarajan, co-founder of our NGO, ‘I’m Every Woman’ and a very dear friend, was the person who gave shape to that action plan. Priya and I share the same passion and interests in the space of women empowerment and that brought us together.

DURGA was conceptualised and born.

DURGA stands for **DARE (To) UNDERSTAND (Behaviour) RESPOND (appropriately) and GUARD (ourselves) ABLY.**

**What is DURGA? A community initiative that will equip women in India with basic self-protection and life skills.**

- Teach women **basic skills** of observation and response against a perpetrator.
- Create **open source module** to train women – train the trainer approach.
- Increase awareness about crime through **community programmes** and medium of **street plays** and **forum theatre.**

Using theatrical tools and techniques, the workshop aims at interactive sessions between the participants. One must understand that when a

crime is being perpetrated, there are no right or wrong responses. There are only responses that will protect you and keep you safe. Towards that, all participants are taught that DURGA will:

- Take control over the situation.
- Distinguish good and bad behaviour.
- Use her judgment quickly.
- Respond to the situation appropriately.
- Defend herself physically, if needed.
- Be confident all through and.

DURGA will not:

- Take law into her hands.
- Go beyond self-defence and self-protection.
- Use the DURGA garb to cover crime.

DURGA has conducted workshops in Bangalore and Mumbai covering more than 1,500 women. Because it is a community initiative using methods of self-expression, women participate freely. We understand that, for any woman to share publicly what she has gone through, in terms of being assaulted and violated, is extremely difficult. Therefore, theatre becomes a great leveller to bring out the anguish, pain and experience.

DURGA’s journey has been interesting. It all started with training a few women in our local areas. We did not advertise through print or electronic media, primarily because as an NGO we did not have any money. Secondly, we wanted to ensure that our participants found value in the workshop and helped us promote DURGA. Our intention was to reach out to more and more people in communities, corporates, schools and colleges. And we did. With the help of all the participants who had similar experiences and wanted to learn and understand how to deal with situations that made them feel threatened. Over a

period of time, we developed separate modules for our girl students in schools, vernacular scripting and better role plays. Priya got in touch with Bangalore Political Action Committee – BPAC – and shared with them the concept and how we wanted to expand. BPAC, last year, invited us to participate in their walkathon event held on International Women’s Day. We also held our own event celebrating womanhood by helping women understand that they need not feel ashamed of the harassment they have gone through.



**Uma Sudhindra**

The writer is a current affairs analyst, with focus on politics and defence. An alumnus of Fergusson College and JNU, she has been writing about international relations, political systems and the humane aspect of armed forces. She is also a social entrepreneur, running her own NGO, which empowers women by addressing their safety and harassment issues. She is part of the Forum For Integrated National Security.

**Global surveys for the last four years continuously have put India as the third or the fourth most unsafe place for women to live and travel**



Eventually, DURGA started getting noticed. The time had come for us to move ahead and look at creating safer public spaces along with empowering women. The DURGA ALARM was a result of that thought process. Our next step was to find out if the Bangalore Metropolitan Transport Corporation (BMT) would agree to have the alarm installed in the public buses of the city. We were apprehensive. Our collective experience of dealing with bureaucrats and government officials was not a positive one. Nevertheless, we took help from BPAC and a few more friends to meet the PRO (Public Relations Officer) and the MD of BMT. Much to our surprise and delight, they loved the concept of installing an alarm in the buses to ensure safety not just for women but for men also. For the alarm could be used to report crime of any nature, by anyone.

The time had come to launch our DURGA ALARM, which we did last week. We have had favourable responses and appreciation for this initiative. However, we do not want only Bangalore to feel safe. We want DURGA ALARM to be in every public transport across the country, so that our women feel safe everywhere.

As we take DURGA ahead, some of the gaps we strongly feel that have to be closed and action taken are as follows:

**Increase women in the police force.** This helps women feel safer. India historically has had a much lower percentage of female officers in the police force. New Delhi, being the capital has only 8 per cent female officers, according to the *Times of India* and even these female officers are given inconsequential posts that do not involve patrol duty. Other cities in India have even lower percentages of female officers.

**Acceptance of domestic violence.** The Reuters Trust Law Group conducted a survey and said India's record in domestic violence is one of the worst. This is not to say that domestic violence does not happen across the world. It does. However, what

is scary is that urban and rural India seem to think that women deserve this treatment. Educating men and women about the stringent laws that will be implemented in such cases can be the only deterrent. A 2012 report by UNICEF found that 57 per cent of Indian boys and 53 per cent of girls between the ages of 15 and 19 think wife-beating is justified. A recent national family health survey also reported that a sizable percentage of women blame themselves for beatings by their husbands.

"When a boy grows up seeing his father assault his mother, he starts to accept such a behaviour and repeats it," Anuradha Gupta, mission director for India's National Rural Health Mission, was quoted as saying.

**Lack of public safety and public spaces.** Women generally outside their homes are not protected. Gang rapes occur in buses, buildings, schools and colleges, open spaces. Where and how does a woman feel safe? The government of India also agreed that

there aren't enough safe public spaces for girls and women. Streets are poorly lit, lack of women's public toilets, lack of waiting areas in railway stations and bus stands solely for women. A lot of people made fun of Prime Minister Modi's project of more toilets to be constructed. Only a woman will understand the pain.

**Sluggish court system.** Our court system is painfully slow. As a result, justice delayed is justice denied. There have been innumerable cases where the victimised woman has committed suicide only because the criminals were still scot free and the courts did not render swift and speedy justice. Add to that, a low conviction rate of 26 per cent. There is also no law on the books covering routine daily sexual harassment, which is euphemistically called 'eve-teasing.' The passing of a proposed new sexual assault law has been delayed for seven years.

**Status of women.** The biggest issue, however, is the way women are seen in society. There is a tendency to blame the women who have become victims of sexual harassment and crime for bringing it upon themselves. In response to a gang rape incident, a legislator in Rajasthan suggested banning skirts as a uniform for girls in private schools, citing it as the reason for increased cases of sexual harassment. Educating men and women about female infanticide, gender equality in terms of education, career and opportunities in life is critical. What is also equally important is to help women build their self-esteem and empower them emotionally, mentally and financially. Women should not aspire to have power over men, let them aspire to have power over themselves.

In societies where men are truly confident of their own worth, women are not merely tolerated but valued. I, once read somewhere, "in order to rise from its own ashes, a Phoenix first must burn". The Indian woman has done enough of burning. The time has come to rise. **DSA**



## BRAHMOS EXEMPLIFIES MIC IN INDIA

**Sudhir Mishra is Outstanding Scientist and Chief Controller (R&D), DRDO and CEO and MD of BrahMos Aerospace. He is a specialist in Missiles Project Management, Corporate management, Defence Diplomacy, Production Technology and Management, Enterprise Resources Planning and Management, Precision Engineering and Manufacturing and Scheduling Methodologies. He has been awarded with the 'DRDO Scientist of the Year Award 2009' by the Prime Minister of India.**

**F**or a vibrant country like India, which has stood out prominently at the regional and global stage as a major economic, political and military power, it has become imperative to shed its reliance on foreign arms imports and rather focus more on defence indigenisation.

The establishment of a 'Military Industrial Complex' consisting of a cluster of small, medium and large-scale defence-sector entities can go a long way in streamlining domestic defence production and also giving a major fillip to India's defence export ambitions in the future.

Even though India has been successful in developing and producing several sophisticated, state-of-the-art military hardware in the last few decades, military technology all over the world has evolved quite fast. The evolution, or rather the revolution in military technology, is a rapidly transitioning affair as few countries worldwide have achieved major breakthroughs in conceiving, designing and developing a number of modern high-technology defence systems, weapons and platforms.

For India, in order to catch up fast in this domain, it becomes a matter of paramount importance that all the public and private sector firms working in the field of defence come forward and join their hands to design, develop and deliver the very best military products to our armed forces.

Here, to quote the BrahMos JV as the most perfect example of a robust 'Military Industrial Complex' in delivering a very high-technology modern weapon, BRAHMOS, to the Indian Defence Forces would be the best case in point.

The JV between India and Russia, right from its inception in the year 1998, has charted an incredible

journey full of many milestones. Reckoned as the world's best supersonic cruise missile system, BRAHMOS has become the most prized possession of India. It is a weapon no other country in the world has.

Today, the JV has become a huge organisation with an excellent networking of public and private-sector industries and laboratories, both from India and Russia, working continuously to design and deliver different systems and sub-systems for the formidable BRAHMOS missile. In fact, the very foundation of the BrahMos JV is this robust Military Industrial Complex. It is these industry partners which are the strength and backbone of BrahMos.

We take pride in the fact that today, about 205 companies from India alone have come forward in a big way in manufacturing and supplying various components for our missile – be it a small rubber component or the technologically advanced airframe or navigation system. This points towards our capability to become self-reliant in developing, designing and delivering a very high-end military product.

Hence, it wouldn't be wrong to say that the BrahMos JV has exemplified the very contours of 'Military Industrial Complex' in India.

It has paved the way for many more such joint military projects that can be undertaken within the framework of new innovations, product design, development and delivery, technology sharing, research and development and most importantly, for the establishment of a solid defence industrial base in India and also towards realising our long-cherished goal of transforming the nation into a vibrant hub of world-class defence manufacturing and export. **DSA**



# WOMEN WARRIORS

## PAST GLORY, PRESENT VALOUR, FUTURE POWER

In today's modern warfare participation of woman has increased and diversified. In 2012, the US Defense Department lifted the policy barring women from assignments to ground combat units below the brigade level. According to the Pentagon press statement by the then Defense Secretary Leon E Panetta, "is making these changes because he recognises that over the last decade of war, women have contributed in unprecedented ways to the military's mission." In December 2014, the UK defence forces also changed their long-time policy of not allowing women in the frontline and finally approved British women in combats.

*"Men can have an obvious display of heroics or strength or accomplishment, but it is the unsung women throughout all ages of humankind who have endured with superlative strength, beauty and love, often with secret suffering, that deserve absolute respect and acknowledgement. They are the true heroes of humanity ..."*

— Red Haircrow

The history of warfare will be incomplete and imperfect without mentioning the role of women warriors. The histories of war are full of illuminating examples where women have fought in battles full-fledged or sometimes in concealment. If we glance through the pages of ancient history of warfare we can find list of warrior queens and women warriors who have either commanded the troops or fought with enemies in the line of fire. We can find names like Syrian queen Zenobia of Palmyra who dared Rome and seized Egypt, ferocious women archers of the Amazon, Queen Tomyris of the Massegetai, Queen

Artemisia of Herodotus, Queen Boudicca – Queen of the Iceni in Britain in 60-61 AD, Queen Samsi (Shamsi) of Arabia in 732 BC, the two sisters, Trung Trac and Trung Nhi of Vietnam in 40 AD who fought against Chinese, Queen K'abel of the late classical Maya in 672-692 AD.

### Indian Warrior Queens

In ancient Indian context we have traces of the woman warrior as old as c 7,000 BCE, with reference to Queen Vishpala in Rig Veda, Queen Nayanika / Naganika (200 BCE-220 CE) believed to be the ruler and military commander of the Satavahana dynasty. Although, women seldom joined the combat, however, women warriors were not unusual. They were extensively used as spies, as soldiers, administrators etc. One can see mention of women bodyguards by Chandragupta Maurya in 322 BC, Princess Akkadevi of Chalukya dynasty of Karnataka (1010-1064 CE), had been equated to Bhairavi for her courage in historical inscriptions.

Talking about Indian women warriors in modern history, names like Rani Rudramadevi (1259-1289) of the Kakatiya dynasty on the Deccan Plateau, has been indicated as the Chief of Army in historical inscriptions. Razia al-Din or Razia Sultana (1205-1240), was the only woman monarch of both the Sultanate and the Mughal period. Lady commander Rampyari Gurjar fought against Timur in 1398 in Battle of Haridwar. Rani Durgavati (1524-1564) of Gond kingdom who fought fearlessly against the mighty Mughal Army. Employment of women warriors by Krishnadevaraya, King of the Vijayanagara Empire, Tuluva Dynasty, in 1509-1529. Chand Bibi or Chand Sultana of Ahmednagar (1550-1599 CE) fought against Mughal Army. Kittur Rani Chennamma (1778-1829) of Karnataka fought against British in 1824. Rani Lakshmi Bai of Jhansi (1828-1858) made glorious and courageous contribution against Britishers in revolution of 1857. Women warriors also played an important role in the Indian National Army (INA) or under the leadership of Netaji Subhas Chandra Bose. Rani of Jhansi Regiment, the women wing of INA, under the leadership of Capt Lakshmi Sahgal, displayed a rare show of women combat strength during 1943.

### American Civil War

In modern warfare history, American Civil War (1861 to 1865) saw more action from the women warriors. During the Civil War, when women participation in war was not authorised, an estimated four hundred women disguised themselves as men and fought bravely against the enemy. Frances Clalin, mother-of-three children from the Illinois, disguised herself as Jack Williams, joined the union in 1861 with her spouse. She in disguise of a man fought

eighteen battles, got severely injured thrice and was even captured once. Sarah Emma Edmonds disguised herself as Franklin Flint Thompson and joined 2nd Michigan Infantry as a male field nurse and worked as a spy. Jennie Rodgers disguised herself as Albert Cashier, worked as an active soldier through entire civil war without revealing her true identity.

### Role Reversal

In modern history, the major shift in women's role became quite inevitable with the world wars. Gradually due to shortage of labour as men were fighting the battles, women started filling in the male dominating skilled jobs. Moreover at ground zero, participation of women also expanded. They no more confined themselves to the 'noble nursing' job but also into the combat zone. The First World War (28 July 1914 till 11 November 1918) saw the transformation in role of women, from 'bandages to guns'. Approximately 80,000 women served in the three British women's forces as non-combatants. However, British women lobbied to be allowed to have rifle training and bear arms for home defence. Britain's Dorothy Lawrence disguised as Denis Smith (a man) to participate in the war. Canadian women went beyond the periphery of nursing and were given paramilitary training. Around 6,000 courageous Russian women participated in World War I and also in combat. Maria Bochkareva was the commander of the First Russian Women's Battalion of Death.

In the background, the high demand for weapons resulted in the munitions factories becoming the largest single employer of women during 1918. By 1917 munitions factories, produced 80 per cent of the weapons and shells used by the British Army. Identified as 'canaries' because they had to handle TNT, which caused their skin to turn yellow, these women risked their lives working with poisonous substances without adequate protective clothing or the required safety measures. Approximately 400 women died from overexposure to TNT during WWI.

During World War II (1939-1945), for the first time women were inducted in US military in an official capacity and by the end of 1941 around 350,000 women were part of the US military. Also at this point of time, the US and former USSR inducted women to fly military aircraft for the first time. There were daredevils like Lt Col Jacqueline Cochran who



Kriti Singh

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In the Indian context, women officers have been in the Indian Armed Forces for more than 85 years and served with competence and distinction



made immense contribution in the establishment of Women's Auxiliary Army Corps (WAAC) and Women Airforce Service Pilots (WASP), Russian fighter pilots like Marina Raskova, Lydia Vladimirovna Litvyak. In UK, Canadian, Polish and Brit women aviators were employed in Air Transport Auxiliary. In 1938, German aviator Hanna Reitsch became the first woman to fly helicopter. Emphasising the potential of women as air warriors, Eleanor Roosevelt, wife of President Franklin D Roosevelt and also an American politician, diplomat, said in 1942, "We are in a war and we need to fight it with all our ability and every weapon possible. Women pilots, in this particular case, are a weapon waiting to be used." It was also during this time as the war progressed, military needs and soldiers attitude changed. Despite the apparently inherited contradictions, the hitherto mutually exclusive categories of 'women' and 'soldiers' converged to a certain degree. Women soldiers were needed and the category became feasible over the period between 1941 and 1945. By the end of the war, more than 2 million women had worked in war industries. Hundreds of thousands had volunteered as nurses or members of home defence units or as full-time members of the military. Around 800,000 Russian women served alongside men in army units during the war.

**Diversified Role**


In today's modern warfare participation of women has increased and diversified. In 2012, the US Defense Department policy changes were announced, which noted that, "it will abolish the restriction on assigning women to locations where ground combat troops operate and selectively lift the policy barring women from assignments to ground combat units below the brigade level." As senior US officials noted that this move reflects, "women's increased roles in and out of combat

**From top-level we need to accelerate the acceptance of the rediscovered and reinvented image of women warriors and develop innovative ways for making them future power**

and the fact that war is no longer linear." According to the Pentagon press statement by the then Defense Secretary Leon E Panetta, "is making these changes because he recognizes that over the last decade of war, women have contributed in unprecedented ways to the military's mission." In December 2014, the UK defence forces also changed their long-time policy of not allowing women in the front line and finally approved British women in combats.

In the Indian context, women officers have been in the Indian Armed Forces for more than 85 years and served with competence and distinction. They were inducted in the Military Nursing Service in 1927 and in the Medical Officers Cadre since 1943. The role of women in armed forces saw a significant shift in 1992, when the iron doors of Defence forces were opened. Prior to that, the role of women was confined to the medical services only. Following Cabinet approval, induction of women officers in other branches in the three Services started in 1992. In 2008, the government granted Permanent Commission, prospectively to Short Service Commission officers, both men and women in branches and cadres of the three Services, which do not entail direct combat or possibility of physical contact with enemy. The numbers have seen a steady increase. Ninety three lady officers enrolled in 2010 and 166 in 2011. In 22 years, their strength has grown from 50 to 1,300. However, their role in full combat still seems to be a distant dream.

According to a study undertaken by the Delhi-based Integrated Defence Staff (IDS) headquarters in 2006 and the high-level Tri-Services Committee in 2011, 'Induction of women in combat duties has not been recommended.'

Induction of women in combat needs to be seen in totality, not just from stances, opinions, gender discourses or political debates or gimmicks. We have to make decision keeping in mind the realities of our own social strengths and weaknesses. The process is in evolution and expecting overnight results will not be pragmatic approach. The complete dismissal of idea will not be judicious either. The history is resonating with the achievements of women capabilities as warriors. The 2015 Republic Day parade was just a small glimpse of the actual potential, which is yet to be explored. However, to materialise it we need a multilevel and multidimensional approach. From grass root grooming of our society, so it re-learns to accept the history of women warriors and acknowledge their present achievements. From top-level we need to accelerate the acceptance of the rediscovered and reinvented image of women warriors and develop innovative ways for making them future power. Because in the end it is the 'will to do' which will win and shape the future of women warriors. 



**SAAB**

**TEAMING UP WITH INDIA, FOR INDIA**

Lars-Olof Lindgren is the Chairman and MD of Saab India Technologies Pvt Ltd. He has previously served as Sweden's Ambassador to India before taking up this position. In his earlier career he was the State Secretary to the Prime Minister responsible for EU and Foreign Affairs issues. Ambassador Lindgren has also served as State Secretary at the Ministry of Trade and Industry responsible for trade issues and earlier served as a Director General for Trade at the Foreign Ministry. Between 1995 and 2002 he was a Deputy Permanent Representative at the European Union responsible for Coreper-1 issues. He has also worked at The Swedish Trade Union Confederation, The Swedish Embassy in Beijing and the Swedish OECD-delegation in Paris. Ambassador Lindgren has a degree from the Stockholm School of Economics.



Lars-Olof Lindgren

**A**t the core of India's development premise today is the government's focus on 'Make in India'. It is in line with the ambition to create an indigenous Indian defence industry of global scale – the creation of an industrial base that will ensure that the country does not need to look beyond its borders for future technology requirements.

One way to build the necessary capacity to produce, develop and design products indigenously in an acceptable time frame, is to team up with a foreign company which already has cutting edge technology – and has a genuine interest in true transfer of technology and joint development of a new generation of products, in India, working with Indian companies.

**'Make In India' Is Right For Swedish Companies**

We see a perfect match between the skilled Indian workforce and Swedish know-how in the defence industry. Saab could build products and solutions here in India, by Indians, for India and even for export. This will create jobs in high-end manufacturing as well as education in defence engineering through collaboration between Indian and Swedish Universities, including exposure to the Saab production concept and way of working. Sweden and Saab have a proven track record of being open to sharing critical technology. We call it Transfer of Technology in its true sense. This includes training, transfer of know-how, capability development and supply chain development.

We have already progressed quite a bit towards realising this vision in India. One important step in this direction was the setting up of the Saab India Technology Centre, a Research and Development Centre, in partnership with Tech Mahindra in Hyderabad. Engineers at the Centre are working on multiple Saab programmes to develop critical technologies for aircraft, missile and radar systems, to support Saab's global market.

We work closely with partners such as BEL and HAL. Saab and Bharat Forge Limited have signed an agreement to work together on the Indian Army Air Defence programmes VSHORAD and SRSAM. Ashok Leyland will deliver high mobility vehicles for the BAMSE SRSAM solution.

Saab has a partnership with Indianeye Security for supplying Agile Tactical Engagement Simulation equipment to Indian Armed Forces, Paramilitary, Special Forces and Police.

Saab is an equity investor in Pipavav Defence and Offshore Engineering Ltd. Further, Saab and Pipavav are jointly developing Combat Management Systems in India. Saab, in collaboration with Grintex, has been selected by the Airports Authority of India to deploy Advanced Surface Movement Guidance and Control Systems at five airports in India, to enhance situational awareness and runway safety at these airports.

In 2012, Saab, in collaboration with Elcome Integrated Systems, implemented the National Automatic Identification System on the Indian coastline. The NAIS is helping safeguard India's coastline through monitoring and identification of maritime traffic.

Saab is also working with many suppliers of machinery and composite parts in India, including Aequs, Tata Advanced Materials and CIM Tools. These companies play a very valuable role in helping Saab develop, industrialise and manufacture complex airframe assemblies for Airbus and Boeing. Saab and Aequs have also established a joint venture, Aerostructures Assemblies India, an AS9100C-certified company located in Belgaum. AAI specialises in build-to-print assemblies for aircraft.

These alliances will go a long way in helping Saab fulfil its vision – of becoming a true and genuine partner to India's defence industry. For us, India is more than a market – we are not here simply to win bids, but to build business in partnership with reliable Indian partners, all the way from sub-component suppliers to strategic partners. 



# NATIONAL SECURITY THREATS, CHALLENGES AND SOLUTIONS

The concept of India's strategic autonomy will be called into question if India does not develop demonstrable military capability and upgrade its doctrinal thinking in tune with changing nature of wars and prevailing environment. Strong dissuasive capability backed by political resolve is required for India to protect its interest and shift from pure territorial bias to more interest-based capability. Even more important is reorientation of political mindset that looks upon soft power and *status quo* as the best options, leaving India open to coercion and dealing with unabated proxy war.

Full scale conventional war is less likely in the future. Conflicts will be fought in all spaces – land, air, sea, undersea, space, cyberspace and most importantly in our minds. Future wars will transcend beyond geographical boundaries and will be technology intensive, ambiguous and complex. Impact of technology will be far more evident. These wars would be fought on all fronts – physical, economic and psychological and characterised by uncertainty and reduced time for decision-making.

### Non-state Actors

Sub-conventional conflict perpetrated by non-state actors will increase both in scale and technology. Spectrum of conflict could range from conflicts between states, with non-state actors and their proxies resulting in blurred boundaries between regular and irregular warfare. These groups in the future could acquire better capability and greater lethality to pose a serious threat especially in case of acquisition of weapons of mass destruction. Non-state actors and asymmetric threats would emerge centre stage in future security situations.

Armed forces will be required to undertake low intensity border wars as well as insurgency fuelled by foreign powers. Such conflicts are likely to prolong indefinitely as conflict resolution requires many contradictory influences. More chances of hybrid conflicts involving conventional as well as sub-conventional threats.

Challenges like energy, water and mass migrations will manifest themselves as discernible threats. Depleting crucial natural resources like water and energy specially oil, will see greater rivalry for markets and resources, thereby increasing regional instability. Cross-border migrations resulting in demographic inversions are likely to increase specially in impoverished regions creating large-scale demographic upheavals leading to grave security threats.

Global warming and disaster management will be issues to contend with. Disasters likely to be exacerbated both in frequency and intensity due to global warming resulting in increased deployment of armed forces for the same, affecting operational capability. Global warming's greatest impact will be on availability of water resource, escalating tensions in the region.

Changes in structure of global economy, communications and new technology ushered in by revolution in military affairs (RMA) will continue to have greater effect in coming decades. Offensive use of information warfare especially cyber space and options of non-contact war will give the adversary the ability to cause disruption and destruction and degrade the war waging potential even before the battle is actually joined. New challenges to national security emerging from terrorism, ethnic diversity, proliferation of small arms, narcotics trafficking and religious extremism in the region.

Global warming and disaster management will be issues to contend with. Disasters likely to be exacerbated both in frequency and intensity due to global warming resulting in increased deployment of armed forces for the same, affecting operational capability. Global warming's greatest impact will be on availability of water resource, escalating tensions in the region.

### National Security Objectives

While there are no formally stated national security objectives by the government, however, over a period of time the following have generally been accepted:

- India's unity and territorial integrity to include land and maritime borders, island territories, EEZs, maritime trade routes and airspace.
- Peaceful, prosperous and friendly neighbourhood – ensure mutually beneficial ties within the region (immediate neighbourhood) in tune with our national interests and ability to prevent their destabilisation, which could have adverse security implications for India. Develop capability to effectively contribute towards security and stability in international affairs consistent with our policies and stature.
- Sustained inclusive economic growth and provision of energy and raw materials to ensure adequate defence budget allocation.

**Armed forces will be required to undertake low intensity border wars as well as insurgency fuelled by foreign powers**

Political stability and internal social harmony – by securing the country against any threat based on religion, language, ethnicity, socio-economic dissonance etc.

- Credible capacities for defence against all threats.
- Developing mutually beneficial ties within the region.
- Accelerate indigenous defence production.
- Address emerging threats of Information warfare with special reference to cyber warfare.
- Combating terrorism – Today the epicentre of international terrorism lies in Asia in India's neighbourhood with non-state actors redefining terrorism and proxy wars.
- Relations with the Indian Ocean Region rim countries creating safe zone for trade.
- Develop critical infrastructure and industry with security implications.
- Ensure food security as part of strategic autonomy.
- Improve energy efficiency and develop renewable resources in accordance with environmental concerns and provide for energy security. Climate change to be addressed on the basis of international equity and shared global responsibility.

### External Threats / Challenges

India would wish to proceed on its peaceful path of development. However, it would be naïve not to take into account the threats and challenges it faces in this regard both in the conventional and sub-conventional domain. These could be from regional powers, proxies, non-state actors or global threats with their own manifestations in the Southeast Asian context.

### China

The growth of China and increasing disparity is of disquiet, more so in the military domain. With triggers as existing threats are long-term and could manifest in all domains.

### Triggers

- The unresolved territorial and boundary dispute – it is unlikely to be the main trigger for the conflict, however, it has the potential to be an excuse for initiation of a conflict.
- Competing space – regional and neighbourhood, especially India's interest in South China Sea and South East and East Asia.



**Lt Gen BS Pawar**  
PVSM, AVSM  
(Retd)

The writer is a Gunner and an Aviator. He was head of the Army Aviation Corps and commanded the School of Artillery during a career spanning four decades. A defence analyst, he writes for a number of defence journals and publications. He is currently the President of the Northern Region of Helicopter Society of India.





- Energy and other resource oriented issues.
- Water woes.
- Violent rebellion in Tibet post Dalai Lama phase.

**Threats**

- Poses long-term threat / challenge, hence limited / full-scale war not ruled out.
- China's military capability development and improvement of logistic infrastructure in Tibet is India centric.
- Enhanced involvement in PoK, especially the Gilgit-Baltistan area, resulting in a *de facto* third party status in Kashmir.
- 'String of pearls' strategy encircling India with the prime focus on enhanced presence in Indian Ocean Region for power projection and influence.
- Multi-front threat, a reality in collusion with Pakistan.
- Damming of rivers will have a contagion effect on India – with no agreements existing; a potential threat.
- Use of Information Warfare – Cyber warfare, deception and intense psychological warfare as detriments of a non-contact war in peacetime or as a prelude / part of hostilities.

**Pakistan**

Present trends bode ill for Pakistan and unless it changes tack it will continue to be a source of instability and terror. The nuclear arsenal and its security is a major cause of concern. It is likely to remain on short fuse with possibility of conflict.

**Triggers**

- Unsettled border dispute in J&K – likely main and central cause.
- Another terror attack on India supported by Pakistan could be a significant trigger, but may not culminate into a full-fledged armed conflict.
- Contradictions between various institutions in Pakistan requiring diversion of public attention could culminate into a conflict.
- Support to terrorist / jihadi groups operating out of Pakistan.
- An internally unstable Pakistan.

**Threats**

- Radicalisation and Talibanisation of Pakistan.
- Pakistan's nuclear and missile development programme.
- Limited conflict – recurrence of Kargil-type operations remains a possibility.
- Pakistan's proxy war in Kashmir

**Pak-China Collusion**

The core of China's strategy in South Asian Region revolves around its strategic alliance with Pakistan by providing unprecedented levels of nuclear and conventional military support to Pakistan.

Pakistan has become a vassal state of China, by even allowing positioning of Chinese troops in PoK. Hence in any future conflict both countries will collude with each other to carry out mutually supportive military operations. For India, this implies fighting simultaneous wars on two widely separated fronts virtually amounting to a two-front war – a reality in the future.

**Afghanistan**

Talibanisation of Afghanistan aided and abetted by Pakistan constitutes a major threat. Deteriorating security environment in Af-Pak region is the greatest challenge to regional stability. The area is the main centre of Islamic extremist fundamentalism, drug trafficking and illicit trade in arms. The withdrawal of US forces has further increased the uncertainty.

**Sub-conventional Threats**

Proxy war and insurgency fuelled, aided and supported by Pakistan and China in J&K and the Northeast – this is also manifesting itself in the Naxalite affected areas.

**Proxy war and insurgency fuelled, aided and supported by Pakistan and China in J&K and the Northeast is also manifesting itself in the Naxalite affected areas**

Irregular/ asymmetric war involving non-state actors may occur concurrently across the entire spectrum of conflict. The prevalence of such groups in armed conflicts has added layers of complexity to conflict management and resolution.

Left wing extremism – increasing Naxalite violence is rapidly emerging as a major threat with distinctive features. Though, an internal threat could be exploited by Pakistan and China.

**CBRN Threats**

Region encompassing South and East Asia is home to largest concentration of nuclear capable states. Nuclear overhang more volatile in India-Pakistan context compared to relatively stable India-China context. Proliferation of nuclear technology – rogue elements getting their hands on WMDs is a serious threat and challenge. Nuclear weapons have encouraged greater reliance on proxy, low intensity and asymmetric warfare. Role of biological weapons in a non-contact war cannot be overemphasised.

**Aerospace Threats**

- Enhanced Chinese space capabilities, especially in ISR.
- Space could be the new frontier of conflict in the future.
- Anti-satellite capability and Ballistic Missile Defence.

**Maritime Security**

- Threat to island territories requires capability of intervention operations.

- Threat to oil platforms and drilling rigs from marine terrorists.
- Sea piracy becoming a major threat.
- China's 'string of pearls' strategy and our strategy to counter the same.
- Security of sea lanes of communications (SLOCs).

**Information / Cyber Warfare**

Information warfare will gain more relevance and will be the next arena for intensive conflict with no physical boundaries or attributability. It will also constitute the silent war which will carry on during peacetime. With an increasingly wired society it will pose a major 24X7 threat to national security. Cyber war as form of non-contact war can target the populace and influence minds. This form of warfare is likely to be a major national security threat in future both during peace and war, as it is a shift from the physical to the perceptual domain. What is more dangerous is the threat from non-state actors.

**Water Conflict**

Population pressures and changes in climatic patterns are having adverse effect on availability of water while demand continuously expands. Around the world pressure to control and access water. This is likely to be a major security concern in future both domestically and internationally. India shares rivers and watersheds with Pakistan, Nepal, Bhutan, Bangladesh and China (Indus, Brahmaputra, Ganges, Barak). Chinese plans to divert the Tibetan rivers is a major security challenge.

**Energy Security**

Oil is a critical energy resource and depletion of this resource in the future will spark tensions and could be a major trigger for conflict in future. Maximum consumption is by both China and India, being the fastest growing economies and developing countries in the world. There is an urgent need to look at alternate energy sources

**Global Warming**

Large-scale migrations of human population result in ethnic and religious imbalance. Cross-border migrations will result in demographic upheavals leading to grave internal security threats. Food and energy security will pose grave challenges and be a volatile trigger for conflict. Health epidemics, greater potential for failed states in our immediate neighbourhood – impetus to growth of terrorism. Escalation of conflicts over resources. Disasters likely to be exacerbated in frequency and intensity increasing employment of armed forces.



**Indian Diaspora**

Large Indian Diaspora is spread all over the world and their security and safety is a major challenge. This has been starkly evident in the Arab crises where a sizeable Indian Diaspora had to be moved out of countries like Syria, Libya and Egypt. The ongoing crises in the Islamic State of Iraq and Syria (ISIS) where, while India was successful in rescuing the nurses from Kerala, the whereabouts and fate of the 30 workers from Punjab remains unknown – this will remain a major security challenge in the future.

**Footnote**

The 21st century has been spoken of as the Asian Century with its largest share of humanity. Aspirations of this populace, their desire for development, demographic pressures amongst others, constitute a heady and explosive mix with potential for conflict. India due to its location, size and democratic strength must be the catalyst to ensure regional peace and security. This can only come about if backed by technological, economic and military prowess.

Fundamentally the Indian security environment is skewed with multidimensional threats posed by two nuclear powers acting in collusion in our neighbourhood. The concept of India's strategic autonomy will be called into question if India does not develop demonstrable military capability and upgrade its doctrinal thinking in tune with changing nature of wars and prevailing environment. Strong dissuasive capability backed by political resolve is required for India to protect its interest and shift from pure territorial bias to more interest-based capability. Even more important is reorientation of political mindset that looks upon soft power and *status quo* as the best options, leaving India open to coercion and dealing with unabated proxy war. **DA**

**Oil is a critical energy resource and depletion of this resource in the future will spark tensions and could be a major trigger for conflict in future**



# NAVAL MODERNISATION FUNDING THE INDIAN NAVY

**The International Monetary Fund (IMF) has predicted that Indian economy will grow at the rate of 6.5 per cent and surpass China in 2016. Military spending depends on the economy, the government can allocate more funds, which can further contribute to the enhancement of Indian Navy budget.**

The Stockholm International Peace Research Institute (SIPRI), an agency that monitors, compiles and publishes global military spending and exports / imports of military hardware by the world's armed forces, has noted that in 2013 the United States was the highest spender on military accounting for US\$ 618 billion. China was at the second position totalling US\$ 171 billion, Russia (US\$ 84.9 billion), Saudi Arabia (US\$ 62.8 billion) and France (US\$ 62.3 billion) followed at third, fourth and fifth positions; India was ranked eighth (US\$ 49.1 billion).

Military spending is generally a reflection of the health of the economy of the country. According to Sam Perlo-Freeman, senior researcher and head of the SIPRI Project on Military Expenditure "You need to have GDP growth to be able to afford higher military spending ... when you see an economy growing, it's entirely natural that [spending] would increase."

### Declining Budgetary Support

Indian leadership has been supportive of building a strong and a modern military to safeguard national interests, to serve as a deterrent and be

a force to reckon with commensurate with the size and interests. In 2005, during the Indian Military Commanders' conference, Prime Minister Manmohan Singh assured that the government could allocate about three per cent of India's GDP for its defence needs if the economy grows at eight per cent annually. However, the defence allocations as percentage of GDP have been declining and averaged between 2.35 and 1.74 for the last six years. This has had some effect on the modernisation of military keeping in mind that obsolescence of military technology is high and the armed forces require newer technologies to respond to the near continuous transformations in warfare led by the information technology. In India, bulk of the defence budget is allocated to the Army (51 per cent) followed by the Air force (24 per cent) and the Navy (16 per cent). The R&D sector and ordnance factories are allocated nearly 7 and 1 per cent respectively.

### FDI In Defence

According to the SIPRI, in 2013, India imported arms valued at US\$ 5.6 billion and was adjudged as the 'world's foremost arms importers for decades'. The indigenous military-industrial complex in India is still very rudimentary when compared with western standards and there is a huge gap between India's domestic production efforts and weapons requirements of the military, resulting in a situation where nearly 70 per cent of actual requirements are met through import substitutions.

Among other reasons, India's investment in military R&D had never crossed 7 per cent throughout history. Insufficient funding in military R&D efforts has affected negatively on India's indigenous production efforts. For instance, in last decade, India imported US\$ 10 billion worth of military hardware from the US and the dependence is fast increasing from US\$ 200 million in 2009 to US\$ 2 billion by 2013. Russia, the traditional supplier of military hardware to the Indian armed forces, has accounted for nearly US\$ 40 billion over the last three decades. During the last three years, India spent ₹ 83,458 crore on importing weapons and the US accounted for ₹ 32,615 crore, Russia ₹ 25,364 crore, France ₹ 12,047 crore and Israel ₹ 3,389 crore.

The new government in Delhi has called on the global manufacturers of military hardware to 'Come, Make in India' and encouraged investment in the indigenous military-industrial complex. It has revised the Foreign Direct Investment (FDI) policy in the defence sector from a cap of 26 per cent to 49 per cent. This initiative is expected to boost indigenous industry and accelerate SME participation. Significantly, the Ministry of Defence has set up a 100 crore initial corpus for a Technology Development Fund to assist Small and Medium Enterprises

(SMEs). The Indian Navy chief has reiterated the national government's policy of 'Make in India' and stated, "The Navy's blueprint revolves around the 'Make in India' concept. In fact, the country is not new to this as India's first indigenous ship was built in 1941. The Navy, at present, has no foreign orders anywhere". In fact, in 2014 the Indian Navy cancelled orders to acquire eight minesweepers from the South Korean company Kangnam Corporation after it won contract in 2008 through a bidding process and announced plans to build in India.



**Dr Vijay Sakhuja**

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### Navy's Need For Funds

There are several imperatives for India to enhance its naval spending. First, the primary strategic objective of the Indian Navy is to secure control / influence in the Indian Ocean. Second, the Indian Navy should possess a combat-capable fleet for long-range operations in its primary and secondary areas of interest (Indian Ocean region is the primary area of interest and operations, which includes the sea space encompassing Strait of Bab-el-Mandeb – Strait of Hormuz, Straits of Malacca and Cape of Good Hope and the Red Sea, South China Sea, Southern Indian Ocean and East Pacific Region have been classified as the secondary area of interest) with maximum effectiveness and minimum risk. Third, it should be able to engage in naval diplomacy to support national foreign policy objectives, facilitating closer relations with several countries across the globe and building 'maritime bridges' with like-minded states. Fourth, any maritime contingency that affects Indian security interests in the sea will be the responsibility of the Indian Navy.

The Indian Maritime Doctrine (IMD) stipulates four missions for the Indian Navy: (a) Military (b) Diplomatic (c) Constabulary and (d) Benign. These, among other variables, drive the Indian Navy's force structure planning and are closely related to the budgets allocated for maintaining force levels to ensure the strategic objectives of the country and the force. India has set strategic targets and in October 2014, the Defence Acquisition Council (DAC) cleared ₹ 900 billion in acquisitions to boost military power including the requirements of the Indian Navy.

### Naval Orbat

The Indian Navy comprises of nearly 150 ships and the inventory includes a variety of platforms such as aircraft carriers, submarines, surface

The defence allocations as percentage of GDP have been declining and averaged between 2.35 and 1.74 for the last six years



ships and the aviation component comprises of fighter / patrol aircraft that operate from ships and shore bases. There are 41 ships and submarines under construction in both government-owned and private Indian shipyards. These include an aircraft carrier, submarines (conventional and nuclear), warships, expeditionary platforms, long-range maritime patrol aircraft, fighter jets and helicopters and the cost totals up to US\$ 32 billion.

India is building a 40,000-tonne aircraft carrier under Project 71 Indigenous Aircraft carrier, which is likely to be named *INS Vikrant*. In 2014, Cabinet Committee on Security (CCS) approved an expenditure of ₹ 19,000 crore. The carrier is expected to be ready by 2018. Earlier, the Indian Navy acquired from Russia the 44,400-tonne *INS Vikramaditya* (formerly *Admiral Gorshkov*) which was refitted at a cost of US\$ 2.33 billion. The Indian Navy also acquired 45 *MiG-29K* naval fighters at a cost of over US\$ 2 billion from Russia.

#### Submarines

Likewise, India would soon induct a 6,000-tonne nuclear submarine *INS Arihant* that was developed jointly by the Indian Navy, Bhabha Atomic Research Centre (BARC) and Defence Research and Development Organisation (DRDO) and constructed in India. It has a generous component of Russian technological assistance including the 83 Mw pressurised water reactor. This platform has cost India nearly US\$ 2.9 billion. According to media reports, India may build six of these submarines in the long-term and three submarines of this class (S-2, S-3 and S-4) are at various stages of construction. India also acquired *INS Chakra* on a 10-year lease (2012 to 2022) for US\$ 1.5 billion. The Indian Navy is building six French *Scorpene*-class submarines at a cost of ₹ 53,000 crore under construction in India at the Mazagon Dock Limited, Mumbai. Further, under Project 75-I ('Make in India'),

six state-of-the-art conventional submarines at a cost of ₹ 60,000 crore are under consideration. In 2014, the DAC also cleared acquisition of two SDV underwater commando delivery vehicles.

Among the surface ship category, the impressive Project 15A ships cost the Navy ₹ 11,662 crore and the follow-on four more destroyers under Project 15B cost ₹ 29,325 crore. Further, 12 vessels of Project 28 class 3100-tonne anti-submarine warfare (ASW) corvette are also under construction.

#### Naval Aviation

The naval aviation too has witnessed significant growth and a number of long-range maritime patrol (LRMP) aircraft, fighter jets and helicopters have been included in the inventory. These have either been imported or built in India. India signed a contract worth US\$ 3.9 billion with Boeing to supply 8 *P-8I* Multi-mission Maritime Aircraft (MMA). The Indian Navy plans to acquire about 40 naval variants of the Light Combat Aircraft (LCA) at a cost of ₹ 209 crore (US\$ 33.5 million) per fighter. Further, ₹ 18.5 billion have been allocated for 12 more license-built *Do-228NG* short-range transport and maritime surveillance aircraft from HAL.

#### Future Trends

The International Monetary Fund (IMF) has predicted that Indian economy will grow at the rate of 6.5 per cent and surpass China in 2016. As noted earlier, military spending depends on the economy, the government can allocate more funds, which can further contribute to the enhancement of Indian Navy budget. The Indian Navy has long been the strongest advocate of indigenisation and the focus of the present government is 'Make in India', this will encourage participation by the Indian companies through joint ventures and consortiums and the government would be better inclined to provide enhanced funding to the Navy.

**There are 41 ships and submarines under construction in both government owned and private Indian shipyards and the cost totals up to US\$ 32 billion**

**Mahindra**  
DEFENCE

## PRIVATE SECTOR FOR STRATEGIC STABILITY

Samir Advani served in the Navy for 30 years retiring as a Commodore. He has been working in Mahindra Defence Systems since his retirement and is currently responsible for Strategic Business Development.

The equipment in the Indian Armed Forces needs a serious revamp. As a member of the public, one may not be privy to the details on the state of readiness but as an informed citizen, it is not too difficult to make that assumption. Stories run aplenty – of ships sinking due to their poor material state, aircraft crashes and lives lost due to delays in acquisition of newer aircraft, artillery projects which start and stop at regular intervals. All this is symptomatic of an urgent need to CHANGE the way we do business. By continuing to state that we have processes which are absolutely necessary before we induct, makes for not being able to see the woods for the trees.

Commissions and reports have recommended changes, but if these changes are put in place in piecemeal, it does not have the desired effect. More so when these are selectively applied.

If the task of equipping the Armed Forces with the necessary equipment lies with the Ordnance Factory, the Defence PSUs and the DRDO, then that is perfectly in order. However, given the nature of defence manufacturing, if they are not able to deliver the goods in time, we become a nation which has a soft underbelly, despite all our claims of high economic growth. How then are we expected to have strategic stability? Thereafter to expect the private sector to step in and solve all the ills overnight is expecting too much.

Countries like South Korea, Israel and Turkey have taken the challenge of strategic independence in defence production seriously. These nations have economies smaller than ours, they have been in existence just as long as India yet they are capable of producing sophisticated weapon systems, which may perhaps not be cutting edge technology but it certainly meets their defence needs. India on the other hand, is a young nation in terms of its production capabilities. We are still dependant on several other countries and import a range of equipment and technology, some of which is extremely basic. As a case in point – India still imports flight trainers despite having HAL, an aeronautic body that has commanded a monopoly for nearly 60 years.

It is imperative that in a nation like ours, the private sector not be treated as step-children by government agencies. The American model of core development through private agencies is a tremendous learning opportunity. There is adequate capability and technology within our country, but if bogged down by processes and suspicion, we can never hope to create a strategic military industrial complex. The failed 'Make' Programmes are indicative of our inability to even set the wheels in motion for creation. Just as Mao said 'Let one hundred flowers bloom' – we need to sow the seeds for a hundred 'Make' Programmes.

Finally, the signs that emerge in the last few months indicate an intent which as a concerned citizen one hopes will come true.



**Samir Advani, Vice President,  
Strategic Business Development,  
Mahindra Defence Systems**



# MAKE IN INDIA FOR INDIAN DEFENCE

India has a well-articulated, if not the best, system of drawing Defence plans that covers three distinct time periods: 15-year Long-Term Integrated Perspective Plan (LTIPP), five-year Services Capital Acquisition Plan (SCAP) and two-year roll-on Annual Acquisition Plan (AAP). The heart of the matter is that all these plans are prepared with an eye to acquire the best possible equipment available in the world. The DRDO or domestic industry is completely ignored in the planning process.

**R**eplying to a question in the Parliament in August 2014, the Union Defence Minister informed that India spent a whopping ₹ 83,458.31 crore on arms import in a matter of three years ending 2013-14. The huge arms import dependency is in stark contrast to the objective of substantive self-reliance in defence production that the country has been aspiring since independence. However, all is not lost. The 'Make in India' (MII) initiative launched by the government of Prime Minister Narendra Modi offers a ray of hope. As per the initiative, 25 focused sectors including defence manufacturing have been identified through which the government intends to revive India's industrial growth and more importantly propel the nation as the global manufacturing hub. However to realise the cherished objective of the MII, particularly in the defence manufacturing sector, the government needs to address some of the pressing issues that have so far hindered India's self-reliance drive.

### Institutional Mechanism

The biggest weakness in India's defence manufacturing is the lack of a high-powered institution that can draw the long-term road map for Defence industry, set the target for the industry, monitor the progress and more importantly bring all the stakeholders to one platform and to a common cause of MII. In the absence of this, crucial decisions with far-reaching implications are being pursued by various stakeholders on a piecemeal fashion, often to cross purposes. Suffice to mention that while the armed forces are interested on acquiring equipment in the fastest possible time frame without bothering too much about the origin of supply, the Defence Research and Development Organisation (DRDO) is content with endless design and developmental efforts with scant respect to timeline and sanctioned budget. On the other hand, the Defence production agencies, major portion of which is owned by the government, is merely happy in manufacturing, the technology of which is not in their control.

Consequently, the focus of producing defence equipment in-house and achieve true self-reliance loses focus and India ultimately ends up importing from others.

Realising the importance of an institutional mechanism, the Group of Ministers (GoM) had recommended for creation of Defence Minister's Council on Production (DMCP) under the leadership of the Defence Minister himself. To give DMCP a dynamic look and enable it to seek ideas and experience from other sectors, the GoM had recommended that the high-powered body would draw members from not only the top leadership of the Defence establishment but also from the Space, Atomic Energy and Science and Technology departments and a pool of eminent industrialists from the private sector. As per the GoM's recommendations, the DMCP would 'lay down the broad objectives of the long-term equipment policies and planning on production, simplification of procedures' among other things. However, as the fate of key recommendations of many government appointed committees, this crucial recommendation of DMCP has so far been conveniently forgotten. Interestingly, the government was

quick to implement one of the GoM's recommendations that led to creation of Defence Acquisition Council (DAC) under the chairmanship of the Defence Minister. However, as the name suggests, the DAC is more geared towards addressing the short-term procurement-related hurdles, rather than addressing the concerns of the domestic industry for achieving self-reliance in the long-term. As a matter of fact, indigenisation is a mere by-product of the DAC's decisions rather than being the key influencer. For the MII to become a reality in Defence manufacturing sector and more importantly for the initiative to become a self-sustaining drive, the whole apathy towards indigenous Defence manufacturing needs to change for which the government should now revive the GoM's recommendation and set up the DMCP at the earliest.

### Manufacturing And R&D

The apathy toward in-house production of the Defence equipment is perhaps best amplified in the way various Defence plans are prepared and pursued thereafter. Of note is that India has a well-articulated, if not the best, system of drawing Defence plans that covers three distinct time periods: 15-year Long-Term Integrated Perspective Plan (LTIPP), five-year Services Capital Acquisition Plan (SCAP) and two-year roll-on Annual Acquisition Plan (AAP). The heart of the matter is that all these plans are prepared with an eye to acquire the best possible equipment available in the world. The

DRDO or domestic industry is completely ignored in the planning process. To make matter worse, there is no system whereby the armed forces can provide advance information to the industry so as to enable the latter to come up with detailed financial, technological and industrial plans to meet the requirements in a time frame that is acceptable to the armed forces. Suffice to mention that the Technological Perspective and Capability Roadmap (TPCR), announced in April 2013, which was expected to bridge this gap has been a big disappointment and termed completely useless by both industry and analysts for its lack of specificities and absence of any commitment from the government.

Consequently when the acquisition process begins, it is often too late for the R&D and production agencies to offer a solution. To overcome the above difficulty, the Economic Advisory Council to the Prime Minister in a report of September 2013 had recommended to the government to 'convert the LTIPP into a defence manufacturing and R&D plan'. More significantly, the advisory council had suggested that the conversion should be undertaken by a joint working group involving all important stakeholders including the Indian industry and R&D establishments. This vital piece of recommendation does not seem to have received the required attention of the policy makers. Since much of the success of MII lies in translating long-term requirement of the armed forces into technological and industrial outputs, it is high time that the government comes out with detailed plan for the industry and R&D agencies at the earliest. The plan in order to be successful must identify specific projects which would be executed by the local agencies.

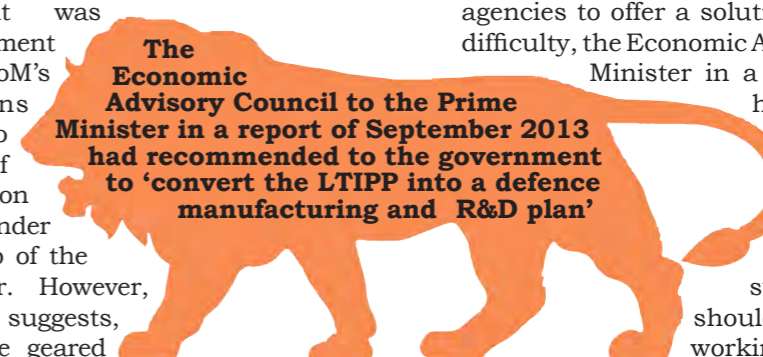
### Looking Beyond The DRDO

One of the unique features in India's defence industrialisation process has been the near monopoly of R&D by the DRDO. This began with the establishment of the DRDO in 1958 and perpetuated ever since with the growth of the organisation. The dependence on DRDO for technology has however not yielded the desired results. The DRDO despite its vast potential has been beset with many a problem leading to failures and cost and time overruns in the projects undertaken. This combined with the lack of R&D in industry and academia has compelled the country to source technology from outside, leading to a vicious cycle where initial import leads to another in successive fashion.



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**The Economic Advisory Council to the Prime Minister in a report of September 2013 had recommended to the government to 'convert the LTIPP into a defence manufacturing and R&D plan'**



Compared to India, other advanced Defence manufacturing countries encourage R&D at diverse sources that include dedicated research institutes, universities and industry. Among the countries which are successful in cutting edge innovation, Israel offers test case worth emulating. The giant strides that a small country like Israel has made is attributed to the Office of the Chief Scientist (OCS) which was set up in 1974 under the Ministry of Industry, Trade and Labour. The OCS is responsible for executing government's R&D policy to foster innovation and promote technological entrepreneurship. It discharges its functions by way of awarding R&D contracts to diverse sources and managing them through small team that comprises of 30 full-time employees. OCA's core principle of R&D funding is not to subsidise R&D rather than partially mitigate risks through government financial assistance. Interestingly, nearly one-fourths of OCS's budget in 2011 came through the royalties paid back by companies which have successfully converted R&D funding into marketable products.

In order to expand the R&D base, India also needs to have an institution similar to OCS. For this to happen, there is need to look beyond the DRDO. The Scientific Advisor to Raksha Mantri (SA to RM) who is now wearing multiple hats (Secretary, Defence Research and Development and Director General DRDO) may be freed from his daily duties of DRDO and given a role like that of OCS with a dedicated R&D fund at his disposal. This will not only create competition between DRDO labs and other agencies but will lead to more innovation.

**Human Resource Development**

Unlike in most other sectors, Defence industry involves high skilled labour force. However, there is hardly any thinking as to how to create a robust human resource base, in terms of number and quality. A clear evidence to this effect is visible in DRDO which is supposed to be at the heart of India's defence innovation. It is of note that number of scientists at DRDO has not increased since 2001, although number of projects has been increased exponentially.

Apart from shortage of skilled labour force, an equally disturbing aspect of most of the scientific organisations like the DRDO is the low educational profile of the scientific workforce. The Rama Rao Committee which reviewed the functioning of the DRDO and submitted a report to the government in February 2008, was greatly perturbed to see the predominance of first degree holders in DRDO's scientific cadre. It had noted that only 10 per cent of the scientific manpower had higher qualification of PhD. To make matters worse, majority of the workforce were not research trained, observed the Committee.

It is however, to be noted that low education and lack of training is an aspect that is common to other high-end R&D organisations like the ISRO and Atomic Energy department and even to manufacturing establishments such as Hindustan Aeronautics Ltd (HAL). A major reason for this is classroom teaching orientation of most of Indian universities which themselves are far behind the global peers. However, to overcome the quality constraints, organisations like ISRO and Atomic Energy have devised their own methods. ISRO for instance runs a dedicated university, Indian Institute of Space Science and Technology (IIST) that taps talent at very early age and provides graduate, postgraduate and doctoral programmes in areas of space, science and technology. There is no such dedicated university for Defence, although the requirement is far greater than in

ISRO. According to the National Skill Development Council, the aerospace industry in its three verticals – R&D, manufacturing and maintenance, repair and overhaul (MRO) – alone will require an additional manpower of over 1,85,500 by 2022, justifying the necessity to set up a dedicated Defence Technology University.

**Equal Partner**

Although, Indian Defence industry was opened 100 per cent to the private sector way back in 2001, the latter is yet to contribute in any meaningful manner. The biggest hindrance in the private sector's participation has so far been the mistrust. When it comes to big contracts, procedural hurdles come in the way, making it virtually impossible for the private sector to get into complex defence manufacturing. Moreover, single source procurement from the private sector is still considered a taboo, whereas import without competition is greatly admired!

For the MII to succeed, there is a need to change the mindset and treat the private sector as an equal partner. This can only be demonstrated by awarding big contracts, preferably through the 'Make' and 'Buy and Make (Indian)' procurement categories which hold the key to success to private sector's participation in defence production. For the government, it is imperative to announce a list of contracts which can be awarded under these two categories.

**Conducive Financial Framework**

Defence is undoubtedly a strategic sector and countries all over the world accord special treatment to nurture and develop this vital sector. For instance, in the early phase of Defence industrialisation in South Korea, the government provided a wide range of financial and fiscal incentives besides raising funds for the industry through a special defence tax (a 10 per cent income and surcharge tax) which

remained in force for 15 years till 1990. Israel, a country which boasts of an advanced Defence industry, continues to incentivise the local enterprises through 15 per cent price preference.

The Indian Defence industry however operates in a hostile financial framework that tends to render it uncompetitive vis-à-vis the foreign manufactures. It is of note that Indian industry operates in a double-digit interest regime compared to nearly zero interest rate prevailing in Europe, US and many other countries. This increases the cost of working capital for the Indian industry which is finally reflected in the final products, making them uncompetitive vis-à-vis the products offered by the foreign manufactures. The Indian industry also suffers on account of the variation in exchange rates. As per the MoD's Defence Procurement Procedures (DPP), the local private companies winning contracts under the 'Buy (Indian)' category are required to bear all the risks associated with exchange rate variation (ERV). The non-protection against the ERV has however led several companies to virtual bankruptcy due to wide variation in exchange rates as has been witnessed in the recent past.

Apart from the above, the Indian industry also suffers from the prevailing taxes and duties, which offer virtually no incentive for any local company to undertake defence production. In fact, India follows an 'inverted structure' by which direct import is allowed free of duties whereas manufacturing the same attracts all possible taxes and duties. What is surprising is that there is no realisation by the concerned authority that taxes and duties can make or mar the local industry. As per several estimates, taxes and duties can raise the cost of local products by as much as 20-25 per cent. Considering that MII seriously wants to promote the local manufacturing, it is high time to create a conducive financial framework for the local industry. Among others, the government may accord the 'infrastructure status' to the defence industry which would not only take care of the taxes and duties concerns of industry but also incentivise new investments. It is also highly desirable that certain sales of the local industry may be given 'deemed export status' whenever such sales are likely to substitute direct import.



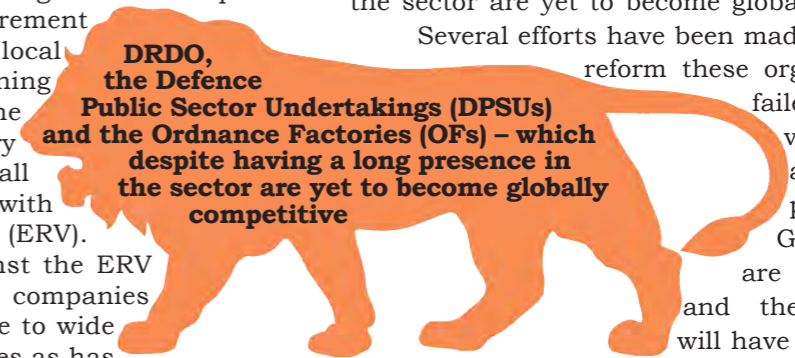
**Reformation**

It is a fact that much of India's Defence industrial woes is attributed to the inefficiency of the three major players – DRDO, the Defence Public Sector Undertakings (DPSUs) and the Ordnance Factories (OFs) – which despite having a long presence in the sector are yet to become globally competitive.

Several efforts have been made in the past to reform these organisations but failed due to the vested interests and lack of political will. Given that these are major players and their functioning will have a direct impact on the MII initiative, it is imperative to examine afresh the recommendations given by several past committees. Among others, the OFs should be corporatised and made more accountable for their functioning. All the unlisted DPSUs need to be listed in the stock exchanges to bring in transparency and enhance their corporate governance. The recommendations of the Rama Rao Committee on DRDO, especially the one for creation of a Defence Technology Commission, should also be implemented at the earliest.

As per the official estimate of the MoD, India is likely to spend around US\$ 130 billion on Defence modernisation in the coming 7-8 years. While this makes India one of the largest Defence markets in the world, the opportunity it offers should be fully exploited to the benefit of local industry. This will not only improve India's self-reliance in Defence production but will have a multiplier effect on the wider economy. The government must ensure that the local industry is geared and incentivised enough to rise up to expectations and make the government's 'Make in India' initiative a successful story.

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# TIME FOR A MILITARY INDUSTRIAL COMPLEX IN INDIA?

**Questions have been raised about the capabilities of the Indian private sector in meeting demands of the armed forces in futuristic or state-of-the-art systems. The real question is how to integrate this sector with the overall public sector system. This would ensure that the private sector graduates from being a component supplier to an active participant in Defence production.**



**T**he term military industrial complex has a historical and ideological context. Its origins are in the American efforts to build a credible defence industry in the Eisenhower era. Its ideological context is in its linkage to the Marxian perceptions of this development and the consequent identification of the concept with arms race, wars and imperialism. In an Indian context, it would imply a total change in the current Defence industrial sector that is almost exclusively in the hands of the state to an active participation of the private sector. A discussion on the possibility of developing such a Defence industrial production base in India would have to focus on the role that the private sector is likely to play *vis-à-vis* the public sector in this effort. But this raises several issues, some of them contentious. One, it calls for an understanding of the historical legacy that India has inherited; two, it dwells into the ideological debates that are associated with the term 'military industrial complex' and three, there is a range of informative and sometimes speculative discussion on the Indian capabilities in that area. It also dwells into the process of modernisation in the context of defence in general and Defence industry

and production in particular, understood as a steady evolution from a state of dependence for defence equipment to a state of self-reliance.

### Backdrop

India has had a problematic historical legacy of arms production. India was known to import weaponry from the Europeans in the medieval era. Given the absence of technical knowledge about iron casting, India depended on the Europeans for modern weaponry like cannons or matchlocks. Similarly construction of ships in India was limited to the building of coastal vessels. During the colonial era, the security of India was 'managed' by the British. It was the shortage of weapon systems during the World Wars and the growth of the Indian Army that led the British to consider the problem of supplies that until then were sourced from Britain and prompted them to produce in India. The establishment of Board of Ordnance in Fort William, Kolkata in 1775 marks the official beginning of the Army Ordnance in India. In 1801 a Gun Carriage Agency was established at Cossipore, Kolkata, this being the first industrial establishment of ordnance factories in India. With the advent of the Second World War,

security imperatives for defence investments became pronounced and ordnance factories came up at different locations for the production of rifles, shells, ammunition, mortars, clothing etc. India also saw the development of railway lines to facilitate the movement of troops. Eventually, the American supported and funded Defence production came in due to the limitations of the British to start such an industry in India. While it was true that British efforts to initiate industrialisation in India would reduce its dependence for finished goods on Great Britain, the compulsions for such a policy must be understood in the overriding security considerations that influenced those British decisions.

Independent India's Defence industry had limited capacities, especially in the area of designs, expertise, components and manpower. Krishna Menon's tenure as Defence Minister represents a turning point in Indian perceptions about Defence production. He was an ardent supporter of the goal of self-reliance in Defence production and sought to increase Defence production and affirm the social value of added Defence spending. He also centralised decision-making about Defence production. The efforts at indigenisation took form of upgrading machinery and equipment and providing domestic substitutes. However, Defence remained a state sector as a result of the Industrial Policy Resolution of 1948 that reflected Indian commitment to socialist planning. The 1962 War saw a shift in Defence production in India. A Defence Plan was put in place with the objective of strengthening the production base and improve procurement, storage, training etc and new Defence Public Sector Undertakings (DPSUs) were set up and older ones came to be expanded.

### Modernisation

The stages of modernisation as a steady evolution from a state of dependence for Defence equipment to a state of self-reliance are relative in nature and as such one does not aim for an absolute state of either dependence or self-reliance. Further, this relativity would operate separately for different sectors and products and would not be a uniform phenomenon. In the Third World, the context of these developments would be dependent upon the availability of infrastructural facilities or the lack of it; or the ability or otherwise to indigenise and innovate and produce in the face of trade and other restrictions.

The entire ladder of modernisation rests on certain political presumptions. At the level of principle, it implies that a country has accepted to forge defence links with a particular country or group of countries. This would be a conscious choice and would indicate certain linkages in foreign policy. The methodology of modernisation – public or private sector – also indicates the approach towards development that the country seeks to take. In India, debates on modernisation of

defence forces and equipment saw a broad consensus on the need for self-reliance in Defence. Consequently, efforts made for seeking a transfer of technology along with Defence purchases received the required backing. This also suited Indian development perspectives that focused on the need for industrialisation. However, the public sector always played a dominant role in this process, therefore, in deals that related to transfer of technology it was the DPSUs that benefited from the transaction.

### Issues

Changes in this approach began in the late eighties but took off in the post 1991 period of economic liberalisation. Initially, manufacture of components, assemblies and sub-assemblies was opened for the private sector. Eventually, in 2001 the government allowed 100 per cent private equity with 26 per cent Foreign Direct Investment in Defence production. But the participation of the private sector was made subject to obtaining industrial license and security clearance, something

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that has always been a bottleneck for the Indian private companies. The Defence Production Policy of 2011 sought to encourage indigenous manufacture of Defence equipment. Today, the government has further relaxed norms for industrial licensing, a rudimentary Defence exports policy formulation is in process and the FDI limit has been extended to 49 per cent. While these changes constitute a marked departure from the earlier 'Socialist' position, there are several issues that need to be addressed in the context of Defence production in India.

This change reflects an acceptance of certain realities regarding changes in the approach to warfare that were seen in the early 1990s, initially in the context of the Kuwait crisis and later on in Iraq. The implications of this change were reflected in the Indian thinking. Revolution in Military Affairs (RMA) has made Defence systems more and more technology driven. This is an area where the private sector has traditionally been dominant as the survival of the private sector in a competitive world depends upon its ability to innovate, adapt and deliver in a shorter time frame to the continuously changing technological needs.



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**Public-private Synergy**

Indian position on the participation of the private sector in Defence production is peculiar: It recognises the need to involve the private sector, calls for a private-public participation, seeks to give preference to 'Buy (Indian)' and 'Buy and make (Indian)' but at the same time seeks to retain the dominant / controlling position of the public sector. The Indian private sector that had played a visible role in indigenous defence production in the 1940s and 1950s were taken over by the government. As Indian government adopted a Socialistic ideology which emphasised centralisation and nationalisation of the Indian Defence science and technology industry became structurally and operationally state-owned and controlled. Questions have also been raised about the capabilities of the Indian private sector in meeting demands of the armed forces in futuristic or state-of-the-art systems. The real question is how to integrate this sector with the overall public sector system. This would ensure that the private sector graduates from being a component supplier to an active participant in Defence production.

There has been a counter argument that seeks to defend the public sector. This argument focuses on the issue of self-reliance as a factor that is addressed in the context of the capabilities of Defence production of any country. The Defence R&D results are often very promising but there have been occasional complaints in India that unlike the Navy and Air Force the traditional Army prefers to import majority of its modernisation requirements resulting in the problem of moving from R&D to production especially when one has to contend with the mindset that prefers imported equipment. Further, globalisation has changed the very definition of self-reliance. Today, one need not invest resources and time in creating indigenous options for what the country can afford to buy competitively from overseas. India's 'buy options' for several latest technology equipment are much wider today mainly because the technology maturity acquired within the country has changed the image of India from being a target country for technology denials to a country worthy of international partnership in pursuit of many high-tech endeavours.

The Ministry of Defence document "Technology Perspective and Capability Roadmap" (2013), provides the industry an overview of the direction in which the armed forces intend to head in terms

of capability over the next 15 years, which in turn would drive the technology in the developmental process. The DRDO has also released a list of critical defence technology areas and test facilities for acquisition through offsets. In both of these, the private sector can play an important role but for this purpose it would have to take up R&D far more actively. What the private sector is looking for is a risk sharing partnership with the government. The expectation is that the government works with the following objectives: (a) Promote or support private sector from an R&D perspective in order to reduce reliance on foreign companies, (b) Develop design and manufacturing capabilities of the private sector (large and medium enterprises) beyond policy support, (c) Ensure stable demand of key equipment as well as visibility to allow the private sector to plan well. Implicit in the demand is the option for export of armaments to make investments cost-effective. Some of the leading industrial houses in India have nascent but growing Defence industry divisions. The creation of a large Defence sector will hinge on building capabilities of these large companies, through partnerships, technology transfers and in some cases fundamental R&D initiatives. This will require both, a change in mindset from the government and also the commitment from these companies to think of investing in the Defence sector on a long-term basis.

Indian foreign and security policy has shifted to a more realist posture over the past two decades. The Indian economic stability, technological successes in the areas of Nuclear, Space and Electronics in face of international sanctions and political stability have given India the ability to demand space in the decision-making circles of the world. This has taken place with the private sector working hand-in-hand with the public sector. The development of an adequate military industrial complex is a necessary part of this demand for recognition. And such an industrial complex would have to be a public-private partnership at all levels. While it is necessary for India to embark on a more active Defence industrialisation effort that would include an active participation of the private sector, care would have to be taken about the messages that it is likely to send out. India had entered the age of market economy in the 1990s. While it is true that the changes ushered in 1991 led to an overall growth of the Indian economy, Indian policy makers had to reckon with the Socialist image of the country. It is interesting to note that the Indian political elite have shown political sensitivity and avoided the use of the term 'market economy' while describing the changes in the economic policies since the term (perhaps) carries an odour of capitalism. The Indian elite have used a more neutral term 'economic liberalisation' to describe the changes. It is this imagery that the Indian policy makers would have to keep in mind when they embark on the 'Buy (Indian)' and 'Buy and make (Indian)' policy and move towards creating a robust Defence industry base. **DSA**



# ESTABLISHING THE MILITARY INDUSTRIAL COMPLEX



**We need the corrective against the paradox of reaching Mars but not being able to produce a state-of-the-art assault rifle; being called an IT super power but importing hardware; not having own operating systems and glut in electronics – namesake indigenous chips manufacturing and not even making a pen drive.**



**A** lot has happened since PM Modi's call for 'Make in India, Sell Anywhere' from ramparts of the Red Fort on 15th August 2014. This is vital for defence since no country can hope to be militarily strong if it continues to import over 70 per cent of its defence needs. In order to increase indigenisation and progress to self-sufficiency, a Review Committee was set up in 1995 under the chairmanship of Dr (later President) APJ Abdul Kalam. This Committee set the target to achieve 70 per cent self-sufficiency in defence equipment by the year 2014. However, in 2014 we were found to be still in the very same state though 19 years had gone by; still importing over 70 per cent of defence equipment albeit the DRDO claimed that 60 per cent of their (DRDO) needs are being met through indigenous firms. But then DRDO needs

don't comprise defence equipment requirements at national level. Ironically, the Ministry of Commerce and Industry website admits that 50 per cent defence equipment currently held by our military is 'obsolete', proportion of state-of-the-art equipment needs to grow from its current level of 15 per cent to 30 per cent and the current cycle including acquisitions drafted under the Long-term Integrated Perspective Plan (LTIPP), is expected to include procurements worth US\$ 100 billion by 2022. So the picture is pathetic unless indigenisation takes off systematically in sustained fashion.

**Time Frame Specific**

In his first address to the DRDO, the Prime Minister gave a subtle admonishing while stressing on the need for scientists to complete work in time and stay ahead of technological innovations by saying,

"I see that the big challenge is how we complete our work before time. If the world will finish something in 2020, can we do it by 2018?" These words by the PM should have pricked the conscience of the audience. Many countries do not have the type of military-industrial complex that India has had all along; over 50 Defence R&D laboratories of DRDO, nine DPSUs and 41 Ordnance Factories, employing an overall manpower of 1,80,044 employees. DRDO's annual budget for 2013-14 stood at ₹ 10,610 crore. Obviously, there were no checks and balances, no periodic reviews and no heads rolled. If we have major voids in modern technology and modernisation in our armed forces, it is because the DRDO emphasis was less on R&D and more on commercialisation to earn profit whereas the emphasis should have been on R&D, synonymous with the name of the organisation. It is this mindset that has held indigenisation back. No doubt the DRDO has had patches of excellence as admitted by their own hierarchy unofficially but this notwithstanding, what actually went wrong in functioning of the DRDO is contained in the CAG reports of the last few years. As per these reports, DRDO has been developing equipment which is either substandard or have extended deadlines and additional budgets.

### Wasteful Expenditure

Many projects have no government approval. As per one report only 10 per cent projects have MoD clearance. The CAG says corruption and nepotism exists in the upper echelons and there is an exodus of qualified scientists. As expected, the DRDO challenged these CAG findings though MoD took cognisance and ordered review of the approval processes. Even the CGDA audit findings raise serious questions about the capabilities of the DRDO. The audit noted that in several cases, DRDO bought equipment from other companies 'after' spending crores on R&D. For instance, after spending five years and ₹ 129.96 crore to develop satellite signal monitoring equipment, DRDO ultimately bought the same from a PSU on single tender basis for ₹ 724.50 crore in April 2011. When commercial off-the-shelf (COTS) equipment is available, DRDO still spends crores of rupees for reinventing the wheel. For example, DRDO spent ₹ 6.85 crore to develop explosive detectors, which were then offered to the Army for ₹ 30 lakh per piece while COTS versions were available at ₹ 9.8 lakh apiece and that too with repair and maintenance.

The CGDA reports also criticise DRDOs joint ventures (JVs) for importing older technology and promoting foreign firms without mandatory formal ToT agreement. In the 2011-12 CAG report, DRDO was found spending crores on random research projects while out of 55 high priority projects based on user-requirements, only 13 had gone into production. In 2010, a modular bridge being developed for the

Army was shelved after eight years of experiments and spending ₹ 21.46 crore. Despite this, just six months later another ₹ 13.25 crore was sanctioned for another modular bridge project. The initiative to produce next generation laser weapons was shut down within a month after equipment for research was procured. A news item of 23rd November 2014 titled 'DRDO's Rath Yatra' reports of DRDO making a silver chariot over one year at a cost of more than ₹ 5 crore and donating it to a temple without any sanction whatsoever. The senior scientist, who filed a complaint with the CVC against this venture was stripped of his ongoing projects and transferred out.

### Sub-standard Products

The report by the Parliamentary Standing Committee on Defence to Parliament on December 22, 2014 has been equally critical of DRDO's chronic inefficiency, bringing out amongst other issues: Inordinate delays in execution of almost all projects; ten projects worth average sanctioned cost of ₹ 1,686 crore delayed on an average of 5 years; Kaveri engine and LCA Tejas have been decades behind schedule and DRDO, tasked with developing technology for the military, has failed since 1982 to produce an acceptable INSAS rifle, the standard weapon of the Army. What perhaps the Committee did not know is that the DRDO was handed over 17 x 5.56 assault rifles of 11 countries in 1982 and took 14 years to produce the INSAS assault rifle which certainly is not anywhere close to the ten top global products in this category. These are but few examples. Despite importing all infrared (IR) tubes, indigenous night vision equipment continues to be heavy and bulky. The idea of leapfrogging technology has been lost in the practice of reinventing the wheel despite the avoidable loss of more money and time. The irony also has been that all this has been going on with full knowledge of the Department of Defence

Production (DoPD) of MoD, since Joint Secretaries of MoD are on the boards of the DRDO and DPSUs. So, while Avinash Chander was sacked from the post of DRDO Chief 16 months before his extended tenure is a good signal for DRDO to pull up its socks, it would be bad move to create yet another bureaucratic post of Secretary (Defence R&D) to also double up as Scientific Adviser to the Defence Minister, as was reported in media. The MoD, crammed with bureaucrats sans knowledge of matters military is already handicapped in defending the country. Not only does the MoD need to be staffed with military professionals, the Scientific Adviser to the Defence Minister should be a scientist, not a bureaucrat.

### Accent On ToT

The Modi government has liberalised the Foreign Direct Investment in defence from 26 per cent to 49 per cent and more significantly has committed to FDI higher than 49 per cent on case to case basis, which apparently

is already happening in cases like JVs for medium lift military aircraft and military helicopters. After all, it is not without reason that the Department of Industrial Policy and Promotion (DIPP) of the Ministry of Commerce and Industry had been recommending 74 per cent FDI in case of transfer of technology (ToT) and 100 per cent FDI in case of the investing foreign partner willing to make available state-of-the-art technology with ToT. The PM also has asked for the procurement procedure to be simplified – read Defence Procurement Procedure (DPP) but this is still being worked out. The bottom line is that the defence sector needs to be made unambiguously attractive to investors including through FDI and DPP.

### Defence Offsets

Then is the issue of defence offsets. As per a study undertaken by KPMG, defence offsets in the Indian scenario for period 2010-2020, taking into account perceived threats and a recovering economy, defence spending is set to increase substantially with existing (year 2010) offset opportunities in defence estimated at US\$ 5 billion, expected to rise to US\$ 12 billion over next three years and US\$ 4-5 billion every year thereafter. The study also brought out that greater private sector participation in defence would be in favour of Indian companies with 55 per cent of offset contracts taken by the private sector and that the Indian aerospace defence industry was emerging as outsourcing hub for many services like CAD, CAM and CAE, manufacturing and design engineering, testing and integration and technical publications. Some 18 defence offset JVs are already underway or on the anvil in India: between HAL and SNECMA of France; Lockheed Martin (USA) and Wipro Technologies; Boeing and Tata; Thales and Samtel Group (France) with an Indian company; TCS and SAAB; L&T and DRDO; Dassault Systems (DS) and Cummins Infosystems Ltd; Wipro and GE Security (USA); Taneja Aerospace and TIDCO; HAL and CAE (Canada); SAERTEX and KEM – ROC; Sikorsky and Tata Advanced Systems; Airbus, Airspace Infrastructure Ltd and Airlogic Ltd; Wipro and CAE (Canada); BEL and Suriname Armed Forces; Rolls Royce and HAL; M&M Ltd and BAE; L&T and Cassidian; AgustaWestland and Tata Sons Ltd and between L&T and Europe's EAD. These JVs underline the vast scope that defence offsets have in India, their importance in bridging our voids in defence equipment and technology and as importantly the focus of foreign investors on the Indian defence market.



### Multi-pronged Reorganisation

Reorganisation of the defence-industrial sector in India needs to be taken up on multiple fronts: *One*, the name 'defence-industrial' itself is misnomer for the reason that the users (military) are not part and parcel of the DRDO and DPSUs whereas military officers (serving and veterans) should be posted at various levels including the design, management and decision-making levels. Perhaps it should be termed military-industrial complex rather than defence-industrial complex which creates impression of an exclusive DRDO-DPSUs domain. *Two*, civil-military industrial zones need to be planned at national level (like what is happening in Gujarat) incorporating private industry including even Micro Small and Medium Enterprises (MSMEs). *Three*, DRDO should focus on R&D and given a focused road map for futuristic technologies. *Four*, the military-industrial complex including the DPSUs, ordnance factories and private industry should be 'affiliated' not 'under' the DRDO. *Five*, a policy and road map is needed for leapfrogging technology – as being done by countries like China and Pakistan and *Six*, JVs and ToT must be encouraged and the defence sector made unambiguously attractive especially to our strategic partners. From a global innovativeness ranking of 24 in 2004, China jumped to the sixth position in 2009 and targets to be the fifth by 2020 and by 2040-50, attain technological parity with the US.

**Not only does the MoD need to be staffed with military professionals, the Scientific Adviser to the Defence Minister should be a scientist, not a bureaucrat**

### Paradox

Ancient India was the leader in science and technology. There is no reason why we cannot aim for the top slot. We need the corrective against the paradox of reaching Mars but not being able to produce a state-of-the-art assault rifle; being called an IT super power but importing hardware; not having own operating systems and glut in electronics – namesake indigenous chips manufacturing and not even making a pen drive. **DSA**

**What actually went wrong in functioning of the DRDO is contained in the CAG reports of the last few years**





# MODERNISATION OF INDIA'S CENTRAL ARMED POLICE FORCES

**Modernisation is a multi-purpose activity that deals with recruitment, training, improvements in tactic, upgradation of weapons and military ordnance etc. It must be purposeful in the sense it achieves desired results. The role of the Ministry of Home Affairs, which supervises the huge internal security paraphernalia, also requires clarification. There is no improvement in the internal security situation, it may in fact have deteriorated. Training and inter-service synergy is one area for consideration. The CAPFs must create a Centre of Excellence in the shape of a National Police University.**

India is perhaps the only democracy in the world that can claim pride in having a system wherein the gap between the civil police and the military is bridged by the central armed police forces. The Central Reserve Police Force (CRPF), as worthy successor to the Crown Representative Police (CRP) under erstwhile British Raj, is the pioneer organisation that came to be utilised by the Central government for various purposes such as aid to civil power, border guard duties, anti-insurgency operations and disaster management to name a few. There has been a steady accretion to the ranks of central armed police forces with the

creation of the Indo-Tibetan Border Police (ITBP), Border Security Force (BSF) and Central Industrial Security Force (CISF). Sashastra Seema Bal (SSB), which had different roots joined the Ministry of Home Affairs (MHA) pantheon in 2001. The Assam Rifles, the country's oldest paramilitary force, retains its own character though it is directly officered by the Indian Army and is under the Army's operational control. In addition, there are several other Central Police Organisations (CPOs) like the Intelligence Bureau (IB), Central Bureau of Investigation (CBI), National Investigation Agency (NIA), Bureau of Police Research and Development (BPR&D) forming part

of the internal security management infrastructure. Besides, there are others like the National Security Guard (NSG), Special Protection Group (SPG), Railway Protection Force (RPF) and India Reserve Battalions (IRB) performing diverse roles in the management of internal security.

### Holistic Approach

Since 1947, India has conducted four in-house reviews and one inter-ministerial review of certain aspects of national security management. Of the five, one involved China, one was terrorism related and rest Pakistan-centric. In other words there has never been a comprehensive, proactive review of national security management that is totally futuristic and all-encompassing and not a panic reaction. This underlined the fact that India's national security interests and objectives have not been fully articulated. More importantly, the internal security management has not been fully examined at the highest political levels. A holistic and futuristic road map is vital to meet the complex threats to national security. Most of today's existing 'arrangements' are reactions to developments rather than solutions to problems and issues. It will be seen that the role of the military and the intelligence community has been examined by several committees in the past with some positive results. However, the role and

**The internal security management has not been fully examined at the highest political levels. A holistic and futuristic road map is vital to meet the complex threats to national security**

efficacy of India's central armed police forces (CAPFs) has not received due attention by either a Parliamentary Committee or by an empowered group of competent individuals. There is an exponential growth in the size and shape of the central armed police forces (CAPFs) without any appreciable improvement in internal security environment. The KRC was critical of the role of the CAPFs. The National Police Commission (NPC) had made several recommendations in respect of the central police forces including creation of separate IPS cadre for the intelligence agencies and the CBI and a separate IPS cadre for the CAPFs. Nothing ever came out of the NPC recommendations.



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### Multitasking?

Modernisation of the CAPFs is a constant activity. Modernisation must be based on the premise that the available forces are well trained for their specific tasks. Modernisation must not make the CAPFs prone to multitasking as often is the case. We have four border guarding forces in the shape of the BSF, ITBP, Assam Rifles and SSB. In addition, several battalions of these CAPFs are engaged in multitasking role mainly counter-insurgency operations (COINS). Several former senior officers of the CAPFs opine that it is time to make the CAPFs 'lean and mean' to effectively deliver desired results. According to them the first and the foremost feature of a dedicated modernisation plan should focus eminently on the size and shape of each of the CAPFs. It will be seen that both Border Security Force (BSF) and Central Reserve Police Force (CRPF) have grown exponentially in strength. They have both consequently become unwieldy and are in need of serious force reappraisal. The CRPF is a huge multitasking organisation and functions across several scenarios within the country. This represents a unique situation. The CRPF too includes in its ORBAT the Rapid Action Force (RAF) and three exclusive Mahila Battalions.

### Left Wing Extremism

According to available information, the CRPF is the largest among the CAPFs comprising over 220 service battalions and other establishments. One former senior CRPF cadre officer recommended that a separate force, under a Director General rank officer, may be carved out of CRPF to deal exclusively with COINS in Left Wing Extremist areas, northeast region and other

areas. In other words, this should become the lead agency for this purpose. Another senior retired police officer was of the view that the present arrangement in the CRPF under one DG is not a satisfactory one.

### Revamp Of Border Management

Similar views were expressed by former BSF veterans, who recommend that BSF must remain 'lean and mean' and must concentrate on Pakistan border under the existing DG, while the arrangements for the Bangladesh border may vest under a new organisation. The need for augmenting the ITBP has been underlined while some of them remarked that given the nuances of dealing with China / Tibet, the training requirements need careful examination. The SSB is still coming to grips with border management duties on the India-Nepal and India-Bhutan frontiers. The role of the Assam Rifles needs some rethink given its background and strategic importance. A recommendation was to make it the Lead Agency for India's Look East Policy in the northeast region.

The role of the CAPFs and the CPOs in internal security management is central to national security interests. This subject has received attention at several fora. Governor of J&K, NN Vohra, in his address at the First Air Commodore Jasjit Singh Memorial Lecture (July 2014) entitled 'Management of National Security - Some Concerns' at the United Service Institution of India (USI), made some significant observations as also several recommendations. NN Vohra has touched on the role of the state police including the need for their modernisation. The state police as first responder to major developments have their roles articulated and may have acquitted themselves satisfactorily in the past. There is considerable scope for improvement. The Centre for Land Warfare Studies (CLAWS), New Delhi in its National Workshop on Internal Security (September 11-12, 2014) discussed the issue threadbare and made suggestions on dealing with sensitive issues.

**There is no good news on the insurgency front in the northeast and not one ceasefire arrangement has been converted into a political document**

### Fumbling MHA?

The role of the MHA, which supervises the huge internal security paraphernalia, also requires clarification. There is no improvement in the internal security situation, it may in fact have deteriorated. There is no good news on the insurgency front in the northeast and not one ceasefire arrangement has been converted into a political document. It is the same in other areas. This could be due to some degree of lacking in political management of the internal situation. The MHA too requires modernising to deal effectively with threats and challenges. It must create a policy template strong enough to bring solutions to problems at grass roots level rather than continue to be reactive to developments.


Training and inter-service synergy is one area for consideration. The CAPFs must create a Centre of Excellence in the shape of a National Police

University. It should be the highest seat of learning and wisdom and the apex of all central police training institutions. It must draw its teaching and academic staff from among former and serving members of the police, intelligence and security establishment, senior members of the military, law and academia, research bodies and corporate entity in the IT and ICT fields. It must be open to all DIG and equivalent rank officers and serve as a platform for not only visionary thinking but also effective templates to meet emerging and future challenges. Another area pertains to increasing participation of CAPF officers in the Defence Services Staff College (DSSC) and the National Defence College (NDC). More such synergy must be encouraged at other higher institutions of instruction and learning. The tendency to deal with national security in a 'silo' mentality must be abandoned at the earliest. National security should not be seen in narrow military sense. There is consensus on the need to improve understanding of asymmetrical warfare and countering it.

### Cyberwar Strategy

Greater participation of our IT and ICT giants in extending assistance to both the CAPFs and the CPOs is the need of the day. A common facility may be created in Bangalore to help the law enforcement agencies in creating effective monitoring and supervision of cyber threats as also cyberterrorism. It is quite possible that these very agencies are victims of cyberattacks during peace time but also in case of 'hot war' along the international borders.

The new mantra should be to put more young women in uniform and make effective use of the large reservoir of talent and potential. More intake into direct entry levels as Assistant Commandants (GD) or Technical or equivalent is recommended especially for the role of intelligence analysts, communication analysts, IT and ICT professionals, pilots for Unmanned Aerial Vehicles (UAVs) and science and technology. With the emphasis on creating more air assets, fixed wing and rotary wing, in the CAPFs, the role of young women pilots is going to be important. This can also be open to direct entry-levels as Sub-Inspectors. The CRPF continues to be the pioneer in the recruitment of women personnel for combat and non-combat roles, it is noteworthy the others too are in pursuit of similar targets.

Modernisation is a multi-purpose activity that deals with recruitment, training, improvements in tactic, upgradation of weapons and military ordnance etc. It must be purposeful in the sense it achieves desired results. The need for audit and accountability of the activity of each CAPF and CPO is also very important. This must be accompanied by plans to tackle problems at grass roots levels in a time bound and systematic manner. 



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## THE ASSAM RIFLES AT 180

### HUMANITARIAN AND PROFESSIONAL ACHIEVEMENTS

**Over the years, Assam Rifles has become a part of the lives of the people of the region and the men of the Force have managed to win the hearts and the minds of the people. The Assam Rifles' tally of military decorations is a peek into a glorious history. These include decorations awarded for extraordinary bravery and courage, as well as distinguished service during times of war and peace.**

One of the lesser known facts about the 14th Dalai Lama is that an Indian paramilitary force had played a crucial role in his escape from the Chinese crackdown on Tibet, which presaged his exile in India by crossing the border at Khinzamane (Near Tanwang) in Assam. This event as it unfolded on 31 March 1959 was widely reported by the Western media. René Cutforth of the BBC was among the world press waiting in Khinzamane, after hearing that the Khambas – the horsemen who lived on the Tibetan plains – were in revolt against the Chinese and the Dalai Lama was fleeing 'through tremendous blizzards across the roof of the world', heading for the Himalayan passes, with the intention of seeking sanctuary in India.

"The first we knew of the Tibetans' arrival was the reedy hooting of a jeep at high speed," wrote Cutforth

of the Dalai Lama's flight to India "and then came a jeep full of Gurkhas of the Assam Rifles: and close behind them a closed jeep, out of which stepped the Dalai Lama". His Holiness donated all his weapons to the battalion and blessed the Force thus: "May your luck increase to the size of a mountain. May your fame be such as to cover the whole sky. May your knowledge become vast and deep as the sea, long and healthy lives to you and hope your work for others, will be a success."

### Inception And Growth

The Assam Rifles raised as Cachar Levy in 1835 is the oldest Central Paramilitary Force in India and possibly the world. The Force was raised mainly to guard the fertile alluvial plains of Assam from the wild and unruly tribes inhabiting the surrounding hill tracts. This was the earliest embodied unit of what eventually developed into the Assam Rifles. Gradually, more such units were

raised to set up posts in the interior and thus acted as the *strong arm* of the civil administration in extending their authority across the region's mountainous and treacherous terrain. They also helped in opening up these remote areas to development activities, earning accolades from the administration.

Variouly designated and reorganised from time to time, as the Assam Frontier Police (1883), the Assam Military Police (1891) and Eastern Bengal and Assam Military Police (1913), it came to be known by its present name, the Assam Rifles, only in 1917 in recognition of its contribution to the war effort during World War I. During its long history, the Assam Rifles has earned many laurels both in fighting alongside the Army as also in aid to the civil administration. The Force has been officered by the Army since 1884 and is today, on a per capita basis, by far the highest decorated security force in the country.

### Operations

Operationally, Assam Rifles has a proud record of taking part in both the World Wars and all other conflicts after independence. During World War I, the Assam Rifles fought alongside the Indian Army in Flanders. It remained untouched by World War II until the danger of Japanese invasion made it imperative to deploy forces on the North-East Sector as well. The World War II saw the Force functioning as elements of the much-fabled and ghost-like 'V' Force, on reconnaissance and harassment missions behind Japanese lines in Burma. Many of its sub units fought alongside regular British and Indian troops in the fiercely contested battles of the Burma Front from Ukhrul to Kohima.

The image of the *Dhai Moorti* – which depicts a soldier assisting a refugee family fleeing from Burma ahead of the advancing Japanese – testifies to its yeoman service in the management, evacuation and control of refugees of Burma / NEFA in the face of the onslaught of the Imperial Japanese Army in the First Burma Campaign of World War II.

Following the end of the War, the five Assam Rifles battalions became part of the civil police under the Assam Inspector General of Police. After independence, however, the Indian government assigned the Assam Rifles its own Inspector General. The Assam Rifles were then placed under the command of the Ministry of External Affairs as part of the North East Frontier Agency. After 1965, the force has come under the Ministry of Home Affairs even as the operational control remains with the Army.

In 1947, ten platoons under the Inspector General Assam Rifles were deployed in Tripura to thwart Pakistani irregulars launched from East Pakistan (now Bangladesh) on the lines of their invasion of Kashmir. In 1950, when a devastating earthquake hit Assam, the Force was called in to assist in the reconstruction and rehabilitation work.

The rise of insurgency in Nagaland in the 1950s saw the Assam Rifles assisting the Indian Army in containing the rebels. The grave threat posed by insurgency, which followed the Chinese annexation

of Tibet in 1959, necessitated raising of more battalions. The Assam Rifles unit established new posts in uninhabited areas at high altitudes to maintain a constant vigil at our borders. When the Chinese attacked in October 1962, officers and men of the Force fought bravely combating and delaying the Chinese advance, thereby giving the Indian Army time to reach the battlefield.

During the 1965 Indo-Pak conflict, the Assam Rifles stepped in to fill the void that was created in Nagaland and Manipur after the Army units deployed in the region were moved for operations to the west. The Indian Peace Keeping Forces' OP PAWAN, the codename for their operations in Sri Lanka, saw the deployment of three battalions – 22, 23 and 26 – from December 1988 to February 1990. The 7th and 26th battalions were also actively involved in the counter-insurgency operations in the Srinagar Valley.

### Friends Of The North East People

Over the years, Assam Rifles has become a part of the lives of the people of the region, be it education, health, construction activity, farming, veterinary aid or assistance during natural calamities. The humane, just and ever helping approach of the men of the Force has managed to win the hearts and the minds of the village people.

Since the end of World War II, the Assam Rifles has widened its role in society. Their humanitarian efforts continue unabated with over forty schools in the North East and 30 Study Centres of Indira Gandhi National Open University, to provide higher education and distance learning. These educational institutes spread all over the region are open to civilians as well. In order to wean away the support to terrorists, as also to make the youth of the Region self-sufficient, varied vocational training and employment generating schemes are regularly organised. A project such as the Fruit Processing Unit in a Naga village has provided employment for the next generation too besides making the entire village self-sufficient and sustaining. This is just one of the many such envious pursuits established by the Assam Rifles in the seven sister states. The Honourable Home Minister Rajnath Singh while amongst the troops of the Assam Rifles at an Assam Rifles post on the Indo-Myanmar border remarked "I have seen the Border Development Programme carried out by Assam Rifles and would like to congratulate officers and jawans of Assam Rifles for their excellent performance". An apt recognition indeed.

The Assam Rifles' contribution towards integrating the people of the North East into the national mainstream is monumental. Their long association with the region reflects in the Force being fondly called "The Sentinels of the North East" and "Friends of the Hill People". The Force now has 46 battalions with a dual role of maintaining internal security in the North East and guarding the Indo-Myanmar Border.

Anthropologist and naturalist Verrier Elwin, who was nominated by the government of India as adviser



Assam Rifles Republic Day Parade contingent with Khukris – Delhi-1953

on Tribal Affairs to North East Frontier Agency had this to say as a tribute to the Force:

*"The custodians of law and order, the pioneers of every advance into the interior, the guardians of our borders and, the friends of the hill people. Modestly and without fuss, they have faced every hardship and difficulty and thousands of villagers in the wildest of areas think of them with affection and gratitude".*

### Sporting Excellence

Assam Rifles manages some world-class sporting infrastructure in the North East. A world-class indoor Sports Complex with most modern sporting facilities at Shillong would probably be of its only kind in the region. There are practice grounds for obstacle course, muscle-conditioning equipment and courts for volleyball and football apart from swimming pools, tennis courts and golf courses. In martial arts, archery and football, the troops have been continually winning tournaments at national-level with representations at international arena. The Training Centre at Dimapur boasts of utilisation of technology for military training apart from addressing the psychological and physiological needs of the soldier through some of the most envious facilities and instructional faculty.

### Awards And Honours

The Assam Rifles' tally of military decorations is a peek into a glorious history. These include decorations awarded for extraordinary bravery and courage, as well as distinguished service during times of war and peace. The scroll stands at 11,419 awards and decorations which include 108 Pre-Independence and a tally of 2,210 Military and 9,096 Civilian Post-Independence awards.

### Human Rights

There is no denying that today, any allusion to the security forces also brings to mind the noise of criticism against the Armed Forces Special Powers Act (1958), which many activists allege has encouraged arbitrary actions against innocent people.

Lt Gen RK Rana, SM, VSM, the Director General of Assam Rifles describes any such incident as an 'aberration' – attributed to an otherwise highly disciplined Force. Sometimes it is lack of effective intelligence mechanisms or young zealous heads on relatively greenhorn shoulders which could be triggers for such aberrations. These issues have been addressed and steps are being taken to meet the requirements of the intelligence gathering process and related training so as to be in tandem with the rights of the people. Operating under extremely demanding conditions, deployed in the remote regions of the North East for their entire service with no classical 'peace' tenures, the Assam Rifles soldier has toiled selflessly to become the *friends of the north east people*, says the Director General and goes on to emphasise, "Our endeavour is to ensure that we continue to live up to the expectations of the populace so that we always have a welcome presence amongst them".

The training of Assam Rifles' officers and men incorporates cultural sensitivity and human rights concerns. Besides improving the working conditions, men are also being introduced to yoga to reduce stress and combat fatigue. "Better training, rules of engagement that emphasise civilian protection, fostering attitudes of respect toward the populations are gradually yielding results. Each soldier will be a 'SMART' soldier as envisioned by our Prime Minister while addressing the Director Generals of all police forces in Guwahati in November 2014", the General says peremptorily as the sun sets on the beautiful Laitkor Hills in Shillong, where the Assam Rifles is headquartered.

Kudos then for the sentinels of the North East, who are only two decades short of their bicentenary celebrations. The Nation too echoes the sentiments of His Holiness in wishing that the Assam Rifles, who are indeed one of our finest forces, continue to rise to new heights of glory. "May your knowledge become vast and deep as the sea, long and healthy lives to you and hope your work for others will be a success."



**Nitin A Gokhale**

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**PUT POLICY FRAMEWORK IN PLACE**

**TO SUPPORT**

**MAKE IN INDIA IN DEFENCE**

**W**hen the 10th edition of the biennial, five-day Aero India held in Bangalore event, easily Asia's biggest air show, ended on 22nd February 2015, two distinct takeaways were evident.

One, India is the flavour of the season in the world's defence market and two, India needs to quickly put in place a policy framework that supports Prime Minister Narendra Modi's strong pitch to end India's dependence on defence imports.

The show witnessed over 300 foreign firms vying with each other to align with the government's 'Make in India' campaign as they try and access the burgeoning multibillion-dollar Indian defence market. In terms of sheer numbers Aero India 2015 turned out to be big. Besides 54 ministerial and other high-level delegations from several countries that attended the event, the exhibition at the show saw participation of over 600 companies, including 295 Indian and 328 foreign companies. The US with 64 companies had the biggest presence at the event, in which 33 other countries took part. France was the second biggest participant with 58 companies, followed by the UK with 48, Russia with 41, Israel with 25 and Germany with 17, the organisers said. According to the organisers, nearly three lakh people turned up on the last two days of the show when it was thrown open to the general visitors.

The devil however lies in the detail. All the companies want to see change on the ground, in India's often cumbersome and sluggish defence acquisition and procurement processes if India wants to overcome the tag of being the 'single largest importer of military equipment and weapons.'

Narendra Modi, who became the first Prime Minister to inaugurate and attend the mega event, has promised major changes in the policy allowing greater private participation while firmly saying that 'Make in India' will get preference. New Delhi's main suppliers of military equipment like the US, Russia, France, Israel and UK have all responded cautiously. However, they now await a policy that will clarify the terms and conditions of setting up units in India. If the

Defence sector needs to align itself to the overall policy of 'Make in India' then a new initiative to encourage defence manufacturing is needed.

Defence Minister Manohar Parrikar, aware of the desire among big defence manufacturers, declared: "We are planning a separate policy on 'Make in India'. It will be outside the existing Defence Procurement Procedure (DPP)." The separate policy is likely to be notified in the next financial year. It will have clarity on providing a level playing field – to the Ordnance Factory Board, PSUs, import partners and domestic private industry.

Prime Minister Modi in fact laid out the broad contours: "India can also be a base for export to third countries." On the permitted level of Foreign Direct Investment (FDI) at 49 per cent, the PM virtually read the mind of the foreign companies who want majority stakeholding in plants in India. "This (FDI) can go higher if the project brings state-of-the art technology," Modi has promised.

Modi's pitch notwithstanding, it's the policy framework foreign companies want to see. A senior executive of a foreign company said: "By setting up a unit here, are we expected to supply to only Indian armed forces or can we export to other countries?" Also, in case of exports, will the Indian government decide which countries can be the buyers, he asked. The other issue is transfer of technology (ToT). A thing like metallurgy of a jet engine may be a tad difficult to share. As of now, the public sector undertakings owned by the Ministry of Defence have the infrastructure of assembly lines, testing facility and skilled manpower, but it is the private sector that is more in tune with international best practices. "It will be no longer enough to buy equipment and simply assemble them here. We have been doing this in the past, without absorbing any technology or developing our own capabilities. In some areas, we are where we were three decades ago," the PM said.

The Prime Minister's intention is clear. He wants to make India self-reliant in defence manufacturing but it is easier said than done. The demand is huge across the three services. For instance, nearly 1,000 helicopters are needed for both defence and civilian sectors in the next decade. During the past

decade, a project to acquire 197 new Light Utility Helicopters for replacement of *Cheetah / Chetak* has been scrapped three times. In August 2014, the Defence Acquisition Council, chaired by then Defence Minister Arun Jaitley, scrapped it almost four years after field trials between Russian *Kamov-226T* and Eurocopter *AS 550 C3 Fennec* had been completed. The MoD wants these 197 to be built in India.

Defence Minister Parrikar did announce a two-pronged plan. One to ramp up capacity of Hindustan Aeronautics Limited (HAL), a company owned by the Ministry of Defence and the second to invite foreign participation in collaboration with Indian companies. Former IAF officer Air Vice Marshal Manmohan Bahadur however has his doubts. In a stinging piece he wrote for a newspaper, AVM Bahadur said: "It is time to drastically reform HAL through a structured plan.

"Firstly, though HAL is not in the same league as Boeing or Airbus, it has a finger in all types of aviation and in space too; HAL needs to be restructured to become a true aircraft integrator, with many divisions hived out to make independent manageable firms. Thus, its engine divisions, accessories and helicopter divisions, which incidentally have had success in the Advanced Light Helicopter and Light Combat Helicopter programme, should be made independent entities; the space division could well be given to ISRO. Private players need to be brought in on a risk-sharing basis to usher in professional project management and accountability, a term alien to HAL's work ethic and culture. Should HAL be running a helicopter training school and a management training academy in Bangalore? The government's involvement, thus, needs drastic reduction with only a 'golden share' to be used in national interest," he asked.

That's a question the government must look at very seriously.

Meanwhile, many countries are making a beeline for India. Israel, France and the US are gearing up to take full advantage of the new energy in the top political leadership of India.

After years of secrecy, Israel's security relationship with India was out in the open at the Aero India. For a decade now, Israel has emerged as one of India's top three arms suppliers, along with the US and old partner Russia, but such transactions have been taking place in a shroud of secrecy, mainly because of India's fear of upsetting Arab countries and its own large Muslim population.

But Modi and the BJP have long seen Israel as a natural ally against Islamist militancy. In fact, during the Aero India, Moshe Ya'alon became the first Israeli Defence Minister to visit India since the establishment of diplomatic ties in 1992.

"We used to have our relationship, security wise, behind the scene," he said in a speech in New Delhi. "And now I am here ... in Delhi to meet Prime Minister Modi and other ministers." "We see India as a partner and a friend. That is why we are ready to share technology," he said, adding that he was looking for ways to upgrade the defence relationship.

Israel is not alone. The Defence Minister of France Jean-Yves Le Drian was in Delhi immediately in the wake of the Aero India show, mainly to try and

rescue the mega contract for procuring 126 combat jets for the Indian Air Force. French aviation major Dassault had emerged the winner in a long drawn competition in 2012 but since then the process has slowed.

At the time of writing, Le Drian and Parrikar appear to have sorted out one of the key issues holding up the estimated US\$ 15 billion deal to buy 126 *Rafale* fighter jets for the Indian Air Force. The deal, billed by some as one of the biggest defence procurements by any country in a long-time, has been on hold for almost a year over the issue of producing the planes in India.

Of the 126 jets, 18 are to be purchased ready-made from France. The rest are to be manufactured by HAL. Dassault was hesitant to guarantee the quality of the jets produced in India, since it does not control the process. More importantly, Dassault estimates that the jets can be produced faster, with fewer man-hours, than calculated by HAL, which can keep the cost down.

The same week as the French Defence Minister was in town, top Indian and US defence officials will meet in New Delhi to draw up a road map to fast-track the implementation of four projects identified for co-development and co-production and formation of a joint working group on aircraft carriers.

US Under Secretary of Defence for Acquisition, Technology and Logistics (AT&L), Frank Kendall, who is in India, will announce the name of the official who would lead the American side in this joint working group. The Indian side too is expected to name its lead, following which the joint working group would formally become operational.

The idea of co-operation in the field of aircraft carrier was first discussed in early September leading up to Prime Minister Narendra Modi's US visit in September last year. "We laid the groundwork in September and October and then it became part of the (India-US) joint statement in January (after US President Barack Obama's India trip)," the official said, adding that the working group would explore opportunities for co-operation in aircraft carrier capabilities and techniques in construction.

India is embarking on a next generation aircraft carrier construction and there are potentially multiple areas that would be of mutual interest in discussing it, the official said.

"We need to understand what they are interested in ... because of the complexities of the platform we are proposing a working group. What we are committed to do in this trip is to bring name forward that would be our lead on the US side from the US Navy to lead that working group. We hope to receive the name of India's lead of the working group," the official said. **DSA**



## 'MAKE IN INDIA' MISSION AND DEFENCE INDUSTRY HUBS

**Hubs are industry specific. Therefore, it will be prudent to develop hubs in areas where defence laboratories and industrial units are already located. They should become the nucleus around which clusters should be developed by attracting newer enterprises of analogous business interests. It will be unwise either to relocate them or to duplicate the facilities.**

Prime Minister Modi's address at Aero India 2015 on 18 February 2015 was remarkable in two aspects. One, rather than boasting about India's shopping list (as has been the practice in the past), he regretted the fact that India had the reputation of being the largest importer of defence equipment in the world. "But, this is one area where we would not like to be Number One", he said ruefully.

Two, he talked of raising the percentage of domestic procurement of defence goods to 70 per cent in the next five years. He referred to the studies that show that even a 20 to 25 per cent reduction in imports could directly create an additional 1,00,000 to 1,20,000 highly skilled jobs in India. Stressing that the development of India's defence industry was at the heart of 'Make in India' programme, he envisioned India becoming a part of the global supply chain.

However, the objectives of mission 'Make in India' with respect to the defence industry cannot be achieved with the current structures, policies and procedures. They are outdated, unproductive and beyond redemption. Persistence with *status quo* will not deliver. India will have to introduce fundamental reforms and initiate several radical measures to kick-start the slothful defence industry. Establishment of defence industry hubs should be the first step.

Industry hubs are regions where specific types of businesses are clustered. In the US, Detroit houses auto industry. Silicon Valley is a well-known industry hub for high-tech businesses. Similarly, there are hubs for sporting-goods (Ogden), nanotechnology (Albany) and garment industry (Los Angeles).

Industry hubs are not new to India as well. Coimbatore is a major textile hub with more than 16,000 small, medium and large industries. Jalandhar and Ludhiana are equally famous for sports and woollen goods, respectively. India's thriving auto industry owes its growth to the evolution of three auto hubs (Pune, Chennai and National Capital Region). Having realised their criticality, Gujarat is also seeking to develop auto hubs through attractive incentives.

The story of Pune auto hub is educative. It started with the entry of Tata Motors and Bajaj Auto in the 1960s. A number of ancillary units came up to cater for the demands of the auto majors. Arrival of Mercedes-Benz, in a joint venture with the Tatas in the 1990s, marked the emergence of Pune as an attractive destination for the auto industry. Many global auto majors have since established their facilities at Pune, making it earn the epithet 'Detroit of India'. As expected, auto component industry is also flourishing – there are about 7,000 auto ancillary units. Close to one lakh engineers are working in and around Pune. More investments continue to pour in.

### Defence Needs Multiple Hubs

Learning from the success story of the auto industry, the defence industry should also aim at having industry hubs for different weapon systems and technologies. It is best to have all analogous and interdependent industries co-located. In other words, every hub must be skill and knowledge specific.

Industry hubs are distinctly different. Unlike industrial-parks / industrial-estates / economic-zones, they are not located in a demarcated area. Industry hubs are clusters of complementary industries that are located in functional geographic proximity. The spread of a hub depends on the nature of industry, availability of area and the infrastructure. Hubs provide the following distinctive advantages:

- Facilitate co-location of system integrators and component suppliers.
- Provide a fillip to ancillary industries.
- Promote small and medium sized industries through interfacing with large conglomerates.
- Provide favourable environment for innovations and technology upgradations.
- Nurture technical excellence through focused but competitive developments.
- Reduce costs through the co-location of laboratories and test facilities.
- Improve visibility of smaller players in getting noticed for their niche competence and get financial support from investors.
- Provide modern storage and transportation facilities to reduce per-business costs.
- Generate employment.

It is an accepted fact that innovations, both in technology and manufacturing processes, flourish in industry hubs. Concerned over decreasing manufacturing prowess of the US, President Obama, in the State of the Union address of February 2013, proposed the launch of a network of manufacturing hubs to develop and deploy new manufacturing technologies, to be anchored through collaborative R&D efforts between the industry, academia and government agencies.

### Prerequisites

However, for an industry hub to be able to deliver, it must have the following essential features:

- Ample availability of unskilled, skilled and managerial manpower. For that, close proximity of technical education institutes helps.
- Peaceful labour environment.
- Assured power, gas and water supply.
- Adequate open storage, warehousing and cargo-handling facilities, including containers.
- Necessary integrated infrastructure, to include roadways, railroad sidings, ports and high-end communication cables and high-volume gas lines.
- Easy accessibility of required raw material and convenient export of finished goods.
- Availability of facilities like palletisation, assembling, wrapping, packaging, repackaging, shrink wrapping and firefighting systems.
- Favourable climatic and weather conditions. For example, a dust free environment is preferable for electronic hubs.

As defence is a vast field transcending across many technologies, dedicated hubs would be required for different specialised fields. The government has to play a major role in making the concept succeed. In

addition to developing necessary infrastructure, as mentioned above, it must facilitate acquisition of required land by the industry. Easy availability of funds at reasonable cost, tax incentives and purchase / price preference are some of the other measures that can make hubs attract newer investments. Feasibility of according infrastructure status and deemed-export status to eligible manufacturing units should also be considered.

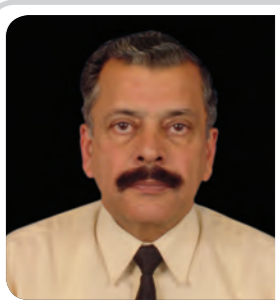
### Some Suggested Hubs

Indian defence industry is in a nascent stage. It is dominated by nine public sector enterprises (including four shipyards) and thirty nine ordnance factories. The private sector is a peripheral player. Giants like Hindustan Aeronautics Limited (HAL), Bharat Electronics Limited (BEL) and Bharat Earth Movers Limited (BEML) have multi-location manufacturing facilities. On the other hand, ordnance factories are located all over the country.

As stated above, hubs are industry specific. Therefore, it will be prudent to develop hubs in areas where defence laboratories and industrial units are already located. They should become the nucleus around which clusters should be developed by attracting newer enterprises of analogous business interests. It will be unwise either to relocate them or to duplicate the facilities. Based on the above criteria, some of the potential defence industry hubs are as follows:

**Armament and Combat Engineering Systems Hub.** It should be located around Pune as three premier defence laboratories Armament Research and Development Establishment, Research and Development Establishment, Dighi and High Energy Materials Research Laboratory are already located here. Whereas Ammunition Factory and High Explosive Factory are situated in Khadki, Ordnance Factory, Dehu Road manufactures pyrotechnic products. In addition, Pune is industrially well developed with a number of supporting units. For example, Bharat Forge, the largest forging company in the world is located here.

**Aeronautical Systems Hub.** Bangalore is the undisputed choice as the city is host to almost all major laboratories and industrial units associated with aeronautical systems. The laboratories include Aeronautical Development Establishment, Centre for Airborne Systems, Defence Avionics Research Establishment, Gas Turbine Research Establishment and Centre for Military Airworthiness



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and Certification. HAL, the colossus that straddles the Indian aerospace sector, has many facilities located in Bangalore. It has already developed a large vendor base and helped the growth of ancillary industries.

**Combat Vehicles Hub.** Chennai is ideally suited for the purpose as it is already a major auto hub, accounting for 60 per cent of India's automotive exports. It houses companies like Ford, Hyundai, Renault, Mitsubishi, Nissan, BMW, Daimler and Datsun. The premier defence laboratory Combat Vehicles Research and Development Establishment is also located here. In addition, ordnance factories like Engine Factory and Heavy Vehicle Factory have their facilities nearby in Avadi.

**Missile Technologies Hub.** Hyderabad is the obvious choice for this hub. Defence Research and Development Laboratory and Research Center Imarat are located here. In addition, Bharat Dynamics Ltd, the undisputed leader in the manufacture of anti-tank guided missiles, surface-to-air weapon systems, strategic weapons, launchers, underwater weapons, decoys and test equipment has its factories in Hyderabad. Equally significant is the presence of the BrahMos Integration Complex in Hyderabad. Requirement of super-alloys, titanium and other specialised metals can be sourced locally from Mishra Dhatu Nigam.

**Opto-electronics and Electronic Devices Hub.** Due to the favourable climatic conditions and close proximity to Delhi, Dehradun lends itself for the hub. A number of important defence laboratories like Defence Electronics Application Laboratory and Instruments Research and Development Establishment are located at Dehradun. In addition, Opto Electronics Factory and Ordnance Factory Dehradun (manufacturer of binoculars, telescopes and night vision devices) have their manufacturing facilities in Dehradun. Laser Science and Technology Centre and Scientific Analysis Group are located at a short distance at Delhi.

**Communication and Computational Systems Hub.** Bangalore is India's Silicon Valley and is ideally suited for such a hub. In addition to the presence of a large number of IT companies, two premier research establishments ie Centre for Artificial Intelligence and Robotics and Electronics and Radar Development Establishment are located here. BEL has large facilities (radars, electronic warfare systems, electro-optics and tank electronics) in Bangalore which can be seamlessly integrated. Favourable climate will be an added advantage.

**Defence Materials Hub.** A cluster of defence manufacturing units exists in central India around Kanpur. They include Ordnance Clothing Factory Shahjahanpur, Ordnance Equipment Factory Kanpur, Ordnance Equipment Factory Hazratpur, Ordnance Factory Kanpur and Ordnance Parachute Factory. The proposed hub can also draw benefit

from the Defence Materials and Stores R&D Establishment at Kanpur as well.

The above list is purely indicative in nature. It is neither exhaustive nor inflexible. Many more hubs would be required to cater for other defence products. The government will have to carry-out a technical *inter se* appraisal of all likely areas for various hubs and identify the ones that yield maximum benefits. In many fields, it may be prudent to have more than one hub in the country.

### The Way Forward


Unlike other sectors, defence industry requires highly focused and well-considered treatment for four primary reasons. One, initial investments are heavy and gestation periods are long. Two, cutting edge defence technologies suffer from rapid obsolescence, thereby needing sustained R&D. More so as key imported technologies are vulnerable to embargos by foreign governments.

Three, stringent quality control is of paramount importance as defence systems cannot fail in operations. In a way, national defence potential is dependent on the quality of equipment produced.

Finally, market is highly restricted. Generally, government is the sole buyer and budgetary constraints can restrict its purchasing options. Therefore, vendors need to have adequate financial cushion to sustain them during the lean period.

As is apparent, hubs are ideally suited to cater for the above mentioned attributes of the defence sector. In case India wants to develop its defence industrial potential, it has to adopt the route of industrial hubs. They can propel India towards the achievement of the status of a global manufacturing hub through the co-location of multiple systems integrators and component suppliers, thereby facilitating synergy of operations and generating competition.

Dismal state of the indigenous defence industry is a matter of serious security concern. Fortunately, it has been included in the list of 25 sectors identified for mission 'Make in India' to spur industrial growth. This golden opportunity should not be missed at any cost.

Finally, India should not be content with manufacturing prowess only. The litmus test of a nation's defence industry is its ability to innovate *ad infinitum* to develop newer technologies and weapon systems. Manufacturing hubs should ultimately graduate into innovation hubs, both at the product and production levels. Achievement of technological excellence should be the ultimate aim. It is only then that India can hope to reduce dependence on imports and ensure success of the ambitious 'Make in India' mission. 

In case India wants to develop its defence industrial potential, it has to adopt the route of industrial hubs

## BUDGET 2015-2016 FINANCING INDIA'S DEFENCE NEEDS

**A number of steps need to be taken to put defence acquisition on a fast track. One such step is rationalisation of the tax structure and providing incentives to the defence industry in India. This has been long overdue. The matter was taken up by MoD with MoF as far back as 2013. It is a bit surprising that the budget for 2015-16, which has unmistakable underpinnings of the 'Make-in-India' mantra, does not address this matter or reveal any scheme customised to give a leg up to the defence industry in India.**

**D**elivering his second budget speech in less than a year Finance Minister Arun Jaitley announced a modest increase in the allocation for defence, increasing it from what he described as 'the likely expenditure of ₹ 2,23,370 crore this year' to ₹ 2,46,727 crore for the next fiscal. This 'likely expenditure' is, in fact, the Revised Estimate (RE) for the current year. The actual expenditure could be more, or even less, than the RE.

The matter of fact manner in which the announcement was made is in sharp contrast to the last year's budget speech which was punctuated with pointed mention of the sums earmarked for one-rank-one-pension, defence rail network, war memorial and the technology development fund.

More than six months down the line, one-rank-one-pension scheme is yet to be rolled out, no money got spent on developing the defence rail network, work on war memorial has still not begun and the contours of the technology development fund are yet to emerge.

'Modernisation of the armed forces is critical to enable them to play their role effectively in the Defence of India's strategic interests', he had said last July while proposing to increase the capital outlay for defence by ₹ 5,000 crore over the amount provided for the interim budget.

Underutilisation of the capital budget to the extent of nearly ₹ 13,000 crore this year has done little to accelerate modernisation of the armed forces for which additional allocation was made in July 2014.

On all these counts, the outcomes were to be delivered by the Ministry of Defence (MoD). In the circumstances, the minister was arguably right in claiming that this year too he had provided adequately for the needs of the armed forces. The fact that the expenditure is likely to be less than the initial budget allocation would support

that claim, though not many would agree with this.

For the record, a sum of ₹ 2,24,000 crore was allocated for defence in the interim budget 2014-15 by the UPA government, which was increased to ₹ 2,29,000 crore when the new government presented its first budget in July 2014. Going by the trend of expenditure and after diversion of a part of the capital funds to the revenue segment, the current year's RE has been brought down to ₹ 2,22,370 crore.

At ₹ 2,46,727 crore, the defence budget for 2015-16 represents an increase of 7.47 per cent when compared with last year's allocation of ₹ 2,29,000 crore and 10.95 per cent with reference to the RE for the current year. The revenue to capital ratio in the defence budget works out to 62:38.

Of the total central government expenditure (CGE), defence expenditure accounts for 13.88 per cent. This is the highest since 2006-07. Its share in the non-plan segment of the union budget works out to 18.80 per cent. These percentages would be higher if the outlays for defence pensions and the Ministry of Defence (Civil) are also clubbed with the defence budget. Overall, defence budget for 2015-16 constitutes the second largest single item of expenditure in the non-plan segment of the union budget after interest payment and ahead of subsidies.

The outlay for defence pension for the coming fiscal is ₹ 54,500 crore, while the Demand for Grant for Ministry of Defence (Civil) has an outlay of ₹ 8,852.60 crore. The latter includes allocation for such diverse organisations as the Indian Coast Guard, J&K Light Infantry, the Armed Forces Tribunal and the Defence Accounts Department. The outlay for the Border Roads Organisation has also been included in the Demand for Grant of Ministry of Defence (Civil) for 2015-16 for the first time.



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## DEFENCE ALLOCATIONS

Budget 2015-2016 vis-a-vis Budget 2014-15

|              | ₹ cr            |               |                 | Share of the Budget (%) |              |              | Revenue-to-capital ratio |              |              |
|--------------|-----------------|---------------|-----------------|-------------------------|--------------|--------------|--------------------------|--------------|--------------|
|              | Revenue         | Capital       | Total           | '14-'15 (BE)            | '14-'15 (RE) | '15-'16 (BE) | '14-15 (BE)              | '14-15 (RE)  | '15-16 (BE)  |
| Army         | 1,04,159        | 21,574        | 1,25,733        | 49.50                   | 52.00        | 51.00        | 82:18                    | 85:15        | 83:17        |
| Navy         | 13,726          | 23,911        | 37,637          | 16.00                   | 13.50        | 15.25        | 37:63                    | 41:59        | 37:63        |
| IAF          | 23,000          | 31,481        | 54,481          | 23.00                   | 23.50        | 22.00        | 39:61                    | 39:61        | 42:58        |
| Jt staff     | 1,800           | 922           | 2,722           | 1.00                    | 1.00         | 1.00         | 70:30                    | 70:30        | 68:32        |
| OFB          | 2,884           | 760           | 3,644           | 1.00                    | 1.00         | 1.50         | 51:49                    | 72:28        | 78:22        |
| DRDO         | 6,570           | 7,788         | 14,358          | 6.50                    | 6.00         | 5.75         | 39:61                    | 48:52        | 45:55        |
| Other        | —               | 8,152         | 8,152           | 3.00                    | 3.00         | 3.50         | —                        | —            | —            |
| <b>Total</b> | <b>1,52,139</b> | <b>94,588</b> | <b>2,46,727</b> | <b>100</b>              | <b>100</b>   | <b>100</b>   | <b>59:41</b>             | <b>63:37</b> | <b>62:38</b> |

Source: Budget documents

What do these statistics show? Do they show that the finance minister has provided adequately for the needs of the armed forces, as claimed by him, or is the counter-narrative that the budgetary allocation for the next fiscal would not help accelerate their much needed modernisation more credible?

To answer this question one has to look separately at the revenue and the capital segments of the defence budget as the implication of defence budget cannot – and should not – be assessed only in terms of its impact on modernisation.

Revenue segment caters for the day-to-day expenditure of the armed forces on operations and maintenance. Almost 70 per cent of the revenue budget is spent on pay and allowances. Of the balance 30 per cent, a sizeable portion is spent on other inescapable expenses relating to rations, clothing, POL (petrol, oil and lubricants) and movement of troops and goods.

Expenditure on these items cannot be curtailed or deferred without an immediate immobilising effect on the day-to-day functioning of the armed forces. In a way, this expenditure is the first charge on the revenue budget. Therefore, other requirements can be met only to the extent funds are available after meeting the inescapable expenditure on pay and allowances etc.

The 'other requirement' includes the expenditure on maintenance and upkeep of the infrastructure. But, more importantly, it also includes ordnance stores, notably spares and ammunition. The former has an impact on the serviceability of the equipment and weapon systems while the latter has a direct bearing on the war waging capability of the armed forces. It may sound perverse but these critical areas tend to get neglected as the effect of inadequate allocation is neither immediately visible nor immobilises the day-to-day functioning of the armed forces.

This is not a new problem, though it was General VK Singh's letter to the then prime minister which brought the matter in sharp focus a few years back. The Standing Committee on Defence has also been expressing its concern on this issue. Going by the reports of the committee, MoD is mindful of this problem.

The budget for 2015-16 leaves this area unaddressed. The increase under the 'stores' budget head, which caters for spares and ammunition, apart from ration, clothing and other objects of expenditure, is less than ₹ 1,000 crore in respect of each of the three services. In the case of Army, which faces critical shortage of ammunition, the increase is a meagre ₹ 708 crore, which is less than half of the difference between the actual expenditure on stores in 2013-14 and the 'likely expenditure' in 2014-15.

In its third report on MoD's Demand for Grant (2014-15), the Standing Committee on Defence (16th Lok Sabha) had observed that 'the Government has taken into consideration the deficiencies in some of the critical ammunition on priority and has also taken effective steps to mitigate the deficiencies to ensure desired level of Op-preparedness commensurate to (sic) threat perception in a dynamic strategic scenario'. The report went on to mention that MoD has a road map to build-up adequate stock of ammunition within three years. The paltry increase in the allocation belies that expectation. Hopefully, the Standing Committee would revisit this issue while examining the Demands for Grant for the year 2015-16.

Surely, the Ministry of Finance (MoF) is not expected to micro-manage the defence budget and it was for MoD to ensure adequate allocation for stores budget head while deciding head-wise allocation of funds. But, considering that the problem has persisted for several years now, MoF and MoD should have



jointly worked out a solution and a pointed mention of that in the budget speech would have reflected the government's resolve to address this long-neglected area more than the kind of announcements made in last year's budget speech.

It makes little sense to go on buying new equipment and weapons systems if the ones we have cannot be used for want of ammunition or because of the concerns about their serviceability.

Two other issues need to be flagged in regard to the revenue budget. One, the allocation for ex-servicemen health scheme (ECHS) has been increased by ₹ 1,050 crore in the RE for 2014-15, which is ₹ 689.19 crore more than the actual expenditure for 2013-14. A mere increase of ₹ 168.42 crore is going to be barely sufficient for meeting the expenditure on this health scheme in 2015-16. It is evident that the allocation will have to be increased but, more to the point, a fresh thinking is required about management of this scheme in the long run.

Two, the already tight revenue budget is likely to come under further pressure as and when the recommendations of the seventh central pay commission are implemented. The effective date for implementation of the recommendations is expected to be 1st January 2016. Even if the recommendations are not implemented during 2015-16, substantially higher allocation will be required for pay allowances in 2016-17. Last time, there was a jump of around 15 per cent in the share of pay and allowances in the revenue budget after the implementation of the recommendations of the sixth central pay commission.

The capital segment of the defence budget hogs greater attention on account of its capital acquisition segment which accounts for 75-80 per cent of the total capital budget. Out of ₹ 12,622.71 crore reduced at the RE stage in 2014-15 from the capital budget, approximately ₹ 9,000 crore seems to have been reduced from the capital acquisition segment (the rest of the amount was reduced from other-than-capital acquisition segment of the capital budget), bringing the allocation down to approximately ₹ 66,000 crore. Against this, the allocation for 2015-16 seems to be approximately ₹ 77,360 crore, which works out to an increase of 15.40 per cent over RE 2014-15.

Two questions arise from this. One, whether this means that MoD will not be able to sign some contracts this year? And two, whether this will have an adverse impact on the modernisation drive in the long run?

The expenditure from the capital acquisition budget had been to the tune of ₹ 50,269 crore till the end of January 2015. Thus, MoD was left with approximately ₹ 16,000 crore to be spent in the remaining two months of the financial year. Going strictly by the average monthly expenditure, the amount left with the MoD would be adequate to meet the requirement for the current year. It is not known if signing of any contract has been shelved for want of funds.

The next year's allocation for capital acquisition is approximately ₹ 11,000 crore more than the RE for the current year. In the last ten years, the year-on-year increase in the actual expenditure on capital acquisition has not crossed ₹ 8,500 crore mark. Judged from this perspective, the increase in allocation for capital acquisition does not seem unreasonable at this stage.

This is not to suggest that everything is fine on the modernisation front. The point essentially is that the problems, such as they are, relate more to the pace of modernisation at this stage. This, in turn, is affected by the problems relating to policy, defence planning, procurement procedures and decision-making. This is a systemic issue which requires to be addressed by MoD more than the MoF, though the latter's nod would be required for a number of steps that need to be taken to put acquisitions on a fast track.

One such step is rationalisation of the tax structure and providing incentives to the defence industry in India. This has been long overdue. The matter was taken up by MoD with MoF as far back as 2013. It is a bit surprising that the budget for 2015-16, which has unmistakable underpinnings of the 'Make-in-India' mantra, does not address this matter or reveal any scheme customised to give a leg up to the defence industry in India.

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