General

A seminar on "Emerging Threats and Challenges: 2030-50" was organised at CLAWS on 17 Jan 2012. The seminar was chaired by Lt Gen AS Lamba, PVSM, AVSM, (Retd), former VCOAS. The speakers were Maj Gen Dhruv C Katoch, SM, VSM (Retd), Additional Director CLAWS, Col Vivek Chadha, (Retd) Research Fellow IDSA and Col PK Gautam, (Retd), Research Fellow IDSA.

Welcome Remarks: Brig Gurmeet Kanwal (Retd), Director, CLAWS

The Director highlighted some of the emerging threats and challenges likely to be faced by the country over next few decades, for which the nation especially the armed forces has to be prepared. Though a conventional threat in near future is less likely, however, a possibility of a patrol skirmish turning into a border conflict / war cannot be ruled out. In the back drop of unresolved border dispute, any increase in disparity between India and China in terms of force capabilities will make it very difficult to safe guard the Indian interests. The instability of the Indian region along with the increasing presence of China in the Indian Ocean and immediate neighbourhood requires India to have a relook at it strategy. The seminar will Endeavour to assess the emerging threats and challenges which the country is likely to face till 2050 and recommend strategy to meet them.

Maj Gen Dhruv C Katoch, SM, VSM (Retd): Conventional threat and out of Area Threats

War will remain a continuation of politics by other means to ensure/ safe guard national interest by nations. The development of technology over last few decades and in near future shall heavily influence the war waging means and can even act as a game changer. The power of economics will be used by nations to their advantage as a lever of conflict resolution. It is important for us as a nation to have a well laid out doctrine to safe guard our interests and sovereignty, especially keeping the environmental realities in our neighbourhood in mind Based on the future challenges the country is likely to face, the concept of force has to be devised in sync with our doctrine.

Chinese Threat

China believes in active defence which posits that China will go to war only to defend national sovereignty and territorial integrity and will resort to attack only once attacked. However, what constitutes an attack has been conveniently left vague. Therefore, unresolved border disputes can easily become a reasonable cause for conflict. China has been keenly following the developments of conflict which have taken place over the past decade and has imbibed the lessons from conflicts waged by the US. As per Chinese doctrine, future wars will be conducted simultaneously on land, sea, air, in

space and cyber space. China's military Preparation for conflict is based on following premises:

• Shorter wars – perhaps only one campaign.

• Unlikely to be fought in Chinese territory.

• Joint military ops – Use of advanced technology, especially information technology.

• Emphasis on velocity rather than mass.

China's military focus remains primarily on countering the US in the belief that capabilities required to counter the US would ipso facto be adequate to deal with all other countries in the region. The key aspects of Chinese focus are:

• Space domination.

• Three Warfares.

• Cyber Warfare.

• Computer network operations.

• Ballistic missiles.

• Air power

Space domination means the ability to control the use of space, at times and places of one's own choosing, while denying an opponent the same ability. It will involve the following:-
• Hard and soft kill measures aimed at satellites, launch sites, TT&C Facilities and data links.
• Integrated operations, which will include use of all military and civilian assets at the disposal of a nation for the synergized efforts and also with-in three services to compliment the strengths, techniques, operational methods for best results.

The combination of the "three warfares" constitutes a form of defense-in-depth, but one that is executed temporally (in order to delay an opponent) and politically (by fomenting public disagreement and doubt), rather than physically. The three warfare concept involves the aspects of Psychological, Public Opinion, and Legal (like anti succession act against Taiwan). Its application against India will be aimed at:

• Sapping Indian will.

• Attenuate alliances.

• Reinforce her domestic will.

Cyber Warfare, and Computer Network Operations will play a critical role in future conflict. An added factor will be the power of the social media as exhibited recently in developments in the Arab world. China will aim to exploit the above to cripple an adversary well before the start of a conventional conflict. India hence needs to develop capability to defend itself against such attacks and also exploit the same to its advantage. As of now, we are not aware of any formal Chinese doctrine on cyber warfare but she does cater for 'Integrated Network Electronic Warfare' involving integrated use of EW, CNO and kinetic strikes to disrupt battlefield network information systems. She has even established Information warfare units to wage this kind of warfare.

Ballistic missiles will constitute a major element in China's war fighting strategy. China's ballistic missiles mainly focus on Taiwan. However, she has the ability to shift these missiles for use against India and has carried out exercises to demonstrate the same. Therefore, these missiles do pose a potent threat to India also. The details of the type of missiles held with China are:-

• SRBMs. Approx 1500 deployed opposite Taiwan.

• CSS-6 (DF-15/M-9)…..Range 600km, payload 500 kg.

• CSS-7 (DF-11)…..Range 280-350 km, payload 800 – 500 kg.

• DF 21 (MRBM) deployed on India's borders?

• ICBM – DF 31 and 31A.

PLAAF. China has over 1600 combat aircrafts, though mostly obsolescent. She is rapidly modernising her fleet. The SU30MKK and Su 30 MK2 from Russia are making up increasing component of fleet besides have fielded the 4th generation fighters, in her drive towards modernization. In any future operations on Tibetan plateau, Air will be the critical determinant to to dictate the course of the conflict. The nature of terrain will demand heavy concentration of Artillery fire, leading to very extensive deployment. To ensure the deployment of artillery on a massive scale China needs to have an adequate air cover. Therefore it is essential for India to deny the same by way of having superior air force for success in combat operations with China.

PLAN. China's Maritime strategy is delineated in three phases-

• First stage – 2001-2010. First Island Chain.

• Second stage – 2010 – 2020. Second Island Chain.

• Final stage – Challenge US dominance in the Pacific and Indian Oceans and assume control.

China after exercising total control over South China Sea, is seeking to gain her influence in Indian Ocean and her strategy of having string of pearls around India is part of this grand strategy.

Triggers

The unresolved border problem with China can lead to conflict between two nations. China is heading towards attaining overwhelming military superiority. China's rapid military modernisation to achieve both quantitative and qualitative superiority should be noted by India with great concern. Her steep rise in defence budget form USD 30 billion in 2005 to USD 91.5 billion in 2011is a pointer in that direction. This does not include expenditure on foreign purchases, 2nd Artillery, expenditure on para military and subsidies to def industries etc. The huge differential in military power between two nations certainly can act as a trigger for war.

Many intellectuals have opined that an economic collapse of China is a possibility. The Chinese Banks have been lending USD 80 billion every month for construction and other economic activities. Failure to lend will put 50million workers out of jobs where as with continued lending the slope of inflation curve may become vertical, leading to massive inflation. Any negative fallout in economic growth will have a cascading affect leading to unemployment and chaos, a serious problem for any government. This could act as another trigger for war.

Stage management of conflict

The first stage of war in the psychological domain is perhaps already being fought by the Chinese. She is constantly focused on amassing world opinion to favourably view her claims on the Indian state of Arunachal Pradesh. By destroying its own satellite, China has sent a message of potential threat to our space assets. As China becomes stronger militarily, to meet her aspirations, she may set up strategic stage of conflict through their "Three Warfares" and follow up with sequential military pressure points with inbuilt conflict control mechanisms. Along with Cyber attacks against financial and economic institutions, she will exploit space warfare capabilities. She will build up for conventional ops alongside concentrated SRBM attack at key command and communication nodes and Integrated network electronic warfare with kinetic strikes against battlefield network info systems. Though, 1962 cannot be repeated, India must acquire the capability to respond to any Chinese hostile acts on our border regions and in the Indian Ocean region.

The Threat from Pakistan

Pakistan has limited capability to pose a conventional threat to India. In any case, If India has the capability to counter China, then Pakistan is ipso facto dealt with. However, we must be prepared for two and half front war, one front each against the major adversaries and the half front against the ongoing internal security scene. There is a need to seriously rethink on relocating some of our armour assets towards East to compliment the threat perceptions. There is also a need to strengthen our forces with potent platforms like attack helicopters and predators class drones to meet the challenges effectively.

India should also devise her strategy to deal with the influx of millions of refugees from across the border, incase Pakistan goes the Afghanistan way leading to her Talibanisation. Is India geared to take on this mammoth influx of refugees from across the border, which in a fact is far greater challenge and danger than militancy itself?

Out of Area Capability

India needs to protect its sea line of communications, as these are crucial for economic growth. India also needs to have an effective force to protect its Island territories. An effective land-sea-air based power is the need of the hour to carry out limited operations in support of friendly countries at a short notice.

Conclusion

India needs to prepare now to meet its future challenges, otherwise it will be too late. India must reshape her defence budget, enhance her space capabilities and create aerospace command. There is need to synergise cyber capabilities for defensive and offensive operations besides raising cyber warrior units. To meet the future threats on all the fronts, India must also ensure the following:-

• Electromagnetic domination over the Tibetan Plateau.

• Air capability over Tibetan Plateau.

• Naval capability in the Indian Ocean.

• Make up voids in artillery.

• Improve logistics infrastructure.

Sub Conventional Threats: Col Vivek Chadha, (Retd) Research Fellow, Institute for Defence Studies and Analyses (IDSA)

As a precursor to forecasting emerging threats in next few decades, it is pertinent that we first contextualise the emerging threats in the near future. In order to do so, it is imperative that we conduct a scan of present regional and national environment. In

cross border migration front, approximately 15 million Bangladeshis have been reported to have migrated to India by 2001 and approximately three lakh have been added every year thereafter. The migration is primarily due to economic disparity between India and Bangladesh. Cross border migration could increase social tensions and result in insurgencies.

It is estimated that approximately 275 billion cubic meters of water will be depleted in next 20 years posing a fresh challenge to our national security. The political environment in our country is only likely to add to our worries. The regional parties are gaining importance and coalition politics is likely to adversely effects decision making.The political polarisation could increase social division and centrifugal tendencies. In the economic front it is forecasted that India's GDP will be third largest by 2030 and per capita income is anticipated to reach $4500 by 2030 and $21000 by 2050. It is further forecasted that 37 per cent of India's below poverty line population in 2010 could reduce to 4.1/ 19.6 per cent by 2030 and 2.5/4 per cent by 2050. This could be a reason for reducing insurgencies.

A scan of social environment suggests that the world population is likely to touch 9.3 billion, whereas India's population would reach 1.6 billion by 2050.The scan also indicates that 100 per cent literacy may not be achieved by 2030, however, a substantial increase is anticipated. It is forecasted that approximately 40 million jobs would be needed in next 10 years which is a major challenge seeing the present rate of unemployment in our country. Owing to internal migration, it is likely that 40 per cent of India's population will be in cities by 2050. Employment shortage may lead to social unrest. India's labour surplus and literate population would demand increase in jobs, however, failure could cause unrest. An increase in population and limited resources could lead to conflict over resources. The increase in per capita energy consumption could also lead to increase in demand.

Evolving Trends

The future threats would include weapons of mass destruction or disruption techniques which may not necessarily be nuclear threat but may involve biological and chemical weapons. The country is likely to witness increasing polarisation due to religion. In the globalised world there would be reduced relevance of borders and geographical barriers. The future threats are likely to be technology driven and will affect every aspect of emerging threat. Insurgencies are likely to reduce .The future insurgencies are likely to have loose and decentralised structure, unlike the organized structure our security forces are used to fighting till now. We would be facing networked organizations which will have expertise in technology. The insurgencies will be based on sub regional resources. The scarcity of basic energy needs could lead to conflict for survival. The criminals are likely to exploit economic, human, drug and cyber trafficking networks by

establishing cross border linkages. They are likely to exploit ungoverned or misgoverned spaces and employ osmotic benefits of a globalised international network, thereby, establishing transnational linkages.

Terrorism is likely to witness religious polarisation using religion for global and regional polarization. The terror could be used as a tool to wield political power including state sponsored terror. Terror and crime are likely to increase in linkages and impact. The cyber terrorism has ability to cause disruption and destruction .Terrorism will focus on soft targets, economic targets and suicide attacks and likely to see increase in home grown groups and incidents of terrorism. The cross border terrorism has already engulfed approximately 15,000 civilian casualties in this decade. It is anticipated that the instability in AfPak region could fuel terrorism in J&K.

The role of army will witness reduction in overall employment of army due to increase in terrorism and criminal activity, decrease in insurgencies. But Army will have to evolve fresh nature of response to have increased impact with reduced strength. The individual soldier will have to take on a greater responsibility. The modernisation can be done with improved soldier to soldier as well as soldier to system integration ,situation awareness ,better education and technological exploitation ability, specialization, lighter, more lethal and ergonomic equipment profile.

Emerging Non-Traditional Threats: Col PK Gautam (Retd), IDSA

Threats in today's world are no longer only military/ traditional. Conceptual framework by scholars such as Bary Buzan and Ole Waever etc has included environmental, economic and societal security as a basic tenet of life today. The United Nation's Human Development Report (HDR) of 1994 argued for a change in the concept of security from an exclusive stress on territorial security to a much greater stress on people's security and also a change from security through armaments to security through sustainable development. It also listed threat to human security as economic security, food security, health security, environmental security, personal security, community security and political security. UN high level panel has demarcated six clusters of nontraditional security as economic and social threats, including poverty, infectious diseases and environmental degradation, inter-state conflict and internal conflict, including civil war, genocide and other large-scale atrocities, nuclear, radiological, chemical and biological weapons, terrorism and transnational organised crime. There is a growing realisation of the importance of preserving the "Global Commons" such as Space, Ocean, Air, and Cyber Space.

People's Daily Online (China) has identified non military threats as terrorism, drug trafficking, serious communicable diseases, piracy, illegal immigrants, environmental security, financial security and info security. The Western literature identifies non

military threats as environmental degradation including climate security, economic disparities, chronic poverty, diseases, transnational crimes, migration, energy security and resource wars. The preliminary assessment of the US National Intelligence Council forecasts that unprecedented economic growth, coupled with 1.5 billion more people, will put pressure on resources—particularly energy, food, and water—raising the specter of scarcities emerging as demand outstrips supply. International conferences over a period of time have commonly identified non military threats as pandemics, border management /migration, water, energy, climate change, disaster management, human traffic and drugs and food security. However, conferences in India have identified non military threats as currency crisis, international terrorism, money laundering, organised crime, smuggling, spread of small arms, drug trafficking, illegal migration, religious extremism, piracy, ethnic- nationalistic secession, chronic poverty , food and energy, human security, jobs, human trafficking, environmental security, water, climate change, and pandemics.

Major queries from diplomats undergoing courses in India on nontraditional security relate to state of massive numbers of undernourished children, role of all types of black money, human trafficking etc. They have been also enquiring about low priority being given to AIDS as a problem, arable land being lost to urbanisation in times of food insecurity and role of the state in all the above .

In the last decade, studies are being conducted in India to identify nontraditional threats albeit a delayed and slow pace attempt. The studies of IDSA and DRDO have commonly identified nontraditional threats as food, water and energy security, demographics & migration, climate change, environmental security and disaster management, health and human security, information and cyberspace security, and terrorism.

National security is moving beyond traditional tropes. Non-traditional transnational threats are receiving more serious attention in the "high politics" of international relations. The number and diversity of non-traditional threats to state is increasing. Nontraditional security has immediate human impact with implications for both domestic and regional stability. There is a very real potential these threats can exacerbate conditions contributing to traditional security threats in the region. The passage of time has witnessed increasing importance of non-state actors in context of these nontraditional threats. E.g. UN, WTO, OECD, World Bank, IMF, MNCs, Community groups/movements, NGOs, Media.

 It is opinioned that military will continue to plan for worst case scenarios. Even though so much has been talked about nontraditional threats we must not forget the fact that neither the geopolitics has not gone away or the institution of war. As a military man or scholar warrior we must analyse as how to be relevant to society and interact with

citizens, scientists, civil academics, bureaucrats and politician? We must put an end to being consumers of knowledge and aping the West and contemplate as how do we continue to write good GSQR and be part of transformation? This is going to be our real challenge in times to come.