

General

A Round Table discussion on the GFAST-DRDO study on "Threats, Challenges and Capabilities – 2050" was conducted at CLAWS campus on 15 Nov 2012. The RT was attended by faculty from CLAWS, DRDO, think tanks and officers from Indian Army. The session was chaired by Lt Gen Aditya Singh, PVSM, AVSM** (Retd). The speaker panel consisted of Brig RK Bhonsle, SM, (Retd), Lt Gen BS Pawar, PVSM, AVSM (Retd), Brig Arun Sahgal, (Retd), Lt Gen D Bhardwaj, PVSM, VSM, (Retd), and Lt Gen AKS Chande, PVSM, AVSM (Retd).

Remarks by Chairperson

The nature of war is undergoing a drastic change and the ability to predict security threats to India in the medium to long term is a daunting task. The traditional definition of war involving organised, armed and prolonged conflict between nation states characterised by high collateral damage is outdated. To cater for the future security challenges three aspects need to be studied, namely:

- a) To analyse the emerging threat environment from the immediate and extended neighbourhood
- b) Examine operational scenarios to identify the needed capability
- c) To extrapolate the findings to cater to future wars and conflicts

Today's deliberations would be restricted to the land theatre. The aspect of no-contact war is gaining popularity as perception of masses to collateral damage leading to enhanced political sensitivities will dictate the course of wars. The applicability and indispensability of technology in future wars combined with their dual usage capacity, needs to be studied in detail.

Brig RK Bhonsle, SM (Retd): Regional Environment and Environmental Scan

Though India is expected to be a maritime power in the future, the long land borders which it shares with China and Pakistan will be at the heart of any conflict in this region. To identify the various security challenges to India, an understanding of the economy, socio cultural stability, external relations, security strategy and capacity of neighbouring countries is essential.

China is the most likely contender for global leadership in medium to long term, and will present the US with the dilemma of competition versus conflict. Russia will remain relevant in the context of India and will remain one of the major suppliers of military hardware and technology to India. Pakistan is likely to remain unstable in terms of

political governance and will face increased sectarian pressures. She would continue to present grave threats to India in terms of proxy wars and nuclear weapons buildup. Nepal would remain of concern because of the Maoist governance and anti-India feeling in some quarters of the Nepali populace. Sri Lanka which is geo-strategically positioned in the India Ocean would vie for favourable treatment from both China and India, thus resulting in competition in the region between the two Asian giants. Maldives is going through a political transition, experiencing increased influence from Islamic fundamentalism, and is crucial to India's plans for domination of the Indian Ocean region (IOR). Bhutan will be our ally and would continue to act as a strategic buffer between India and China. Afghanistan is likely to go through a tumultuous period before the Afghan security forces would be able to stabilise the situation. Myanmar has initiated small steps towards democratisation and would require continuous attention from our decision makers so as to enhance India's influence in this strategically located region due to its proximity to the ASEAN countries.

Lt Gen BS Pawar, PVSM, AVSM (Retd): Threats and Challenges

Full scale conventional war is less likely in future. Conflicts will be fought in all mediums – land, air, sea, undersea, space, cyberspace and most importantly in our minds. Future wars will transcend beyond geographical boundaries and will be technology intensive and complex. Sub conventional conflict perpetrated by non state actors will increase both in scale and intensity. Spectrum of conflict would range from conflicts between states, with non state actors and their proxies, resulting in blurred boundaries between regular and irregular warfare. Challenges like energy, water and mass migrations will manifest themselves as discernible threats. Global warming and disaster management will be issues to contend with. Changes in structure of global economy, communications and new technology ushered in by Revolution in Military Affairs will continue to have effect in coming decades. New challenges to national security emerging from terrorism, ethnic diversity, narcotics trafficking and religious extremism in the region would be of concern.

As far as National Security objectives are concerned the following have generally been accepted over a period of time:

1. India's unity and territorial integrity to include land and maritime borders, island territories, EEZ, maritime trade routes and air space.
2. Peaceful, prosperous and friendly neighbourhood.
3. Develop military capability consistent with our policy and stature.
4. Sustained inclusive economic growth and provision of energy
5. Political stability and internal social harmony
6. Developing mutually beneficial ties within the region.
7. Accelerate indigenous defence production.

8. Address emerging threats of Information warfare
9. Combating terrorism

Brig Arun Sahgal (Retd): Nature of Future Wars and possible Conflict Scenarios

The main threats to India's strategic space would arise from China and Pakistan, individually as well as jointly. China in the short to medium term is likely to maintain its focus on Tibet and the adjoining provinces. The unresolved border dispute would be a thorny issue between the two countries but highly unlikely to result in large scale conventional conflict. Other issues that would define the competition with India would be in the spheres of trade and regional influence. In terms of military capability, India is much more vulnerable to Chinese short range and medium range missile and weapon capability as deployment of such systems in Tibet can target major population centres in India. For India to pose a credible threat to China's heartland, we need long range missile capability. In the tactical sphere, India would need short and medium range missiles, but long range missile systems would be required as strategic assets. Nuclear factors are likely to restrain the space between conventional wars and escalation, leveraged as "Strategic Deterrence". China will increasingly use Pakistan to balance the growing Indo-US strategic partnership.

As far as Pakistan is concerned, two issues merit attention:

- Nuclear buildup particularly in number of weapon heads and Tactical Nuclear Weapons delivery platforms
- Use of terrorist and other Jihadist organisations to wage proxy wars within India due to limited capability in the conventional domain

As a strategic choice, India will need to follow a three pronged strategy for securing and maintaining her strategic interests – demonstrate political will, soft power backed by adequate military power and cooperative multilateral and bilateral security relationships.

Lt Gen D Bhardwaj, PVSM, VSM (Retd): Capability Development

To face these challenges brought out above, there is an urgent need to identify, develop and deploy military capabilities which will be relevant through 2050. The critical factor would be the synergy between the various services and the ability to carry out joint operations in both a conventional and nuclear backdrop. The focus of the study was on the land fighting capability of our military. To achieve the task the Army must be highly agile, net enabled, lethal, multipurpose and full spectrum capable. The need of the hour is to transform the Army into a truly threat cum capability force. The Indian Army must be prepared to defend the homeland including island territories, able to deter use of WMD, protect our global interests and respond to any crises at home or abroad. The Army is likely to be the net provider of security in the entire Asia Pacific region by 2030

and that is what India should be aiming at. The imperatives for the transformation to take place are:

- Be prepared to face two adversaries simultaneously
- Deter any adversary from initiating conflict
- Undertake intense operations at short notice
- Initiate and counter operations in non contact domain
- Engage forces propagating fundamentalism and separatism

The concept of theatre commands needs to be implemented in its totality. India should possess the means of exercising various options in respect of credible dissuasive and punitive levels of deterrence. There is also a need to shift from mechanisation to informationisation of India's defence forces. Space assets, ISR, Command and Control, unconventional operations, non-contact operations and miscellaneous fields like life sciences, robotics and stealth capability will play an increasingly important role in the wars of future.

Lt Gen AKS Chandele, PVSM, AVSM (Retd): Technology Requirements for Land Forces

Technology will be a critical component of the capability building exercise undertaken by the Armed forces through 2050. Some of the technological imperatives are – the need to have network centric approach with respect to weapon platforms, Information Technology, nanotechnology, robotics and biotechnology, alternate fuels and energy sources, advanced material technologies and capability to sustain large scale battle damage. To enable a full-fledged network centric environment, the availability of bandwidth, spectrum, complete IP based networks and the ability to integrate all legacy systems within a sophisticated architecture would be indispensable to the endeavour.

Another area of concern is the existing radar systems and their limitations. The future radar systems should have foliage penetration, cognitive recognition and all weather workability. Cyber and electronic domains will act as important facets of the non-contact domain in which future wars will be fought and probably decided. The ability to absorb, develop and produce new cutting edge military technologies would decide the fate of battles to be fought by India within its strategic space.

Concluding Remarks: Major General Dhruv C Katoch, SM, VSM (Retd), Director, CLAWS

The purpose of the study was to give inputs and provide assistance to DRDO for technology building in the next 2-3 decades focusing on the land aspect. The Indian Armed Forces need to develop a comprehensive strategy and capability based on the

threat cum capability model to design a modern fighting force in tune to India's growing power. The ability to identify and predict worst case scenarios and prepare for these eventualities would be critical to assuring our freedom and territorial integrity in the years to come.