

India's Energy Needs - Strategic Imperatives*

Dr Kirit S Parikh**

I am delighted to be here and be asked to deliver Colonel Pyara Lal Memorial Lecture. I learnt from General Nambiar that Colonel Pyara Lal served this Institution for thirty long years from 1957 to 1987 and passed away while still serving the USI. That is really a remarkable sense of commitment. Institutions create a sense of continuity and the benefits are derived by future generations. This annual memorial lecture is a befitting tribute to the contribution that Colonel Pyara Lal has made to this great Institution.

We face really enormous challenges in meeting our energy needs. The country needs to grow by 8 to 10 per cent economically, if we are to meet our human development goals. We will also need to provide clean, convenient and reliable energy for all. We need to increase primary energy supply by three to four times. Electricity is not the primary energy. Coal, oil, gas, wood etc. are primary energy sources and currently, we are consuming something like 425 million tons of oil equivalent worth of primary energy and we need to increase all these by three to four times over the next 25 years. Our electricity supply has to go up by five to seven times and we will have to improve the quality and the quantity of supply of all kinds of energy sources. It is also clear that coal shall remain the leading energy source in India for the next 25 years at least, if not longer.

If you compare India's energy consumption with other countries, you will find that our per capita energy consumption is very low. In comparison with other countries, the consumption per person of primary energy in India is one of the lowest in the world and much less than the World average. We consume one half of that of China and 1/20th of what an average American consumes in terms of primary energy. It is the same story in electricity consumption as well.

See Table 1.

Region/Country	Total Primary Energy Supply (TPES) Per Capita (kgoe)	Electricity Consumption Per Capita (KWh)
India	439	550
China	1090	1380
USA	7835	13070
World	1688	2430

kgoe stands for kg of oil equivalent

Some people also say that India is not very energy efficient, but if you look at it in a slightly different way you will find that we are quite efficient users of energy and it is understandable. Anyone who is as poor as we are and whose energy cost is so high is understandably using energy very efficiently. No one can afford to use energy in a wasteful manner.

If you compare how much energy we use for a dollar worth of Gross Domestic Product (GDP) adjusted in Purchasing Power Parity (PPP) terms, you can see that we are quite an efficient user of energy. See Table 2. We are using only 0.16 kgoe worth of energy for adding one-dollar worth of GDP in PPP terms whereas, the USA takes 0.22 kgoe. The world, on an average takes 0.21 kgoe and China takes 0.23 kgoe. Even in terms of KWh we are quite efficient. PPP corrects for the difference between actual purchasing power and the nominal exchange rate. One dollar costs nearly 40 Rupees, but if you go around buying things in the USA, what you can buy for one dollar you can buy that in India for about Rs 10. In a sense, the purchasing power of a rupee is much more than what our exchange rate indicates.

Table 2 : Energy Use Efficiency Per GDP \$: PPP-2000

Region/Country	Primary Energy (kgoe)	KWh
India	0.16	0.20
China	0.23	0.29
USA	0.22	0.37
World	0.21	0.31

We use large amounts of traditional fuels. Mainly women in rural households are currently using these. In fact, 90 per cent of the rural households continue to use firewood and dung cakes and 20 per cent of the urban households also use firewood and chips. Only five per cent of the rural households and 44 per cent of the urban households use LPG. Similarly, kerosene is used by only 2.7 per cent of rural households and 22 per cent of urban households.

Traditional fuels cause huge burden on health, particularly women's health. If you quantify the time that women spend in gathering fire wood, in gathering dung and so on, you will find that on an average, 3000 crore hours are spent by Indian women per year in just fire wood gathering in the country. They also cause all kinds of respiratory

diseases and the symptoms are quite widespread. The economic losses that people suffer in terms of lost opportunities, sickness time, employment that they miss, the money they spend on medicines, etc have been estimated to be around Rs 30,000 crores per year. It also illustrates that you just cannot neglect to provide clean and convenient energy to our people in rural areas. This has to be an important objective of any kind of energy policy.

India consumed 121.04 metric tons (mt) of crude oil products (including refinery fuel) in 2005-06, whereas, domestic production of crude oil was only about 33.98 mt during the same period. We are virtually importing more than 70 per cent of our oil needs and this dependency on oil imports keeps on increasing. The total consumption of petroleum products has been growing at the rate of around 5.1 per cent between 1980-81 and 2005-06; though over the last five years it has grown at a lower rate of around 4 per cent because the crude price has gone up significantly in the international market.

For a long-term energy perspective, we have to make some assumptions about how much energy we would need 25 years down the line and how fast our economy would grow, how fast our population would grow, what kind of measures can we take for energy conservation, what would be our energy policy, what would be the availability of different fuels etc? There are so many imponderables in making projections for the future that one needs to find a method that gives a broad idea of what our options are, what the feasible space is, what are the parameters within which we can act, and what all can we do?

One way to do this is to look at energy elasticity. The notion of energy elasticity is- if GDP grows by one per cent, how many percentage points would the energy consumption increase? If you look at the Indian data in the past then you will find that our GDP consumption elasticity for Total Primary Commercial Energy Supply (TPCES) is around 1.08 from 1980-81 to 2003-04, but it has come down slightly and we have now become a little more energy efficient. This is illustrated in Table 3.

Table 3 : Energy Use Elasticity wrt GDP

(Percentage change in commercial energy use for one per cent growth in GDP)		
		Per Capita
TPCES wrt GDP	1980-81 to 2003-04	1.08
	1990-91 to 2003-04	0.82
Electricity Generated wrt GDP (Utilities + Captive)	1980-81 to 2003-04	1.30
	1990-91 to 2003-04	1.06

Now let us take electricity generation. If you look at electricity generated, we are becoming a little more efficient. Earlier, we used to add 1.3 per cent of electricity for every one percent increase in GDP. Now we are adding only 1.06 per cent for every one per cent increase in GDP. We can also compare how other countries have done in this regard. If you look at them with different levels of per capita income, you can see that globally also, countries' elasticities keep going down once their per capita income increases and this is also true for electricity consumption. This is illustrated in Table 4.

Table 4 : Energy Use Elasticity wrt GDP from Cross-Country Data of 2003

TPES (kgoe/capita) wrt per capita GDP (\$ PPP 2000)	All Countries	
	2000 <GDP <8000	0.83
	GDP >8000	0.79
Electricity Consumption (kWh/capita) wrt per capita GDP (\$ PPP 2000)	All Countries	0.76
	2000 <GDP <8000	1.24
	GDP >8000	1.25
		1.09

Based on such elasticities, for growth rates of 8-9 per cent, we get the primary commercial energy required. It would be around 1500-1800 metric tons oil equivalent (mtoe) by 2031-32. By oil equivalent, I mean-1 Kg of oil gives you 10,000 kilo calories of energy whereas, 1 kg of Coal in India gives only 4,000 kilo calories. So one kg of coal equals nearly 0.4 kg of oil; in energy terms these are equivalent. One uses such energy equivalence numbers to aggregate all the different types of fuels and one gets the kind of broad numbers as shown in Table 5.

Table 5 : Total Estimated Primary Commercial Energy Requirement (TEPCER) in 2031-32 for 1.47 billion Population (mtoe)

	GDP Growth Rate	
	8%	9%
GDP (Rs. in billion at 1993-94 prices)	122170	156689
TEPCER (mtoe) (Falling Elasticities)	1514	1823

Similarly, we can make projections for electricity requirement in 2031-32 as shown in Table 6. The installed capacity required would be around 800,000 to 960,000 Giga Watts (GW) or approximately a million GW (1GW = 100 MW).

Table 6 : Electricity Requirement 2031-32

	GDP Growth Rate	
	8%	9%
Total Energy Requirement (billion kWh)	3880	4806
Energy Required at Bus Bar	3628	4493
Projected Peak Demand (GW)	592	733
Installed Capacity Required (GW)	778	960

Now, if we really translate this into plan-wise projected installed capacity addition, then we get a picture that for the 11th Plan we need 75,000 to 80,000 MW of additional capacity and you can see from Chart 1, how it is growing. When you look at these numbers, you do not really feel surprised that China, which has a much higher per capita income than we have today, is adding perhaps 50,000 MW of capacity every year whereas, during the entire 10th Five Year Plan, we added a capacity of 20,000 MW over five years. 75,000 MW may look large but it is not certainly difficult and certainly not impossible for us to attain, if we really mean to do so.}

Plan-wise Projected Installed Capacity Addition (MW)

The electricity requirement we have projected can be generated in many different ways. We can use coal, hydrocarbons or nuclear. So, to get a fix on how much of coal, oil etc we require, we first project what we require by way of coal, oil and natural gas for non-power and for non-transport modes. These are very small users and one can make fairly reasonable projections and this is what has been done based on the studies carried out by various researchers in India. Then we put this in a programming model, that is to say: I need to generate so much of electricity, so much of transport demand in terms of billion passenger kms and billion ton kms of goods movement and so many MW of electricity. And, for so many billion units of electricity generated, what is the best way to do so? What are our options?'

Using the above model, we could develop various scenarios. These scenarios are extreme scenarios. One scenario says, everything will be coal-based development that would give you maximum demand for coal and minimum demand for others. Another scenario says, let us maximise nuclear, third scenario would be to say, let us maximise hydro, the fourth scenario would be, we maximise both hydro and nuclear together, the fifth scenario could be - along with hydro and nuclear, we say 25 per cent electricity could come from natural gas. The next scenario could be that we have demand management and energy efficiency to significantly reduce the demand for energy in the country. We know that options are available. Electricity consumption can at least be reduced by 20-25 per cent, if we really push for energy efficiency. Similarly, the next scenario says that we also work on the supply side i.e. improving its energy efficiency. For example, increase coal power plant efficiency. Today, bulk of coal (some 70 per cent) goes into generating power. We are burning coal with an efficiency of 30.5 per cent, i.e., if you take the energy of electricity produced and the energy of coal that is burnt, the ratio would be about 30.5 per cent. Now the best plants in the world today, for example, in Germany give an efficiency of 46 per cent. We

cannot get the same efficiency as in Germany, their ambient temperature is lower and they have certain advantage. But even accounting for our higher ambient temperature, we should be able to achieve at least 40-42 per cent efficiency with the available technology. So, one could say that if we increase our technical efficiency from 30 per cent for burning coal in power plants to 40 per cent, we would achieve a significant reduction in coal requirement, because 70 per cent of the coal is going into power plants. Thus, we achieve 33 per cent reduction in coal that can be quite significant.

Then in another scenario, we could have a higher freight share of the railways. What happens is, if a ton of goods is moved from Bombay to Delhi by truck, it costs you five or six times the energy as moving it by train. So, if a larger share of the goods movement is carried out by train, you would have reduced the energy requirement and increased the energy efficiency. Of course, that would require making the railway services as efficient and reliable as the road transport but that can be achieved. We can also increase the vehicle efficiency so that oil demand would go down and, finally, we put a lot of renewables into the system. The above scenarios are summarised below-

- (a) Coal-Based Development
- (b) Maximise Nuclear
- (c) Maximise Forced Hydro
- (d) Maximise Hydro & Nuclear
- (e) Scenario (d) plus forced Natural Gas
- (f) Scenario (e) plus Demand Side Management
- (g) Scenario (e) plus higher Coal Power Plant Efficiency
- (h) Scenario (f) plus higher Coal Power Plant Efficiency
- (j) Scenario (h) plus higher freight share of Railways
- (k) Scenario (j) plus increased vehicle efficiency
- (l) Scenario (k) plus renewables

We do everything to the best extent possible and the combination would indicate to us the space within which we can operate. See Table 7. What we get here is that the oil requirement towards the end of 2031-32 would be anywhere between 352-486 million tons. Domestic production, in a pessimistic sense, has been estimated to be around 35 million tons of oil only and the range of imports would be between 315-451 million tons, i.e. import dependence would be anywhere between 90-93 per cent. Similarly, for gas, our import dependence can be 0 per cent - 50 per cent, for coal 10-45 per cent and for total commercial primary energy, it could be anywhere between 30-60 per cent. So, we could be importing 0 per cent - 60 per cent of the energy; 30 per cent if you go for all the efficiency, all the renewables, all the hydel, all the nuclear and everything. We have to recognise the fact that India would be required to import large amounts of energy. Nothing wrong in importing energy, if we have the money, if we are exporting things and if we can buy this at reasonable competitive prices in the international market. Then one can say: these are my requirements, what are really my options, what can I really do and what can I develop?

Table 7 : Range of Commercial Energy Requirement, Domestic Production and Imports for 8 Percent Growth for Year 2031-32

Fuel	Range of Requirement in Scenarios	Assumed Domestic Production	Range of Imports*	Import (Percentage)
Oil (mt)	350-486	35	315-451	90-93
Natural Gas (mtoe)	100-197	100	0-97	0-49
Coal (mtoe)	632-1022	560	72-462	11-45
# TCPES	1351-1702	-	387-1010	29-59

* Range of imports is calculated as follows:

Lower bound = Minimum requirement - Maximum domestic production

Upper bound = Maximum requirement - Minimum domestic production

TCPES stands for Total Commercial Primary Energy Supply

Generally, it is believed that we have a lot of coal in the country. The extractable coal that we have and the amount of coal that we can bring out from the coal mines at our current level of consumption would last for 86 years. But, of course, our coal requirement is not stagnant at the current level of consumption. If the economy is growing at 8-9 per cent, then our coal consumption would grow at five per cent per year and at five per cent growth rate of coal consumption, the reserves would not last for 86 years but only for 40-45 years. So, even the so-called vast coal reserves that we have will run out in 45 years. Now one can say that we have not exploited all the coal bearing areas and 30 per cent of the coal-bearing areas are yet to be explored. Add that 30 percent and instead of 45 years it will run out in 60 years. Coal is a finite resource. Apart from the concerns about climate change that coal imposes, we have to recognise that we would be short of even coal. Similarly, our current known reserves of oil, at the current consumption rate would last only for 23 years and gas only for 38 years. So, we are clearly short of these conventional energy reserves.

If you look at Uranium, even here we are very short of it. The total amount of Uranium that we have in the country is sufficient for only 10,000 MW of the first generation nuclear power plants called Pressurised Heavy Water Reactors (PHWR). These are the kind of reactors that we have built in Rajasthan, Madras and Narora. We are continuing to build these kind of reactors in the country. With these PHWRs, we can generate at the most, 10,000 MW of nuclear power. Put that 10,000 MW in the context of our requirement of 800,000 MW to a million

MW, 25 years down the line and we have a clearer picture of our energy deficiency. Today, nuclear power is around 3000 MW and is contributing less than 2 per cent. If we rely only on our own natural Uranium, it cannot contribute more than 10,000 MW. But our strategy right from day one has been to install 10,000 MW of first generation nuclear power plants i.e. PHWR. This PHWR generates electricity and the Uranium we feed in comes out as depleted Uranium, which also contains Plutonium. We separate the Plutonium and the depleted Uranium, and once we have enough Plutonium available, we can build what is known as a Fast Breeder Reactor. The Fast Breeder Reactor has the characteristics that while it generates electricity it also converts some of the depleted Uranium into more Plutonium than we put in. So, it breeds Plutonium. But though the name is called Fast Breeder Reactor, its breeding rate is very slow and it takes number of years of operation before you get enough Plutonium to start another Fast Breeder Reactor. But we can do that and then after a while it grows very rapidly and we can have exponentially growing availability of Fast Breeder Reactors in the Country. The total capacity for Fast Breeder Reactors with the same Uranium that can give you only 10,000 MW of first generation plant, can give us 500,000 MW from Fast Breeder Reactors. Another advantage of Fast Breeder Reactor is that some of the more long lasting isotopes in the depleted Uranium are burnt into it. So what comes out in the end is somewhat safer and easier to dispose of as nuclear waste than what comes out from a first generation power plant. Our strategy is to go to third stage and use our Thorium reserves. But first we need to develop Thorium technology, which is 30 years down the line. With this technology, we can build very large capacity, may be around five million MW of additional nuclear energy.

Now, what is the importance of all this? What is called pessimism here means that we are not importing any nuclear power from anywhere? In 2030, that would give us only about 48000 MW out of a million MW. Now, if we are able to import some Uranium, say 8000 MW of nuclear capacity is imported in the next 10 years, then that 48000 becomes 63000 MW. It may not seem very large, but look at 2050 numbers. By the year 2050, 8000 MW of nuclear capacity we import today, creates the possibility of increasing nuclear power from 208,000 MW to 275,000 MW, and if we can have the 123 Agreement and can import not just 8000 MW but 16000 MW of nuclear power and process it, then may be, instead of 2,75,000, this would become 3,50,000 MW, and of course 20 years further down the line, it would be very large. So, the whole importance of being able to import nuclear power or Uranium today and reprocessing it, is that it gives a huge opportunity to find an additional source. Since we will run out of coal and other things, this could be our insurance mechanism. We really need a fallback energy source and here is the one that is really feasible and that insurance becomes much better, if you are able to import Uranium. We can do that without importing but what we can achieve by the end of the 21st Century; with the import of small amount of nuclear power, we can achieve the same results by the year 2070.

Now let us look at the renewable energy resources shown in Table 8. Many people feel that while we do not have hydrocarbons but what about renewables? There are a lot of opportunities there. The main problem with renewables is that many of these are bio-mass based and require large amount of land and the country is also short of land. Let us look at the options. Suppose, I have 60 million hectares which is considered waste land and if we take 60 million hectares of waste land and convert it into productive fuel wood plantations and run them in an efficient and sustainable way, we can get almost every year 620 million tons of oil equivalent worth of wood which is quite large but that is the limit. The assumption is that we are using all 60 million hectares of wasteland, which is not really available, because 60 million hectares of wasteland also includes Himalayas and other places where it would not be possible to grow anything. But if we grow 30 million hectares of forests for wood plantation, we can get 300 million tons of oil equivalent of energy out of wood plantations; not a small quantity.

Table 8 : Renewable Energy Resources

Resources	Unit	Present	Potential
Hydro-power	MW	32,326	1,50,000
Wood	mtoe/year	140	620
Bio-gas	mtoe/year	0.6	4
Ethanol	mtoe/Year	<1	10
Solar Photovoltaic	mtoe/year	-	1,200
Solar Thermal	mtoe/year	-	1,200
Wind Energy	mtoe/year	<1	10
Small Hydro-power	mtoe/year	<1	5

Let us look at bio-gas. The dung availability is restricted and the quantity is quite small. Bio-diesel, with 20 million hectares (jatropha plantation) at today’s level of yield can give us only about 20 million tons of bio-diesel from it. That is not to be neglected as it provides local renewable energy resource. Therefore, bio-diesel is not the magic bullet to solve our energy problems. Ethanol (sugarcane based) may provide about 10 million tons.

Take solar photovoltaic. With only five million hectares of land covered with today’s solar photovoltaic cell, which has 15 per cent efficiency, we can get 1200 million tons of oil equivalent worth of energy and if you have 10 million hectares of land, we can have twice as much. Solar, in a sense is a very large resource that we have. We have abundance of it. The only catch is that the cost is high. Today, a kwh of energy generated by solar photovoltaic costs about Rs 20 per KWh whereas, pithead coal based power plant generates at Rs 2 per unit. Now, if you say that since solar is available at the consumer’s end, we can compare it with Rs 4 or Rs 5 per unit, we still need to bring down the cost of solar from Rs 20 to Rs 5 per unit, if solar energy is going to be a viable option.

With wind energy also, there is a problem that it operates only for part of the time. We get electricity for about 20 per cent of the time it operates. Our current load factor on wind power is around 18 per cent. Even if you assume

that 20 per cent of wind power is available, all the 65000 MW of wind power potential in the country operating at 20 per cent is really no more than 20,000 MW of coal based power plant operating at 70 per cent load factor. This is very less. There is no other magic bullet other than solar energy, which is very expensive.

Currently in Brazil, people are using sugarcane to convert it into ethanol and run their cars on that. Ethanol can also be made from cellulosic bio-mass, i.e. rice stock and wheat stock. the entire crop residues can be used to generate ethanol. If we can make cellulosic bio-mass ethanol, then we can have a large amount of ethanol. Since we have so much of crop waste that can be used, we can have 300 million tons of oil equivalent of ethanol, which is possible. Again, the technology is not currently economical but many people are working on it and may be, with time it would become economically viable a few years down the line.

So, what are our strategic imperatives? One thing has emerged very clearly that we are short of energy. We need to use all our energy resources. We need to push energy efficiency in demand management. We must augment our resources in whatever way we can, to get maximum out of what we have. We need to think about energy security, including that for the households, because the households do suffer a lot for want of clean and convenient energy. We need to worry about environment sustainability, see how we can improve that and we even need to think about a carbon free scenario, with the rising global concerns about climate change. Can we think of a scenario without emitting carbon? Finally, we should think about energy independence. Is it needed and is it a possibility?

Let us look at all these. The energy efficiency and demand management are one of the first and foremost options that we should really take. For every MW that is saved, or you can say every negawatt (negative watt) that is produced by saving a MW, it is even more than a MW that is produced, because the wastage in transmission and distribution is not there. There are many things we can do. We should promote urban mass transport system because that would really reduce energy consumption. We can increase the share of railway freight movement. We should benchmark our energy consumption for all energy intensive sectors in the country. There are many energy intensive sectors. an industry could be told that they were wasting a lot of energy. If we let the investors know-how efficient or inefficient a particular firm is, I think that should be sufficient motivation to make the energy sector efficient.

We can also have annual energy audits for specific energy intensive industries. To promote energy efficiency, we have a Bureau of Energy Efficiency (BEE), which is now labelling products. It gives ratings of 1 star, 2 star, 3 star or 4 star etc. It is labelling the major energy products. What we need to do is that we should make it possible for government procurement agencies to buy a product with least cost on lifetime basis and not just first cost basis. For example, if you want to buy an air conditioner, then the procurement officer would call for tenders and would be required to buy one with the lowest quote. But if the lowest cost, let us say, consumes 20 per cent more energy than another one, he would not be able to prefer that one, because the Central Vigilance Commission (CVC) would come after him. So, we need to develop a mechanism by which a rational choice can be made. It is not very difficult to do so. One can easily imagine and ensure that there is no CVC hassle involved and a person can take honest and correct decisions. I think we should promote this culture and these are the kind of measures we need to take.

The next strategic option we have is that we must augment our resources. We need to accelerate our exploration of coal, oil and gas. We must accelerate nuclear power because this is what really increases the availability of energy. We need to develop the Thorium cycle for nuclear power and also exploit non-conventional energy sources. We should go for in-situ coal gasification and also enhance recovery of oil and gas. For energy security, we should reduce our dependence on import of energy. In some sense, we must see that diversification is there; we ought to buy oil from as many sources as possible and not just one place. We should use, not only oil, but spread out our consumption over many different resources of fuels. We should set up buffer stocks. We need to provide clean fuel and electricity to all. How do we do that?

Currently, we are giving kerosene and LPG at highly subsidised rates. However, a part of the kerosene that is earmarked for households, at least 35 per cent, leaks out and goes out for adulteration of diesel. In spite of all kinds of measures that we have, these leakages continue.

Similarly, many people using LPG can afford to pay more than what they are currently paying, but they are used to getting subsidised LPG. I think what we need to do is to make sure that every household should have some entitlement of subsidised kerosene and electricity. For example, first 30 units of electricity a month or may be 8 cylinders of gas per year are made available at a subsidised price and the rest is available at a higher price. To prevent leakages, what we need to do is give everyone a smart card with which a person can buy the product from any dealer at the market price and the difference between the market price and the ration price is charged to the Government account, and the person only pays the ration price. That way, there will be only one price for the market and there would be no incentive to divert kerosene or diesel or LPG to other uses and that it will be available. However, we have to recognise the poor and evolve leak proof methods to subsidise them.

What about environmental sustainability? From the global point of view, carbon emissions are the main concerns but from the local point of view, we are concerned more about the air that we breathe in the cities. Degradation of local natural resources is important. If you dig a coalmine, then the land is carved. You need to worry about these issues as well. Sulphur or particulate emissions from power plants are also of importance. Our CO₂ emissions would rise significantly. By 2031-32, it would be 5.3 billion tons per year in the high coal use projection, but if we use all the low coal technologies, putting everything together, it can be brought down to 3.8 billion tons per year. The USA's CO₂ emissions today are in excess of 5.5 billion tons. So, 25 years down the line, even in our worst case scenario and with a much larger population of 1.5 billion people, we would not reach the USA's level. How can we think of a carbon free world? We should have adequate nuclear energy. We will use all our hydel, solar, wind and other renewables for electricity. This is possible even today, but the costs are very high. We need

to bring down the costs of all these. For oil substitutes, we can go for electric traction, electric vehicles, cellulosic ethanol and bio-diesel. These are all technically feasible but their cost is high and they need technological breakthrough.

If we want to have energy security, we ought to develop all resources and need to go for energy efficiency and demand management, as strongly as possible. We also need to follow a strategy for energy saving. It will reduce carbon emissions and also help in achieving energy independence.

.*Edited text of the Eleventh Colonel Pyara Lal Memorial Lecture 2007 delivered at the USI on 12 September 2007.

**Dr Kirit S Parikh is Member, Planning Commission, Government of India.

Journal of the United Service Institution of India, Vol. CXXXVII, No. 570, October-December 2007.

National Security - Nationalism :We Cannot Reverse History - But Prepare To Maintain Freedom

Lieutenant General ML Tuli, PVSM (Retd)

“Leaders of the Society should have the moral strength to proclaim truth fearlessly”

Rig Veda

Introduction

Peace and harmony have been sought by humanity ever since the dawn of civilization.¹ And yet the whole of human history, from the very earliest times is replete with wars and violent conflicts from the tribal rights upto the international level. Indians, however, tend to believe that conflict is unnatural, that peoples from all nations are basically alike, that differences are product of misunderstanding and that permanent peace is a reachable goal. For ages the Indian psyche has been geared to devoting ones life to the welfare of all, ‘Sarva Bhute, Hite Raha’. It has also been focussed not on individual self but on the entire globe, ‘Vasudheva Kutumbakam’ was always the objective. History disapproves each of these propositions. As mentioned, the causes of the conflict have been many and varied. Some wars have resulted from the ambition of individuals or groups to dominate society, others from an attempt to fight injustice and tyranny, and there have also been wars of national liberation, freedom and religion. All religions preach peace, but in fact it has been one of the major source of violent conflict down through the centuries and remains so even today. Science was supposed to establish peace but it has created deadly weapons of mass destruction. Only when the countries have accepted the existence of conflict and sought to manage it have enduring periods of general peace resulted.

Unfortunately, we Indians lack confidence to revisit our history with a degree of candour. Although we can not reverse history, we must examine our past in order to prepare for the future. Availability of facts will lead to informed debate and a great consciousness. History can be used to create trauma or to apply creative ideas from the past; ‘forewarned is forearmed’. We have suffered heavily in the past because we were disunited. The concept of nation state was non existent in earlier feudal times when loyalty of the masses was extended to their king and not to the country. When we study a large number of battles that we lost, it is possible to discern the recurrence of three main shortcomings which contributed to our misfortunes. In the technology of the contemporary weapon system, we invariably lagged behind the invading armies. For example, for centuries we relied on slow and unwieldy elephants against the more nimble and versatile horses which were used to advantage by the invaders. With the advent of gunpowder, we were also slow to catch up with the latest advances, the same weakness continues to date in the manufacture of modern weapon systems. And, finally a lack of aggressive spirit, planning ahead to meet the danger, coupled with treacherous defections remained the root cause of misfortunes that befell the Country.

Military History

Let us examine the chronicle, of our Indo-Islamic past and the British conquest and post Independence conflicts, which is filled with the debris of the tides of war.² India was lost first to Arab followers of the Muslim faith inspired by their religious and military enthusiasm at the beginning of 8th Century. Mohammed Bin Qasim, a young man of 17 years, under orders of the Caliph led a well trained force of Syrian horse and Bactrian soldiers, few heavy artillery catapults with adequate baggage train of camels. A large number of Jats and Meds who were discontented with the rule of King Dahir of Sindh also joined the invaders. King Dahir took up defensive positions at the head of a large force of men and horses but lost due to superior tactics of the invaders combined with disaffection among population of his Kingdom.

Three hundred years later Muslims again started knocking at the gates of India, this time persistently (1001-1026) under Mahmud of Gazni from another direction - North West. Mahmud’s expedition to Somnath is one of the greatest feats of military adventure in the Medieval Indian history. His march with 30,000 regular cavalry and a large retinue of local volunteers and 30,000 camels loaded with supplies including water as a reserve for an emergency over a distance of nearly 1000 miles from Multan testifies to his boldness of conception. The campaign involved overcoming determined fight by Bhatti Rajputs, about 10 miles North West of Jaisalmer, and another battle against sizeable Rajput force at Mundher, West of Ahmedabad, before laying siege of Somnath town fortress. The defenders who numbered over 50,000 in all, organised strong counter attacks but were overwhelmed by better tactics of the invaders. The sack of Somnath continued to be remembered right upto 1947 and thereafter, as an event of great humiliation and significance. Al Baruni, the historian who followed in the train of Gazni writes of a letter from King Anandpala to Mahmud, “Turks are rebelling against you in Khorasan and I offer to send 5000 horsemen, 10,000 foot soldiers and 100 elephants. I have been conquered by you and I do not wish that another man should conquer you”. Such was the level of hypocrisy and sycophancy - almost slave mentality devoid of any self respect.

While the 11th Century had witnessed the passing of Punjab into the hands of invaders, the next century saw the expansion of their power further East. Like a resolute Commander Muhammed Ghori inspite of a near rout at the first battle of Tarain at the hands of Prithviraj Chauhan in 1189, planned another expedition in 1192 to establish his superiority at the head of 1,20,000 cavalry consisting of the best Turkish, Afghan and Tajik horsemen. They were all trained in shooting their arrows while on the move. Prithviraj mustered the support of 150 rulers

alongwith their contingents estimated at 3,00,000 cavalry, 3000 elephants and a large number of infantry. However, Jaichand of Kannauj did not join the confederacy. The two Armies met once again at Tarain. Ghorī employed better tactics by keeping sizeable reserve and surprised the Rajputs before they could organise themselves properly. At a critical juncture when both sides were wearing out due to fatigue, Muhammad employed his reserve of 12000 horses and inflicted heavy casualties. Prithviraj was taken prisoner and is reported to have been killed. Prithviraj lacked foresight and committed the grave error of giving second battle again within his dominion and permitting the invaders so far forward unhindered. After the battle, the Turks extended their frontiers further into North India, thus laying the foundation of Muslim rule for the next 300 years until the arrival of the Moghuls. Having established themselves in the Country, they ruled with a strong hand, almost like an army of occupation and they never identified themselves with the local population. The Sultans were opportunists and ease loving; and at times even slaves became kings. They too failed to keep abreast of the times and neglected the security of North West of the Country when Timur and Babar were knocking at the gates of India. So when Babar came into India at the head of a small force of 12,000 men and horses with few guns, he was faced with a muslim army at Panipat - a virtual mob of over a lakh men, horses and large number of elephants. The battle began on the morning of 21 April 1526 and was over in less than six hours. Ibrahim Lodi was himself killed in the battle and Afghans were completely beaten by highly trained and motivated cavalry archers, flank attacks and artillery.

The first battle of Panipat is a landmark in Indian history - it meant the end of Delhi Sultanate and ushered in the Moghuls who ruled the Country (except for a short interlude of Afghan adventurer Shershah) for the next 300 years. After the success of Babar at Panipat, a new power threatened the Rajputs who had been dreaming of establishing their supremacy. Mewar's battles were entirely defensive, they defended their land against Muslim onslaught; on everything that Hindus held sacred to their faith, Gods and women. Rana Sanga hero of Rajput national revival fought 18 battles against the Sultans of Delhi, Malwa and Gujarat and could never enter into an agreement with alien Moghul power under Babar. This resistance culminated in the famous battle of Kanwa, the Rajputs fought heroically but were defeated due treacherous desertion of Sillaidi who led Sanga's Vanguard with his force of 30,000 men and horse to the Moghuls. With the Moghuls installed in Delhi and aggressively expanding their empire, Akbar won over the allegiance of Rajputs - Kachwahas of Amber, Rathores of Jodhpur and Bikaner, and Bhatīs of Jaisalmer. But the Maharana of Mewar would just not do so. They preferred liberty and 'Vanvas' to dishonour and humiliating subordination, and thus the epic struggle continued under Rana Pratap.

The 14th, 15th and 16th Centuries witnessed the greatest amount of mental awakening directed towards the uplift of the masses and their urge for freedom from the invaders bondage and rising of the moral stature. Guru Gobind Singh (1666-1708) the Tenth and last Guru brought a tremendous change in the religious, military and political life of the people. His most important contribution was to infuse a sense of fighting spirit in the peasantry. Like Shivaji in the South he had first to forge the sword with which he was to fight. Taking up the sword of righteousness against Moghuls' oppression, addressing the almighty he said, "Grant me O Lord this boon that I may not falter doing good. That I may entertain no fear of the enemy when engaged with him in battle. And I may always be sure of my victory. May my mind be trained in the desire to dwell upon the goodness and when the last moment of my life should arrive, may I die in the thick of battle." This wide awakening of peasantry led to remarkable socio-political organisation in the North. Ranjit Singh rose from the status of a petty Chieftain to become one of the most powerful Rajah of his time. He was the first Indian in thousand years not only to stem but to reverse the direction of invasions from the North West frontier. Also, he was the first person to persuade Sikhs, Hindus and Muslims to become the willing instrument of his expansionist policy; extending the borders upto Tibet and Afghanistan in the North to the deserts of Sindh in the South. Unfortunately, this situation did not last long after his demise in 1839 because of parochial quarrels, intrigues among his military commanders and determined expansion of British empire in India. We may skip the British conquest and subsequent rule in India, which came about more due to weakness of Indian character than to the bare effects of their brilliant achievements, when they were merely contemplating the protection of their trade. A brief mention of the first war of Independence in 1857 would further highlight the role played by the Indians to help the British in stabilising their empire in the Country. The mutineers were initially Muslims and Hindus of Bihar and Oudh and Marathas. As all these men came from land holding classes, this feeling was diffused among the civilian population where it received a sympathetic ear and support. This National uprising, to get rid of alien rulers, was suppressed brutally by the British with the active help and cooperation from numerous chieftains and some natives.

In the post Independence era, our Army has just about managed to maintain the territorial integrity of India, discounting the loss of Aksai Chin to China and areas of Kashmir occupied by Pakistan.³ Stephen Peter Rosen of Cornell University in his book 'India and its Armies' writes, "After the difficulties experienced during the 1962 border war with China, the Indian Army was enlarged and its funding was increased. Greater attention was paid to military affairs by civilian officials. In most of the accounts of the 1965 war Indian writers say that by then the Indian Army had reformed, that the territorial gains made by the Army in 1965 wiped out the shame of territorial losses in 1962, that the war had a profoundly unifying effect on India and the Pakistani efforts to raise the Muslims of Kashmir against the Indian Government at the outset of 1965 war failed completely." The detailed military account of that War by the Commander of Indian forces opposite West Pakistan, Lieutenant General Harbakhsh Singh, indicates that Major General Sukhwant Singh was correct when he wrote that, "Lavish praise for all the Services and image building by the propaganda media: clouded an objective analysis of the War which would have taught many lessons for the future and the Official Secret Act hid many sins". About Indian victory in 1971 war against Pakistan, he writes, "The Indian advances into East Pakistan from the North East, North West and South West did lead to a quick Indian victory at a low cost to India." However, writing almost 20 years later, Field Marshal Sam Manekshaw reviewed all the functions of war that had to be integrated in India to produce successful military operations in wartime. He then wrote, "Now do not tell me that I did all this in 1971. I must tell you that there was a difference then. The military operation in erstwhile East Pakistan was not worth talking about, China could not operate due to the time of operations (winter) that we had selected and we had planned on strategic defence for the Western theatre of operations. A mutual defence treaty was signed with the Soviet Union in August 1971 to secure Indian strategic flanks". In a nutshell, while the Pakistani threat bears watching,

there is some sort of consensus for shifting our focus on China - a big military power and increasingly also an economic one. However, both these countries pose chief security threats to India in the foreseeable future. Hence, we have to prepare ourselves to maintain our freedom.

Nationalism

History is supposed to be the basis of Nationalism. If people reject their own history for the history of another people, then in what way, they can be patriotic or Nationalistic. Patriotism is not linked to religion, culture or tradition but to the feeling of National unity, independence and interest; and hence the paramount importance of bringing minorities into the mainstream of National development. Otherwise communalism of minorities can manifest itself in the separatism, exclusivism, withdrawal and anarchism. Sri Aurobindo in his message to the youth of India said, “There are times in a Nation’s history when providence places before it one work, one aim to which everything else, however high and noble in itself, has to be sacrificed. Such a time has now arrived for our Motherland when nothing is dearer than her service, when everything else is to be directed to that end.” 4 The first and foremost pillar to achieve the Seers vision is to develop a sense of National identity. We have not found it even after 60 years of Independence. We have millions of Bengalis, Maharashtrians, Northerners, Southerners but very few Indians. Parochial loyalties based on region, caste, religion are the order of the day. They are sure prescription for National disintegration. Indiscipline is somehow ingrained in our character. Therefore, patriotism today should be about doing our duty conscientiously. It stems from getting recognition based on merit and from getting ‘justice’ that is timely and not purchasable. It comes from fairplay, a good civic sense, social awareness and law abiding attitude. Patriotism is about integrity, honesty and uprightness. It is about down to earth living rather than lofty rhetoric. To sum up, this is what Frederick Max Mueller wrote about our Motherland :-

“If I were to look over the whole World to find out the Country richly endowed with all the wealth, power, beauty that nature can bestow - I should point to India. If I was asked under what sky the human mind has fully developed some of its choicest gifts, has most deeply pondered on the greatest problems of life and has found solutions of some of them which deserve attention even of those who studied Plato, Kant - I should point to India. And if I was to ask myself from what literature we hear in Europe, we who have been nurtured almost exclusively on the thoughts of Greeks, Romans and of one semitic race, the Jewish, may draw that corrective which is most wanted in order to make our inner life more perfect, more comprehensive, more universal, in fact more truly human, a life not for this life only, but transfigured and eternal life-again I should point to India”.

***Lieutenant General ML Tuli, PVSM (Retd),** is a former Vice Chief of the Army Staff. An article by him on National Security-Nationalism also appeared in July-Sep 2000, Vol CXXX No 541 of USI Journal. Journal of the United Service Institution of India, Vol. CXXXVIII, No. 574, October-December 2008.

Tackling Terror and Our Response Mechanism

Lieutenant General Chandra Shekhar, PVSM, AVSM (Retd)*

‘I say to you that no war is ever won through terrorism. It’s that simple. Because (if you employ terrorism,) you earn the opposition, hatred and rejection of those whom you need in order to win the war’.

Fidel Castro, My Life

Introduction

Despite the truth of the above statement, the number of terrorist attacks in the World today increase every day. We in India, particularly face the brunt of such violent attacks, the most recent being the tragic Assam bomb attacks which have left hundreds dead, injured or bereaved. India is a complex society with diverse cultures, religions, ethnic groups and economic levels. This is our strength. Unfortunately, however, the multifaceted nature of our Nation has also been our bane. The reasons are many. There are many groups within our Country who feel wronged, marginalised or exploited. Thus, we have ongoing terrorism in large areas—right from Jammu & Kashmir (J&K) in the North to some of the States in the Northeast, to large swathes of the tribal belts of Andhra Pradesh (AP), Chhatisgarh, Jharkhand, and Orissa. We also have Islamic fundamentalist groups supported by the Inter Services Intelligence (ISI) and Harkat-ul-Jihad-al-Islami (HuJI) carrying out terrorist attacks all over the Country.

It was because of uneven economic growth levels of the ethnic groups and diverse cultures, that Article 370 for J&K and the Sixth Schedule for the North east States was introduced, so that special provisions were provided for these areas. No outsiders were allowed to settle there. Special quotas, additional autonomy and rights were granted. The aim was to prevent exploitation of the region and its people from outside these areas. Ironically and regrettably, these have only heightened the divisions, rather than improving harmony. This is true both in J&K and the North east States. Religious fundamentalist groups have further exploited the diversities and differences, while bad politics, inept administration and a weak bureaucracy have not done enough to improve the lot of the people.

The only way to counter the terrorist threats in each of these regions, is to evolve specific ways of governance and development, based on their specific social, cultural and ecological needs. However, broadly, the issues involved may be divided into three categories: Terrorism in J&K, Situation in the North east States and Internal challenges of ‘Naxalism’ and Islamic fundamentalism.

Fighting Terrorism in J&K

The separatist movement in J&K has caused us the greatest concern so far. The situation has resulted due to a series of historical blunders in the past, compounded by electoral politics of the State, corrupt administration and active Pakistani support for cross-border terrorism. Article 370, though well intentioned, has not facilitated the integration of the ‘Valley’ with the rest of the Country. A consistently unfathomable political and administrative volte-face and lack of strategic thought, has allowed Pakistan to retain POK despite battlefield gains by the Indian Armed Forces in 1948, 1965 and 1971. In more recent times, the mishandling of the Amarnath Shrine Board episode by the State and the Centre has undone all the work of last two decades. The sanctity of the National institutions stands low and has to be restored and strengthened.

What has caused this situation and how can we rectify it? The causes may be summarised as:-

- (a) The policy of appeasement and inaction by the Centre.** This has to be rectified. A firm message needs be sent to the separatists and their supporters that the law of the land will not be allowed to be violated.
- (b) The lack of a ‘proactive’ and ‘retaliatory’ Policy to eliminate the bases, camps and terrorist-support systems in Pakistan, POK and J&K.** This has to be revised realistically to include credible diplomatic and military operations with international cooperation and support.
- (c) Political reluctance to take firm action on anti-national elements (ANE’s).** This should not be tolerated. Alleged atrocities by the security forces (SF) as also by the separatists must be fully investigated. Remedial steps must be taken to restore the confidence of the populace. Justice must be seen to have been done.
- (d) Corrupt and parochial administration in the States.** This needs to change. Civil society should not be subjected to any harassment and must be given a fair deal. A humane approach by the SF in the States must be insisted upon.
- (e) Neglect of modern education and inadequate steps to build a moderate society.** This needs to be immediately addressed. The Madrassa system of education must be made more broad-based, without giving an impression of interference in religious affairs.
- (f) Ineffective policing and intelligence acquisition.** This must be improved. Modernisation of police functioning and effective utilisation of intelligence inputs should be ensured. While conducting security operations, sensitivities of the local populace should be kept in mind.
- (g) Marginalisation of National institutions, press and political parties at the expense of unproductive confidence building measures (CBM’s), or pandering to Pakistani surrogates such as Hurriyat.** This must not be continued. Contradictory acts such as the Government talking to separatist elements on issues like proposals for “autonomy” whereas the same proposals recommended

by the mainstream political parties were rejected, must not be indulged in by the Indian Government. Talks must be held to find a realistic solution to the conflict but with mainstream parties alongwith representatives of the dissatisfied elements, as also with prominent personalities of civil society.

The political dimension to conflict resolution in Jammu and Kashmir needs to be looked at carefully. In a complex situation like J&K where society is divided along religious beliefs and regional identity, we need to develop an accommodative political settlement with greater devolution of power. We need to create an inter-governmental joint council between the Governments of J&K and Pakistan Occupied Kashmir (POK), with equal representation to look after matters of inter-state dimension. These would include trade, communications, river water, tourism, forestry across the line of control (LoC), which could be redefined without being redrawn.

What is often forgotten in the excessive focus on the Kashmir Valley's dissatisfaction with the Central Government, is the dissatisfaction of the Jammu and Ladakh regions with their State Government. Three regions of J&K (Jammu, Kashmir and Ladakh) may be given autonomous status with their own elected Governments under a federal J&K Government. However, defence, external affairs, currency and strategic communications should continue to remain with the Centre. The same model should be applied to POK and the Northern Areas. As in the Irish Model, a joint council for cross border affairs should be set up. And finally, at the apex an Indo-Pak Commission, the two Prime Ministers need to be involved and selected ministries must be constituted. This would require gradual implementation of agreed upon policies and would have to take into account the sensitivities of India, Pakistan and the J&K region. The question of sovereignty of India and Pakistan over respective areas of J&K and POK may be accepted by all the involved parties. The unprofitable and unproductive exercise of bringing up these issues every now and then should be stopped. The recent decision on CBM's and commencement of bilateral trade across LoC slated to begin from 21 October 2008 is a right step towards conflict resolution.

Situation in the North east Region

It is quite evident that the Sixth Schedule, created for the protection of tribal laws, customs and land rights, along with the provision of autonomous 'Hill Councils' has not prevented tribal insurgencies in Nagaland, Mizoram, Manipur, Tripura and Assam. The special rights and laws in fact have led to a worsening situation. They have prevented their integration with the Country and resulted in the division of Assam. The lack of strategic foresight has perpetuated the British legacy of 'divide and rule' while allowing the 'Church' unlimited powers of governance contributing to tribal alienation. Earlier, the demographic invasion of Assam and Tripura by erstwhile East Bengal's cheap labour, traditionally patronised by the British Tea Gardens, was followed by the Congress for electoral gains. The continued illegal influx from Bangladesh, allowed due to a corrupt administration, has also created social disharmony in Assam. Thus, today the divide has become more intense between Meities, Kukis, Nagas, Assamese and Bodos. Insurgency, other than in Mizoram, remains unresolved and has become an industry. The violence by All Assam Students Union (AASU), United Liberation Front of Assam (ULFA) and Tripura National Volunteer Force (TNVF) to fight illegal migrants, and a "soft approach" by the Centre towards Bangladesh, has led to a large illegal Bangladeshi influx into many States, which are exploited by the fundamentalists. A firm National resolve and consensus are lacking due to 'Vote Bank politics'.

While we have been able to undertake joint operations with the Bhutanese and the Burmese, the Bangladeshis have not only been uncooperative but are actively indulging in covert operations by HUJI in India. Swift raids by Special Forces and Air Power, along with diplomatic steps against insurgent groups and camps in Bangladesh should be undertaken. We need to learn from the Israelis or the Russians on how to protect our National interests, as recently displayed by the Russians in Georgia. Firm action to deter support to ANE's is essential, besides deporting illegal migrants. Simultaneously, communications and economy must be effectively developed to integrate these areas with the mainstream.

Internal Challenges of Naxalism and Islamic Fundamentalism

Our diverse 'social fabric', uneven economic development and low education standards, coupled with radical Islamic ideologies around us provide a suitable support base for exploitation by radicals of all hues. Lack of development, economic deprivation, and disputed land rights in the forests, have provided a ground for 'Naxalite revolutionary ideology' in the tribal belts of Andhra Pradesh, Chhatisgarh, Orissa and Jharkhand. While the Naxalite violence has a strong ideological motivation, the economic dimension must not and cannot be neglected. The problem can be solved only through economic development, justice, and education. Raising more armed Police battalions is not going to give us any dividends. Instead, we should aim for better mobility, improved communications/ connectivity, effective local leadership at the grass roots and good governance.

On the other hand Muslims have been led to believe that they are denied equal opportunities, rather than focussing on their lack of modernisation. Pakistan has deftly played its cards to exploit these sentiments of the Muslims in Kashmir, as also in other parts of the Country to stoke Islamic fundamentalism. Thus, today many of the mosques and madrassas preach and exhort extremely radical thinking and action. The rise of religious fundamentalism has introduced a new ideology which sanctifies Jihad. This exploits the sentiments and economic deprivation of the frustrated youth. This situation is also seen in other countries, such as Pakistan, Turkey and the UK. In these countries, and in Pakistan too, madrasa education and 'Imams' are being given enlightened exposure, to integrate them into national mainstream. This is the answer for India as well. The methods to integrate Muslims into the mainstream are economic development, modern education and moderate policies.

Future Road Map for Tackling Terrorism

The steps essential towards an effective long-term policy to tackle terrorism are outlined below:-

Evolvement of an integrated Politico - Military Approach. Terrorism is basically a politico - military problem, as a terrorist movement develops when a section of the populace feels that political or civil justice is denied to them; to counter which military forces are then marshalled by the State. Thus, radical Islamic groups feel that they have been wronged and are not getting a fair deal. Whether in Kashmir or elsewhere in the Country, the State Governments have mishandled internal events concerning Muslims such as the demolition of Babri Masjid or Gujarat riots in 2002. Similarly, the Naxalite movements are a result of sustained denial of the interests of the rural and tribal communities. Since the root cause of these problems is political, they must be addressed at the political level, with military action taken only to destroy or degrade the potential of the terrorists. There is no alternative, apart from finding a political answer, along with steps to foster equitable economic development and social harmony by developing an integrated strategy, which addresses all the dimensions of the problem.

Create a sound Intelligence frame work. All intelligence agencies-IB, RAW, Defence Intelligence Agency (DIA) and others, must establish an integrated intelligence network, which is accurate, timely and actionable at strategic and tactical levels, along with a computerised data base and a multi - agency centre. They have to modernise technical and electronic intelligence, as also the human intelligences (HUMINT) at the grass roots level. This cannot remain an exercise in itself but has to be shared with the States effectively. The States' special investigation branches / forces also need massive overhauling. The existing resources and their training have to be upgraded so that they are better manned and better equipped.

National Counter Terrorism Centre. Terrorist attacks and normal law and order problems are entirely different issues. The State Police forces have to handle terrorist attacks with many constraints, little guidance and coordination. There is also a lack of trust between the 'central agencies' and the state organs. A National Counter Terrorism Centre to detect, guide and plan counter- terrorist actions would go a long way, by being the 'Focal Policy Centre'. The devastating terrorist attack of October 30 in Assam could have been avoided had the intelligence agencies talked to each other and coordinated their efforts, as they all had prior information of the impending blasts.

Effective Anti Terror Laws. The Police and the law enforcement agencies need special powers for prevention and detection of terrorism related cases. There is a need for tougher anti-terror laws, which are pending the Centre's approval. While the fear of misuse by the States is an entirely justifiable one, suitable 'checks' and 'balances' should be built in these laws. At the same time the Police and Intelligence agencies cannot be expected to deliver decisive results if they are handicapped due to lack of effective anti-terror laws. The Central Government appears to have understood the urgency of enacting suitable anti-terror legislation in the overall National interest.

Modernisation of Police Forces. The Police Forces in the States need to be better-trained, better-equipped and better-motivated. They must have improved communications, mobility and capability to operate in various types of terrain and environment. The tendency to add manpower, without matching modernisation, is not cost effective.

Strategy to Interdict & Eliminate the Support Structure. The terrorist bases, camps, arms and ammunition supply-lines and finance-sources have to be eliminated. Keeping in mind the strategic environment and military capabilities, we need to develop a 'Proactive' response both for interdiction of external support and internal overground workers. Diplomatic efforts and joint operations similar to Indo-Myanmar and Indo-Bhutanese anti terrorist operations have to be developed. Where international cooperation to fight terror is not forthcoming, National response needs to be developed. The tendency to opt for a 'soft approach' is counter productive and undermines National will.

Winning Hearts and Minds of the People (WHAM). When a majority of the population supports a terrorist movement, it is evident that only a people friendly approach will work. On one hand, economic developmental projects and civic action programmes need to be undertaken; on the other, 'Information Operations' to counter hostile propaganda have to be deftly handled. Local participation at the ground level must be maximised and encouraged, as was done in Punjab and Mizoram to successfully tackle terrorists. We should seek the support and involvement of civil society, educational institutions and religious leaders for detection, prevention and elimination of ANE's. The subverted over-ground workers must be targeted, with concerted efforts of disincentives, motivations and rewards. The genuine demands of the 'people', whether economic, social or political must be addressed with fairness, justice and firmness. However, demands affecting National sovereignty, constitution and secular fabric must be firmly disallowed and fully resisted. A firm balance between a humane approach to the people has to be fine-tuned with a strong message to the militants.

Finally, we must recognise that total protection against terrorist attacks is impractical, but an unflinching commitment to public safety and adoption of a comprehensive response by the Nation to tackle terror wholeheartedly is imperative. As the list of political targets continues to grow in the urban and industrial field, State apparatus alone will not be able to provide security. Institutional protective measures at the respective institutions need to be adopted by all concerned. Radical religious groups in all the religions have to be neutralised. Anti-terror laws have to be terrorism specific and not misused to settle political scores or to target a particular community. We should strive to forge National consensus on defensive measures against the source of terrorism. The response needs to be structured taking into account all aspects. The decision making process itself needs to be modernised. While the fruits of appropriate development need to be spread more evenly throughout the Country, political, administrative and military responses must be scrupulously fair and just. In the end, I would like to again quote Fidel Castro, a veteran of both politics and war :-

'There are principles that are elementary in war and politics...Ethics is not simply a moral issue - if ethics is sincere, it produces results'.

***Lieutenant General Chandra Shekhar, PVSM, AVSM (Retd)** is a former Vice Chief of the Army Staff and

presently a Member of the USI Council and Chairman of the Board of Management, Centre for Strategic Studies and Simulation at USI.
Journal of the United Service Institution of India, Vol. CXXXVIII, No. 574, October-December 2008.

Civil - Military Relations*

Lieutenant General VK Nayar, PVSM, SM (Retd)

There was a temptation to examine the Civil-Military relations in the domestic Indian context in view of the recent face off between the Armed Forces and the Government on account of the 6th Pay Commission report. However, on closer examination of the subject and keeping in view India's emerging position in the world, I felt it prudent and appropriate to take an overall and enlarged view.

During the cold war regions were frozen geographically, politically and economically. Since then the international environment has changed, new centres of power have emerged and some old one's are reviving. The world power structure is being redefined. Globalisation, terrorism and war against it have made the security scenario more intense and complex. Most Civil-Military relation theories are of post World War II and Cold War period and are based on each nation's historic experience. Theories of Huntington and Janowitz are being challenged by James Burke and others, as in the changed environment the problem in democracies is not of civil control over military or separating it from politics. It is more a question of state capacity building and bureaucratic modernisation to meet the emerging challenges of security, which requires democratic governance of defence and security¹.

A word about globalisation and security would be in order. Prof Geogory Foster of American Defence University has defined globalisation as a process which suffuses virtually every aspect of our lives and is inevitable. It assumes so many forms and occurs at so many levels that it cannot be stopped. In such an environment the viability of the State will depend on how it meets the expanding needs of the society. He also concluded that the performance of the military acting as an arm of the State and institution of the society will be instrumental in determining how viable the State remains².

In a globalised environment the importance of being strategic will be greatly enhanced, requiring a strategically effective military providing advice to a strategically competent civilian authority, accompanied by a viable civil society, a critical free press and a military-industrial complex subordinate to society rather than playing a dominant role. In future the effects of action and inaction will be magnified and threshold of crisis for the decision maker and public alike will be lowered, response time for decision reduced and potential for disaster multiplied. In such circumstances need for immediate attention and action mandates close Civil-Military coordination and cooperation³. In the current globalised environment of terrorism the need to be strategic can be best illustrated by the inadequate and ham handed response of the MHA, it needs to fight terrorism at the strategic level and leave the fight against terrorists to the police and the intelligence agencies.

Broad aims of national security continue to be to protect the nation and its institutions against external and internal threats. Internal threats could be due to subversion and internal destabilising forces and threats posed by deteriorating social, economic, demographic and political situations. The later normally graduate to the former with the passage of time due to lack of social and political action. Since both civil and military instruments are involved, Civil-Military relations become a function of security policy and essential for its implementation.

Unlike Pakistan, legitimacy of the political authority has a traditional acceptance in India and holding of periodic elections is our democracy's biggest achievement. However, inspite of it other democratic norms, particularly federalism, have been diluted and power centralised. Political expediency and appeasement of one or the other segment of the society has fragmented its social fibre along religious, caste and ethnic lines. Politics of expediency primarily oriented to electoral arena and power has led to political instability and bad governance, which has resulted in institutional degradation and deteriorating internal situation. This makes the task of executive instruments more difficult and demands greater synergy of thought and action.

While in Western democracies the professional military, over a period of time, has learnt to respect the skills of their political leaders⁴, it cannot be said of our system. Similarly, the concept of civilian control in our democratic system is accepted and honoured by the Armed Forces. But what is worrisome is the misplaced concept of civilian control as to who the controller is? It is the political master and not the bureaucracy, which is just another executive instrument. Without going into the past of why and how, the current state of affairs is dismal. The ignorance of the national security by our political elite has resulted in lack of political direction and ineffective mechanism for formulation and execution of national security policy. The Government response to frequent acts of terrorism is a prime example. The void can only be filled by professional advice to and understanding of it by the political leadership. The preparation for and execution of a war is even a more complex issue requiring intimate and continuous professional advice. The success of 1971 war for the liberation of Bangladesh was essentially due to sound professional advice by late Field Marshall SHFJ Manekshaw, MC and other Service Chiefs to delay operations till the winter, which was accepted by Mrs Indira Gandhi inspite of pressing international and domestic political compulsions. The requirement is for an 'objective' civilian control wherein the power is distributed between civilian and military sides with maximising of military professionalism. What we have in India to-day is a type of subjective civilian control⁵, which is undermining the military security of the country.

Indian Armed Forces like any other institution are conditioned by their functional imperative to meet the growing threats to the country. They have also been influenced by societal imperatives, that is why they are different from the Pakistan Army inspite of common heritage and traditions of the British Indian Army. There is an inherent and natural conflict between the two as military institutions which reflect only social values may be incapable of performing their military role effectively, on the other hand military institutions purely shaped and influenced by military imperatives will be difficult to contain within the society. Interaction and balance between the two is the

hub of Civil-Military relations⁶. The implications and need for this balance are best illustrated by the debate on the “Disturbed Areas and Armed Forces Special Powers Act”.

Officers are the directive elements of the military structure and are responsible for the military security of the society. Similarly, State is the active directive of the society and is responsible for allocating resources among important values including military security. Social and economic relations between the military and rest of the society normally reflect the political relations between the officer corps and the state⁷. This really reflects the core of the Civil-Military relations as also the conflict between functional and societal pressures. The recent so termed face off between the Chiefs of Armed Forces and the Government probably reflects it, if not wholly, at least partially the above phenomenon in a negative sense.

Armed Forces operate at the margin of moral behaviour and they shall obey civilian political authority as long as it appears to be legitimate. The military derives its legitimacy both from its constitutional position and public acceptance of its role, thus its involvement in the affairs of the State has to be properly so within the accepted norms of democracy⁸. The emergency declared by Mrs Gandhi in June 1975, the only deviation from democracy in India left the Armed Forces untouched, inspite of the fact that she had handpicked General Raina, a Kashmiri Pandit to be the Chief of the Army Staff a month before it. It is widely believed that when she asked him to intervene and take over, he not only advised her against it but refused Army’s involvement in any manner. He thus upheld the democratic norms and refused to follow directions, which were not legitimate.

The present structure for security and defence planning is flawed and there is no institutionalised professional interaction. The Cabinet Committee of Security (CCS) – (earlier Cabinet Committee on Political Affairs) is the highest policy making body on security and defence matters. The next is the Committee for Defence Planning, which acts as a chain between the CCS and Chiefs of Staff Committee (COSC), which is the highest policy making body within the perview of the defence forces. The three committees represent the political, bureaucratic and the defence services. Interaction and intercommunication between them is minimal and virtually non existent and mostly during crisis. They work in an isolated fashion. Defence and civil services are compartmentalised to such an extent that these are considered antagonist to each other. The situation had been made worse by the interjection of a Strategic Policy Group and a Crisis Management Coordination Committee under the Cabinet Secretary and a National Executive Committee under the Home Secretary. The Armed Forces have also fallen a prey to the ethos of committee system by forming the “Defence Services Crisis Management Group” under the Integrated Defence Staff. A sneak review of the system confirms that for long term policy planning for defence and security the system is flawed and lethargic and for emergency and crisis it has added to confusion and delays. Committees without proper professional representation and inputs can never take sound policy decisions and neither can they be accountable. Institutions respond to situations and not committees. A prime example of the failure of the system is the response to the recent floods in Bihar. Having constituted the Disaster Management Authority, its basic recommendation of positioning relief bricks got lost in the maze of committees. Who can be blamed? If any thing it has added to the turf war and disjointed actions.

The need for integration of the Defence Services with Ministry of Defence and establishment of the Chief of Defence Staff system as recommended by Arun Singh Committee can no longer be delayed. In conflict situations as in Jammu and Kashmir and the Northeast, the system has resulted in adhocism and total lack of policy for conflict resolution and management. The concept of Unified Headquarters and Civil-Military liaison committees adopted in conflict areas is only a contraption to soothe the turf war between the administration, para military forces (PMF) and the Army. The need is for unity of command. This existed in the troubled areas of Nagaland, Mizoram and Manipur till late 1980s. It worked well and there was never any problem either with the civil administration, the pmf and the Army. The problem has its roots at the centre, where each head of PMF wants to control (really interfere) in field operations more to establish its turf but without accountability.

Before I get down to the actual functioning and implementation of the Civil-Military relations at the operational level, a word on aid to civil authority is essential. Instructions on Aid to Civil Authority 1970, lay down that aid to civil authority is a constitutional obligation, albeit the instrument of last resort. What needs to be clearly understood is that this is the instrument of last resort and therefore does not bear procedural compliance as is the impression of some junior administrative officers. There have been a number of occasions when request for Army requisition has been made without utilisation of police and pmf resources available with the administration. To prevent this the Central Government has laid down the following additional guide lines:-

- (a)** Employment of troops for normal law and order situations other than having communal overtones may be responded at Command Headquarters at the discretion of GoC-in-C. Army Headquarters will be kept informed.
- (b)** In the case of communal disturbances it will be referred to Army Headquarters and cleared by the COAS and MOD.
- (c)** All election related deployment of troops will be projected by the MHA and cleared by Army Headquarters and MOD.
- (d)** Employment of troops for more than ten days will require sanction of the Central Government.

I intend to suggest some guidelines for actual working of Civil-Military relations at different levels by narrating actual incidents in my experience.

During my visits to the outlying areas in Manipur and Nagaland as GOC, I always made it a point to meet the local officials and functionaries irrespective of their status. My new Aide-de-Camp, a young officer initially thought that I was observing some kind of a traditional ritual but found that the conversations and interaction was related to the area and their functioning. One day he could not contain his anxiety and asked me as to the purpose of my doing it. I told him to figure it out. However, after a month or so I told him that irrespective of how low a status we might think they have, in their own environment and domain they are important, whether an ADC, Circle

Officer, BDO, Gao Burha, Dobashi or a panchayat representative. By giving them respect and importance we help in enhancing their status and build them up among their people and it reinforces their authority and helps in drawing their willing responses. Everyone irrespective of his comparative low status is important in his own environment.

During the Assam agitation in late 1970s, a newly posted DC gave a requisition for dispersal of an agitated crowd to a Major incharge of a column, which had been pre-positioned in anticipation of such an eventuality. Having received the requisition, the Major deployed his men but took no action against the agitators who were over a couple of thousands. The DC asked the Major as to why he was not dispersing the crowd which was shouting slogans, beating drums and utensils and blowing sankhs. The Major told the DC, the demonstration is peaceful, they have done no harm to anyone and not damaged anything, they are just agitating. The young DC told the Major that once he has given the requisition, it must be obeyed and crowd dispersed. The Major told the DC, you have done your duty, I will do mine based on my judgement. The DC complained against the Major to the Commissioner when he visited the area. The Commissioner was a seasoned veteran and explained to him that Major's action was right and if he had taken action as the DC had thought, it would have precipitated the situation. Without discouraging the DC, the Commissioner told him that the Major has 13 to 14 years service and he should respect his age and experience and not let ego come in the way of doing the job. I had similar experience in Manipur while implementing the Armed Forces Special Powers Act. No law is bad, it is its bad implementation which causes problems.

I took over the Division in Manipur and Nagaland at the height of the Meitei insurgency in Manipur and renewed phase of the rejuvenated Naga insurgency in the districts of Nagaland and Manipur bordering Myanmar in May 1981. The situation in the Imphal Valley was so bad that the elected Government had washed their hands off and President's rule had been imposed. Both the Government and the Security Forces (SF) were on the back foot. Administration and police were nowhere to be seen and SHOs had hung their uniform and disappeared. Anything and everything was being guarded, from petrol pumps to all Government Offices, institutions and officials and all civil installations of any consequence. Mr LP Singh, a towering personality and one of our most distinguished and able civil servant, was the Governor of all the seven North Eastern States. A few days later he arrived from Shillong and I went to call on him. During the meeting he outlined the situation as a true professional covering all the core issues. After which he asked me as to what my initial assessment was and as to what should be done. After a brief resume of the situation as I saw, I told him that what we were doing was wrong and that we should get out of the protective mindset and go on the offensive. I told him that to do so I intend withdrawing all Army, Assam Rifles and other PMF under Army's control from protective duties and after reorientating them to go on the offensive to seek and destroy Meitei extremists (ME). I informed him that I intend doing this after thirty days to give the civil administration time to readjust and take overall essential protective duties and throughout this phase I shall help the civil administration and also be available for dealing with any untoward situation. He was visibly upset and told me that he cannot permit this as civil administration was not upto it and there was bound to be a backlash. I issued orders for withdrawal of all Army, Assam Rifles and PMF under the Army's control and to hand over protective duties to Assam Rifles, Armed Police and PMF under the civil administration. I gave a copy of the order to the Chief Secretary. Nothing happened for twenty five days and when I reminded the Adviser, he told me that he will ask the Governor. Two days later Mr LP Singh arrived in Imphal followed by the Home Minister Gyani Zail Singh and the Cabinet Secretary Rao Sahib Krishna Swamy. I received a message from the Raj Bhawan to meet the Home Minister. I sent back a message regretting my inability unless I received orders through Army channels. A couple of hours later I received instructions to meet the Home Minister and convey my point of view. I met him and conveyed my professional assessment and the line of action. Gradually the troops were relieved and we got on the offensive, while simultaneously helping the civil administration, police and PMF under it to be active. Results started coming in slowly with successes in small encounters followed by bigger ones. In July, just two months later, we captured Bisheshwar Singh, the Chairman of PLA and one of the main ojhas (leader) of the seven who had returned from Lhasa. Hearing of it Mr LP Singh flew to Imphal and after congratulating me, told me that my professional judgement was correct and he is happy that I stuck to my guns. While there was sincerity of purpose on both sides, commonality of perception and trust took time. Mr LP Singh was one of my biggest supporters and we developed highest of mutual trust and respect. Due to our professional stance the credibility of both the SF and administration was established.

The foundations of Civil-Military relations in a conflict situation should be laid on sincerity of purpose, mutual trust, tact, perseverance and above all professionalism. Of these sincerity of purpose is most important as we should be quite clear of our long term aim and work towards it inspite of all pressures, and should not compromise these for the sake of good relationship and short term gains. There is a tendency amongst politicians and some bureaucrats to succumb to pressures and wash their hands off unpleasant situations. This results in erosion of Government's image and loss of credibility, which must be avoided. The need is to be frank and even blunt at times but there should never be a break in relationship.

The sphere of our Civil-Military relations are primarily confined to conferences at State level and down to districts and updating of Internal Security Schemes. These are all in the formal domain and deal with only some of the major problems of mutual interest, even these linger on from year to year. There is no continuous and progressive relationship developed between civilian and military officers, there may be odd exceptions. During the British period John the DM, Jim the SP and Joe the local Garrison Commander met regularly socially and otherwise, which projected the Government's functioning in a united and cohesive fashion. Today there is greater need for it as areas of Civil-Military cooperation have expanded beyond routine land acquisition, cantonments, excise, pensioners and ex-servicemen welfare. The disturbed social, political and at times economic environment have made handling of law and order more complex, what to say of terrorism adding more complicities to our internal security situation.

Major Recommendations

The present structure is not conducive for efficient functioning. There is urgent need for reforms and these have to be top-downwards. The CCS should be more representative and include Service Chiefs as professional heads for security and defence planning. Arun Singh Committee report on integration of Service Headquarters with the Ministry of Defence should be implemented.

The Chief of Defence Staff system should be instituted as without it integration will remain flawed irrespective of the Integrated Defence Staff.

The scope of internal security has enlarged. it includes the expanding dimensions of terrorism. there is an urgent need for a long term strategic response and improvement in dealing with it effectively at the tactical level requires immediate attention.

The number of committees should be reduced as you do not govern by committees. they have no accountability and are a hindrance against decision making and implementation. When you constitute committees for specific purposes then its recommendations should be examined and implemented. The cases in issue are the committees on Intelligence, Internal Security, Border Management and Defence, based on Kargil Review Committee Report.

Conclusion

The recent impasse about the implementation of the Sixth Pay Commission for Armed Forces reflects the current state of Civil-Military relations and in a way it epitomises what is wrong. There is lack of mutual trust. In my opinion things are heading for sad consequences and in this turf war there will be no victors only victims, the worst sufferer will be the nation. There is an urgent need for a change in the mind set.

While bureaucracy since Independence may feel happy and satisfied to have helped out national leaders in their unfounded fear of a powerful military and rejoice in their success in the down- gradation of the military's status and prestige, it has indirectly degraded national power and cohesiveness of its capability. Inspite of it, military has remained apolitical and the only effective national instrument.

On the sidelines of this known turf war there has been a further silent subversion of the system (including the bureaucracy) by the intelligence agencies who have exploited the hunger for power of our political elite as well as their fear of losing it by opening direct access to PMO and other power centres and wielding undue influence on them. Long tenures of BM Malik, Kao, Santook and the present security set-up should be an eyeopener. There are wheels within wheels in the power structure and the system has collapsed.

Today we depend on the Army and other Services to bail us out of dirty situations resulting due to failures of others. What is worse, we take it for granted and refuse to give them their due. God help the nation when military fails it.

*The article is based on a lecture by the author at the Lal Bahadur Shastri National Academy of Administration in October 2008.

Lieutenant General VK Nayar, PVSM, SM retired as GoC-in-C, Western Command in 1989 and was also Governor of Manipur and Nagaland.

Journal of the United Service Institution of India, Vol. CXXXVIII, No. 574, October-December 2008.

Emerging China as a Strategic and Economic Super Power

Colonel PK Vasudeva (Retd)*

Introduction

China's double-digit increase in defence spending over the last 15 years has raised hackles across the world on at least two concerns. First, is the force modernisation and second, the objectives of its military strategy. This is particularly true in the context of an external environment in which older conflicts still fester while a new set of challenges emerge almost every five years.

The international environment has become unstable since the watershed events of the 1990s; many major and rising states in Asia have been reviewing their strategic choices. The extent and scope of China's military modernisation has become a critical factor in the choices these states will make. China is proceeding rapidly in projecting its military capabilities to 'major' levels by 2020, to engage with its adversaries.¹

China is being heralded as the next biggest emerging economy of the world followed by India. Witness the stunning economic growth, massive modernisation programmes and the rising standard of living in the cities of China.

Military Modernisation

Since 1978 the big story from China has been its economic growth and the defence modernisation. Focussed military modernisation, the fourth and the last of Deng Xiaoping's four modernisations, took a back seat to economic concerns while China's Gross Domestic Product (GDP) was sustained at an average growth rate of 9-11 per cent per annum. China has viewed the military modernisation of science and technology, of agriculture and industry, and the assumption that it is primarily the national economic strength that translates itself into greater influence in world affairs.²

China's strategies changed after the major Cold War confrontations broke down, as the world was emerging in a period of peace and stability with conventional notions of large scale land based world war unlikely in the near future. China therefore evolved a new security concept of downsizing military until 1980s. However, the United States emerged as the world hegemon which made the Chinese to carry out strategic analysis that led to nation's comprehensive national power.³ Military modernisation assumed a new significance, especially given the lessons to be learnt from the revolution in military affairs (RMA) in evidence during the first Gulf War.

Chinese Military Strategy

By mid-1990s the People's Liberation Army (PLA) had changed its national defence strategy from Deng's people's war under modern conditions to 'regional limited war under high-tech conditions.'⁴ More recently, the national defence strategy mentions fighting future wars under 'conditions of information' involving the development of a military equipped with advanced technology, enabling to fight an adversary beyond its borders. Its five defence White Papers since 1998, have given the world a glimpse of its military planning and the context of its military modernisation.

Three events have prompted changes in China's military: the end of the Cold War, the imperative of China's economic growth and the RMA. The first two events have been viewed as an opportunity enabling to pursue its own 'peaceful rise' and peaceful development. The RMA is one of the drivers of change in the PLA and the challenge to be met if China is to achieve its strategic objectives. Thus, even as China characterises the strategic environment as peaceful with few threats; its national defence White Papers, as well as the national defence doctrine as articulated in Jiang Zemin's influential Military Strategic guidelines for the New Period, have oriented military modernisation to the current and future 'challenges'.

The chief security challenge is presented by Taiwan, where efforts towards unification have been queered by the US commitments to protect Taiwan under the Taiwan Relations Act as well as by Taiwan's domestic pro-democracy political opinion. Other challenges are territorial disputes along China's periphery, the security of maritime interests, the potential for regional instability and domestic unrest. However, the sub-themes in all the White papers since 1998 has been that China's greatest challenge is the hegemonic structure of global and regional power. In China's real politic assessment of challenges and opportunities, the presence of hegemon curtails its opportunity to rise 'peacefully'. A conflict with a hegemon and its supporters is likely, given its current assessment of the strategic situation. It is in this sense that China is likely to win a high-technology war by 2051.

Therefore, its view of its 'major capabilities' by 2020 need to be understood in relation to America's preponderant military power by India and other states in the region. This is especially so as the direction of strategic action has shifted in recent years to a concern with stability on China's periphery including its border regions and the domestic stability in its minority provinces such as Xingjian and Tibet.

PLA Changes

China's military set-up has undergone a revolutionary transformation. The PLA of 2008 has few similarities with the PLA of 1980s. It is now better equipped, operationally better trained, better educated and better organised. It uses a set of strategies and tactics that has little relation to the large land based forces of the past. The combination of changes in technology, organisation, and doctrines has meant that the PLA has also dramatically extended its combat effectiveness. The importance of its 2nd Artillery, for example, has been enhanced with the stress on asymmetric warfare, the ability to inflict shock, use access denial strategies and new concepts of deterrence based on using long range, precision, and conventional missiles.

Its space programme is an important part of its comprehensive military modernisation. The use of advanced technology and satellite communications were dramatically demonstrated in January 2007 when in its first anti-satellite test (AST), China brought down its own satellite as an exercise in denying access to intelligence-gathering reconnaissance satellites in space.

Under Jiang Zemin and now under Hu Jintao, as heads of the Party and as chairman of the influential Military Affairs Commission of the Chinese Communist Party (CCP), the PLA has received dedicated attention of China's top policy makers enabling effective changes and course corrections. China has now cast its military strategy of 'active, in a defensive framework' as it says in its recent White Paper (2006), it would employ a strategy of 'active defence' for which the capabilities of the navy and air force will be to protect its territory beyond its borders and enable its army in 'trans-regional mobility'.

Defence Spending

After about 25 years of high economic growth, China now has the means to invest in indigenous production of sophisticated military technology and to purchase dual-use technology worldwide, despite the embargo on the sale of sensitive technology by the USA and the EU.

China's military budget, low until 1988, began to show increases in 1990s. Between 1995-2006, according to the Chinese sources, the PRC's defence budget in RMB terms increased to slightly over two and a half times the amount in 1995. As a percentage of GDP, it remained between 2.8 to 3.7 per cent till 2006-07, which translates into US \$ 75 billion.

Increase in the defence budget has translated into purchases of weapon systems largely from Russia, development of indigenous naval systems, development of its missiles and space programme and radical reorganisation of the PLA.

The Economic Strategy

China's economic engine has really been in overdrive for much of the last two decades - the payoff of the 1978 decision by Deng Xiaoping to adopt free-market reforms. But it is only in recent years that the public at large has taken notice.

Its GDP is growing by 10 per cent a year. Industrial production is galloping ahead at an annual rate of 17 per cent. Its economy is now the second biggest in the world, behind only the USA, and there are predictions it will assume the top spot as early as 2020.

China's integration into the world economy has been astonishingly rapid. Since its adoption of the "Four Modernisations" a generation ago (agriculture, industry, science and technology, and defence) China's share of world economic output has grown from 3.4 per cent to almost 12 per cent in 2000.

Its admission into the World Trade Organisation in late 2001 has only served to accelerate that growth. The World Bank now estimates that exports represent a quarter of China's GDP, five times the level of 1978.

China and India: Economic Powers

For decades, China and India plodded along under ideologies that favoured visible hand of the government over the invisible hand of markets. Their economic systems stifled growth and left both countries poor. In 1980, real per capita income stood at \$ 556 in China and \$ 917 in India 1.

To jump-start their economies, China and India shifted strategies, letting private enterprise flourish and opening markets to trade and investment. The new policies have led to rapid economic development. China's real per capita income has grown at an average of 8.4 percent a year since 1995, climbing to \$ 4,766. India's 5 percent average annual growth has raised per capita income to \$ 2,534.

Both China and India have unleashed pent-up economic energy, but they're not traveling the same development path. China has followed the traditional route, becoming a centre for low-wage manufacturing and exporting clothing, toys, electronics and other goods. India has emphasised services, using its large English-speaking labour force for call centres, data processing operations and the like.

Growth rates give China's goods-dominated strategy a better track record so far. But India's approach may payoff better in the long term. A look at per capita incomes around the world shows that the wealth of nations eventually depends more on services than on industry.

On Different Paths

China’s strides in industrial production have been phenomenal. Since 1978, when early reforms began loosening communism’s yoke, the country has made great leaps forward in producing such inputs as cloth, electricity, steel and cement. Gains have been just as impressive in finished products such as air conditioners, colour televisions, microcomputers and mobile phones. The bulk of the production increases have occurred since 1990, suggesting that the Chinese economy performed better as reforms took root and spread.

This development path forged an economy skewed toward producing goods, a broad category that encompasses manufacturing, construction and agriculture. China’s goods output as a share of gross domestic product exceeds the average for nations at its per capita income level by about 12 percentage points. The country lags the worldwide average in services as a share of GDP by the same amount.

India has not matched China’s breakneck industrial build-up. For its per capita income level, India lags the global average of goods output as a share of GDP by about 8 percentage points. It tilts towards services by an equal amount. India shares an above-average reliance on services with dozens of wealthier nations. Panama, with its namesake canal, has carved out footholds in international trade and banking. France, Greece and other economies with thriving tourism industries-and the USA, with its globalised business services-also lean toward services.

China sold more than 60 per cent of its goods abroad in 2006, up from just 12 per cent in the early 1980s. Its exports of goods relative to total production are nearly double India’s (Chart 1A). India passed China a decade ago in the share of services going overseas and in 2006 exported nearly 17 per cent of its services, double China’s share (Chart 1B).

All told, 20 percentage points separate goods and services as a share of GDP in the Chinese and Indian economies-a gap that confirms the two countries are on different development paths. Goods production includes agriculture, a backward sector in both China and India. Narrowing the focus to manufacturing, however, reveals a similar dichotomy, with factory output accounting for 48 per cent of GDP in China but just 28 per cent in India.

As its economy took off, India made strides in goods production and trade. Its goods exports, for example, grew 11.4 per cent a year from 1996 to 2006-strong but less than China’s 17.8 per cent. At the same time, China made headway selling services on global markets, posting a healthy 13.6 per cent export growth rate, compared with India’s 23.7 per cent.

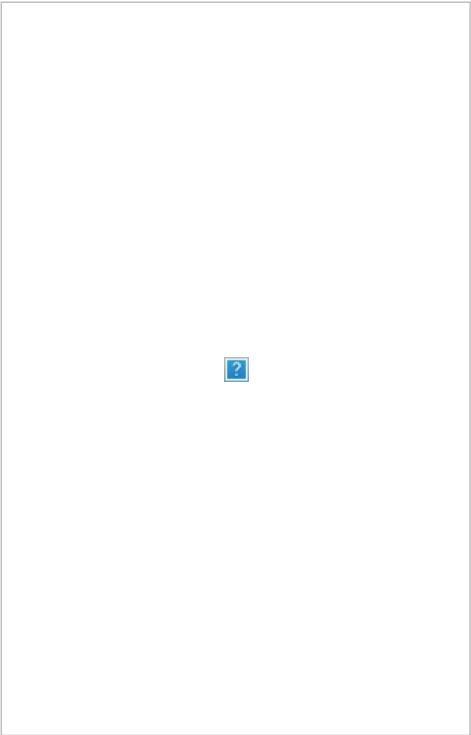


Chart 1

Despite their different development paths, both countries have reaped the same reward: rapid and sustained economic growth. Their rapid progress evokes comparison to Germany and Japan, which became economic miracles with their quick recoveries after World War II, and South Korea, whose rapid ascent began in the 1960s. Following some variation of a free enterprise model, these countries prospered and narrowed their income gaps with the USA (Chart 2).

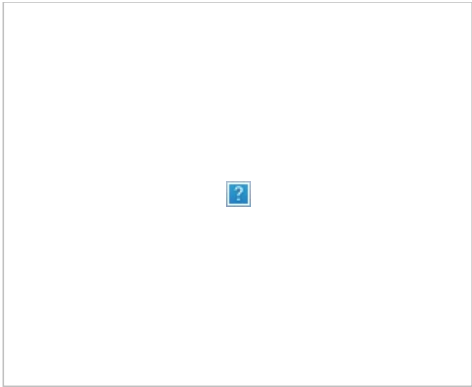


Chart 2

Today, sheer size gives greater weight to the economic miracles taking place in China and India. The two nations’ combined population of nearly 2.5 billion is 10 times the 260 million total of Germany, Japan and South Korea. Never before has the world seen an economic development story of such epic proportions.

The Services Strategy

Japan and South Korea launched their economic transformations by using abundant, low-wage labour to establish manufacturing-for-export industries. China has followed a similar path, becoming the world’s low-cost producer of goods and a daunting competitor for global market share.

India possesses advantages that bolster a services strategy. Two are legacies of British rule: large numbers of English-speaking workers and familiarity with the West. India also offers an ample supply of educated workers, many of them college graduates available at a fraction of what they could earn in the USA and other advanced economies. China’s labour force includes larger numbers of educated workers, but the country has long way to go before matching India’s advantages in language, cultural compatibility and communications technology.⁵

India also had the blessing of good timing. Services trade has surged in recent decades, providing new opportunities in the global market-place. Two factors are at work. First, the Internet and other technologies have made international communications faster and cheaper, lowering barriers to marketing and delivering services over vast distances. Second, rising incomes have shifted consumers’ spending from goods, boosting demand for services and making it an engine for economic growth.⁶

India’s fastest-growing services exports are linked to offshoring business services, which make up a quarter of the country’s services exports, shot up 107 per cent in 2006 and 138 per cent in 2007. Software services, two-fifths of the services exports, rose about 33 per cent each of the past two years. Financial services exports may be relatively small, but they grew roughly 140 per cent in both 2006 and 2007.

These recent gains build on earlier ones. In the past decade, India’s services sales have risen from 18 per cent to 38 per cent of all exports, topping the 30 per cent of the USA, the largest seller of services in the global marketplace (Chart 3).⁷

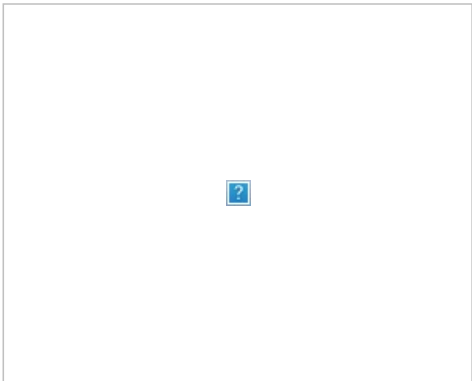


Chart 3

Conclusion

The steady growth of its military and its modernisation, with the strategy of outer space success and anti-satellite warfare capabilities, remains a worry in the region and globally, as does its growing insistence on blocking Taiwan’s independence aspirations.

China has the second-largest economy in the world with a GDP of over \$ 6.9 trillion (2007) when measured on a purchasing power parity (PPP) basis. In November 2007, it became the third largest in the world after the USA and Japan with a nominal GDP of \$ 3.42 trillion (2007), when measured in exchange-rate terms. Since free market reforms in 1978 China’s GDP has grown an average 9.9 per cent a year. China’s per capita income has grown at an average annual rate of more than 8 per cent over the last three decades, drastically reducing poverty, but this rapid growth has been accompanied by rising income inequalities. The country’s per capita income is classified as low by world standards, at about \$ 2,000 (nominal, 107th of 179 countries/economies), and \$ 7,800 (PPP, 82nd of 179 countries/economies) in 2006, according to the International Monetary Fund.

The concept of sustainable development has proven to be a fleeting goal in China. Environmental concerns take a distant back seat to growth. Air pollution is among the worst in the world. The World Bank estimates that 16 of the world's 20 most-polluted cities are in China - fallout from the country's heavy use of coal-fired generating stations. Things are not all bleak, to be sure. China's fashion, arts and cultural community has enjoyed somewhat of a renaissance of late. You no longer see the Mao suits that once dominated urban streetscapes. Chinese artists, with some exceptions, are enjoying unprecedented freedoms. Chinese authorities, again with some exceptions, are even allowing their citizens to access the Internet.

Still, the challenges facing the modern China remain daunting. How do you keep 1.3 billion people happy while engineering an economic and social revolution? But it seems determined to press ahead with its "great revival." The world is already watching.

*Colonel PK Vasudeva (Retd) is a soldier turned economist. He did his PhD on World Trade Organisation. He has authored five books and writes articles on security related subjects regularly.

Journal of the United Service Institution of India, Vol. CXXXVIII, No. 574, October-December 2008.

Whither Chinese Characteristics of Market Economy Horizon of China's Fight Back against Scary Recession

Dr Sheo Nandan Pandey*

Introduction

The People's Republic of China (PRC) is beset with recession.¹ It defies all public pronouncement of the Chinese leadership. Barely a fortnight after Hu Jintao, the Chinese President, Wen Jiabao, the Chinese Prime Minister and Yang Jiechi, the Chinese Foreign Minister had demonstrated and displayed China's rock bed to withstand surging global financial crisis and its cascading aftermath in the presence of 45 heads of states/governments at the 7th Asia Europe Meeting (ASEM) in Beijing, the Chinese State Council announced a stimulus package of 4 trillion Yuan (US \$ 585.5 billion) to ward off the wolf of recession as the USA Congress had done in announcing US \$ 700 million bail out. Fifteen European Union (EU) member countries and several other important actors in the world economic scene have followed suit in their own ways, as their economies continued to shrink through the third quarter without likelihood of a check during the fourth quarter.

Phenomenon of recession is not something new for the world. It is concomitant to business/trade cycles in a capitalist system.² Due to forces of globalisation and inter-dependence of the world economies, the recessionary pressure of one country and/ or group of countries tend to breed recession in another country and/ or group of countries. The bust as such can seldom be avoided unless boom is done away with. The capitalist system does not have to be apologetic as it is reminiscent in its objective laws. There is issue just with the socialist system, which got into being as an anti-thesis to this.³ It is still much more in the case of the PRC, which swears by socialism while lives on long despised capitalist road. The appendage "socialist" to "market economy" in specific context of "socialism with Chinese characteristics" serves little intent and purpose except being a cloak.

In this paper, there is an attempt to bring out how best and to what extent the Chinese stimulus package could at long last pull out the Chinese economy from the quagmire of recession much less stop further slide into depression. In its perspective, the paper would shed light on the fact whether the Chinese strides in economic development had reached a stage whereby it was capable of decoupling from the push and pull factors of the global economy. The framework of the study, accordingly, examines: the Spell and Severity; Convulsion and its Inter Sector Spread; the Stimulus Package and its Outreach; and, in finality, the Outlook of Fight Back. The discussions, in the bargain, will throw light on the relative weight of the Chinese economy to square over the losses to consumer confidence. The study will rely basically on open source information to testify various constructs of the study.

Spell and Severity

In the first three quarters of the year 2008, the growth rate of China's gross domestic product (GDP) has been lower by 2.3 percentage point over the same period last year. In absolute terms, it stood at 20.163 trillion Yuan (US \$ 2.96 trillion). It included 2.18 trillion Yuan generated by the primary industry, 10.11 trillion Yuan by the secondary industry, and 07.87 trillion by the tertiary industry. While the primary sector clocked 0.2 higher percentage points, the secondary and tertiary industries were down by 3.0 and 2.4 percentage points respectively. While acknowledging the phenomenon of deceleration in the Chinese economy, the Chief Economist of the Chinese National Bureau of Statistics (NBS) Yao Jingyuan struck a justificatory note in response to media a query. He said the growth rate for the January-September 2008 period was higher than the average rate of growth in the past three decades.⁴ Notwithstanding, the prospect for China's GDP growth during the fourth quarter is still more bleak. While the estimates widely vary, the best fit range between 5.5 to 7 per cent. In the first quarter, the growth rate was 10.6 per cent. It declined to 10.1 per cent and 9 per cent in the second and third quarter of the year 2008 respectively.⁵ In fact, after peaking to 11.5 per cent in the first half of 2007, the largest ever since 1994, it has been continuously decelerating. Li Xiaochao, the spokesman of the Chinese NBS, squarely attributed the phenomenon to the global financial crisis and weaker demand for Chinese exports.⁶

There is visible sign of onset of decline in the inflow of foreign direct investment (FDI). The peak of US \$ 9.6 billion in June 2008 has since witnessed month after month slide. For the reasons best known to China, there is yet no official data on FDI inflow for October 2008. In its latest report on 19 November 2008, the official website of the Chinese Ministry of Commerce has cryptically acknowledged "a slower clip" in FDI inflow.⁷ Non-Chinese sources put the amount at US \$ 6.7 billion.⁸ It accounts for 30.2 per cent decline. It is again literally without signs of corrections month after month.⁹

Interestingly, the simmers started appearing much before the crisis surfaced either in the USA or it got to spread elsewhere amidst hyperbolic assessments of some of the top agencies.¹⁰ FDI from the EU to the PRC, excluding Hong Kong Special Administrative Region (HKSAR) had dropped sharply from six billion euros (US \$ 9.3 billion) in 2006 to 1.8 billion euros in 2007.¹¹ The same holds good in the case of FDI inflow from the USA.

There is a saving grace that the direction of FDI inflow to the PRC is not EU and USA dependent. The bulk 87.37 per cent inflow of late stemmed from Hong Kong (44.91 per cent), the British Virgin Islands (17.59 per cent), Singapore (5.07 per cent), Japan (4.36 per cent), South Korea (3.70 per cent), Cayman Islands (3.23 per cent), Samoa (2.95 per cent), Taiwan (1.90 per cent) and Mauritius (1.84 per cent). Deceleration in FDI inflow was yet a

point of concern as it constituted over 11.0 per cent of the total FDI inflow to China. Zhu Baoliang, an economist at the National Information Centre, predicted a negative growth next year. It is quite another thing that he has attributed higher base of the yesteryears behind the phenomenon.

The brunt of the deceleration is being borne by all the four sets of foreign invested enterprises (FIEs): the Equity Joint Ventures (EJVs), the Cooperative Joint Ventures (CJVs); the Wholly Owned Foreign Enterprises (WFOEs); and, the Foreign Invested Companies Limited (FCLS). Not until recently, they played vital role. They accounted for more or less 27 per cent of value added production, 21 per cent of national tax revenue, and 58 per cent of foreign trade. With the global financial crisis and global slow down knocking at the door, there is quite discernible fall in the EU and the USA invested enterprises in China. During January-May 2008, for example, the number of newly established FIEs by the 15 EU member countries decreased by 24.85 per cent year on year basis. During the same period, number of newly established USA invested enterprises dropped by 28.13 per cent year on year basis. The Japanese and South Korean invested enterprises did as well go down in more or less the same proportion.

Chinese State Administration for Industry and Commerce recently reported that the total number of FIEs by the third quarter of 2008 stood at 424,600. In 2005, the total number of FIEs stood at 552960. It goes to suggest a straight 23.2 per cent out movement of FIEs. It ignores cumulative accretion due to new approvals in two intervening years. The proportion of FIEs in manufacturing and tertiary industries stands at 51.3:48.7. The axe of deceleration in FDI inflow could be roughly estimated to fall in more or less same range.

In the first six months of 2008, the slowdown in exports led to closure of at least 67,000 factories across China.¹² It works out shutdown of 11000 factories per month. The latest estimate shows likelihood of at least 100000 factories by the end 2008.¹³ These affected factories employ nearly 50 million workers. The Chinese Human Resources and Social Security Minister Yin Weimin candidly admitted the number of jobless reaching 10.2 million in the first

10 months 2008.¹⁴ This excludes re-employment of 4.5 laid off workers in alternative vocations. A just concluded survey of 84 cities by the Chinese Human Resources and Social Security Minister shows that the demand for workers in the third quarter of 2008 fell by 5.5 per cent. 120 million migrant workers have since returned to their native villages, which they had left two-three decades ago for better future. Pearl River Delta, the home of Made-In- China brand of toys is since seeped into convulsion. As of 21 October 2008, top 50 companies, Smart Union Group included, had applied for liquidation.

Convulsion and its Inter Sector Spread

Notwithstanding the impacts of global financial crisis and consequent global slow down, the crisis in Chinese economy as such is visibly a result of glitch in the export promotion policy. It took the route of FIEs to promote exports, which, in turn, assembled imported components into consumer goods for exports to select few economies. It again offered preferential tax regime for investing in selected economic zones. In the process, Chinese export industry got tied to prevailing business environment in select foreign countries as much as select domestic economic zones.

While it ascended the status of world's third largest trading economy behind the USA and the EU, it lost dynamism to switch and swap to safer pastures in short run to them as well. When it basked in the glory of crossing over US \$ 1 trillion exports proceeds in 2004, the USA and EU had respectively share of 21 per cent and 18.1 per cent in China's export drive to the world economies. Hong Kong did as well enjoy place of pride with a share of 17 per cent at long last. The other reckonable destinations were Japan, ASEAN and South Korea with their respective share of 12.4 per cent, 7.2 per cent and 4.7 per cent. The rest of the world held share of just 19.3 per cent. In the bargain, any change in demand for Chinese exports goods in the USA and EU was bound to leave abiding impact on outcome. Nonetheless, the other two major destinations of Chinese exports such as Hong Kong and Japan did not have large enough domestic markets. Being closely integrated with the USA and EU economies, they could hardly escape the spin effect of slow down.

The Chinese policy thrust in the wake of Third Plenum of the 11th Central Committee of the Communist Party of China (CPC) got to promote indiscriminately small and medium enterprises (SMEs) as it had happened earlier when the Chinese policy thrust favoured large scale enterprises. It has since over 42 million SMEs, which accounted for 67.71 per cent of the gross output value of all China's industrial enterprises.¹⁵ Notwithstanding, they hitherto employed over 75 per cent of the Chinese workforce in cities and townships. They were again the ones who contributed 58.72 per cent of total tax revenues paid by all Chinese industrial enterprises. Nonetheless, they are the ones which so far generated 65 per cent of China's patents, over 75 per cent of its technological innovations and nearly 80 per cent new products. Much of the SMEs owe their origin to "zhua da; fang xiao" (grasp the large; release the small) policy of state owned enterprises of late 1990s. As a result, truly private SMEs, started and run by enterprising individuals constitute less than 15 per cent while the majority belong to collectives of yesteryears, particularly the then town and village enterprises (TVEs).¹⁶ In the process, they exemplify the characteristics of "old wine in new bottle". They are largely modelled to produce export goods on the lines of FIEs. As a result, they are subject to the vagaries of elasticity of demand in foreign markets.

As of 15 October 2008, 1391 out of a total of 3631 toy factories in Dongguan in Pearl River Delta in Guangdong province were shut down. Hong Kong listed Smart Union Group Holdings Ltd, filed for bankruptcy and the Hong Kong High Court has since appointed provisional liquidators to wind it up. The decision of the company followed loss of US \$ 26 million in one go for want of sufficient demand. Harbour Ring, another company in Dongguan, has cut output and retrenched 4500 out of total of 8000 workers. There is a long list. The region turns out vast quantities of low-cost consumer goods such as toys, textiles, shoes, garments, home appliances and electronics for Western markets. Foreign investors from Hong Kong, Taiwan, Japan, Europe and the USA had flooded the

region to set up factories since the 1980s. They are the ones who are now down and out.

Shenzhen, another major manufacturing city in the Pearl River Delta, has been a witness to an identical scenario. Most manufacturing firms in Baoan and Longgang districts of Shenzhen have been shut. Manufacturers of home appliances and electronics suffered the brunt first and went bankrupt. Weak demand in almost all major export destinations, particularly the USA and the EU, rising labour costs, expensive raw materials and the Yuan's appreciation are major contributors. The pang of the slow down is being increasingly felt in all the nine pillar industries of Guangdong province, namely electronics, household appliances, petrochemicals, textile, food and beverage, building materials, paper making, automobile, and medicines.

Shandong, the second largest economic province in terms of GDP after Guangdong has started faltering in no less severe proportion. It laid off 38000 out of 9.14 million workers as on 23 November 2008.¹⁷ In the first 10 months of the year, Qingdao, seaside industrial complex of the province, alone dealt with 7897 cases of labour disputes.¹⁸ Going by the deliberations of the meeting of the Chinese Premier Wen Jiabao with top economists and entrepreneurs on 25 November 08, there is mortal fear of the phenomenon of slow down inflicting Chinese economy in quite severe proportion in a wide range of fields, namely petrochemical, telecommunications, auto, steel, nonferrous metal, machinery manufacturing, logistics and real estate.¹⁹

Stimulus Package and its Outreach

China has been quite quick to respond to the challenges. It did not hesitate to accept and go by Keynesian prescription in preference to Marxian alternative as well.²⁰ To prop up effective demand and sustain supply, China came to resort to a novel instrument, some what similar in spirit but quite different in form to the American palliative. It was a 4 trillion Yuan (US \$ 585.5 billion) economic stimulus package, hailed as China's "New Deal" and characterised to contain elements of composed of what the Chinese tend to call "active fiscal" and "moderately active monetary policy".

There has been conflicting reports for long about the funding plan. What has hitherto emerged out, the Chinese Central Government was contemplating to float 1 trillion Yuan (US \$146 billion) worth of new construction treasury bonds, with 500 billion Yuan (US \$73 billion) scheduled to be sold in each of the next two years. This could bring the budget deficit up to 2.5 per cent of gross domestic product in 2009 and 2010. Responsibility for the remaining 3 trillion Yuan (US \$438 billion) of the total package will fall to the provinces, mainly through their own budgets and cheap (subsidised) loans provided by the nation's major banks.²¹ So far, the People's Bank of China has asked the national banks to contribute a tiny 100 billion Yuan (US \$14.6 billion) in loans for infrastructure projects, but this is likely only an initial push. If the State Council approves the provinces' right to issue their own bonds, then this too could provide funding, though it will take time for this mechanism to be operable and for provinces to find markets for their bonds.

The plan initially envisaged 10 major steps: building affordable and low rent houses; improvement of roads and power grids in the countryside; expansion of transport networks, particularly dedicated passenger rail links and coal routes; beefing grass root medical system; construction of sewage and garbage treatment facilities as part of environment protection programme; development of high-tech and service industry; speeding up construction works in disaster hit areas, particularly May 12 earthquake locations; raising average per capita incomes in rural and urban areas through an array of concessions and subsidies; reforms in value added tax rules capable of reducing corporate tax burdens; and, last but not the least, enhancing financial support to maintain the growth rate.

Local governments are also implementing their own measures and investment plans totalling at least 10 trillion Yuan (US \$ 1.4 trillion) have been announced.²² It includes 3 trillion Yuan (US \$ 439 billion) investment plan of Yunnan and 2.3 trillion Yuan (US \$ 337 billion) plan of Guangdong province.

Outlook of Fight Back

At the face of it, the Chinese stimulus package evokes awe. Little difference could have been expected otherwise from a resurgent China, suddenly faced with the home truth of an all round decline in fortune.

The Chinese module yet suffers limitation of untold proportion. The challenges before the Chinese leadership are manifold. It has to ignite and sustain first, declining consumer confidence. Figures released by China's National Bureau of Statistics on 01 November 2008 showed that China's Consumer Confidence Index (CCI) was 3.2 point lower than the corresponding period last year. It had fallen 0.3 point in the third quarter of 2008 as against the second quarter. The CCI, which measures consumers' opinions on employment, the economy, regular income, the stock market and quality of life, was released after the disclosure of a lower entrepreneurial confidence index and a lower business climate index, both year-on-year figures for the third quarter. The NBS data showed that China's entrepreneurial confidence index dropped to 123.8 in the third quarter, 11 points lower than the previous quarter and 19.2 points lower from the same period last year. In the similar vein, China's Purchasing Managers Index (MPI), a tell tale measure of manufacturer's confidence, registered 45.2 in October 2008 as against 47.7 in September 2008. It was again lowest level since the survey began in 2004. No amount of rhetoric could perhaps change the ground situation.

There is again some scepticism about how much of the spending is actually new. This is true both about the stimulus package of the Central and local governments. Notwithstanding, the time lag in the case of central investment plan is two years and the provincial five years. It can not thus bear fruit in the short run. Moreover, all the laid off factory workers cannot be adjusted in one or the other 10 set of work areas identified in stimulus package. This, however, does not undermine their importance in providing some sort of succour to the lives of a

large number of skilled and semi skilled workers hitherto rendered unemployed.

To a great measure, China’s experimentation in the fightback against the economic slow down shall be a matter of great interest both for the academics and the decision makers. Skewed industrial structure, particularly oriented to produce export goods of relatively high elasticity of demand is bound to suffer the China syndrome.

.***Dr Sheonandan Pandey** is at core a sinologist. He served in the Ministry of Defence and the Ministry of Human Resource Development, and retired as an officer on Special Duty with the National Technical Research Organisation (NTRO).

Journal of the United Service Institution of India, Vol. CXXXVIII, No. 574, October-December 2008.

The Situation in Afghanistan and the Way Ahead

Major General Y K Gera (Retd)*

Background

Afghanistan is a landlocked country with an area of 6,52,100 sq km and population of 22 million approximately¹. Four million Afghans live outside, mostly in Iran and Pakistan. Afghanistan is one of the world's least developed countries with 90 per cent of its population living in rural areas at subsistence level. Twelve per cent of the land is arable, three per cent under forest cover, 46 per cent for pastures, and the rest 39 per cent or so is mountainous. Its small scale industry contributes 26 per cent to its Gross Domestic Product (GDP). Four million children are out of school. Annual population growth is at 2.6 per cent or so. Life expectancy is 41 years for males and 43 years for females. The country has been fighting war for more than 25 years. The educational and health infrastructures have been destroyed during this war.

The erstwhile USSR's intervention in Afghanistan and failure of its policy there is said to have contributed substantially towards its demise and the end of the Cold War. In early 1989 the Soviet Union withdrew from Afghanistan after losing more than 14,500 troops. One million Afghan lives had also been lost. The policies followed by the USA and Pakistan in Afghanistan led to the emergence of the Taliban, who continue to be active there. Supporting Taliban served the short term interests of both these countries. Afghanistan during the period 1996-2001 became epicentre of Jihadi terrorism under the Taliban regime. It provided sanctuaries and training facilities to organisations like Al Qaeda, holy warriors of Chechnya, Islamic Movement of Uzbekistan (IMU) and so on.

On 11 September 2001, terrorists attacked sensitive targets in New York and Washington DC in the USA. In October 2001, American forces launched 'Operation Enduring Freedom' against the Taliban regime in Afghanistan. This step was welcomed by most countries adversely affected by terrorism, since it suited their strategic interests. Pakistan was forced to take a U-turn in its policies. Pakistan continues to be a reluctant partner in the global war against terrorism. Its attitude in countering terrorism continues to be ambiguous. The US employed Special Operations Force (SOF) in conjunction with Northern Alliance Forces in Afghanistan in successfully overthrowing the Taliban Government. North Atlantic Treaty Organisation (NATO) mandated by the United Nations Security Council, participated as a multinational military force under American leadership. Britain contributed a big contingent. Germany, Netherlands, Norway, Denmark, Poland and Portugal have contributed only token elements.

Internal Dynamics: Afghanistan

Afghanistan is a difficult country to govern. In the past, attempts to control large number of tribes and sub-tribes, who are fiercely independent, have failed. There is a need to adopt tribe friendly approach, isolate the bad Taliban, and highlight that presence of foreign donors and security forces is for the benefit of the local population. Dependence of the locals on poppy cultivation is also difficult to reverse, given that the area is dry, barren, and very cold during winter.

President Karzai of Afghanistan has the support of a majority of Afghan leaders constituting the Jirga. He is occasionally accused of taking help of tribal leaders and warlords with dubious reputation of being a part of drug and crime nexus. Some of the chiefs and warlords have been allowed to retain their militias along with their arms which militates against the objective of disarmament. Some warlords accused of serious crimes have been made police chiefs², thereby compounding the problems of enforcing law and order and ensuring good governance. President Karzai has a good understanding of the politics in Afghanistan and has succeeded in keeping the key leaders happy by providing them lucrative assignments.

Structural Reforms

The international community led by the USA has taken a long term view of Afghanistan's security dilemma. It was felt that in addition to combating militancy, efforts to develop democratic institutions and enhancing human competence and capacities would be required. The challenges to be met are gigantic. These include creation and training of a national army and police, disarming militias and warlords, countering narcotics, and bringing about judicial reforms to put an end to impunity for violent crimes. To bring about reforms a system of 'lead donors'³ has been adopted. The USA agreed to lead military reforms – creation of the Afghan National Army; Germany the police reforms; Japan the disarmament, demobilisation and reintegration of militias and Mujahideen troops; the United Kingdom agreed to focus on the task of judicial reforms. Varying degree of progress has been made in all the five fields.

Strategic Interests of Major Players in Afghanistan

The USA and NATO Forces. The presence of the USA and NATO Forces prevents Pakistan from installing Taliban regime in Afghanistan. To counter terrorism the USA justifies military presence in Afghanistan and maintains military and logistics bases in Pakistan and Central Asia, thereby addressing some of the other global security concerns.⁴ The USA is also keeping a watchful eye on nuclear and politically unstable Pakistan which has emerged as an epicentre of Islamic Jihadi terrorism. The USA military presence in Afghanistan and West Asia ensures strategic pressure on Iran and generates more options for dealing with that country. The USA has set up an air base in Kyrgyzstan and has secured logistics support from Tajikistan and transit rights in Kazakhstan for

conduct of operations against the Taliban in Afghanistan. As a by product, the USA keeps its flag flying in oil rich Central Asia, where China and Russia also want to have a more strategic influence. The NATO Forces moved into Afghanistan on peace enforcement mission under Chapter 7 of the UN Charter. However, it has turned into a mission to combat full blown insurgency and counter terrorism. Different NATO partners have their own national rules of engagement leading to difficulties in co-ordination and achievement of synergy, essential for success of operations. Glaring weaknesses of NATO troops in terms of lack of suitable arms and equipment to fight insurgency in mountainous terrain, lack of essential weapon systems such as armed helicopters, air support, and inadequate logistics support came to light. NATO troops continue to look over their shoulders for such support from the USA. The NATO is finding it difficult to muster additional troops required from member countries. Fatal casualties of troops are having adverse impact on NATO efforts. Weaknesses noticed in conduct of operations by the NATO Forces need to be addressed for promoting operational efficiency.

Role of Pakistan. Pakistan's policy towards Afghanistan has three essential parameters. First, to achieve 'strategic depth' for military operations against India. Second, Afghanistan should be militarily weak, and not be in a position to question the Durand line. Third, it should be unstable and not be able to raise the Pashtunistan issue. During the Taliban regime (1996-2001), Pakistan achieved its ambition of 'strategic depth' and attempted to extend it to include Islamic nations of Central Asia through Taliban. Islamic religious fundamentalism and terrorism were exported to Central Asian countries through terrorists trained and funded by Pakistan and Taliban. However, after 11 September 2001 terrorist attacks on the USA, Pakistan reluctantly reviewed its Afghan policy without completely abandoning its strategy. While cooperating with the USA to eliminate the al-Qaeda and Taliban elements, it tried its best to save its Afghan policy. Pakistan is in a happy position to harass the USA, the NATO and the Afghan Government through its support to Taliban. Pakistan has helped Taliban to recoup and regroup by providing sanctuaries in Pakistan, despite being a major non-NATO USA ally. Pakistan provides logistics and other support to the USA and NATO Forces deployed in Afghanistan. Presence of the USA in Afghanistan makes Pakistan strategically relevant and it stands to benefit both militarily and economically. It enables Pakistan to obtain latest military hardware which need not necessarily be for counter terrorist operations.

Role of Iran. Iran appears to be playing real politic. While in the year 2001, Iran was anti-Taliban and pro-Northern Alliance, consequent to the USA and European pressure on Iran to stop uranium enrichment, Iran has been supporting the Taliban. It is one of the reasons cited for resurgence of the Taliban in Afghanistan. It is difficult to fathom whether the Tajiks and Uzbeks in Afghanistan can be brought together into a Taliban dominated coalition. There is a view that Saudi mediation in Afghanistan was motivated to stall Iranian influence over the Taliban. The new USA Administration may be prepared to negotiate with Iranian authorities regarding operations in Afghanistan and Iraq.

Operations by NATO and USA Forces and Resurgence of Taliban

Operation Enduring Freedom was launched in Afghanistan in October 2001. Taliban made a tactical retreat from the urban areas to the country side or crossed over into the tribal agencies in Pakistan. The NATO Forces did not perform well initially.⁶ Reasons for poor performance are said to be limited strength on ground, lack of operational experience, covert support to Taliban by Pakistan, socio-political complexities of militancy, and lavish funds available to the Taliban through illegal narcotics trade.

In March 2003, the USA opened second front of the 'war on terror' in Iraq. In March 2002, the USA began to withdraw its Special Forces, surveillance satellites, and drones from Afghanistan to prepare for war in Iraq. Distracted by Baghdad, it did not notice the happenings in tribal agencies area in Pakistan. By March 2004, the extremists were well entrenched in South Waziristan. Within Afghanistan, the USA Coalition Forces and the Karzai Government in Kabul had to depend on the cooperation of the various Mujahideen factions that had emerged to play a role in the post Taliban space. The legitimisation of their role in Afghan politics went a long way in undermining the authority of Karzai Government.

Away from the international gaze, the Taliban got an opportunity to regroup and revive its tribal and Islamic networks across the Durand line. There have been reports of Taliban controlling several districts in the provinces of Helmand, Kandhar, Uruzgan and Zabul⁷. However, they have not succeeded in establishing "Islamic Emirate of Afghanistan" their stated goal. Yet, they have kept up pressure against the Coalition Forces in southern and eastern Afghanistan by regular guerrilla attacks. The Karzai Government controls only about 30 per cent of Afghanistan. Pakistan also regained its influence in Afghanistan politics by reverting to pre-11 September 2001 policy of supporting Taliban. There appears to be a strategic stalemate with prospects of tough struggle ahead.

Recent Developments Pertaining to Operations in Afghanistan

Effect of Global Economic Slowdown. Recent global financial crisis is likely to adversely effect operations in Afghanistan. The flow of aid to Pakistan from the USA is likely to be hampered. The USA is likely to loose its economic pre-eminence. Economic slow down has led to fall in demand for oil globally. There has been substantial fall in oil prices. Russia and Saudi Arabia may also loose their clout, as oil prices fall. The USA and NATO countries may not be able to spare sufficient funds for conduct of operations in Afghanistan. There is an imperative need to reassess the situation in Afghanistan in the light of financial crisis and uncertainties.

Use of Pakistan's Tribal Areas as Base. Militants from Taliban and al-Qaeda use Pakistan's tribal areas as base to attack Afghanistan. The cross border attacks present increasingly lethal challenge to the USA and NATO efforts to wind down the war and deny terrorists a sanctuary. The Inter Services Intelligence (ISI) of Pakistan pretends to be supporting the Americans in Afghanistan even as it continues to provide shelter and assistance to Taliban leaders including Mullah Omar on Pakistani soil. A draft report by an American intelligence agency concludes that Afghanistan is in a "downward spiral"⁸ and casts serious doubt on the ability of the Afghan

Government to check rise in the Taliban's influence. If support for the Taliban does not effectively end on Pakistani soil, the Americans facing continued attacks on their forces in Afghanistan will inevitably strike on Pakistan territory. As it is, deniable air strikes by Americans have been going on since the year 2002.

Pakistan's Double Faced Policy. The USA Government's antipathy towards Pakistan military follows a realisation in Washington that it was being cheated of billions of dollars by Pakistan Army.⁹ In one incident on 10 June 2008, Pakistan Frontier Corps personnel were reported to have fired at American troops chasing terrorists across the border into Pakistan, causing the US command to call for air support to bomb the Pakistani post, killing 11 Pakistani soldiers. As per reports, the US President secretly approved cross border operations in Afghanistan in July 2008. On 03 September 2008, USA troops launched an airborne assault inside Pakistan across Afghan border killing 15 persons. Pakistan cut off supplies to the USA and NATO troops in landlocked Afghanistan, but relented after Washington put the squeeze on Islamabad. There appears to be a sense of anger across Afghanistan at having been 'double crossed' by Pakistan. However, as per media reports, the USA and Pakistan have reached a tacit agreement on Predator air strikes on Pakistan territory, under which, "Islamabad allows them while continuing to complain about them and Washington never acknowledges them".¹¹ The deal coincided with a suspension of ground assaults into Pakistan by the US Special Forces.

Opium Production and Importance of Drug Money

Afghanistan produced 6,100 tons of opium during the year 2006, amounting to 87 per cent of the world production. Contraband revenue from heroin accounted for 70 per cent of Afghanistan's GDP. In 2007, production of opium in Afghanistan accounted for 92 per cent of the world produce. According to a UN official, 'it is clear that the rebels derive an income from drugs, which they use to pay their supporters and purchase weapons'. Financial benefits that drive poppy cultivation are \$ 600 billion¹² or so. The drug money gets laundered through financial markets and international banks. Another reason for high opium production was the inability of Kabul Government to exercise control over farmlands due to not having authority over farmers. Poppy cultivating farmers were under the thumb of drug warlords, who were sustained by heroin money provided by the international drug cartel.

The Coalition Forces led by the USA had a difficult task in Afghanistan and had to depend heavily on drug warlords in order to marginalise the Taliban and al-Qaeda combine, and maintain law and order in the hinterland. The compromise helped in successful conduct of Presidential elections in Afghanistan in October 2004.

Indian Assistance to Afghanistan¹³

India has strategic and economic interests in Afghanistan. India's objective in Afghanistan is to support a peaceful, stable, democratic, and prosperous country, which should never be allowed to become a haven for terrorists. India's aid programme in Afghanistan has been a historical tradition. Its contribution amounting to \$ 1.2 billion for reconstruction of war ravaged country has been recognised the world over. It has made New Delhi, one of the largest donors for Afghanistan. India's imprint is visible across the country. 400 buses and 200 minibuses gifted by India ply in major towns and cities.¹⁴ Afghanistan Airlines has restarted with three Indian Airbus aircraft. Five Indian medical teams provide medical cover to Afghans across the country. The Indira Gandhi hospital in Kabul which was destroyed by the Taliban has been commissioned.

India has constructed the road from Zaranj to Delaram in Afghanistan linking Garland Highway to the Iran border through the Milak Bridge. India has also helped Iran in building Chabahar port in its Sistan-Baluchistan province. A 200 km road connecting Chabahar with Afghanistan is also being constructed with India's help. It will provide Afghanistan a valuable alternative and shorter route, saving 1,000 km or so, to the seaport across. It is likely to facilitate their imports and exports to and from Central Asia in addition to other countries.

Indian engineers from the Power Grid Corporation have constructed a 220 KV transmission line to Kabul across rugged mountainous terrain, despite sporadic terrorist attacks, and extreme cold conditions. Indian telecommunication engineers have digitised and restored the telecommunication networks across eleven provinces in Afghanistan. Over 2,000 Afghan nationals have undergone training in India in diverse fields. The Indian assistance programme is internationally recognised as cost effective and people oriented.

THE WAY AHEAD

Winding Down Violence and Getting Pakistan to Deliver

There are two main challenges in Afghanistan. First is to root out Taliban and al-Qaeda from their foundation. Second is to rebuild a viable state with infrastructure necessary for its sustenance, functional institutions, and a credible authority that can run its writ in the entire country. The USA Coalition Forces ousted Taliban from power in 2001, but the war is far from over. Despite engagement of International Security Assistance Force (ISAF) of about 53,000 personnel from different countries including the USA, Canada, Australia, New Zealand and so on, remnants of Taliban and al-Qaeda still continue to pose a credible threat. There is evidence of resurgence of Taliban since 2006. The attack on the Indian Embassy in Kabul in July 2008 came within the context of spiraling violence. As per reports the attack was aided by Pakistan's ISI.¹⁵

The history of personalities thrown up recently by the political system in Pakistan does not inspire confidence in the Pakistani state being able to control militant activities. On 20 September 2008, a truck bomb explosion killed more than 50 and wounded more than 250 persons, in addition to causing extensive damage to five star Marriott Hotel in Islamabad. The Pakistan Army which really calls the shots, is ambivalent in its attitude towards the home grown Taliban. In the meantime the American soldiers are getting killed in Afghanistan and they blame it on lack of resolve, and even complicity on the part of Pakistan Army, in whom the USA has invested heavily. The USA is

likely to compel Pakistan to do more. If Pakistani politicians do not deliver, the USA inevitably would lean on the Pakistan Army to brush aside the political authority and do what is necessary to achieve its objectives. There is an imperative need to adopt measures to pressurise Pakistan to curb support to Taliban and wind down violence in Afghanistan.

Building Up Military Strength in Afghanistan

Additional US and NATO Troops for Afghanistan. The ISAF has 53,000 personnel from 43 different countries. Of these more than 20,000 are USA troops. All NATO partners contribute to ISAF. It is also backed by 29,000 Afghan National Army (ANA) and 30,000 Afghan policemen. The ANA is yet to be fully trained. With a certain degree of stability returning to Iraq, some troops are likely to be reduced there. The USA establishment is veering around to a general consensus on the need to increase forces in Afghanistan. In April 2008, the USA announced a decision to send a brigade of marines to Afghanistan. The USA has suggested that NATO should also send more troops for Afghanistan. France promised 700 additional troops. Two to three additional brigades along with more helicopters and logistics support are likely to be inducted.

Logistics Support. Afghanistan is a landlocked country. Logistics support to the USA and NATO Forces in Afghanistan is routed through Pakistan. Taliban have been concentrating on cutting supply lines through Pakistan. In the event of escalation of operations, this aspect will need special attention. In April 2008, during NATO Summit in Bucharest, Russia signed memoranda of understanding and agreed to allow transportation of non-lethal logistic support over its territory for NATO'S operations in Afghanistan. This is a positive step and alternate supply route should be available for success of operations.

Ground Assaults. In July 2008, the US President secretly approved and allowed American Special Forces to carry out ground assaults inside Pakistan, without prior approval of the Pakistan Government. The assaults aim at strengthening the US war against terror, particularly on the Afghan-Pakistan border.

Afghan National Army (ANA). In 2002, it was decided that the ANA would comprise 70,000 troops. Later it was announced that the strength of the ANA would be 50,000 by the year 2009. Currently, the ANA strength is 29,000 or so. According to the Afghan Ministry of Defence, an army of 1,50,000 to 2,00,000 all ranks would be needed to ensure proper security. Due to various reasons, initially, the ANA was beset with desertions and severe logistics problems. The education level is also low. Illiteracy rate is as high as 80 per cent. Only about 20 per cent of troops possess professional knowledge. Others are former militia fighters or young recruits. However, the pace of training and retention has since improved. While the force is a long way from managing Afghanistan's security threats on its own, the building of the ANA has helped convince warlords to cooperate with the Karzai Government.

Political Negotiations

It may be said that the world can afford to abandon Afghanistan only on its peril. Various Afghan factions, particularly the Taliban are waiting for the West to withdraw from the region. It would be prudent to realise that whether Mullah Omar and Osama bin Laden live or perish, their legacy will live on until sustained international efforts are made to address the problems faced by Afghanistan, which continues to bear the brunt of the last great battle of the Cold War era. The strategy in Afghanistan should be, "to restore Afghans the capacity to govern and secure the country for themselves" 16. The common aim of al-Qaeda and the Afghan and Pakistani Taliban is to establish an Islamic caliphate. Given the mind set of Taliban, negotiations with them at present are not an option. What needs to be done is to build up military strength in Afghanistan. While there is no military solution, there has to be military pressure, whether it is in the Helmand River Valley or in the Hindukush mountains. There have to be targeted strikes against the al-Qaeda and Taliban leaders and military commanders. Concurrently, there is a need to convey to the Afghan population at large, particularly the Pashtun belt, that there is a place for them in an Afghan political settlement. By success in military operations the security forces can create the requisite environment for political dialogue from a position of strength. Once that happens, the Taliban leaders would be willing to come to the negotiating table.

The starting point for reconciliation should be the acceptability of the Afghan constitution, basic principles of democracy and human rights. In any case election of some Taliban members to the Afghan Parliament in September 2005 through democratic political process is a positive development and should be encouraged. There have been suggestions that efforts should be made to win over the good Taliban. There is scope for involving regional players including Iran, Russia, Pakistan and India for the reconciliation process. Perhaps a consultative group could be created and proposal discussed with the new US Administration and processed further. The Democratic Party of the USA in its document titled, "Renewing America's Promise" 17 focuses on ending the war in Iraq, stabilising Afghanistan and combating violent extremism. As per media reports there have been negotiations between the Taliban and Hamid Karzai Regime mediated by the Saudi monarch and facilitated by former Pakistani Prime Minister Nawaz Sharif.18 It appears that in the near future, Afghanistan is likely to continue to live with the present situation. Prospects of achieving peace and stability in Afghanistan in the mid-term period would be brighter if the structural reforms and establishment of modern political, constitutional, legal and economic institutions in consonance with the Afghan environment can be achieved to some degree with the help of the international community. Afghanistan is approaching both the presidential and parliamentary elections. Democratic rights including human rights, rule of law and freedom of media are likely to become important election issues as the country moves towards the polling booth.

***Major General Y K Gera (Retd)** is an alumnus of the National Defence College, New Delhi. He has been editor of the USI Journal for more than a decade. He writes regularly on national security issues and defence matters.

Water as a Source of Conflict: Indian Context

Lieutenant Colonel Yogesh Nair*

Introduction

Everything originated in the water and everything is sustained by water” said Goethe and it holds true in absolute sense. Water by virtue of its multifarious uses is one of the fundamental gifts of nature. Its availability greatly influences the sustenance of life, prosperity, development potential and health status of humans. When world population was limited, its bountiful supplies seemed endlessly renewable. This however, is no longer possible since the exponential growth rates of human population, industries and farms have already reduced the availability of water to below its minimum per capita daily requirement of about 23 litres¹.

The magnitude of the problem lies in the fact that only three per cent of world’s water is fresh, of which, approximately 77.7 per cent is locked in polar icecaps and glaciers and is not available for human use. 22 per cent of freshwater is ground water². In the last 70 years, the global population has trebled, while the water consumption has increased six fold due to industrial development and growing irrigation requirements. Supplies have also grown manifold to keep pace with the demand through exploitation of surface and groundwater. The result is that ground water resources are over-exploited leading to ground water scarcity. Surface water resources are over-exploited in many basins and are fast depleting due to siltation. Fresh water supplies are increasingly coming under threat of population from industrial effluents and municipal wastes.

The problem of water and its related management is global. There is no such thing as managing water for a single purpose; all water management is multi-objective and based on navigating competing interests. Within a nation, these interests include domestic users, agriculturalists, hydropower generators, recreators and environmentalists; any two of which are regularly at odds and the chances of finding mutually acceptable solutions drop exponentially as more stakeholders are involved. Add international boundaries, and the chances decrease exponentially yet again. The scarcity of water in the countries leads to intense political pressures, often referred to as ‘water stresses’. As per water scholars, by 2050 it is likely that two-third of the world population would be living in areas facing water stress conditions³.

Many Asian countries are beginning to experience moderate to severe water shortages brought on by the simultaneous effects of agricultural growth, industrialisation and urbanisation. Several countries in the region, including Indonesia and Papua New Guinea, have experienced droughts of such severity that they have caused food shortages and have threatened the long-term food supply. Further, climate change and environmental degradation in the form of shrinking forests and swamps may produce even more erratic weather and result in similar crises. Another concern in the region is growing competition over shared water resources.

In the entire gambit of water shortage, the Indian Sub Continent is becoming the focal point. Estimate of the future population indicates that this region is expected to add 570 million in India, 200 million in Pakistan, and 130 million in Bangladesh over the next 50 years, hence water stress and water scarcity are and will be confronted by countries of this Sub Continent⁴. Due to its location, size and contiguous borders with other countries of the region, it is India, in its capacity as both upper and lower riparian state which is facing depletion of water resources. In fact, India is identified as a country where water scarcity is expected to grow in the coming decades. The dawn of 21st century projects gloomy picture for future generations of India because of increasing water scarcity, which may lead to water crisis.

India’s Water Crisis

India, which relished its past fame as water prosperous country, today is moving towards becoming a water stressed nation due to rapid population upsurge and unequal distribution. The stress on water resources is also the result of a multitude of factors such as climate change and changing lifestyles that have increased the need for freshwater and intense competition among agriculture, industry and the domestic sector that is pushing the groundwater table deeper. India’s water problem and disputes are galore. Be it with the neighboring countries; inter state dispute or localised issues, India is neck deep battling the menace. India’s water crisis can be broadly classified into three categories namely domestic, sub national & national level.

At Domestic Level. The main issue confronting India is non availability of clean drinking water, lack of adequate sanitation, water borne diseases and disastrous effects of flash floods. This is a severe security issue of human sufferings as large number of people die each year from water related diseases, inadequate sanitation and flash floods. There is ample evidence from the past that the issues like lack of clean fresh water and settlement of displaced people due to water projects have led to occasionally intense political instability including small scale acute violence .

At Sub- National Level. Since Independence numerous inter-state river-water disputes have erupted. India’s inter-state water dispute is so spread out that there is hardly any state which is not affected directly or indirectly by water dispute. Moving down North to South, Jammu and Kashmir, Haryana, Punjab and Rajasthan are at crossroad over sharing of the Ravi-Beas water; water problem exists between Delhi, Haryana and Uttar Pradesh over sharing of Yamuna River; Gujarat and Madhya Pradesh have water dispute over water sharing of Narmada water. The Krishna-Godavari water dispute among Maharashtra, Karnataka, Andhra Pradesh (AP), Madhya Pradesh (MP) and Orissa over utilisation of untapped surplus water resurfaces every monsoon. The Cauvery dispute between Karnataka, Tamil Nadu and Kerala relates to the re-sharing of waters that are already being fully

utilised. And lastly the proposed interlinking of rivers in future if executed will further bring few more states into the ambit of water dispute. As water woes are increasing even the settled/ partially settled disputes will resurface as and when states find it difficult to meet their water requirements within the resources initially allotted. Since rivers cross state boundaries, disputes are inevitable. The Inter-State Water Disputes Act of 1956 was legislated to deal with conflicts, and included provisions for the establishment of tribunals to adjudicate where direct negotiations have failed. However, states have sometimes refused to accept the decisions of tribunals, thereby nullifying the arbitration. Significantly, the courts have also been ignored on occasion. Finally, the centre has sometimes intervened directly as well, but in the most intractable cases, such as the sharing of the Ravi-Beas waters among Haryana, Jammu and Kashmir, Rajasthan and Punjab, central intervention, too, has been unsuccessful. While these flash points can and do occur at the sub-national level, the most common security issue is both subtle and more pervasive. As water quality and/ or quantity degrade over time within the local setting, the effect on the stability of a region can be unsettling.

At National Level. Conflict over freshwater has strained India's relation with almost all its neighbours. India - Pakistan dispute over sharing of Indus water was resolved after World Bank brokered a deal between India and Pakistan in the form of Indus Water Treaty, 1960. But, despite a well spelt out treaty, Pakistan has always objected to the river projects undertaken by India, and always eyes with suspicion the outcome of the same. The bone of contention between India and Bangladesh is the Farakka Barrage and the diversion of Ganges water upstream of Farakka in order to maintain Bhagirathi navigable. This has in turn, adversely affected environment, agriculture, industries, fisheries etc directly or indirectly for the people of Bangladesh. Ironically, many of those displaced in Bangladesh have found refuge in India. With Nepal the issues of 'Water inundation' and embankments for flood control along Indo-Nepal border have become irritants in the relation between the two countries. The recent Kosy floods are a pointer in this direction. It would not be too much out of context if Sethusamudram project is considered as one of the water dispute as it has all the potential to become a future flash point between India and Sri Lanka.

If water geopolitics were to spur interstate tensions through reduced water flows to neighboring states, then this will be a new era of water conflicts. No country could influence that direction more than China, which controls the Tibetan plateau — the source of most major rivers of Asia⁵. Its river waters are a lifeline to the world's two most-populous countries - China and India - as well as to other neighbouring nations. China, in its blockage diplomacy is planning to divert the flow of River Brahmaputra, towards China's Northeast. This South-to-North Water Diversion Project of China is billed by some of the experts as the largest hydrological alteration attempts in the world. This indicates China's greater design to use water as a strategic weapon. The net consequence on India will be a man made disaster and in the process starve 100 million people in India. If 50 per cent of the river water which flows through the centre of India's Northeastern state of Assam is taken out, the river will become a seasonal ditch. The impact on India and Bangladesh will be tremendous. Assam and part of Bangladesh would lose the capability to grow food. One hundred million people in India and Bangladesh will almost lose their livelihood. This will result in massive migration towards the rest of India. A wave of 100 million homeless people moving towards India would overwhelm it. India would surely move to prevent this from happening, and a military confrontation would begin. And this confrontation could be far bigger than the present Sino-Indian territorial dispute.

Water and Conflict

Water scarcity is a major source of concern across the world. Examples are plenty, from China to Bolivia to Thailand and India where diversion of rivers, privation and pricing has resulted in conflicts⁶. Many water scholars now speculate that the greatest scarcity in the 21st century will be of water - not of oil or fossil fuels. The dramatic rise in the demand for water across the world and the related water disputes is a serious reminder that water crisis is becoming a highly emotive issue.

For water, state and national boundaries are not an issue instead, it ignores them and even evades institutional classification and eludes legal generalisation. Hence the sovereignty of trans-boundary water is a serious issue. Secondly, water problem has become a cause of common concern to most of the countries. Piecemeal development activities like rapid rise in roads, settlement, deforestation etc and unsustainable land use practices beside the factor of climate change have greatly impacted the biodiversity of the nations, leading to internal water crisis within the countries. The water issue further gets complicated due to the alarming lack of long-term policies towards quality, quantity and management problems and understanding between and within the countries. Thus, water problems and disputes have become an issue both at sub national and national level. In the future, diminishing fresh water and dispute over water resources could lead to internal instability in many nations, and possibly even spark interstate and international conflicts. An increasingly prevalent viewpoint about water and security is best summed up by Ismail Serageldin, vice president of World Bank: "The Wars of the next century will be about water".

India and Water Conflict: Analysis

Cauvery experience has shown that there is no easy solution to sharing river waters - even when the two warring states were both riparian. Since there is no agreement on the transfer of river water from a surplus region to a deficit one, conflicts could increase thousandfold. Further, a central law to dictate water sharing between all the states from the network has the potential to precipitate new problems. This is because there is no guarantee for change in the very political climate that causes interstate disputes in the first place, despite the present river sharing agreements and authorities. Furthermore, if control is transferred to the centre then decisions might be taken under political pressure. This could also mean trouble for communities living on the banks of rivers, who could lose their rights they traditionally had over the river. There is also fear that with privatisation of water being discussed aggressively, rights over the river may shift from the hands of communities to multinational

companies. Yet another fear is that the only beneficiaries of this project could be contractors and consultants and not the water starved people of India.

Peaceful sharing of river waters becomes complex many times. conflicts in many cases become an obvious phenomena. Although fairly explicit constitutional provisions govern inter-state river waters, it is unclear whether existing mechanisms, for adjudicating interstate water disputes, are efficient. Indeed, there is a growing consensus that existing institutions have increasingly failed to generate the required outcome.

It is important to comprehend in conceptual terms the extent to which the prevalent water sharing between states and among India and its neighbours is peaceful and whether the water scarcity and population rise in India intensifies the chances for water conflicts. The compounding pressures of water and agricultural scarcity may create further tensions within the country and could lead to dangerous disputes over resources. This could manifest itself in a number of different ways, such as, directly in the form of violent conflicts over fresh water resources, or indirectly, by causing large scale migration and food shortages.

It is not only sharing of water resources which can cause social upheaval in the Country, the climatic or environmental degradation will cause another problem – that of dislocation of coastal populace to the hinterland thereby straining extant resources. While environmental degradation may cause problem of plenty due to melting of glaciers etc – in the long run it will be catastrophic.

With expert warning about India's population growth outstripping the availability of water in another 40 years leading to a major crisis ; water conflict seems to be imminent unless some drastic measures and policy decisions are taken, including harnessing of every available river and stream to its full potential.

Effects on Conduct of Military Operations

Geographic disposition of China vis-a-vis India, India with regard to Pakistan and likewise some other countries provide these states control of crucial water sources ; a potential weapon in their hand to make the adversary relent and exert pressures. Hence, conduct of military operation in such a scenario becomes water centric with both sides leveraging their operations around control of water sources. With changing concept of warfare where economies of the country are targeted to cripple the enemy rather than destruction of military might; the weapon of water control is an effective tool with riparian countries to create mayhem and achieve desired result.

While the principles of conduct of warfare may not change, military operations in a scenario of water crisis will require special consideration in terms of attainment of strategic objective(s). Some of the aspects relate to the following:-

- (a)** Operations will be launched primarily to capture water sources or Headworks controlling the flow of water. It may be to release water pressures/ stresses on own side exerted by the adversary by blocking/ shutting down of source(s) of water.
- (b)** Overcoming denial tactics of the enemy such as massive flooding of areas to block own advance. Targeting of scarce portable water sources, storage container, pipelines including strategic bombing of water infrastructure with an aim to create impact on the civilian population besides increasing the administrative hassles of the armed forces. Hence security of water infrastructure, from conventional as well as terrorist strike, also becomes a parameter of paramount importance.
- (c)** Raising/ training Commando battalions fully equipped to carry out swift and surgical operations to capture Headworks and Water Control Points as also raising of Airborne Brigades/Divisions for sustenance of operations assumes importance.
- (d)** Raising Engineer brigades fully equipped to overcome flooding schemes of the enemy and to be able to handle the stupendous upheaval likely to be created by enemy action.
- (e)** Focus on filtration and purification of brackish/ contaminated water, storage containers; water discipline and management of water for sustenance of men, animal and machine will have to be factored during planning of such operation.

Besides the aspects highlighted above there are many issues affecting conduct of military operations in a water stress environment which need to be analysed and planned in detail by military planners and strategists. A thought of water crisis scenario controlled by a hostile state may alarm the policy makers but existence of such a threat and adversaries needs to be realised soon and steps taken to overcome such eventualities including an all out war.

Conclusion

The specific impact of fresh water problems on intra-state security is far more complex and less easily discerned. Water insecurity hampers economic development and contributes to a host of corrosive social behaviours that can result in violence within societies. Fresh water scarcity, often causally related with other factors, such as poverty, population growth, infrastructure problems, environmental degradation, can escalate "human security" problems into a national security issue. Water crisis can be a catalyst for large-scale migration and ethnic conflicts, which may result in decline of effective governance. Water security issues can have a destabilising effect on regional and international security as well. Spawned by globalisation, the increasing economic and political interdependence of nations ultimately means greater potential for spillover of problems. Water is increasingly viewed as a strategic resource, one that is to be protected and valued. Consequently, when one or more countries share water resources, the potential for disputes or conflicts is always present. Although no nation has yet gone to war over water, this potential scenario could unfold given the right conditions. It is therefore very important that India find an appropriate solution to deal with this menace well in time before it takes a shape of an irresolvable conflict.

***Lieutenant Colonel Yogesh Nair** of 116 Engineer Regiment is an alumunus of Defence Services Staff College, Wellington. He is also a Post Graduate in Water Resource Engineering.

Journal of the United Service Institution of India, Vol. CXXXVIII, No. 574, October-December 2008.

Battle of Longewala

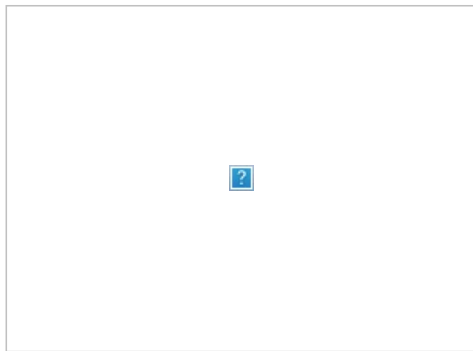
Major General Kuldip Singh Bajwa (Retd)*

In the first week of December 1971 a most remarkable battle took place around Longewala in the erstwhile Indian princely state of Jaisalmer in the Rajasthan desert. On the night of 4/5 December a large Pakistani armour-infantry force rather recklessly without air cover advanced across the international border (IB) to capture Ramgarh and neutralise the airfield at Jaisalmer. On the way, 18 km from the IB was the Border Security Force Post of Longewala now held by A Company of 23 Punjab. A platoon strength patrol from this company had shadowed the Pakistani force as it crossed the IB. Despite the knowledge of the large enemy force, the small isolated force at Longewala held firm to provide the anvil for a flight of Indian Air Force (IAF) Hunters from Jaisalmer airfield to inflict crushing losses on the enemy and frustrate its boldly conceived design.

Brigadier (Retd) ZA Khan, Pakistan Army, who commanded one of the cavalry regiments in this operation, in his recently published book 'Indo-Pak Wars 1965 & 71' has given a very forthright and graphic account of Pakistan's Longewala operation. This article recapitulates the Battle of Longewala in the light of the account given by Brigadier Khan in his book.

Situation in the Run Up to the Operation

On the eve of the December 1971 War, Indian 12 Infantry Division in area north of Jaisalmer (India) was facing Pakistan's 18 Infantry Division in area Rahimyar Khan (Pakistan). There was a general belief on both sides that major operations were not feasible in the Rajasthan and Sindh deserts. Nevertheless, in the event of hostilities breaking out, the Indian division had planned to launch bulk of its force from area Sadhewala-Tanot-Kishangarh to capture Rahimyar Khan, and disrupt rail-road link from Lahore to Karachi. Please refer to the map of the area of operations.



Pakistan's intelligence had come to know of the Indian intention to capture Rahimyar Khan. It was also averred that since Indian commanders still believed that large scale military operations were not feasible in the Rajasthan desert, no significant opposition was expected. It was also concluded that since the Jaisalmer air base had not been war activated hardly any hostile air action would be encountered. Based on these assumptions and conclusions, and to pre-empt the Indian attack on Rahimyar Khan, a bold and swift armour-infantry thrust was conceived astride the Reti-Longewala-Ramgarh-Jaisalmer axis to capture Ramgarh and neutralise the air field at Jaisalmer. It was believed that Longewala held by a BSF company could be either bypassed or easily secured to protect the left flank of their advance.

Troops earmarked for this operation were 22 Cavalry (T-59); 38 Cavalry (Shermans) 51 Infantry Brigade (two infantry battalions; the third battalion of East Bengal Regiment, was placed in a defensive box within Pakistan territory and effectively neutralised with mines placed around it); 206 Infantry Brigade, which shed a battalion to cover routes to Rahimyar Khan; one field regiment (25 pr), a mortar battery (120 mm) and later a medium battery (130 mm), deployed near the IB. Air support was assured by Pakistan Air Force (PAF).

Pakistan's Operational Plan

The concept of Pakistan Army's plan was indeed very bold. The original plan was for 38 Cavalry, with a battalion from 206 Bde to capture Ramgarh, and 22 Cavalry less one squadron with a battalion from 51 Bde to neutralise Jaisalmer air field. Later, fearing a tank battle at Ramgarh, for which 22 Cavalry with its better tank state was more suited the roles were reversed; 51 Bde with 22 Cavalry to Ramgarh and 38 Cavalry Group to Jaisalmer. 206 Bde would follow the advance and capture Longewala with one battalion and establish a firm base there. Two of the essential parameters of the plan were to make the approach march to the IB from the concentration area south of Reti at night and the next night advance to the assigned objectives. The next whole day PAF would provide air cover, which was assured by the PAF C-in-C.

The Assistant Chief of Pakistan Air Force (Operations) had advised that to support this operation PAF would require some days advance notice to activate the Jacobabad air strip. Since the Army had decided on 2 December to launch this thrust on night 4/5 December, the PAF Liaison Officer attending the Division Commander's orders had announced that since PAF had not been given time to activate the Jacobabad air strip it would not be able to provide any air cover. When Lieutenant General Gul Hassan, Chief of the General Staff Pakistan Army, was

approached he ruled that since hardly any air action was expected from the IAF, and that the planned operation was in national interest, it should go ahead without PAF air cover.

There were other major flaws and infirmities in Pakistan Army's operational plan. Foremost was the absence of a logistic cover to support the tactical operation. There was no suitable transport for troop lifting and supporting this operation in the desert terrain. A few civilian goods carriers and tractor-trolleys were hired, but they got stuck in the sand. Arrangements for repair and recovery were also inadequate. Many tanks of 38 Cavalry that needed engine replacement enroute had to be abandoned. To make up for inadequate logistics support most of the tanks carried an additional fuel drum strapped on behind the turret, which later proved fatal when attacked by IAF.

There were frequent changes in operational plans. Roles and objectives of cavalry regiments and infantry brigades were often changed in the middle of the battle. Issue of contradictory orders led to utter confusion, mixing up of units and formations and loss of control. Brigadier Khan also highlights lack of motivation of commanders and troops, desertions, and failure to even approach and tackle the assigned tasks with any measure of determination. Throughout the operation Brigadier Tariq Mir, Commander 51 Infantry Brigade, was completely unwilling to implement the operational tasks assigned to his formation.

Indian Plans

Prior to 3 December, 12 Infantry Division had started concentrating in the launch area for its operation to capture Rahimyar Khan. A senior air force officer claims that practically no air effort was included in the planning of this operation. Longewala was a BSF post. In the build up for the ensuing operations in 1971, it was vacated by the BSF and occupied by A Company, 23 Punjab (about 120 soldiers) led by Major (later Brigadier) Kuldeep Singh Chandpuri. Rest of 23 Punjab had moved to Sadhewala to eliminate a Pakistani border outpost, preliminary to the attack to capture Rahimyar Khan. Defences at Longewala were not well developed. No mines had been laid and no barbed wire was erected. A single strand wire was strung around the perimeter by the BSF to keep their camels from straying. This wire later fooled the attackers into believing that a minefield existed around the post.

Besides its integral small arms, A Company, 23 Punjab, had two medium machine guns, two 81 mm mortars; and for anti-tank defence, four shoulder-fired rocket launchers. Two jeep-borne 106 mm recoilless (RCL) guns from the battalion arrived at 0230 hours on 5 December. Three AMX light tanks (no match for T-59 or Shermans in a tank fight) came up at about 0800 hrs on 5 December, much after the first face off with the enemy.

A training flight of four Hunter fighters had been moved from Jamnagar to Jaisalmer and formed into an adhoc squadron. Wing Commander (later Air Marshal) MS Bawa became the base commander. The primary role of this adhoc arrangement was air defence. Any firm allotment for offensive air support was neither envisaged nor made. However, the location of this flight at Jaisalmer was not known to Pakistan's planners, who were so sure of the absence of Indian air opposition that they had decided to undertake this operation without air support including ground air defence of their own. Nevertheless Pakistan had launched a formidable force. While on the ground the balance of force definitely lay in their favour, the absence of air cover proved fatal in the featureless desert.

Indian Patrol at the IB

Pakistan started the war on the evening of 3 December, 1971. On 4 December, soon after dark, a platoon strength patrol sent by A Company from Longewala to the IB, detected that a very large force of tanks and infantry had crossed the border and were headed south. The patrol leader surmised that this force would soon come up against Longewala. He shadowed the enemy and kept passing the southward progress of this force to his Company Commander Major Chandpuri. While Chandpuri had realised the formidable odds stacked against his small isolated force, he displayed true and sustained courage and determination to hold Longewala, and which he did.

Pakistan's Progress of Operations

The approach march to the IB was ordered to commence in the afternoon of 3 December and continue to Ramgarh-Jaisalmer on night 3 / 4 December, an impossible march of 200 kms in the desert. By the early hours of 4 December both the armoured regiments had reached only 30 kms from the IB. The operation so far was a movement fiasco. Besides tanks of both the regiments getting stuck in the sand on the way, none of the infantry battalions could be lifted in transport and were marching.

GOC 18 Infantry Division ordered troops to disperse in this area and commence further advance after last light on 4 December. On a representation from Commander 206 Infantry Brigade, that the tanks of 38 Cavalry were mechanically unsound the Divisional Commander gave the task to neutralise Jaisalmer airfield to 28 Baluch (Recce and Support Battalion of 18 Division less company, with two additional companies from 206 Infantry Brigade, and a mortar battery.) Later at the suggestion of Commander 51 Infantry Brigade the mission to Jaisalmer was abandoned.

Indian Reaction

Information of enemy's ingress was passed through HQ 12 Infantry Division to the Air Force at Jaisalmer. Though there was no specific allotment of offensive (ground) air support, Bawa in laudable anticipation, armed his Hunters for this role and awaited the dawn of 5 December. At first light an unarmed aircraft of the artillery air observation post, manned by Major Atma Singh and Captain Sangha, came up and directed the Hunters, which

came over at about 0730 hrs.

Pakistan's Progress of Operations

Soon after last light 4 December, 22 Cavalry with 38 Baluch mounted on its tanks crossed the IB. It was to bypass Longewala and proceed to Ramgarh. Rest of 51 Infantry Brigade followed. After crossing the IB, Brigadier Tariq Mir had emphatically declared that he had no intention of proceeding beyond Longewala.

38 Cavalry with 1 Punjab from 206 Infantry Brigade was placed under command 51 Infantry Brigade till it reached Longewala. It was tasked to capture Longewala, if there was an opportunity, failing which it would wait for the rest of 206 Infantry Brigade to fetch up and complete this task. After crossing the IB men of Recce Troop of 38 Cavalry sent ahead of the regiment hid their jeeps behind sand dunes and vanished. Bulk of the tanks of this regiment either broke down or got stuck in the sand. Only two tanks reached short of the metalled road from Longewala to Ramgarh. Around midnight GOC 18 Infantry Division visited the forward troops and ordered 22 Cavalry and 38 Baluch to capture Longewala.

By about 0400 hrs 5 December 22 Cavalry and 38 Baluch had practically surrounded Longewala post, and were prepared to launch their attack. There was a considerable exchange of fire with the defenders and one of the tanks was hit by a RCL gun. B Squadron 22 Cavalry and B Company 38 Baluch mounted on the tanks closed up to the defences but the infantry were reluctant to assault the defences; as a result nearly three hours before daybreak were wasted in this procrastination. While the fire fight was continuing, at about 0730 hrs a flight of Indian Hunters came over and started rocketing and strafing the tanks and infantry which had formed up for the attack. Five tanks were destroyed, four men were killed and four wounded. Both tanks and the infantry dispersed.

After the Hunters departed, tanks and troops of 22 Cavalry and 38 Baluch again started forming up to attack the post. A second air strike knocked out six more tanks and inflicted more casualties on the infantry. An impression that the post was surrounded by mines and the sustained accurate fire from the post added to the attacker's reluctance to launch the actual assault.

At about 0900 hrs one squadron of 22 Cavalry and two companies of 38 Baluch had again formed up to attack but Brigadier Mir came over and called it off. He ordered the troops to disperse. Around midday 22 Cavalry and 38 Baluch withdrew some distance to where the rest of 51 Infantry Brigade was deployed. The avenging Hunters kept coming back in waves, and enemy casualties started mounting. The tanks started taking evasive action by driving around in circles to throw up dust to escape from the relentless Hunters. The last air attack came an hour before sun set. During the day 22 Cavalry had lost 17 tanks, 10 men were killed and 17 wounded.

Indian Reaction

Despite being surrounded by a vastly superior Pakistani force of tanks and infantry Chandpuri and his men had resolutely defended their post with sustained and accurate fire, which had deterred the enemy from launching the actual assault. The defenders' stout action had forced the enemy to concentrate for the attack that presented the targets for attack by the IAF Hunters.

Pakistan's Operation

By midday of 5 December extensive damage inflicted by the totally dominant IAF Hunters coupled with poor progress in the movement forward, extensive breakdowns of tanks of 38 Cavalry, logistic failures, and reluctance of Brigadier Mir to implement operational plans had made it increasingly evident to GOC 18 Infantry Division that the ambitious plans of securing Ramgarh-Jaisalmer were out of his formation's reach. He chose to limit his operational plans to the capture of Longewala. He sent orders by helicopter to Brigadier Mir to capture Longewala post, and Ghotaru 10 km from Longewala. Brigadier Mir declared since an Indian infantry brigade had linked up with Longewala, the position had become too strong for 51 Infantry Brigade to capture. The GOC then gave the task to 206 Infantry Brigade.

Commander 206 Infantry Brigade ordered 28 Baluch to advance along road Longewala-Jaisalmer and secure Ghotaru. This battalion just disappeared and surfaced only after the ceasefire. In the meantime 1 and 10 Punjab had arrived and a detailed plan for the attack on Longewala was prepared. 0300 hours, 6 December was chosen as the H Hour. 51 Infantry Brigade was requested to mark the FUP, provide guides and detail one squadron from 22 Cavalry to give fire support. Brigadier Mir refused to provide any assistance and ordered his Brigade to start withdrawing at 1900 hrs to the north of the IB. Since both Brigades were moving in opposite directions, there was considerable confusion. While sporadic fire was exchanged, 206 Infantry Brigade failed to launch its planned attack.

During the night 22 Cavalry had withdrawn north of the IB. 51 Infantry Brigade was between Longewala and the IB. On 6 December the air attacks by the IAF Hunters continued and Pakistan's casualties mounted. Around midday GOC came over and ordered 206 Infantry Brigade to move forward to Longewala-Jaisalmer road and 51 Infantry Brigade to occupy defences behind it. By the afternoon of 6 December, GOC 18 Infantry Division had realised that there was a complete loss of control over the conduct of battle by his HQ. There was utter confusion, and no cohesive and objectively oriented operations were feasible. Consequently, he ordered a general withdrawal across the IB. It was pointed out to him that this would cause utter chaos and many of the troops would disappear. He was persuaded to order a planned withdrawal by 206 and 51 Infantry Brigades stepping back, one at a time, through each other.

Between 7 and 11 December, Pakistan's rather disorderly withdrawal across the IB had slowly continued. During the day Indian Hunters kept up their attacks though the intensity gradually declined. On 11 December, Major General Mustafa, GOC 18 Infantry Division was replaced by Major General Abdul Hamid. To speed up the rearward movement the new GOC had ordered a general withdrawal and the troops moved back in a mad rush. Brigadier Khan compares this withdrawal to the 'Gazala Gallop' of the Second World War and calls it the 'Gabar Gallop'. Some of the men were rounded up from the Punjab Regimental Centre at Mardan. Pakistan Army's foolhardy venture into the Jaisalmer sector had ended up in a crushing defeat and serious losses of men, tanks, and other war materials.

Assessment

Pakistan's losses as counted in the Indian territory were 37 tanks, 200 assorted vehicles, much other equipment, and over a hundred dead. Losses suffered by the Pakistani force in their own territory could not be ascertained. Brigadier Khan in his book has not given an estimate of losses. Undoubtedly these were considerable.

Pakistan Army's operational plan to capture Ramgarh - Jaisalmer with a tank-infantry blitzkrieg was bold and brilliant in its tactical concept but was over ambitious. It was very poorly planned and executed. It was utterly foolhardy to launch an operation in the desert without air cover. A failsafe logistic back up so vital in a desert operation was missing. Commanders and troops were not adequately motivated and failed to deliver. The overall concept of battle and its control as it developed was very poor. While 18 Infantry Division totally failed to achieve its operational objectives and suffered heavy losses in men, tanks, equipment, and war materials, there is some relevance in its claim that its Longewala operation forestalled plans of Indian 12 Infantry Division to advance to Rahimyar Khan.

Viewed from Indian operational dynamics, Longewala was a closely integrated air-ground operation, which could not have achieved such spectacular results without the participation of troops on the ground and the flyers in the air. It is fully evident that Chandpuri and his men of A Company, 23 Punjab, very stoutly and courageously defended the completely isolated Longewala post against an overwhelmingly superior force of Pakistani tanks and infantry, which forced the enemy to concentrate to attack the post and thereby created the targets for the Hunters to attack. In fact, this was an excellent example of cooperation between troops on the ground and the Air Force. Undoubtedly, the Indian Army and the Indian Air Force combined together effectively to win the Battle of Longewala.

***Major General Kuldip Singh Bajwa (Retd)** was commissioned into the Corps of Engineers (Bengal Sappers) on 22 Dec 1946. He served in 3 Jat and Artillery also. He retired as Chief of Staff 11 Corps on 31 October 1979.

Journal of the United Service Institution of India, Vol. CXXXVIII, No. 574, October-December 2008.

Izzat : Historical Records and Iconography of Indian Cavalry Regiments 1750-2007

Squadron Leader Rana TS Chhina (Retd)*

The 17th of December 2008 marked the culmination of a long period of sustained research activity and intensive support of an important research project that had been undertaken under the aegis of the Maharana Pratap Chair of the United Service Institution Centre for Armed Forces Historical Research (USI CAFHR). The subject of research was the iconography of Indian cavalry regiments in the armies of India from circa 1750 to present times, including Pakistan. Such a catalogue of insignia and accoutrements covering so wide a time-span and so many regiments has never before been attempted anywhere in the world. Furthermore, since the evolution of regimental iconography is incomplete without its historical context, the lineage, battle honours, ethnic composition, highest awards won, as well as the highlights from the respective regimental histories were included in the study and are published in this magnum opus compiled by Captain Ashok Nath (Retd), MA, FRGS. The handsomely produced book, which has been printed to international standards and published by the CAFHR, was released by a senior and distinguished cavalry officer, General VN Sharma, PVSM, AVSM, who retired as the Chief of the Army Staff in 1990.

Captain Ashok Nath was educated at St Stephen's College, Delhi and at the University of Stockholm in Sweden where he studied anthropology and history. He served as an officer in the Indian Army (73 Armoured Regiment) and left India for Europe in 1978. Elected fellow of the Royal Geographical Society for his study of the habitat of the snow leopard in Zaskar, he has travelled extensively in the regions of high Asia, and has been an organiser and a guest lecturer for the Military Historical Society study tours to India, Pakistan, Nepal and Burma. He is currently working on regimental identities, ethnicity, caste and 'martial race' in the Indian and Pakistan armies at the University of Stockholm. This is his first book, with others to follow on the iconography and history of the Indian Army's infantry, arms and services. Conflict history, habitat and ethnography of South Asia remain a major interest and his writings have appeared in various international journals and newspapers.

All professional armies look upon the regimental badge as an icon, worthy of respect and honour (Izzat) - a time-honoured word, understood by all ranks of the Indian Army and therefore also an appropriate title for this book.

There had long been a need for such a work especially since the Indian Army with its rich history lacked a study of its regimental badges. Although a detailed listing of all the regiments that have existed in the armies of India has been earlier compiled by Chris Kempton, a comprehensive catalogue of regimental iconography was till now absent from Indian Army historiography. In the case of the cavalry, over 300 different Indian cavalry units have been identified, several of them previously unknown. Some survive to the present times, but many have faded away. Thus, to cover a period of nearly three centuries was a formidable challenge, which the author has met with aplomb and produced a seminal work which will serve as a point of reference for historians for all times to come.

While the author had been collecting material and data on the subject for many years previously, the seeds of the project were sown following the visit to Sweden by Lieutenant General Satish Nambiar, PVSM, AVSM, Vrc, (Retd), Director of the USI. He is also an adviser to the Folke Bernadotte Academy in Sweden and it was on one of his visits there that he suggested that the author consolidate his findings into a book. Subsequently a fellowship given to the author by the USI made it possible for him to bring this work to fruition.

The book launch ceremony was well attended by senior USI members, officers of the cavalry fraternity and military history enthusiasts. It commenced with a welcome address by General Nambiar, in which he gave a brief background to the establishment of the CAFHR and its gradual evolution over the years. The Chairman of the Board of Management of the CAFHR, Lieutenant General VK Singh, PVSM (Retd) then took the proceedings forward. The chief guest, General VN Sharma, needed no introduction to the audience. The author was then introduced, and he gave an overview of the project and how it had progressed over the years.

Principal amongst those that he sought to thank for their moral and material contribution to the successful completion of the work were: the late John Gaylor an authority on British Army badges as well as the late Len Thomas, one time head boy of the Lawrence Military School, Lovedale. He gave particular thanks to Field Marshal Sir John Chapple GCB, CBE, DL, former Chief of Staff of the British Army - educated at Cambridge before joining the 2nd K.E.O. Gurkha Rifles. The Field Marshal generously allowed access to his splendid collection and private records. Many badges from his Indian Army collection appear in this book. The late Colonel Pyara Lal, AVSM and late Major General Samir Sinha, PVSM both former Directors of the USI were also thanked for their constant encouragement. The author noted that they would have been pleased that the work was being completed under a fellowship being provided by the USI CAFHR.

The support of the Major General Palit Military History Studies Trust was duly acknowledged, as were the staff at various museums and archives in the UK and India.

The compilation also includes a section on Pakistan Army Regiments. The author saw it fit to include a clarification as to why he deemed it fit to do so. His rationale was that the present Pakistan Army descends from those regiments that had been part of the Old Indian Army when partition took place. On the personal side, he was only met with kindness and hospitality for which he thanked the Rimcollian network of Pakistan.

The support provided by the USI CAFHR was duly acknowledged, as were a host of others whose names are duly

incorporated in the preface to the present volume.

The book was then released by the chief guest. In his remarks, General Sharma highlighted the requirement for such works to be undertaken and their importance to the professional soldier. He complimented the author for his painstaking research, and also placed on record his appreciation of the steps taken by the USI and the Service Headquarters in establishing the CAFHR for the purpose of encouraging the study of military history.

The function closed with a vote of thanks by the Secretary CAFHR. Noting the large number of members, particularly cavalry officers who had showed up to attend the function, the Secretary recalled the timeless anecdote about the young cavalry subaltern: A senior officer in days of yore asked him in a promotion exam, as to what, in his opinion, was the role of cavalry in a modern war? The classic reply was that he supposed it was “.... to lend Tone (or a touch of class) to what would otherwise be a mere vulgar brawl..”

The ceremony was followed by tea and refreshments being served at the ‘Pavilion’. The diehard cavalry officers were soon pouring over the display copy of the book and the room was reverberating with the sound of old cavaliers reminiscing about long forgotten skirmishes and the good old times in their respective regiments.

***Squadron Leader Rana TS Chhina (Retd)** is currently Secretary of the USI Centre for Armed Forces Historical Research and Vice President of the Indian Military Historical Research Society, the UK.

Journal of the United Service Institution of India, Vol. CXXXVIII, No. 574, October-December 2008.

Twelfth Colonel Pyara Lal Memorial Lecture Regional Security Dynamics and their Impact on India*

Lieutenant General VR Raghavan, PVSM, UYSM, AVSM (Retd)**

It's good to see so many of my friends here. I acknowledge and salute the presence of many elders and seniors from whom I have learnt over the years, and whose careers have been the role models for my generation of military leaders. Thanks for being here, each one of you. I take your presence here as acknowledgement of Colonel Pyara Lal's great contribution far more than of any special skills that I might have.

I remember Colonel Pyara Lal when I was a junior officer. Whenever I was in Army Headquarters, and the USI was in a very old part of Kashmir House; always warm, very leaky in monsoons, where the books had to be covered in tarpaulins and plastics with limited staff. Yet it was the place where one could find the book or reference one needed, due to the care Colonel Pyara Lal took of the library's efficient management. My generation owed him a great debt because he encouraged us, personally took interest in our work, and guided us on how to work on research issues. It is an advice I share with many young officers today. Every time one gets posted to Army headquarters or in Delhi, use the USI's facilities to widen one's military knowledge base. I ask them to choose the subject of interest and specialise in it, go deeper into it, write about it, talk about it because that will give them a unique speciality. It would also become a window to another career when they retire. As General Nambiar said, we are grateful to Colonel Pyara Lal in providing leadership to this fantastic organisation for so many years, and bequeathing to us the legacy of USI's traditions.

The title of my talk is, "Regional Security Dynamics". The phrase dynamics is from engineering which refers to powers that force a change. Let me start by saying that the word 'region' itself has undergone a change of interpretation. Regions during the Cold War, were determined in terms of the Cold War geopolitics. They were products of super power perceptions of how the World was divided during that period. In the post Cold War era and in a globalised World, the regions are seen through new prisms. Consequently new geographical and strategy related linkages have emerged which make regions into a dynamic - powers that force change - with evolving interpretations. They are being redefined, rephrased, re-titled and regrouped. Remarkably, this is happening more as a result of the market forces than geo-political drivers. When one sees the investment by Japan in China, by China in the United States, the trading and security relations in the ASEAN Region and role of the Asian tigers, the growth of India itself; we find that regions mean different things in different contexts. What was called South Asia, our foreign office now calls Southern Asia. It makes good sense to look at the South Asian region as extending from Afghanistan through Central Asia to the Malacca Straits. Thus there is a change in the dynamics. I feel this title would have pleased Colonel Pyara Lal because he was the one who always encouraged us "to look beyond the immediate, to beyond what is obvious."

There is an extended Southern Asian Region in which India figures prominently. It is also a region which connects almost seamlessly with the rest of Asia and Middle East. In the globalised World, regions are not sui generis and by themselves as they were during the Cold War. They are now interdependent and closely linked. One can't say that one region is in itself an entity. This is because it has close linkages with others: Africa with Southern Asia, Europe with the Middle East, India's own emphasis on ASEAN, its tremendous interests in the Shanghai Cooperative Organisation (SCO) are indicative of the overarching linkages of regions.

This has led to a change in the World from what was called the bi-polar world to a multi-polar world. Recently the USA strategists, like Richard Haass, are beginning to say that we are now in a non polar World. According to Haass instead of looking at poles, we should look at powers - major powers, medium powers and other powers who have meaningful influence. Countries like Brazil and India today can force the WTO discussions into directions that matter to them. They can influence the global warming discussion. They can force issues, even though major powers have considerable undeniable powers. It is a World where emerging powers with meaningful influence, are in a position to influence global issues. That is the World which we have to look at to understand the regional dynamics.

I have just come back from Stockholm where there was a major conference on, "What the World would be like after the American global domination changes?" Thus you can see people are looking at the World from a different prism altogether. There is the National Intelligence Commission of the United States of America which has just produced a draft assessment of 2020 period which is titled "A Transformed World". That looks at a world where America may not have the power it now has. It doesn't mean that it will be a weak power, it will continue to be the dominant power, but it will not be the pre-dominant power. The report acknowledges the context in which India should see itself as part of the global shift of power to the Asian continent.

The South Asian region's dynamic would be influenced by the power shift towards Asia. Everybody is taking stock of the new Asia. According to one estimate by 2025, about 55 per cent of the global population will be Asian. China, India and Japan would be the third, fourth and fifth largest economies respectively. Together, they will consume 80 per cent of the global energy. There will be five, if not six, nuclear weapon states in Asia. And there will be possibly the same number of states in Asia who will possess intercontinental ballistic missiles. There is the book by Bill Emmott titled "Rivals: How the Power Struggle between China, India and Japan will Shape Our Next Decade". There is the new book by Fareed Zakaria which talks of "The Rise of Others", the title of the book is

“The Post American World”. These are telling phrases which people are using to indicate the new World that is emerging. Kishore Mahbubani of Singapore has written a scintillating book, “The New Asian Hemisphere”, whose sub title is “The Irresistible Shift of Global Power to the East”. That is the World in which we are going to be and that is how we should see ourselves.

If that is the case, what is the global security dynamics which we should keep in mind while examining the regional security dynamics? Last week I was in Geneva attending the International Institute for Strategic Studies (IISS) Annual Conference which is held in Switzerland every year. It is called the Global Strategic Review and some of the top leaders come from all over the World to speak there. There were six or seven major issues that this Global Strategic Review Conference covered which tell us how the major powers, Europe and Asia look at the Global dynamics? What are those overarching issues which are attracting the attention, that are going to define the strategic dynamics? First on the list is whether there would be a new Cold War? The Russian action in Georgia has triggered this new anxiety. Global leaders do not want this kind of a conflict again. They do not want the re-emergence of the Cold War. Then there is the question of missile defence, expansion of NATO, etc which in some ways led to Russian actions – seen as an overarching issue. Second, the subject, “Climate Change” and the “Environment Issue”, with Kyoto becoming the sort of symbol of all that is wrong which figures high as a global issue. Major powers are resisting change while India, Brazil and others are demanding their rights. The Indian position is admired in such conferences. Indian Government’s position is that it would agree to all the caps on global warming, but Indian emission levels will never exceed those of developed societies. Whatever be the lowest level which major powers will come down to, India will maintain its emissions below it. India argues that it cannot be blamed for Global Warming, which is something it did not contribute to. Global Warming is a consequence of policies of developed societies. The Indian call, “to not demand from it more than what developed states are willing to give” finds wide resonance. That is the new power structure in the World in which India is working.

The third area is of energy and in that the new magical phrase that is capturing attention is of Resource Nationalism. That is instead of looking at energy as a global need, a state which has control of energy will decide how the World should respond to it. Everyone is talking about Russian Energy Nationalism and Mr Putin’s policies on gas control, petroleum control, and control on the rise of price of gas. Since much of Europe depends on Russian energy resources, what Russia does in Georgia, through which many pipelines pass, has cardiac arrest kind of response on the European powers.

The fourth area in the global context is about conflict zones in which Iran, Iraq, Afghanistan, and of course, the Middle East play a very big part. Pakistan now figures very high as the absolute centre, the consequences that would flow, nobody might be able to control. Pakistan is our neighbour in the regional dynamics. Then comes the question of nuclear proliferation of North Korea, Iran and others where India figures in a completely different light, as a responsible nuclear weapon state. Then comes the question of global terrorism. A phenomenon that is rapidly changing its face; and we have the new face of international terrorism in India. Finally, there is the critical issue of economic stability which is highlighted by collapse of the Wall Street foundations of economy.

If we look at these 6 or 7 overarching issues, which globally affect all regions, two patterns emerge. One pattern on the global scene is the American and European perspective which is seeking stability. These powers want the present strategic stability to continue. They don’t want to go back to the Cold War. They want the international globalised World of the market economies to continue to flourish. However from that part of the World, Asia is seen as seeking greater military capabilities. So, one part of the World is looking for stability while there is a shift of the global power to Asia, and yet that Asia is busy developing its military capacities. Thus, China’s military modernisation is causing high concern; China’s budget figures are very high; and China’s capacity to bring down a satellite from space has led to anxieties in the USA. Fear of an arms race in space is real. Space had been kept free from being made into a military high ground. Now the risks of militarising it are creating anxiety. Asia has in it some of the largest arms buyers in the World, and China and India figure very high on that. That is the global strategic dynamics in which we are functioning and in which we will remain as a principal and an important player. This is the context in which we should look at the regional security dynamics.

Where is India in this review that I have briefly described? One must start by saying with great pride that after the collapse of the Soviet Union, the Indian leadership, whether it was the Congress or the BJP, moved very fast, very determinedly and I think very successfully in strategic terms to reposition India. The endeavour to reposition India from where we were during the Cold War, to our current position in the emerging international architecture, based on economic linkages is a fine achievement. The Indian emphasis is on economic growth. Economic growth will depend entirely on massive foreign investments. Technology and foreign investments can come only from the developed world, which is the Western World. We needed to re-engage with that World and that is why the repositioning exercise. The entire outcome and the results which have flowed from it are strategic issues. The 123 Agreement, the Nuclear Deal with the USA and everything else is a consequence of that re-positioning exercise, and the economic reforms. It is a success story, in economic and strategic terms.

We have also to take note of our neighbourhood i.e. the turbulent world around us. India is politically more stable, and economically growing fast. It is a success story economically and yet, the latest Newsweek journal has Dr Manmohan Singh’s picture on its cover labelling “India Isn’t Shining.” It blames Manmohan Singh for being a man who has failed to deliver. That is another story and a passing phase. India cannot be stopped from where it is headed. We may go slower or faster, but the journey would surely continue. A slow down in Indian economic growth is a major global concern and demonstrates the importance it receives in the global security calculus. One western analyst had said five years ago, “the greatest thing India did was to have determined its political destiny, by proving itself as the democracy which can be worked.” What we are doing now amounts to proving our economic destiny and I do not think that the process can be stopped.

Then of course, came the nuclear test. It’s amazing, what an impact Indian nuclear weapons have had! The test of 1998 led to a new thinking on nuclear regimes nuclear deterrence, and started a new discourse on disarmament.

General Nambiar, Director, USI and I are members of a new movement called “Global Zero” which has got some of the top thinkers and scientists on it, pushing for new ways to obtain disarmament. A statement by Messieurs Kissinger, Schultz, Nunn and Perry in two Op-Eds in the Wall Street journals last year had surprised many. These strategic thinkers and leaders were the legendary Cold War practitioners. Now they are saying that America’s interest would be better served by disarmament. This is also the consequence of 1998, albeit an indirect consequence, of the realisation that a country determined to have nuclear weapons will have them. Yet, in a World worried about proliferation, India is an exception by virtue of the responsibilities that it has demonstrated. That is why wherever I speak abroad, experts would say that they do not recognise India as a Nuclear Weapon State. I would then reply, “you may not, but you have to recognise India as a State with Nuclear Weapons.” India has not bothered about these labels. We have moved from being a “Non Nuclear Weapon State” to become a “State with Nuclear Weapons” and last month the phrase I heard was “Responsible Nuclear Weapons Possessor”. India is graduating in the Nuclear World. It is a grudging admission of India’s reality which is of a new India. That is what we should take note of. Indian military capability is now seen as a stabilising element. As a former Ambassador of the USA to India once put it, India’s Army is one of the few which has actually been in combat for years. It knows that Indian Navy is a stabilising element in the whole region from the Straits of Malacca to the Middle East.

I want to draw your attention to a letter written by twenty American strategic analysts which was published in the Indian Express last Saturday. It is a letter to the Congressmen explaining why they should support the 123 Agreement. It says, “India is the primary resident Naval Force in the Indian ocean and works with us to maintain the security of the sea-lanes through which most of the World’s oil trade travels.” The same letter talks about India’s impeccable non proliferation record and says, “We are poised to reap the non-proliferation benefits of ending India’s nuclear isolation.” Could we have imagined this perception 10 years ago from the Western World? Our stature as the Nuclear Weapon Power also has added to our value to the global security balance.

I remember in Oslo, in a conference on nuclear disarmament, I said, “sometimes weapons can also do good”. I mentioned that since 1998 both India and Pakistan, after making some serious mistakes, had realised that war was no longer a practical option. You cannot go to war with nuclear weapons, since major powers will not countenance it. Global pressures will make war a ‘no choice’ option as it happened in 2002. Nuclear weapons have thus added to stability. The whole peace process with Pakistan has developed momentum after 1998. It is the consequence of the realisation that political disputes can no longer be resolved by war. It was however agreed that in the Indian Subcontinent, nuclear weapons have produced a degree of stability.

India thus figures in a different perspective from the point of view of major powers. We are being seen, as more than a regional player. We are being seen as a global security asset. We are being seen as a strategic balancer from Japan to Singapore. Major powers view India as a balancing element in a large area where their ability to influence matters militarily is reducing. India is considered as one of the keepers of the global concerns. Indian strategic assets, whether in space or in the nuclear field or in missiles are seen as non-threatening. These are remarkable gains considering that two decades ago India was viewed, notwithstanding its non aligned posture, as part of one Cold War block.

Expectations of a larger role from India have led to new strategic partnerships with major powers. There are triangular strategic partnerships like that of China, Russia and India. There are other strategic partnerships in which India is welcomed. These partnerships go beyond the regional patterns as understood in the Cold and Post Cold War era. Regional strategic dynamics is thus ever more linked through economic relations with larger perspectives of security.

There has been a lively debate in India on the India - USA Nuclear Deal. In most parts of the World, and in the strategic communities, there was initial surprise that such a deal was agreed upon by the USA. As the debate evolved and Indian adherence to international norms became clear there was a greater sense of re-assurance. The strategic implication of the deal is the acknowledgement of India as a responsible nuclear weapon state capable of playing a responsible and stabilising role.

There is now a new thinking on nuclear weapons and nuclear regimes that were designed to control their proliferation. The plea from Kissinger, Schultz, Perry and Nunn for nuclear weapons abolition is getting picked up globally. New global organisations are coming into being to push this idea forward. India had taken that position many decades ago through the Rajiv Gandhi Plan and India was the lead player in this. India has willingly supported this call for abolition and consequently there was a conference this year which the Prime Minister addressed in Delhi.

I was a member of the Weapons of Mass Destruction Commission (WMDC), headed by Dr Hans Blix whose report is on the web. Now the Australian and Japanese governments have instituted a new International Commission on Nuclear disarmament, to which I am an Adviser from the Indian side. In the emerging discourse on nuclear abolition, India now figures on the positive side in the global strategic dynamics from whichever combination of issues one looks at.

In the larger context, how should we look at the Regional Security Dynamics, in which India is the central player in Southern Asia? The first thing is that Nuclear weapons have substantially reduced the possibility of a full scale war, at least between the two major countries - India and Pakistan. But that has produced a classical response of the Cold War, by enhancing the potential and the temptation to engage in sub-optimal wars like insurrections, insurgencies and the conflicts of terrorism by non state actors with global linkages.

Oxford University did a project over the last few years on the changing nature of war. It looked at the objectives that can be achieved by conventional military operations in the new global scene and threats. One has to go back to Clausewitz’s famous comment on power and military. Clausewitz’s advice to his monarch was to go on the

offensive, capture more territory, to fight and win battles. Later Clausewitz was critiqued for ignoring the basic idea that the purpose of war was not victory but peace. The question now being asked is whether the Israeli military victories of 1967, 1973 or the military victories in Korea, Vietnam and in Iraq, helped in achieving peace? The answer obviously is 'No'. This is a new thinking on warfare. We must recognise this reality.

South Asia is a region of inbuilt conflicts which are never ending. India is not free from it either. It's a region of substantial political turbulence. It is also a region of very severe economic stress. One cannot talk of India shining without talking about the 40 per cent of population living below the poverty line, which is factored at one dollar a day by the United Nations. So there is poverty and deprivation in this region which is combined with dysfunctional governments. The narrowing of the National discourse from truly macro to very marginal issues is the reality of the region of which we are the principle player.

Our wish to be a global player will always be constrained by the realities that I have listed. Therefore, the growth and success of our region is critical to us. It is a strategic necessity for India. If we look at countries, all the way from Afghanistan to Myanmar, no country is free from strife and turbulence. Whether it is Sri Lanka, Bangladesh or Nepal; for that matter even Bhutan and of course Pakistan. They have a direct impact on Indian security in different forms.

So what are the challenges of the region with this background? I think the principle challenge is of democratic transition. Every country around us, including us, are transiting to a new form of democracy, be it from a single party to a coalition, or from military governance to democracy. Sri Lanka will have to learn, if it wins the war against LTTE, on how to absorb large numbers of Tamil population in the mainstream of its polity. Bangladeshis have yet to resolve the democratic question. Pakistan is in serious democratic difficulties. Nepal has embarked on a route which is unclear. Nepal is divided in two parts – the hill people and the plains people, called the Madhesis, who control half the parliamentary votes. I think these are major challenges and it is a security challenge. India remains an exception. On a lighter note, while in Singapore a month back, I asked a Singapore diplomat as to, how and what did India look to him from Singapore? He replied, "India has too much democracy". He wondered why, India going into strategic deal with the United States of America, (which is the envy of many countries) was being held hostage by its democratic divides? Democratic transition remains the challenge. There is also the challenge of ethnicities. The great Indian State, thanks to its fantastic leaders who had strategic vision, undertook to reorganise the States on a linguistic basis which has given us great strategic stability. But none of the countries in the region including India, have been able to resolve or overcome the question of ethnicities. And, therefore political activity and internal conflicts are driven by ethnic divides which we are yet to overcome. So, whether it is Shias and Sunnis of Pakistan, or Tamils and Sinhalese of Sri Lanka or the Hill Tribes and Madhesis in Nepal, or in India's Northeast – basically, it's all about ethnicities and democratic transition.

There is the challenge of unequal economic growth. In India itself, its five Southern states are the best governed. There is greater social cohesion. They have the highest literacy and the highest foreign direct investment. If India is on the global map, it is largely because of Southern India. Today no coalition can be formed in Delhi without at least two, if not three, out of the five Southern states being partners. That is the power of South India. And yet, when we did a study with a well known economist, the conclusion was that this growth had a security dimension. The Southern Indian growth path is already witnessing a population shift from other parts of India to Southern India. Migrant labour in search of employment is moving in to Southern India. Can Southern India sustain that demographic shift of unequal growth? We are seeing a similar pattern, though in a small measure, in Punjab where labour comes from Bihar. The same is true of J&K. The challenges of unequal economic growth within the regions of India will have a security impact. Asia, from Afghanistan to Japan, also harbours ancient animosities. Europe has overcome it but Asia is yet to do so. Whether it is between China and Japan, or Japan and Korea, or within ASEAN, or between Central Asian States, or claims to energy rich areas, potential conflict zones are very much present.

What should the Indian perspective be in this regional dynamics? India and our generation is at the cusp of the historic moment with huge opportunities and challenges. But the central requirement for India would remain of maintaining a sustained and stable region. The essential dynamics would be to maintain India's growth and internal stability. Therefore, the Indian challenge will have to be to minimise the impact of turbulent neighbourhood on our own internal security. We have to find ways to enhance the strategic autonomy for our Country in the global scene with all the challenges we have.

India is being called in the western strategic discourse as a "swing state". What is a swing state? A swing state is the one which can swing its position to create balance between competing major powers. China, the USA, Japan, Russia are powers that are jockeying to seek or retain a dominant role. How will India play a stabilising role? It is going to be a major challenge for diplomacy and for political leaders. What will be our role in the new balance of power that may be emerging? I think the greatest challenge for the strategic practitioners in India would be to maintain a balance between the two terrific new relationships that are emerging. A stable relationship that is carefully crafted over forty years with China and a new strategic relationship with the USA. These two are not complementary. The India-USA relationship can never be free from the shadow of the Sino-American relationship. We have very little control over what the USA does, what its assumptions of China should be or would not be. We will have to manage these two relationships which will require tremendous skill. I think the Indian Foreign Service and the political leadership have risen to the occasion in the past and will continue to function that way. Lastly, I would say India would need to balance another relationship. That is, of being rooted in Southern Asia and yet working the global strategic commons as a major player. That would be a major challenge for us.

In conclusion, we are not just a resident power in Southern Asia, we are the principle determinant of security in this region. This role will be contested by some and supported by some. I think the major powers will support that. The only way forward is through economic growth and political stability. I wish to draw on the statement of the Prime Minister at the SAARC meeting in Colombo recently where he said, "Our aim should be to create

virtuous cycles of growth in our region, i.e. growth through partnerships.” That vision will need to be pursued with determination.

.*Edited text of the Twelfth Colonel Pyara Lal Memorial Lecture 2008 delivered at the USI on 24 September 2008.
****Lieutenant General VR Raghavan, PVSM, UYSM, AVSM (Retd)** is a former Director General of Military Operations, Indian Army and is currently President, Centre for Security Analysis, Chennai, India and Director, Delhi Policy Group. He is also an elected Member of the USI Council.

Journal of the United Service Institution of India, Vol. CXXXVIII, No. 574, October-December 2008.