

Connectivity Issues in India's Neighbourhood

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Foreword

The land and maritime connectivity have played a crucial role in political and economic evolution of the nation states. With a view to exploring the developments in this area in India's neighbourhood, the Asian Institute of Transport Development held a one-day seminar on May 24, 2008 at India International Centre, New Delhi.

The seminar was inaugurated by Hon'ble Mr. Mani Shankar Aiyar, Union Minister for the Development of North-Eastern Region (DONER) & Panchayati Raj and chaired by Mr. B. G. Verghese, a noted guide and commentator of our times. Mr. TCA Rangachari, former Indian Ambassador to France, eminently coordinated this colloquium.

The speakers at the seminar included distinguished academicians, thinkers and policymakers: Gen. V.P. Malik, Mr. Rajiv Sikri, Mr. Vijay Sakhuja, Prof. Manoj Pant, Mr. TCA Srinivasa-Raghavan, Prof. Mahendra P. Lama, Mr. Falguni Rajkumar, and Mr. R. Dayal.

The background papers and presentations addressed the main theme from different perspectives. The discussions were stimulating, informative and well-focussed. A snapshot of the key issues and guideposts for action is presented in the 'Overview' included in this publication. The rich material provides a fertile ground for further research.

Asia is now building transport networks to rival any in the world. This is happening not only at the national level but also at the regional level. As a result, the old divisions are giving way to much-needed integration in the region and we are witnessing the emergence of regional transport networks that are bringing countries and peoples closer together through greater promotion of trade and tourism.

It gives me great pleasure in bringing to the readers this highly useful volume. It brings home the central role of connectivity as a network of goodwill and influence rather than merely as something along which people travel. I hope our policies will be adjusted accordingly to meet the challenges of our times.

K. L. Thapar
Chairman

Connectivity: An Overview

The last quarter of the 20th century saw the re-emergence, after a gap of about 50 years, of an old phenomenon – greater global integration, first through trade and then through finance. It was the former that led to the latter. There were many reasons why global trade increased but at the root of it lay an age-old reason: better connectivity between regions and countries. The obverse of this, of course, was that countries and regions that did not improve their connectivity were left out of the global trading boom.

There are many reasons why countries trade with each other. Unilateral trade liberalisation, participation in the multilateral trading system, decline in transport and communication costs, all have a role to play. Satellite delivery of services has completely neutralised the distance factor. The decline in transport costs in the 20th century has resulted in monumental changes in the patterns of trade and investment. The most striking example of this is Europe. East Asia is the latest case in point. Some researchers have found that, over time, the proportion of trade over shorter distances increases in relation to trade over longer distances.

One of the most important consequences of this boom in trade has been gradual (but by now very perceptible) shift in economic power from the West to the East. Two centuries ago, before the industrial revolution, India and China accounted for more than half of the world's output of goods and services. By 1950, this share came down to less than 10 per cent. But in the last two decades, it has begun to climb back and Asia can be expected to produce 50 per cent of the world's GDP by 2030.

The key factor in this regard has been better connectivity of different sorts – physical, financial, electronic and intellectual. To deliberate on the various facets of this issue, the Asian Institute of Transport Development organized in New Delhi a seminar on Connectivity Issues in India's Neighbourhood: Economic and Strategic Implications on 24th May 2008.

Inaugurating the seminar, Shri Mani Shankar Aiyar, Minister for the Development of Northeastern Region and Panchayati Raj observed that connectivity between the rest of India and the North East was disrupted by the

Partition of India and the creation of East Pakistan and the 1965 war and subsequently, the emergence of Bangladesh really wrecked that. What had been, throughout history, internal trade was transformed into international trade subject to all its vagaries. The Chhatak Cement Factory in Northern Bangladesh, set up in 1937 by a British-Indian firm which had tapped the limestone available in Cherrapunjee (Sohra) and brought it by an aerial ropeway to Chhatak, is a good example. It is staggering that our diplomacy with respect to a country in whose liberation we were deeply involved has been of such a high order that we have not succeeded in reestablishing that connectivity which was taken as normal and natural through the worst period of the India-Pakistan relationship!

As a result, the Northeast continues to be on an economic trajectory well below that of the rest of India; also the 'Look East Policy' cannot be operationalized without the participation of the Northeast, for Northeast India is where South-East Asia begins. If there is a Look East Policy, then, it cannot be looking East only from Chennai and Bangalore, who have been the biggest beneficiaries of this policy thus far, but will have to include the Northeast. Connectivity to, and through, the Northeast is the most important element of connectivity between India and its neighbourhood in regard to the economic and strategic implications.

The pipeline from Akyab (Sittwe) in Myanmar through Bangladesh into India might have helped Bangladesh in improving their balance of payments and perhaps even bring it to equilibrium by squeezing us for transit fees on gas that will go through the pipeline. We might even have put in a little clause that either party, Bangladesh or India, could feed their respective gas into the same pipeline that would take gas from Myanmar into India. At Brahmanbari, which is the place where they have most of their gas, there is no petrochemical or chemical industry and the bulk of these industries are located around Jessore, a place which is at diagonally opposite end of Bangladesh, much closer to Kolkata than it is even to Dhaka. This could have been a way of effectively using available gas from Tripura which is also capped for lack of, what the oil sector technically calls, evacuation. The evacuation of gas is a big problem from Tripura. So, it is all capped there. Here was the opportunity to bring it to the rest of India using exactly the same pipeline that would come in from Myanmar (where we are part owners of the gas fields A1 and A3). But that draft agreement was not allowed to

move forward. And Myanmar, in total despair, committed the entire gas to China.

In thirty-seven years after helping this country to liberate, we have not been able to restore that level of connectivity between the rest of India and the Northeast. There is a railway line connecting all of the Northeast and Kolkata that went through East Pakistan at the worst time in relations between India and Pakistan, but there is, today, no direct service. And the same applies to road traffic though a bus service between Kolkata and Dhaka, and, subsequently, between Agartala and Dhaka is operating. As for waterways – cheapest form of transport we can still go from Haldia all the way up to Dhubri – except that the Bangladeshis don't really need that waterway, and, therefore, they are neglecting its upkeep, and, in a delta area like Bangladesh, if you do not resort to frequent upkeep, you cannot really use it.

If the Brits could go up and down by waterway, it is extraordinary that two centuries later, we cannot go upstream and downstream by waterway! We have had a difficult relationship with Bangladesh but Thailand has an excellent relationship with them. There is a Thai company specialized in the upkeep of waterways. If we were to tie up with them, and if the Thai company were to offer to look after the upkeep of the Padma in Bangladesh, that would solve the problem and we would have plenty of connectivity to the Northeast region through the Brahmaputra. We need to get on with the job of this connectivity.

The second connectivity that we must give very high attention to is the bypass issue: how the Bangladesh logjam may be bypassed by establishing a maritime route from Haldia Dock to Sittwe port, and, from there, upstream to Kaletwa, and from Kaletwa, by road, through the Kaladan valley, into Mizoram, and then right through Mizoram, cutting like a razor through it from south to north, we get into the Barak valley, and thus secure connectivity to the Northeast. The problem with this is that a single barge from Haldia can take 6,000 tonnes of goods. When it arrives at Sittwe, it has to be transshipped into ten barges of 600 tonnes each before it reaches Kaletwa; and from Kaletwa, it has to be transferred on to 600 trucks of 10 tonnes capacity each to be able to go up the road to the Barak valley. If we are going to have 600 trucks moving up the main artery of the state, the danger is that we will convert Mizoram from a state into a traffic jam!

The answer devised so far is that we have a warehouse at Kaletwa, where we store the goods and send out small consignments on a daily basis. But it would take fifteen days time to clear the goods. So, we get two transshipments and fifteen days of storage. It is not clear how the economics of this is going to work out. There is an alternative bypass. It is a road from an entry point in Manipur to the same junction, also funded by India. We have an MoU that says that we will build it and they will maintain it. It is in our interest but not of much interest to Myanmar, because they have no traffic between the Manipur border and Kaletwa. If we fund the Moreh-Kaletwa road, perhaps we could ease some of the burden on Mizoram and take this road through Manipur.

Alternatively, we could build a dedicated railway that goes up the Kaladan valley, perhaps up to somewhere below Lawngtlai, and, then cuts in from there to link up with the railway line that is anyway planned between Northern Mizoram and a point just below Aizwal in the valley. It could be purely goods traffic to begin with, not requiring very much in terms of wayside stations. And, eventually, it can also take passenger trains. Nothing will more effectively integrate Mizoram with the rest of India than such a move. So, we have to consider this too. Yes, the cost of the railways is very much more than the roads. But, then, the railways do not require the kind of maintenance that roads need, and the transport costs are likely to be very much lower. This is another requirement that needs the highest attention.

The third is that there needs to be a clear understanding on our side that all roads through Myanmar (other than the one between Ledo and Kunming) that connect the Northeast through Myanmar with Thailand and point further South are entirely in India's interest, and, to some extent, in the interest of Thailand, but hardly of any interest to the Myanmar authorities. So, if we can have road connectivity all the way from Rajasthan to Mizoram, could we not just extend such connectivity at our expense through Myanmar to connect to the world's fastest growing economy, the economy of ASEAN?

Between Assam and South-West China, the Stillwell road is now in disuse. The Chinese have rebuilt it from Kunming up to the Myanmar-China border. This is the bulk of the road, but the strategic consideration is that any road up which an Indian businessman could travel is the same road down which a Chinese General could move. It is absolutely true that if we do build this Stillwell

road, there would be much easier access for Chinese forces into India. But, we have been making progress ever since Rajiv Gandhi's visit to China in December, 1988. His historic eight-minute handshake with Deng Xiao Ping in the Great Hall of the People signalled a new chapter in India-China relations. So, do we think that that process is fragile? In which case, we should not rebuild the Stillwell road. Or do we think there is progress, slow but progress in the desired direction, in which case, perhaps, we could build that road. After all, we are at present denying ourselves access to the market which is perhaps second only to the lucrative ASEAN market by not having direct connectivity to South-West China.

In so far as Tibet is concerned, according to the Chief Minister of Arunachal Pradesh there are two-and-a half-lakh, out of six lakh Arunachalis who have relatives across the border, sometimes distant but still having clan connections. And, there is some element of correspondence, exchange of visits between them. It is time we think of connectivity to Tibet, of course, without giving up our apprehensions on the security front.

With Bhutan, we have outstandingly good relations, and, with Nepal, notwithstanding problems, we have, by and large, a good relationship. For the Northeast, I think, it matters a great deal that the Nathula Pass should become a major artery of India-China commerce and go beyond a yak's milk and horse leather or something, which is currently permitted, to move into the twenty-first century. If we can somehow push a road through the Kanchenjunga range into Eastern Nepal from Western Sikkim, then that part of Sikkim, which is really dreadfully neglected and isolated, could suddenly become a new hub of economic activity.

We need to have a foreign policy that deals with India's national interests, not unreal fears. This is a mindset that requires a huge change. The Minister concluded that these were some of the suggestions with respect to connectivity between the Northeast and our immediate neighbourhood. He hoped the seminar would deliberate upon these issues.

The seminar focussed on these issues taking into account both economic and security aspects of physical connectivity. The crucial conclusion that emerged was that if India aspired to be a global player of consequence, it will have to improve its physical connectivity because it scores well on the other types of connectivity. India needs to recognize the importance of better physical

connectivity in the same way as China has. The task is quite formidable, largely because so much time has been lost and China has gained such a head-start.

The Indian coastline is 7,515 kilometres long. The Indian peninsula juts out for almost 1,000 nautical miles. Half of Indian trade transits through the Straits of Malacca, and 67 per cent of India's requirements are sourced from the Persian Gulf. India's coastline is dotted with 12 major, and 187 minor ports. Ninety-seven per cent of India's trade by volume and 70 per cent by value is seaborne. These proportions are not going to change much, but the volumes will.

Maritime infrastructure is perhaps one of the most daunting security challenges that exist within a nation's infrastructure. Maritime infrastructure is a combination of commercial, recreational and defence-related facilities. It covers vessels, docks, oil and chemical facilities, railways, roadways and power plants. International Ship & Port Security Code, the Container Security Initiative, and Customs & Trade Partnership against Terrorism are among the several initiatives and regulatory mechanisms aimed at reducing the likelihood of maritime-vector terrorism. Almost all the speakers at the seminar pointed to India's lack of preparedness – policy-wise, administratively, and financially – to meet this challenge.

Another important conclusion to emerge from the deliberations was that physical connectivity has two aspects: internal and external. Both have to be developed and merely developing one without the other would not lead to the optimal results. During the colonial period, the British, for their own commercial and military reasons, developed hinterland-port connectivity, but did little to improve intra-hinterland connectivity. After Independence, partly due to security concerns but largely due to democratic pressures, the priorities got reversed so that the process of developing and improving connectivity became skewed in a direction opposite to what it was during the Raj. The consequences of this skew have now begun to hurt. Attention, therefore, needs to be turned to removing the distortions in our connectivity policy.

The seminar came to the conclusion that any new policy that seeks to address the problem will, eventually, have to reconcile security imperatives with the economic ones. For example, where the Northeast is concerned, it is now clear that the first step in developing the region, comprising eight border states with a combined population of about 40 million, should be to build more roads

and bridges. Even 60 years after Independence, connectivity within the region remains abysmally poor. (Paradoxically, this is not true of the border states in Western India, namely, Punjab and Rajasthan, where inter-and-intra-state connectivity is amongst the highest in the country. Security, clearly, is not the determining factor for poor inter- and intra- state connectivity in the Northeast).

Neglect, born out of the low political importance accorded to the Northeast, has played an important role in this regard. India needs to give the utmost priority to the immediate development of road communications in the border areas to facilitate integration with the rest of India, and to improve our defence capabilities. It also needs to improve its border trade infrastructure wherever it has been mutually agreed to in the past. It needs to review the century old Inner Line policy in the North and East India to facilitate greater integration with the rest of India, particularly in the area of tourism.

The seminar noted that more than one-third of India's land borders are disputed and un-demarcated. Most of these areas border China. For many years, no roads were constructed in the areas vacated by the Chinese after the 1962 conflict. But in recent years, China has constructed a number of roads in this area. These roads may facilitate offensive operations and movements. Whether or not these fears are warranted is not easy to establish. It is instructive to examine what efforts China has been making in the region. For example, it has constructed all-weather highways to and within Tibet, an oil pipeline and a railway line to Lhasa, and upgraded all airfields in Tibet. The now operational Qinghai-Tibet railway is slated for further expansion – linking Lhasa with Shigatse and Yadong near the Sikkim border. Chinese land communications with Nepal, Bhutan and Myanmar have also been improved. These developments have upgraded Chinese defence infrastructure and military capability in Tibet substantially and enabled almost complete integration of Tibet with the rest of China.

The strategic reality is that the balance of military capabilities between China and India has been shifting to our disadvantage. China has substantially increased its capability to rapidly induct, deploy and sustain large military forces into Tibet. This is compounded by the fact of the strategic nexus between China and Pakistan. China's arms sales to Myanmar, Bangladesh and Sri Lanka further complicate India's security planning. India needs to look at China and its global linkages and respond to the challenges rather than restrict itself to a bilateral

understanding of Sino-Indian relations. It would be imprudent to ignore rising Chinese military power and capabilities that may be used for coercion in a possible conflict scenario on the ground, air or sea anywhere. This is the prospect that India faces.

India's biggest security problem today is the activeness of China throughout South Asia, including, most recently, in Nepal. India needs to promote its political, economic and cultural interests in South Asian neighbourhood with much greater vigour than hitherto. It also needs to improve road communications between India and China through Myanmar, in support of India's 'Look East' policy. There is so much to be done to make up for the years of neglect.

Another aspect that has not yet become an issue for public discussion is India's lower riparian status vis-à-vis China. What are India's options if China seeks to develop and utilize Nepal's hydropower potential for developmental prospects in Tibet/Nepal now that the rail link to Tibet has opened up? Can China become the trading partner of choice for Nepal replacing India, the partner under compulsion? To what extent would China use the enhanced access facilitated by the recently developed transport linkages to transform its claims in the eastern sector into actual ground positions?

China is looking for markets and resources on an ever-increasing scale in order to sustain its developmental needs. The preservation of the existing political order is predicated on sustained and rapid industrialisation. That is why there are three very abiding yet powerful objectives in China's emerging 'forward policy' in this region: expansion of its military base and strategic access, economic and commercial penetration into the huge South Asian market and through it to the Middle East, and finally to tackle its own potential internal instabilities. China has followed a strategy to acquire bases overseas in distant lands and seas and established maritime foothold astride the critical choke points. Referred to as the 'string of pearls' strategy by the western world, it envisages positioning themselves along strategic maritime gateways or choke points to protect their sea-lines of communication, particularly through hostile and unsafe sea spaces. China is defending itself through political, military and commercial diplomacy.

The Malacca straits continue to dominate the commercial and economic lifelines of China. An estimated 60 per cent of crude is sourced from the Middle East by China and it passes through the Straits. Given the growing demand, this figure could rise beyond 70 per cent. Much of this would also pass through the Gwadar straits in Pakistan. China has been developing a port there. It is of great strategic importance to China as it lies astride the sea-lane originating from the strategic choke point of the Straits of Hormuz and provides the Chinese a forward staging post to protect their critical energy supplies from the Persian Gulf.

The Gwadar facility also provides the Chinese a forward base to monitor US naval activity in the Persian Gulf region as also Indian naval activity in the Arabian Sea. Similar conditions prevail in the Bay of Bengal where the Chinese have established facilities at Coco Island in Myanmar to monitor Indian maritime activity and missile testing in Orissa. China has upgraded the road and rail network system from Yunnan in South China to several ports along the Myanmar coast in Bay of Bengal. The project allows Chinese trade an outlet into the Bay of Bengal and, in military terms, it provides Beijing a strategic foothold in Myanmar by providing assistance in the modernisation of the Myanmar naval facilities, including Hainggyi Island and Great Coco Islands.

China has emerged as a major supplier of arms to the Bangladesh armed forces, particularly its Navy and Air Force. Bangladesh could be used as one of its staging/listening posts for the Malacca Straits, the Indian Ocean and Bay of Bengal. In the recent past, China has emerged as a major source of military equipment to Sri Lanka and is currently developing the Hambantota port in Sri Lanka. In short, China is leaving no avenue unexplored to insure against its critical energy vulnerability.

China has extensively used border trade as its main instrument to realize the goal of local economic integration. It is broadly estimated that border trade through its 120 inland towns and ports constitutes nearly half of China's total foreign trade amounting to \$1.3 trillion. The Central government has voluntarily reduced its own role and preferential policies have made the provinces in the coastal regions economic actors with their own economic policies. The very nature and structure of decision-making and political system at the Centre's level ensures a high degree of compliance and vertical accountability thereby

reassuring the Centre that these provinces will not go astray in their decisions and actions. The Chinese government launched “develop-the-west” campaign in 2000. Under this, a number of preferential policies, including capital input, investment environment, internal and external opening up, development of science and education and human resources were offered to the western region. The Chinese government also liberalized the labour policies under which professionals working in western China could retain both old and new registration in their workplace.

On the India-China borders the examples are Lipulekh pass trade route in central Himalayas that connects Dharchula-Pithoragrah, Uttarakhand in India with Taklakot in Purang county of Tibet Autonomous Region (TAR) in China and the Shipkila Pass that connects Namgya-Kinnaur, Himachal Pradesh and Jiuba in Zada County in TAR. Both these trade routes are in difficult and rugged terrains and are highly seasonal.

China looks at Nathula Pass route in Sikkim as a vital physical economic entry into the 1.3 billion people market of South Asia. This is arguably the shortest route (roughly 590 km between Lhasa, Tibet and Gangtok, Sikkim) to Indian mainland, Bangladesh, Bhutan and Nepal. The completion of 1142 km railway from Golmud city in Qinghai province to Lhasa in 2006 and the refurbishing of overland access through Sichuan-Tibet Highway could transform the entire physical accessibility to and from mainland China in relation to Tibet and the neighbouring provinces and also the neighbouring countries. For India, besides Lhasa, these new transport infrastructures could open access to other business centres in western, eastern and south-eastern sea coast of China.

No significant trading has taken place at Nathula due to poor road conditions and infrastructural facilities, limited tradable items and lukewarm attitude of the policy-makers. No one uses containers for transport of goods and services. Power and telecom facilities are most inadequate; no mobile phones work. If adequate cargo facilities are developed in strategically located Bagdogra airport, it could serve as a major air cargo ferrying centre of the eastern and northeastern regions wherein all the major produce, particularly in the agriculture and horticulture sectors, could be transported to anywhere in the world. China has set a high priority on the resumption of trade through this corridor as they see opportunity to enter the Indian market and markets of other

countries of South Asia, and also see scope for Indian goods and services to access the markets of Tibet and western China. They plan to extend the railway line up to the Nathula border. The opportunities for investment in the western region of China are huge; Sikkim can even export electricity and other energy sources to the energy hungry western region of China. The Chinese are also interested in integrating trade with tourism. Eco-tourism and Buddhist circuit can be well integrated with pilgrimage to places like Mansarovar Lake in China. Health and educational facilities can be tapped into by creating new infrastructural and civic amenities including roads, bridges, warehousing, drinking water, electricity, hotels and restaurants, communications and making more effective use of the existing facilities.

With the Kathmandu-Kodari Highway and seven important transit trade posts Nepal-China trade has acquired a new significant dimension. Most of the Chinese goods that come to Nepal find their way into the Indian market. Maybe, the Chinese are attempting to make Nepal an entrepot and a transit route to enter into huge Indian market. The steady increase in imports of Chinese goods through borders with Bangladesh, Bhutan, Myanmar and Pakistan is going to get further impetus once China completes the Karakoram highway link to Gwadar port in Pakistan and opens 5 to 10 more passes in the mountainous border areas for trade with Nepal.

No analysis of China's policies in the region can be complete without an examination of its Tibet policy. Most dramatically, the opening of the Beijing-Lhasa railway line has created new opportunities, but it also poses challenges that have to be analyzed. The Tibetan Autonomous Region could be the largest mineral resource for China, with a potential value of more than RMB 1 trillion (\$125 billion). More than 95 per cent of the cargo transported in and out of Tibet, and 85 per cent of the passengers, go by road to and from Qinghai or Sichuan. Because of high cost of transportation, raw materials in Tibet cannot be easily transported out of the province, and, as a result, there is a big imbalance in the cargo entering and exiting the region. There will be requirement of power for the mining industry as it develops.

On 25 April 2008, in response to a Nepalese request that the Tibet railway be extended to promote trade and tourism, the Chinese authorities announced their intention to extend the Qingzang railway from Lhasa to Khasha on the

Nepalese border. Construction of the extension is planned to be completed by 2013. Reports say that the possible stations, *en route*, might include: Khasha, Xigaze and Yatung. There is speculation that the line might be further extended to Birganj and Raxaul; perhaps even to Nathula on the India-China border and possibly Nyingchi in Arunachal Pradesh at the India-China-Myanmar trijunction. The Nathula post could become a major border trading point between Sikkim and Tibet because of the all-weather road that connects the border region with the hinterland. It would provide for easier transportation of goods compared to the two existing trading points at Lipulekh in Uttarakhand and Shipkila in Himachal Pradesh which do not have a motorable road to the border.

Meeting the requirements of power for developing the mining and other industries in the region could have implications for river waters flowing into India. Many of our northern rivers originate in Tibet. If the Chinese choose to develop hydro instead of thermal power in Tibet, they would have to build dams on these rivers depending on their flows and feasibility. Even if they are small in size, they would affect the availability of water on the Indian side as control of the flows would be with China. (Arunachal Pradesh suffered devastation some years ago due to the collapse of a dam caused naturally by accumulated falling rocks). The other possibility that we need to bear in mind is that China might build transmission lines for using the power generation potential of Nepal. If there is a growing requirement of power in Tibet, China might find these alternatives more economical and viable than shipping power from the mainland.

To enable the workers to remain productive at high altitudes during the construction phase, the Chinese had set up a series of oxygen factories. If they continue to remain functional, they would contribute to easing the pains of acclimatization and training at those altitudes. It is not clear what assessments have been made of the enhanced capabilities for transporting human and material resources and, consequently for force projection, that the Chinese would have with the Tibet railroad in place.

China is also establishing trade and investment linkages with the vast untapped market and well-endowed regions of eastern India, through the larger process of 'Kunming Initiative'. The Greater Mekong Subregion (GMS) led and largely funded by the Asian Development Bank (ADB) could lead to the creation

of an inter-connected Mekong River Basin, with an extensive road and railway network linking southwestern China to Southeast Asia. This will accelerate the growing economic interdependence of China and its ASEAN neighbours. China is seeking to promote Kunming as the regional transportation hub. There is emphasis on completing the construction of the Kunming-Bangkok Highway via Laos. There are proposals to build four cross-border railways. One of them is intended to connect Kunming to Ledo (Assam, India) via Northern Myanmar, eventually linking Southwest China, Southeast Asia and India integrating the domestic and international markets. This would fit in with the Trans-Asian Railway Network promoted by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP).

The Asian Highway Link, Asian Railway Network and a Natural Gas Pipeline Grid are projects under active consideration of BIMSTEC. Linking the railway systems of India and Myanmar at the Dibrugarh railhead will give the NER access to Asian Railway Network. India has already constructed a road in 2001 in Myanmar linking the township of Tamu with the railhead at Kalembo which connects Mandalay, the commercial hub of Myanmar. There is a proposal to construct a 1,360 km Trilateral Highway from Moreh (India) to Mae Sot (Thailand) through Bagan (Myanmar). With the signing of India-Thailand Free Trade Agreement (2003), the steady rise in the two-way trade with Myanmar and spectacular growth in Sino-Indian trade, the prospect of NER becoming a hub for transit trade is brightening.

As a geographical area that abuts on the borders of major powers in Asia, including India, Central Asia will always attract foreign presences. It is what one may call a 'negative security space', where the major powers cannot afford to let other powers or forces exercise a dominating influence. India itself is not merely a South Asian power. India – or at least northern India – has always had a Central Asian character too.

It is not just the security aspects that make Central Asia important for India. Throughout India's history, the Central Asian connection has been the most important one in India's contacts with the outside world. Central Asia has been India's door to the outside world. After the break-up of the Soviet Union, Eurasia has diversified its connectivity with the outside world, has developed new transport and energy corridors to the rest of the world other than via Russia. The

Sarakhs – Mashad railway link has connected the railway systems of Central Asia and Iran. Iran and Kazakhstan have a swap deal arrangement whereby Kazakh oil goes to Iran's Caspian Sea port of Neka and Kazakhstan gets in return Iranian oil in the Persian Gulf for export to the world markets.

There is a Turkmenistan-Iran gas pipeline that supplies Turkmen gas to Iran for the latter's domestic consumption in the north of the country. Turkey and the Mediterranean have become economically more linked to Central Asia as a result of the Baku – Tbilisi – Ceyhan oil pipeline. Exploratory work is being done on oil and gas pipelines across the Caspian that would take Central Asian energy right up to Europe via the Nabucco pipeline. A new bridge across the Amu Darya links Tajikistan with northern Afghanistan.

The most dramatic development has been improvement in Central Asia's connectivity with China. The final settlement in 1996 of the old Sino-Soviet frontier in Central Asia paved the way for the restoration of traditional links and establishment of new road, rail and pipeline links in an east-west direction between China and Central Asia, as well as between Europe and Central Asia. China is also systematically reaching out with roads, railways and pipelines right to the edges of India's borders. Within its own territory, China has established railway connectivity up to Kashgar in Xinjiang and Lhasa in Tibet, which it plans to extend to the borders of Nepal and India over the next five years or so.

As Eurasia is integral to contemporary global geopolitics, India cannot afford to be absent from the region. The major dilemma that India faces is how to access Central Asia. It is undeniable that India's connectivity with Central Asia will remain sub-optimal without the cooperation of Afghanistan and Pakistan. A conscious policy of creating mutual dependency in the fields of energy and trade between India and Pakistan could lead to a much-needed normalization of Pakistan's relations with India. India has also been trying to access Central Asia via Iran. However, Iran does not provide a practical or economically efficient access route.

The geopolitical significance of an Iran-Pakistan-India pipeline would be immense for all the three countries as well as for the region as a whole. At the same time, it would be prudent for India not to rely exclusively on pipeline transit routes via Pakistan. The only possible alternative, or supplement, to a route to Central Asia via Pakistan and Afghanistan is via China. Thus, India

needs to seriously explore the possibility of establishing links with Central Asia via China, since that is the only other overland viable transportation route between Central Asia and India. A mere transport corridor between Eurasia and India via China may not be economically viable. It is only an energy corridor that can compel serious consideration of such an unconventional idea.

Two things become clear as a result of the above narrative. One, India must not allow itself to be boxed in and must improve connectivity in India's neighbourhood. Second, India needs to shed its old fears and apprehensions and get on with the job of maintaining its thrust in south and central Asia. What is needed is a focused policy and a determined leadership that views connectivity as an important element in achieving geo-political objectives and acts decisively to create it.

Perspectives on Northeast Connectivity

Mani Shankar Aiyar*

We need to disaggregate the Northeast in considering issues of connectivity with its neighbourhood for there is no unique system of connectivity that would, in fact, enable each state or each area of the Northeast to come into its own.

The real damage was done to the Northeast by the creation of East Pakistan. And here I hasten to add, for all the way through the worst period of India-Pakistan relations, which I would say was the period of 1947-1965, when emotions were really on the boil, there was no problem of connectivity between the rest of India and the Northeast through East Pakistan. It was the 1965 war that really wrecked that.

A good example of what happened when connectivity links were broken is the Chhatak Cement Factory in Northern Bangladesh, set up in 1937 by a British-Indian firm who had tapped the limestone available in Cherrapunjee (Sohra) and brought it by an aerial ropeway to Chhatak, to feed the cement factory that they established in what was then part of British India. But when Lord Radcliffe was asked to pick up his pencil and doodle with it in the Viceregal Lodge, he chose to draw the border between India and Pakistan in the eastern region immediately below this aerial ropeway. In consequence of which, what was a captive mine for the cement factory became international trade, and when international trade between India and Pakistan was disrupted in the 1965 war, the Chhatak cement plant had to simply close down because it did not have any other source of raw material anywhere within East Pakistan.

Of course, ultimately, this helped history because the lack of cement was one of the minor reasons why the Pakistan Army folded up like a pack of cards when we went in, in early December, 1971. But I, as the Desk Officer dealing with economic relations with Bangladesh, have always claimed that my single biggest achievement in that Desk was restoring the limestone supplies from

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Cherrapunjee to Chhatak – and that has continued till today. We also did get the waterway restored between Barisal and Dhubri. But everything else has remained as it was between 1965 and 1971. It is staggering that our diplomacy with respect to a country in whose liberation we were deeply involved has been of such a high order that we have not succeeded in reestablishing that connectivity which was taken as normal and natural through the worst period of the India-Pakistan relationship!

There is something flawed in such diplomacy. The Northeast, alas, and, its advocates here in Delhi, have simply failed over the last 33 years to point out to the Ministry of External Affairs and all those connected with our strategic and economic relationship, as also, of course, our political relationship with Bangladesh, that continuing disruption of the connectivity which existed till 1965 between the rest of India and the Northeast not only means that we are ensuring that the Northeast continues to be on an economic trajectory well below that of the rest of India, whatever that trajectory might be, but also that the 'Look East Policy' cannot be operationalized without the participation of the Northeast, for Northeast India is where South-East Asia begins.

Were we to establish that connectivity, who knows, we might even become a senior partner in ASEAN! In any case, whether we want to become a senior partner in ASEAN or not, if there is a Look East Policy, then, it cannot be looking East only from Chennai and Bangalore, who have been the biggest beneficiaries of this policy thus far, but will have to include the Northeast. So, this connectivity through Bangladesh to the Northeast is the most important element of connectivity between India and its neighbourhood in regard to the economic and strategic implications of a foreign policy that is in the interest of the Northeast.

The strategic implications are nil. I know that there can be any number of scenarios arising out of paranoia. Paranoia can teach you how Bangladesh will establish strategic relationships with Pakistan and with China and become the gateway through which India will be invaded etc. etc. I cannot rule it out but I find it extremely odd that it is ruled in by anybody. It is a scenario that is at the edges of realism. I cannot say it is totally fantastical, but I am not at all sure that we need to worry about that. What we need to do is to enquire what does Bangladesh want in return?

I had a personal experience of this. As Minister of Petroleum and Natural Gas, I visited Yangon in January, 2005 to discuss a pipeline from Akyab (Sittwe) through Bangladesh into India and succeeded in coming to a tentative agreement with my Bangladesh counterpart, who incidentally was a very junior Minister, and, therefore, came armed with very specific instructions from his authorities in Bangladesh as to what he might concede and what he might not concede, and what were the strict conditionalities, not connected with the pipeline, on which he must secure assurances from us.

It was not an easy negotiation, but when I heard what his conditionalities were, my jaw simply dropped; for one, he said, we must have direct electricity supplies from Bhutan and Nepal to Bangladesh. Having heard him, I cleared my throat and asked him whether he had checked with Bhutan and Nepal whether they were willing to give them electricity. He said, no. I said, in that case, we can agree with you. In any case, I could not understand why we would not want them to get this electricity. But I said, apparently arising from positions based on our sovereignty, etc., the Bhutanese will be asked to supply electricity to us, and, we will, in exchange, send electricity to Bangladesh, and here were the Bangladeshis saying they would prefer dealing directly with the Bhutanese. Anyway, this was the most important conditionality asked for.

The second was that to facilitate transit trade between Bangladesh and Nepal, the customs posts in India should be kept open for 24 hours. I checked to see why they could not be kept open for 24 hours. I was told that since the traffic is so little, keeping it open for eight hours is ample. All the Bangladeshis were asking for was as a very stiff conditionality that these customs posts be kept open for 24 hours. And the argument became delightfully circular for they said, of course, the traffic is little but that is because the check posts are open only for eight hours!

The third significant conditionality and, incidentally, the last one, imposed on me by the Bangladeshis was that something should be done about the balance of trade between India and Bangladesh. The official trade figures were that the Bangladeshis were exporting Rs. 300 crores worth to us and we were exporting Rs. 3,000 crores worth to them, most of it to an MP from Chittagong, who was not only the biggest promoter of Indo-Bangladesh trade in India's favour but also the most anti-Indian on the floor of Parliament! So, he pockets our money and goes on to abuse us. But the money was ours and the abuse was theirs.

I then asked what you think was the ratio, if you take what is so delicately called informal trade. I was told it was Rs. 300 crores to us because there are no or very little exports to us. But their imports informally are exactly equal to their formal imports. It is Rs. 6,000 crores against Rs. 300 crores - and wouldn't you weep if you were a Bangladeshi? I said, under no circumstances, my friend, will you ever be able to export Rs. 6,000 crore worth of goods to us - or even Rs. 3,000 crore - unless, no. 1, you agree to sell us natural gas or, no. 2, you allow us to set up plants in Bangladesh based on your natural gas, which we will import from you. Yet, you are saying that you cannot spare us your natural gas. And since you cannot use it, the only thing you can do is to cap it, which is why I said, his own Foreign Secretary and ex-High Commissioner in India, Mr. Farooq Subhan, on being asked by the London *Economist* how it felt to be the Qatar of South Asia, replied quite accurately, "What can I do if my Government wants us to be Somalia?"

I said to the Bangladesh Minister that, in these circumstances, they could not ever hope to rectify the balance of trade with India, but they could improve their balance of payments and perhaps even bring it to equilibrium by squeezing us for transit fees on gas that will go through the pipeline, through Bangladesh to us. And he saw the wisdom of that point. I also said, let us put in a little clause that either party, either Bangladesh or India, could feed their respective gas into the pipeline, the same pipeline that is taking the gas from Burma into India. He agreed because he knew that at Brahmanbari, which is the place where they have most of their gas, there is no petrochemical or chemical industry and the bulk of these industries are located around Jessore, a place which is at diagonally the opposite end of Bangladesh, much closer to Kolkata than it is even to Dhaka, let alone Brahmanbari. I also saw this is the way of effectively using available gas from Tripura which is also capped for lack of, what the oil sector technically calls, evacuation. The evacuation of gas is a big problem from Tripura. So, it is all capped there. Here was the opportunity to bring it to the rest of India using exactly the same pipeline that would come in from Myanmar (where we are part owners of the gas fields A1 and A3).

So, these three conditionalities were put into the preambular portion of the draft agreement worked out a month later by the tripartite Working Group, for whom we had scheduled three meetings but they completed their work within a month in just one sitting; they had the whole text ready and it was faxed to me. I

was at the Amsterdam Airport when the fax was given to me – and there followed the unseemly spectacle of India's Minister of Petroleum and Natural Gas jumping up from his seat shouting, "We made it, we made it!"

But our Foreign Office came down very heavily on me, and said our Ministry did not understand foreign policy. So, that draft agreement was not allowed to move forward. And the Burmese, in total despair, have committed the entire gas to China. Sometimes, I think, we need to have a foreign policy that deals with India's national interests, not unreal fears. This is a mindset that requires a huge change. There are concessions of a more significant order, not those given to me, but which are being asked for by Bangladesh, primarily relating to the textiles industry. But is it worthwhile protecting elements of the Indian textile industry but leaving the Northeast completely undeveloped? For, it is only if we do make major concessions on these issues that we can hope that they will agree to the restoration of links.

After all, it is not as if Bangladesh is constitutionally incapable of being friends with India. They did first agree to a bus service between Kolkata and Dhaka, and, subsequently, agreed to a bus service between Agartala and Dhaka. But, if you really want a direct service between Kolkata and Agartala, why not give a concession? The railway line is there till today and the traffic was enormous between all of the Northeast and Kolkata through this line that went through East Pakistan at the worst time in relations between India and Pakistan, when, in fact, a Hindu, especially an Indian Hindu trying to travel through East Pakistan might have had some concerns about his personal safety.

In thirty-three years after helping this country to liberate, we have not been able to restore that level of connectivity between the rest of India and the Northeast. And the same applies to road traffic. We have not been able to bring the Bangladeshis around. Now, we are getting signals from the interim government in Dhaka that they want to do some serious business with us. But, it is believed here, quite rightly, that it is not much use entering into an agreement with an interim government, whose only job is to organize elections. There are serious complications in this regard. But, I think, we need diplomatically to move very much further with Bangladesh to break the most significant problem that we have.

It also applies to waterways. Thanks to the agreement we had back in 1972, with me sitting in the background, we can still go from Haldia all the way up to Dhubri - except that the Bangladeshis don't really need that waterway, and, therefore, they are neglecting its upkeep, and, in a delta area like Bangladesh, if you do not resort to frequent upkeep, you cannot really use it. But, on the other hand, upstream from Dhubri right the way through to Dibrugarh or even Sadia, have we kept the upkeep going? Now, I must say, there is some activity there and the Brahmaputra has been made completely navigable between Dibrugarh (but not Sadia) and Dhubri. A pretty good river-side port has also been built just outside Guwahati but there are in total 78 (or is it 72?) wooden platforms along the length of the Brahmaputra, on the North and the South bank, which require upgradation to be able to take heavy machinery.

Here is this cheapest form of transport. It was once used by Scotsmen and the English to go into a state that was rampant with jungles, rhinos, elephants, snakes - and, steaming up the Brahmaputra, they opened up the economy to three products that were unknown till until the British went in there: tea, jute and oil. And Digboi is called Digboi because the Brits used to shout at the local labour, 'Dig boy, dig!' - until they found oil there. If the Brits could go up and down by waterway, it is extraordinary that two centuries later, we cannot go upstream and downstream by waterway!.

We have had a difficult relationship with Bangladesh but Thailand has an excellent relationship with them. There is a Thai company specialized in the upkeep of waterways. If we were to tie up with them, and if the Thai company were to offer to look after the upkeep of the Padma in Bangladesh, that would solve the problem and we would have plenty of connectivity to the Northeast Region through the Brahmaputra. We need to get on with the job of this connectivity.

The second connectivity that we must give very high attention to is the bypass issue: how the Bangladesh logjam may be bypassed by establishing a maritime route from Haldia Dock to Sittwe port, and, from there, upstream to Kaletwa, and from Kaletwa, by road, through the Kaladan valley, into Mizoram, and then right through Mizoram, cutting like a razor through it from south to north, we get into the Barak valley, and thus secure connectivity to the Northeast.

The problem with this is that a single barge from Haldia can take 6,000 tonnes of goods. When it arrives at Sittwe, it has to be transshipped into ten barges of 600 tonnes each before it reaches Kaletwa; and from Kaletwa, it has to be transferred on to 600 trucks of 10 tonnes capacity each to be able to go up the road to the Barak valley. Now, if you land at Airport in Mizoram and try to get Aizawl, it is quite an adventure because you could get stuck on the road since a single breakdown or a single landslide or a single driver of a vehicle can hold up the traffic indefinitely for several hours. So, getting into Mizoram by air is quite easy, but travelling from Lengpui Airport to Aizawl is a matter of luck! Therefore, if we are going to have 600 trucks moving up the main artery of the state, the danger is that we will convert Mizoram from a state into a traffic jam!

The answer devised so far is that we have a warehouse at Kaletwa, where we store the goods and send out small consignments on a daily basis. But it would take fifteen days time to clear the goods. So, we get two transshipments and fifteen days of storage. I am not quite sure how the economics of this is going to work out. There is an alternative bypass. It is a road from an entry point in Manipur to the same junction. It is also funded by India. We have some complicated MoU that says that we will build it and they will maintain it, and, they, of course, have not maintained it. Nobody is interested. It is in our interest but not of much interest to Myanmar, because they have no traffic between the Manipur border and Kaletwa. If we fund the Moreh-Kaletwa road, perhaps we could ease some of the burden on Mizoram and take this road through Manipur.

Alternatively, we could build a dedicated railway that goes up the Kaladan valley, perhaps up to somewhere below Lawngtlai, and, then cuts in from there to link up with the railway line that is anyway planned between Northern Mizoram and a point just below Aizawl in the valley. It could be purely goods traffic to begin with, not requiring very much in terms of wayside stations. And, eventually, it can also take passenger trains. Nothing will more effectively integrate Mizoram with the rest of India than such a move. So, we have to consider this too. Yes, the cost of the railways is very much more than the roads. But, then, the railways do not require the kind of maintenance that roads need, and the transport costs are likely to be very much lower. This is another requirement that needs the very highest attention.

The third is that there needs to be a clear understanding on our side that all roads through Myanmar (other than the one between Ledo and Kunming, which

I will come to later) that connect the Northeast through Myanmar with Thailand and points further South are entirely in India's interest, and, to some extent, in the interest of Thailand, but hardly of any interest to the Myanmar authorities. So, if we can have road connectivity all the way from Rajasthan to Mizoram, could we not just extend such connectivity at our expense through Myanmar to connect to the world's fastest growing economy, the economy of ASEAN?

I come a little further north now, the connection between Assam and South-West China. I often tell the Chinese, I often tell other audiences too, that the First World War would not have been won without Tata Steel, Jamshedpur, and the Second World War would not have been won without oil from Assam going into South-west China along with a road facility that enabled the movement of troops, and, of course, airports, rough airstrips in the North-East, for flights to go in and support the Allied forces. That is how the Second World War was won. That road came to be called the Stillwell road after the General who moved in there. That road is now in disuse.

The Chinese have rebuilt it from Kunming upto the Myanmar-China border. This is the bulk of the road, but the strategic consideration is that any road up which an Indian businessman could travel is the same road down which a Chinese General could move. I cannot deny the logic of this. It is absolutely true that if we did build this Stilwell road, there would be much easier access for Chinese forces into India. I also cannot deny that they did this to us in 1962. But for 5000 years before that, they did not do it.

Also, we have been making progress ever since Rajiv Gandhi's historic visit to China in December, 1988. His historic eight-minute handshake with Deng Xiao Ping in the Great Hall of the People has signalled a new chapter in India-China relations. So, do we think that that process is fragile? In which case I think we should not rebuild the Stillwell road. Or do we think there is progress, slow but progress in the desired direction, in which case, perhaps, we could build that road. After all, we are at present denying ourselves access to perhaps the market which is second only to the lucrative ASEAN market by not having direct connectivity to South-West China.

In so far as Tibet is concerned, I was amazed to learn from the Chief Minister of Arunachal Pradesh that there are two-and-a half-lakh, out of six lakh Arunachalis who have relatives across the border, sometimes distant but still clan

connections across the border in Tibet. And, there is some element of correspondence, exchange of visits between them. And that is why I think it is time we think of connectivity to Tibet without, however, giving up our apprehensions on the security front.

With Bhutan, we have outstandingly good relations, and, with Nepal, notwithstanding problems, we have, by and large, a good relationship. For the Northeast, I think, it matters a great deal that the Nathula Pass should become a major artery of India-China commerce and go beyond a yak's milk and horse leather or something, which is currently permitted, to move into the twenty-first century. If we can somehow push a road through the Kanchenjunga range into Eastern Nepal from Western Sikkim, then that part of West Sikkim, which is really dreadfully neglected and isolated, could suddenly become a new hub of economic activity. They are such a wonderful people, and, it is such a wonderful land that, I think, maybe, we should be doing this.

So, these are some of the suggestions that I have with respect to connectivity between the Northeast and our immediate neighbourhood. And, I hope that you will deliberate upon these during the course of your discussions today.

Imperatives of Connectivity

B. G. Verghese*

The subject is of great importance and the Hon'ble Minister has brought out why it is necessary for the Northeast to connect with the Indian heartland as well as with its neighbours to the South, North and East, namely, Bangladesh, Nepal, Bhutan, Tibet/China, Myanmar and Southeast Asia. The Northeast must also be able to connect with its traditional ocean frontier.

To quite a few the idea appears somewhat new and novel. But, if you look at India's history, we have always been globally connected and India's greatness always lay in its cultural, commercial and scientific interactions with the wide world. The old Silk and Spice Routes remind us of this. The Gateway of India in Bombay, facing West, came on the scene late. However, there were many such gateways connected with famous ports like Tamluk, Khambat, Muzairis and so forth.

Two images are strikingly etched in my memory. I visited Leh as a journalist in 1958 when there was no proper airport and Indian Airlines' aircraft landed on a rubble slope along the Indus marked by a wind sock. Beside it stood a wooden sign-post with several arms reading: Lhasa - so many miles, Kashgar - so many miles, Samarkand - so many miles, and pointers to Srinagar, Peshawar, Kabul and Delhi. You could take your pick and travel anywhere. That was Kashmir; that was India. Similarly, in the Northeast, along the Stillwell Road beyond Ledo, I remember seeing a huge rock milestone that marked the distances to the Pangsau Pass and on to Myitkina, Bhamo, Shweli and Kunming. Choose your road, and the world was yours! All these wonderful signs and symbols have since been allowed to crumble or have been removed, betraying our lack of sense of history.

That earlier connectivity was undermined by the Western colonial intrusion. We became insular as the colonies were linked like spokes to a metropolitan hub in Europe: the French colonies to Paris, the British colonies to London, the Dutch colonies to Amsterdam, and so on. We have got to restore the

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old pre-colonial connectivity and not consider this impossible or dangerous. India was always a globalised society and that is what made it great. Let us not forget that until the early 17th century India and China were the two leading economic powers in the world.

Connectivity denotes community, commerce and culture. We must build community relations with our neighbours and promote commerce and cultural exchange. Security concerns, which the Minister referred to, are extremely important. But we have such a fixation about boundaries, parts of which are yet to be finally drawn, that we lack a border policy, which is much more important. Consequently, as both the Minister and Mr. Rangachari pointed out while introducing the seminar, we have always thought that security lies in letting border regions remain wilderness areas without connectivity. This because, as the Minister said, if you build a road, you can travel across; but so can the other fellow in the reverse direction and even invade the country! So it was thought that safety lay in not building the road and saving the cost of the one or more divisions that would otherwise need to be deployed to defend the homeland in that sector. That is the unspoken theory.

As a result, the border people are often left to their own devices – neglected, peripheral and forgotten, thus creating another kind of security problem. Border neglect does not build security but insecurity. Mr. Pranab Mukherjee went to Sikkim recently and Mr. Anthony, the Defence Minister, visited Arunachal. Both looked across the border and were astonished by the fact that the Chinese had built roads and other infrastructure right up to our doorstep, filling our people with envy. The penny dropped and both Ministers instinctively said later that India must immediately do likewise and more.

The Chinese are everywhere and everybody is looking at China. If you go to any of our border states in the Northeast, you will find the market stocked with Chinese goods. The Indian Government fears dumping of Chinese products. But the border regions do not get merchandise from Ludhiana or Kolkata or elsewhere in India, but from China and South East Asia. It is “informal trade” that spells danger, criminality and growth of mafia networks involved in smuggling, flesh trade, money laundering, gun running and drug peddling. Everything flourishes as a result of this closed-door policy.

After Independence, we turned our gaze to the West as we thought that real business opportunities lay across the oceans in the UK, Europe, America and Japan. We did not turn to the East. Now we are looking East but we also need to look South and to our ocean frontiers and to the North and the great Eurasian Heartland and Greater Mekong Region where extraordinary developments are taking place, largely unknown to us or ignored by us. New pipelines, optical fibre and power transmission lines, trunk railway lines and trans-national highways have been built and are thrusting further forward and outwards bypassing the Indian peninsula south of the Himalayas. We are being excluded. These are among the richest natural resource regions of the world, but they seem to form no part of our thinking, no part of our strategy, no part of our vision, and certainly no part of our planning.

We have, however, been more active in West Asia, with an ocean-cum- rail link from our west coast to Bandar Abbas in Iran, and, then, going north to Sarakhs to tie up with the Iranian railway that goes to the Caspian Sea and on to Russia. This could cut down thousands of trade-miles to Europe or anywhere else, because the great Eurasian heartland can otherwise only be reached by a circuitous sea route via Suez, the Cape or the Bosphorus and then inland by rail or road to the deep interior. The world is fast connecting, while India is still thinking about doing so. We have not understood the meaning of connectivity. Our ministries and the Planning Commission are inward-looking, conscious of our frontiers. Our official conduct of business rules requires us to stay within the limits of India, sometimes even excluding our own border areas. We are merely gazing at our neighbours somewhat warily but not connecting with them. We have been “looking East” for some time but have yet to “act East” with real earnestness.

There is, in fact, little connectivity between the concerned ministries. Connectivity and transportation are no longer a single, simple equation. Movement is by road, rail, air, sea, inland/coastal waterways, pipelines and containers carried on intermodal transport networks controlled by telecommunications and the internet. This is what we must plan for. We have started doing so, but we are way behind the rest of the world. Our concept of looking East has until now been merely to seek ocean connectivity. Thus, Chennai and Mumbai ‘look’ at Singapore, Hong Kong or Osaka. However, the Northeast can only ‘look’ at Guwahati and Kolkata, because we have not allowed

anything to move further East. All you can do in Guwahati or Imphal is to take an about-turn smartly and head for Kolkata or Delhi, whereas the Northeast could and should be a gateway and land bridge to South East Asia, Tibet/China, Bangladesh and the sea.

Were the Northeast to become a land bridge we could cut distances and transaction costs. If we want to have trade, we must be competitive, and, if we want to be competitive, we must have good connectivity. So, instead of thinking of building or retaining buffers, which provide little security, we must build land bridges that connect us to the world around and beyond. This is a concept which we still have to understand fully.

Now, one of India's tragedies is that a country that boasted of having produced great astronomers and mathematicians who taught the world navigation, has turned its back on geography. We denigrate geography and have a horror of maps, which are kept secret (while the world pries on our innermost secrets through satellite or Google eyes). Geography has become just a minor subject in schools and is not greatly favoured by our universities. Only a few in India understand geography. As such, most of them are unable to match geopolitics and geo-strategy with ground realities. It is pathetic. So, if somebody talks of re-connecting Ledo to Kunming, most of the audience would not know where to look for these places. The creation of the world gave us geography: the land, climate and human and natural resources. Man's interplay with geography gave birth to history and politics. Therefore, unless we have some understanding of geography, we cannot properly connect or relate to geo-political realities.

Partition dealt us a very grievous blow in the Northeast. We let the Ganga-Brahmaputra waterway fall into disuse, although it was partially functional till 1965. But as early as 1956 we had abrogated our adherence to the Barcelona Convention on Inland Navigation because someone in Nepal described the Ganga as an 'international river'. In this manner, we unfortunately abandoned our claim to continued historic use of this great international waterway and artery of commerce as a matter of right.

Pakistan made great play on its 'historic uses' of Indus waters and this became the accepted basis of its share of waters under the Indus Waters Treaty. We never ever mentioned our 'historic' navigational uses and transit rights in relation to the Karnaphuli, Ganga, Brahmaputra and Meghna. Pakistan asked us

for transit from West to East Pakistan through bonded railway wagons in the 1950 and 1960s. We refused on security grounds.

Now we ask Pakistan and Bangladesh for transit to Afghanistan and the Northeast! Having long rebuffed them, why should we expect them to readily say 'yes' to us. The tripartite gas pipeline deal with Myanmar and Bangladesh fell through last year as we were not sufficiently open-minded on the principle of reciprocity on Bangladesh's pleas for new or additional rail and power connections to Bhutan and Nepal. Why don't we allow Nepal or Bhutan to export power to Bangladesh, Pakistan or anybody else? We would earn wheeling charges. The moment we say 'yes' we would be in a stronger bargaining position to seek transit rights through Bangladesh. If we don't give others transit but demand transit, connectivity becomes a casualty.

We allowed Air India to go to seed. We used earlier to have more flights than we now operate to Southeast and West Asia. As a result, Indians fly by other airlines to make global connections. The argument is that there is insufficient traffic. Why? Because the traffic has gone to other airlines. All-India Radio and Doordarshan's External Services was a vital aspect of connectivity. They have sadly run down. Everyone now tunes in to the BBC, CNN and Al Jazeera.

Our whole policy has for long been narrowly focused on *swadeshi* and self-reliance. We shunned exports until recently and were primarily geared to our vast internal market. Today, with our depleting natural resource base, we are investing in and not just trading with Australia, Myanmar, Russia (Sakhalin), Nigeria, Colombia and wherever to get oil, coal, manganese, uranium or whatever else. Now, as an emerging economic, political, military and technological power, we must look outwards, as others are doing. But even today, as ASEAN, China, Japan, Korea, Russia and the West are connecting and investing vigorously, India is still thinking more than acting. Thought without action is futile.

Reference was made to developing the Kaladan corridor from Mizoram to Sitwe port in Myanmar. This is something I suggested when I was working in the Prime Minister's Office as far back as 1967! Ideas have lain dormant for decades. We cannot any more remain late-comers on everything, every time. When you think of connectivity, you have got to go beyond linear action to

thinking of whole webs and backward and forward linkages. And thinking must not be sequential but concurrent. Any child knows that if you build a road you need trucks and buses, petrol pumps, repair shops, rest houses, traffic signages, and so forth. You can't just build a road and then think of ordering trucks and then recruiting and training drivers, and so on. All this will take months and years and entail losses and asset-deterioration. Yet this is precisely what happened with the 169 km, Rs 175 crore Moreh-Tamu-Kalewa/Kalemayo highway we gifted to Myanmar in 1999 with the object of 'looking East' and opening up trade with that country and, through it, with ASEAN.

But the existing national highway linking Moreh to Imphal was not repaired, let alone upgraded, and a debate ensued about constructing weighbridges and an expanded immigration and customs post at Moreh, prescribing baggage rules, licensing banks and sorting out relevant currency issues, negotiating a motor vehicles act, preparing signages, depots, warehouses, rest rooms, etc, etc. Nearly a decade later, little of this has happened. Apparently, little or no licensed inter-country traffic moves. The local market has migrated from Moreh in India to Tamu, 100 metres away in Myanmar. And a brisk 'informal trade' is happening under the very nose of the authorities. So much for 'security'! We should not allow the Kaladan corridor to meet the same fate? Forward planning to use the corridor and Sitwe port must start now with all interests brought on board in a coordinated and structured manner.

We have learnt nothing as the sad experience of the Guwahati International Airport and Air Cargo Terminal suggests. I was a Member of the Shukla Commission on 'Transforming the Northeast' in 1997 and recall being told with anticipation of the international airport project. The Commission was duly impressed and asked for operational details about management, usage and forward and backward linkages. Nobody knew either in Guwahati or Delhi. No one knew who was in the loop. Worse, nobody seems to be in the loop even today, 10 years later.

What is the use of connectivity unless you connect your mind with what follows? This has not been done. The total disconnect between thought and action is disconcerting. An inaugural flight to Bangkok was celebrated after which the service was suspended for lack of traffic (and preparation). That has since been revived on a limited basis. Yet, there is great cynicism and skepticism

in the Northeast and elsewhere about 'Looking East' and other grand plans in view of our lackadaisical approach to the planning and execution of projects.

A passenger train service from Kolkata to Dhaka has commenced. But there are many other opportunities for inter-modal traffic and transport through Bangladesh, which are still to be explored and exploited by various central ministries, the states and the private sector, all of whom have to be brought together. We need reciprocity in terms of what we demand from and offer to Bangladesh in order to make it worthwhile for it to move forward.

The Minister referred to the opening of the Nathula trade route. But it is still restricted to "border trade" or some 29 items like yak tails and other local produce. This is good for local communities on either side and has a bearing on lives and economies along the border. But, then, border trade should not be the enemy of international trade on which both Sikkim and China are keen. Here again, the "security" factor was cited. Finally, reality has dawned with the Chinese announcement that they plan to extend the Golmud-Lhasa railway to the Chumbi Valley and Kathmandu. This may or may not fructify. But we have finally been alerted to the fact that something is happening on the other side and, therefore, we had better do something about it.

We have not built connectivities within the country too, because different modes of transport have been destructively competitive. Take water transport. We have some 6,000 km of coast line. But how much coastal traffic do we move? Very little. This is partly because maritime and ocean carriers have frowned on coastal traffic. Road hauliers and the Railways have been embattled for years. Inter-modalism has been retarded. Unless we build connectivities within the nation we will fail to build connectivities without.

If one looks at the Jamuna Bridge across the Brahmaputra (known as the Jamuna in Bangladesh) it immediately suggests itself as a nodal point for east-west movement in the eastern part of the subcontinent. This is because the Jamuna (Brahmaputra) divides Bangladesh into two worlds: a metre gauge, gas-based system east of the river and an imported oil/coal-based, broad gauge system to the West. This was a real economic divide that has now been bridged and offers rail-road connectivity from the Indian heartland to the Northeast and Southeast Asia. It is a vital link. Yet we long fought to have the proposed Asian Highway move north from Moreh to Assam and then through the Siliguri neck

to West, up hill and down dale, adding a great deal of additional mileage to the route.

Unfortunately, the Bangladeshis have been equally limited in their thinking, unmindful of the fact that allowing Indian transit traffic could be enormously profitable for them. Their current negative balance of trade with India would turn in their favour. The Indian and East Pakistan railway systems were interconnected at several points till 1965. The moment the link was severed, the East Pakistan/Bangladesh Railway has been in the red. The World Bank studies indicate that the moment Indian transit traffic is permitted, the BD railway system will again be in the black. Connectivity will bring other investments with it as connectivity will trigger a large multiplier effect and stimulate the entire economy.

Looking at our maritime futures, one sees no great port in the entire Bay of Bengal region. The really large container ships, bulk carriers and oil tankers go to Singapore and Colombo, as they cannot enter any Indian (or Bangladesh) port. Our best ports are second grade by world standards. This is not good. We had offers from Myanmar to build a deep-water port there. We declined and the Chinese have reportedly stepped in. Eastern India constitutes India's poverty belt and also its most populous segment. But if the country grows at 9 per cent and eastern India and the Northeast also do better – as they must and will – more transport and port capacity will be required. So, we would need to augment our ocean capacity in the Bay of Bengal and simultaneously build land bridges to Southeast Asia. The story of Calcutta Port is one of missed opportunities – with a once vibrant inland port trying to project a faded ocean glory. Sustaining a sick Calcutta port has entailed choking port development in Haldia and further out to sea in Bengal. This is, however, a separate issue.

Air connectivity in the Northeast has deteriorated over the past 30-40 years, as privately run Dakota air-taxi services have inappropriately been replaced by wide-bodied aircraft that lack short take-off and landing capability. A regional air service with Guwahati as the hub has been long in coming, as air crew insisted on the comforts of Kolkata night halts. The Civil Aviation Ministry has also had a policy barring small, single-engine aircraft from flying in mountainous regions on safety grounds. Yet, small aircraft are flying all over the world. Nepal has many private carriers flying small aircraft to several mountainous destinations, bringing with its connectivity, tourism, better administration and

national integration. We could also do likewise but sadly negative attitudes prevail.

With regard to pipelines, our first reaction to the proposed Iran-Pakistan-India pipeline was negative, as we feared Pakistan could cut off supplies. Attitudes have since changed and now a Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline could also be on the anvil. If we have oil and gas pipelines that connect to the world's energy centres, it would place us in a position to influence energy flows and markets. Add to this transmission grids that could connect hydroelectric stations in Kyrgyzstan and Tadjikistan and feed power to India or even to Pakistan from whom we could buy power through switch trade. It is connectivities of this kind that are required to get us where we want to go as a nation.

With regard to telecommunications and satellites, we have wonderful satellite facilities that we could exploit to our greater advantage. Why speculate, when a single satellite image could tell us what is happening.

Looking East, we also need to build international power grids. We have got a Bhutan-India Grid, but we do not want to link it with Bangladesh. We have completed a feasibility study of the 3000 MW Chindwin cascade in Myanmar. The Tamanthi project (1200 MW) is likely to be taken up for construction as an aid-to-Myanmar project. Discussions are in progress about its financing and if the project takes off, surplus power will be fed to Nagaland marking the beginning of a potential SAARC-ASEAN grid. Harnessing the enormous potential of the great U-bend in the Tsang-po also opens up exciting possibilities in the future.

There has been a lot of talk, over the years, about the Asian Highway and the Tans-Asian Railway. Unsettled conditions in Myanmar have stalled their progress; but these are projects that will happen sooner or later. As for the routing, trade will follow traffic.

ASEAN is already on the ground and the Mekong-Ganga Cooperation and BIMSTEC are on the drawing board. These represent large geographical entities and huge populations, far larger than the EU or NAFTA. Why not then consider smaller growth triangles or twin growth poles which have worked wonderfully well in South East Asia and East Asia to promote trade across borders and build connectivity. In any area of connectivity, the crucial challenge is the so-called last-mile problem. Growth triangles take care of the last-mile problem in terms of

trade facilitation and connectivity - a little bridge, an immigration or customs post, bank facilities, security arrangements, whatever, either singly or in combination could trigger larger commercial flows. Could we, therefore, not think in terms of building growth triangles with Myanmar, Bangladesh, Nepal, Bhutan and Tibet?

We need to look at the Greater Mekong Region and learn from it. The Mekong economic corridor has been a billion dollar project but will yield a dividend of maybe 10 billion dollars and more because it would bring with it investment, industrialization, tourism, employment and income generation opportunities. But some of us do not want to make the little investments that make us grow. This insular mindset must change and for this connectivity could prove to be the catalyst.

Connectivity and History: A Short Note

TCA Srinivasa-Raghavan*

Introduction

Of the seven countries of South Asia (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka) four namely, India, Pakistan, Bangladesh and Sri Lanka had, until about 75 years ago, been a single unit so far as governance is concerned. If we include Myanmar (Burma), the number becomes five. Yet, in 1947, Britain before granting Independence to India, split it into three parts; earlier it had hived off Ceylon (Sri Lanka) and Burma. Thus, what was a composite unit is now split in five nation-states, each wary of the other. So deep is the spirit of bad neighbourliness that intraregional trade and connectivity have remained low – there is between three to four per cent of total trade, compared to 70 per cent of Europe and 25 per cent of ASEAN. Besides, there does not appear to be much scope for significant expansion, either in connectivity or in trade. For one thing, the complementarities, so vital for trade, do not exist; for another, security concerns are such that improved connectivity looks to be something of a pipedream. If one includes China in this scenario, these problems get enhanced at an altogether different plane as far as India is concerned.

Nevertheless, there is a huge body of literature, remarkable only for the profusion of euphemisms and the explicit or implicit conclusions by everyone that enhanced economic cooperation is possible only after all major political issues have been settled. This is because whenever tensions between two countries have been high, they stop progress for all. This is implicit in the SAARC Charter, which requires unanimity. Again, add China and progress becomes quite impossible because of China's policy of surrounding India with hostile neighbours.

Connectivity, therefore, has become a distant reality for India, even as China has improved its own connectivities in South Asia. Even enhanced sub-regional cooperation has become a victim of political issues. Several commentators, mainly Indian, want the order of cooperation to be reversed, but

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that does not seem possible on current reckoning. It may be pointed out that even Nepal has become less than friendly towards India and very cordial towards China. It even has a Maoist government. Pakistani scholarship's emphasis is more on politics, with special but often unstated reference to Kashmir. Even publications sponsored by foreign think-tanks in Pakistan have tended to include a section on Indian 'designs'. Bangladesh started off positively towards India, but is now quite negative while being very receptive to China.

As I have written elsewhere, "The collapse of the USSR in August 1991 had a profound impact on South Asia. First, it led to a dilution of US focus, notably on Pakistan. Second, it led Pakistan to initiate a low-intensity conflict in Kashmir. Third, it forced India to review its relations with the US, so that Pakistan's traditional ally in South Asia found itself being wooed by Pakistan's sworn enemy. Fourth, India lost a huge market in the USSR, which it sought to replace by trade diversification to East Asia. Fifth, the apparent success of ASEAN in expanding trade and investment, the creation of NAFTA (1992) and the Maastricht Treaty (1993) all brought home the urgent need for enhanced regional cooperation in South Asia. Lastly, as far as India was concerned, the China factor began to drive some elements of sub-regional policy, in the success of which SAARC was seen an important instrument.

The irony is that, despite the problems that India and Pakistan had between themselves during this period, and which should have left SAARC floundering, it was instead the period that saw major progress in regional trade with the creation of SAPTA and later SAFTA. An important reason, as stated above, was the fact that South Asia, especially India, still believed in regional cooperation. The non-reciprocal benefits offered by India stand testimony to this."

But, of late, because of the way the Indian economy has developed, India, too, appears to have become lukewarm. It is making all the pro forma statements, a peace process with Pakistan is underway, talks are being held with Bangladesh, and so on; but finally there is no getting away from the key economic truth: India's size and diversified economy make trading with its immediate neighbours a last option. Even where investment is concerned, only India has the surpluses and it prefers non-South Asian destinations. Also, given the dominance

* *Regional Cooperation in South Asia and Southeast Asia*, K Sridharan, ISEAS, Singapore, 2006.

of knowledge-intensive services. In India, neither there are markets in South Asia, nor there are sources of supply of high technology that India craves. The result is that India's interests lie outside South Asia. And even here, its huge internal market, which is now growing rapidly, removes the pressures that economies with smaller domestic markets experience to become outwardly oriented.

In amazing contrast to Europe, China and East Asia, India can derive no particular benefit in trading with the rest of South Asia. The remaining six countries in South Asia (seven, after the inclusion of Afghanistan in SAARC), are not in the same league. India wants energy from them which they will not give, preferring instead to sell it to China. This, too, affects the impetus towards improving physical connectivity. The reason for all the paradoxes in South Asia – and there are several – is that none of the necessary and sufficient conditions exist, at least in the measure needed to make regional integration a desirable objective. Thus, there is no physical threat to the region and India's domestic economy gives it the scale economies it needs for undertaking large-scale investments. So, possibly the chief motivation for it to improve connectivity is its security concerns.

China has almost completed the integration of Tibet with the rest of China. Chinese land communications with Nepal, Bhutan and Myanmar have also been improved. The strategic nexus between China and Pakistan and the fact of China's arms sales to Myanmar, Bangladesh and Sri Lanka is well established. China has been acquiring bases overseas in distant lands and seas and has established maritime foothold astride the critical choke points. Referred to as the 'string of pearls' strategy by the western world, it envisages Chinese attempts to position points controlled by it along strategic maritime gateways to protect sea-lanes for ensuring supplies of raw materials and energy for China's industries. This is something China will do virtually at any cost, including, if necessary, the use of force. History is replete with examples of countries embarking on rapid growth going to war to sustain such growth. China may not turn out to be an exception.

To understand India's current dilemmas, it is important to go back to the colonial period, when India was ruled by Britain. Unlike the previous rulers of India, Britain ruled India like a branch office, with the head office in London. India was the centrepiece of the British Empire, in three ways. First, it was a source of raw materials; second it was a huge market; and third, it held the key to

the defence of Britain's Asian possessions, both to the East and to the West, not the least by providing soldiers. India, therefore, had to be defended whatever the cost and effort. This is where the British security mindset came in. Since Britain is an island – one that has not been invaded since 1066 -- British security is essentially crafted around a moat mentality. This has always consisted of building secure barriers access to which is controlled by Britain.

Britain's main challenger in this region throughout the 19th century was Russia, which had been expanding eastwards in its quest was for a warm water port in the East. Britain was anxious to prevent this. The discoveries of oil in West Asia made it even more anxious. India thus became the hub of the British Empire's defence in Asia. Indeed, almost half of the government's revenue in India was utilized for imperial defence. It was felt that without India, the Empire would collapse, as indeed it did after 1947.

An absorbing account of the role played by roads in the Central Asian region and their connectivity with South Asia can be found in a Mahnaz Ispahani's book *Roads and Rivals: The Political uses of Access in the Borderlands of Asia*. She describes in great detail how the big powers were engaged in a persistent struggle for achieving their own connectivity and denying the same to their rivals. The British defeats in the Afghan wars, she says, taught them an important lesson: never let logistics come in the way of conducting a war. So, they began to build roads in the region, whose purpose was primarily military but which also facilitated market access. Thus, the 1908 British Imperial Gazetteer for Baluchistan records that "all the railways and the best of the roads have had their origin in strategic needs."

Ispahani says that "what the British achieved in Baluchistan was only a small advance on the accomplishments of preceding empires. By constructing roads and rail and an efficient system of political subordination, the British integrated Baluchistan territorially into their Indian Empire and exercised effective control over strategically necessary areas."

Russia too had been active in the region. It started with the construction of railroads in Central Asia, which worried the British for their lines of communication in the NWFP. As Ispahani says, "In the mid-1880s a railway connecting the Caspian Sea to the Asian heartland was constructed. Russian strategists (most importantly General Annenkov) argued for the connection of

the furthest Turkic outposts with the Caucasus. In 1881, one hundred sixty miles of rail were laid, and in May 1888, the eight-hundred-seventy-nine-miles-long route from the Caspian to Samarkand was opened." Indeed, many scholars are of the view that without the railroad, Russians would not have been able to integrate Central Asia. And, of course, India always beckoned.

What Britain did, in order to secure India was to create buffer zones all around the land borders of India. The sea was not a problem in view of Britain's overwhelming naval superiority. This was the cornerstone of British security policy as can be seen from the English Channel, the Straits of Gibraltar, Suez Canal, etc. Overall, the policy followed from a 1903 decision by Sir Arthur Balfour that "so long as it [Afghanistan] possesses few roads and no railways, it will be impossible for Russia to make effective use of her great numerical superiority at any point immediately vital to the Empire." Afghanistan was to be inaccessible and impermeable, negating the possibility of swift, surprise movements across its frontiers. British trepidation over Russian railroad construction contributed largely to the formation of this Afghan buffer. It should also be noted, in view of what was to transpire fifty years later, that the British thought it wise for the Afghans to maintain minimum economic contacts with their northern neighbor."

"British policy", says Ispahani, "had five elements: denial of access; giving Afghanistan a buffer role; influence route development in Afghanistan; establishment of the Durand Line boundary between it and India; and the protection of the boundary through the construction, inside the frontier, of a network of strategic routes and military outposts." In effect, Britain did what it had learnt from its own island history with the British Channel: it created the equivalent of a moat.

But moats also mean cutting off connectivity except through narrow, easily disconnectable channels. The main buffers in the 19th century were Nepal and Afghanistan and given that the adversary was Russia, the latter became the main buffer. Britain also secured the Northeast, which until then had not been ruled by any major Indian power for any significant length of time. In the Southeast, there was Burma which became a buffer. The Japanese forces, during World War II, in order to reach India had to conquer these areas first.

We also tend to overlook the strategic factor in the decision to create Pakistan. This has been brought out in a book by C. Dasgupta. He says that Britain needed Pakistan as a base to defend its oil interests in West Asia because the Congress would not have permitted India to be used for this purpose after Independence. However, a moat or a buffer is, by itself, useless because it can also be used to trap you in, if a siege is laid. This is what China is, in effect, doing. So, everything depends on who controls the moat. At present, it is China, which is in control. Here it may be pointed out that a drawbridge by itself is not important; you have to control the man who raises it and lowers it. Thus, Pakistan is under US and Chinese influence; and Bangladesh and Nepal are also under Chinese influence. The same holds true for Myanmar. So, even though the buffers protect India, they are controlled by others.

This is the main legacy of the colonial period. A security design that was intended to protect India has now become its jailor. It must be added, though, that while in the security context this matters a lot, in the economic context, it matters a great deal less if the structure of the economy is not one that depends largely on surface transport for trade. Indeed, in many ways, better connectivity in the border areas of India is more of a domestic economic issue than an international economic issue. The implication is that there has to be a trade-off between economic and security issues.

One can conclude by saying that our neighbours will gain more by assuring India of their peaceful intentions and of their desire to expand economic ties with it, because while we can do without them, the reverse does not hold in the same measure. This, however, is a lesson they are unlikely to learn until their experience with China fails.

India-China Connectivity: Strategic Implications

Gen. V. P. Malik*

Geo-strategically, India is so situated that it forms the bridge that links Western, Southern and South East Asian regions along the Indian Ocean and dominates the sea-lanes of communication passing through. It has land borders with six countries:

- China 4056 km (all disputed)
- Nepal 1751 km
- Bhutan 699 km
- Myanmar 1643 km
- Bangladesh 4351 km
- Pakistan 3244 km (of which 1048 km is disputed)
- Afghanistan 106 km (with Pakistan occupied Kashmir)

More than one-third of India's land borders are disputed and undemarcated.

Geo-politically, South Asia represents an integral security zone with India's unique centrality. No two South Asian nations can interact with each other directly without touching or crossing Indian land, sea or air space. India has special ties with each of her neighbours, except with Han China, of ethnicity, language, culture, common historical experience or of shared access to vital natural resources like water. Its size, situation and potential oblige it to function as a stabilizing force in the region.

With China, it has been slightly different. Tibet was a buffer state between China and India; socially, culturally and economically. There was no communication between China and India through Tibet. Both Faxian in 402 AD and Hsuen Tsang in 633 AD came to India via Central Asia and not through Tibet. Han China exercised suzerainty over Tibet but never 'occupied' it till October 1950.

Even with Tibet, India's ties were of a comparative lesser intensity on account of the Great Himalayan geography. Very few passes permitted land

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communications and, therefore, ethnic commonalities and border trade remained limited. For example, despite the existence of several perennial passes, the Tibetan population in Arunachal Pradesh is less than 10 percent. Indo-Mongoloid tribes account for 68 per cent of the population. The rest are migrants from Nagaland and Assam. As far as religious affinities go Hindus are the biggest group with 37 percent, followed by 36 per cent animists, 13 per cent Buddhists. In all, there are 21 major tribal groups and over 100 ethnically distinct sub-groupings, speaking over 50 distinct languages and dialects. The population of about a million is spread out over 17 towns and 3649 villages. With the exception of a few villages of Monpas who live north of the McMahon Line, it is an ethnically compact and contiguous area.

A Background to Sino Indian Strategic Relations and Development of Communications in Border Areas

A common strategic factor between China and India has been their respective long histories and cultures, internal disunity and colonization. It was but natural that after gaining Independence, both started on the 'Hindi-Chini Bhai Bhai' note. Strategic implications of Han Chinese' occupation of Tibet was not adequately appreciated in India. There was little or no administration and no idea of what was going on in the border belt. The 'Bhai Bhai' relations came to a sad end with the 1962 Sino-Indian war. After the war, Chinese, unilaterally, withdrew to the present Line of Actual Control (LAC) and remained in occupation of the territory which was strategically important to them. India's politico-military shock was so traumatic that for several years, Indian Army was not allowed to go near the LAC in many areas. We had neither military capability nor road communications to project ourselves.

Another border incident took place in 1967 when Indian troops tried to construct a fence at Natula in Sikkim. An artillery duel went on for several days, with many casualties on both sides. The Chinese must have realized that the Indian military had changed and a 1962 type war was not repeatable.

For many years, no roads were constructed in the areas vacated by the Chinese after the 1962 conflict. There was a fear that in the event of another Chinese attack, these roads may facilitate their offensive operations and movements. We even considered Chinese military threat through Burma and Nepal. In the mid-1970s, the China Study Group reviewed Northern border patrolling policy and decided to send small patrols forward up to the LAC.

However, nothing was done to construct roads or tracks in the forward areas. Thus, there was little improvement in our administration or logistics infrastructure in the forward areas.

The Wangdung incident in August 1986, however, brought about a major change. After the CCS clearance, Army occupied Hathongla Ridge (South of Thagla Ridge) in Kameng District with a mountain brigade. This move escalated the border situation and resulted in intensified patrolling and deployments on both sides. At many places, Indian and Chinese troops got into eyeball to eyeball positions. Due to lack of communications, Operation Falcon – as it was called – had to depend upon massive air support. This operation resulted in immediate government sanctions for construction or improvement of several border roads, advance landing strips and other logistics infrastructure for the civilian public and military formations deployed in this area. In some strategically important sectors, border roads were built right up to the LAC.

The main point to be noted is that the military was better prepared to defend the territory right up to the LAC, provided it could be logistically supported and given adequate communications. The military also favoured economic development of the border areas for greater integration of the local population with the rest of the country and also doing away with 'Inner Line Permit.'

The present improvement phase in the Sino-Indian relations started with Rajiv Gandhi's visit to China in 1988. Its immediate impact was that financial sanctions for further development of communications in the border states along the LAC dried up. As a result, no major projects were undertaken in the next 14-15 years.

Since 1988, India and China have signed several agreements to improve bilateral political, economic, strategic and military relations. These include agreements and protocols signed in 1993, 1996, 2003 and 2005 – 'Political Parameters and Guiding Principles for the Settlement of the India-China Boundary Question'; 'Agreement on Confidence Building Measures (CBMs) in the Military Field along the Line of Actual Control (LAC)'; and 'Modalities for the Implementation of CBMs in the Military Field along the LAC'.

From time to time, both sides have 'reaffirmed that neither side shall use or threaten to use force against the other by any means or seek unilateral military

superiority' and have committed to work on the CBMs contained in these agreements. But till now, there is no accepted delineation or even an agreed perception of each other's LAC on the maps. Consequently, there is often local tension in some areas when troops from either side carry out road building, bunker construction/repairs or patrolling. Other CBMs like deployment of troops and heavy weapons as given in Article 3 of the 1996 Agreement are related to distances from the LAC. These are not actionable until the LAC is delineated.

So, while China continues to occupy nearly 18000 sq km of Indian Territory in Ladakh, has obtained Shaqsgam Valley further west from Pakistan, claims the whole of Arunachal Pradesh and some other areas, our political and economic relations with China have been on the upswing. There have also been high and low level discussions on strategic matters, particularly on terrorism. Exchanges and interaction between the armed forces of both countries have also increased marginally.

Meanwhile, China has constructed all-weather highways to and within Tibet, an oil pipeline and a railway line to Lhasa, and upgraded all airfields in Tibet. The now operational Qinghai-Tibet railway is slated for further expansion – linking Lhasa with Shigatse and Yadong near Sikkim border. Chinese land communications with Nepal, Bhutan and Myanmar have also been improved. These developments have upgraded Chinese defence infrastructure and military capability in Tibet substantially and enabled almost complete integration of Tibet with the rest of Han China.

Larger Strategic Picture and Prospects

In the last two decades, global strategic and security environment has seen unprecedented changes in the concepts, paradigms and complexities of national security. Globalization, multilateralism, and regionalism have replaced not only bilateral international relations but also the straitjacketed concept of sovereignty and security. There is a more liberal approach to security and a greater awareness of its comprehensive nature. Comprehensive security, it is well understood, includes not only the traditional defence-related threats but also challenges in societal, political, economic, technological and environmental dimensions of security.

Power, as we know it now, is not just military power; it is also economic, political, cultural, and technological power. The true mark of great power is

strength in all areas. It is well-known that China is in pursuit of such a comprehensive power. Some distinctive features of the new strategic architecture are:

- Increasing centres of power in the world with greater focus on Asia. In that, China and India are the most promising rising powers.
- Asymmetry of power and capability among power centres resulting in concurrent cooperation and competition among the power centres. International relations are issue-based, driven by functional national interests and require greater flexibility than hitherto.
- Trade and economics of international finance have made nations inter-dependent in a free market and export-oriented world. High-speed long-range communications have become a necessity.
- Rising population and depleting energy resources is giving rise to new factors in the strategic power play.
- World population growth, expected to touch 8.05 billion in 2020 as compared to 6 billion today, and the tendency to migrate in search of 'greener pastures' will create its own strategic dynamics.
- Armed conflicts are moving down the paradigm scale of intensity and inclusivity. High scale conventional wars are yielding more often to limited wars and low-intensity conflicts.

This, however, does not mean that any nation is prepared to compromise on its security, or give up its efforts to become powerful. No nation wants to take a chance with its security and underestimate the value of nuclear or conventional deterrence.

China's strategic planners tend to evaluate and measure national standing in relation to other nations on the matrix of comprehensive national power. A recent study of China's grand strategy has identified three objectives that it seeks to achieve. These are: (a) preservation of domestic order and well-being in the face of different forms of strife; (b) defence against persistent external threats to national sovereignty and territory; and (c) attainment and maintenance of geopolitical influence.

Many believe that the current Chinese strategic behaviour is conditioned by a strong sense of victimization and vulnerability arising from past memories of

colonialism and focused pre-occupation with all issues related to nationalism and sovereignty. There is a strong desire to regain status and influence. This is obvious from the following:

- The Chinese sensitivity and assertion is reflected in the war in Korea, its conflict with India and armed struggle in Vietnam, and more recently in the Han-isation of Tibet, Hong Kong, South China Sea assets, and its determination to re-unite Taiwan with the mainland.
- Chinese pride and nationalism was best seen in the outburst of patriotic feelings when Beijing was awarded the 2008 Olympics, when China entered into the WTO, and on the occasion of other Chinese achievements like the Three Gorges Dam, Golmud-Lhasa railway line, and so on.
- China has a feeling of geo-strategic 'encirclement by inimical forces'. With USA perceived as its principal strategic competitor, this translates into a major adversity for China's security.
- China is very sensitive to the emerging insecurities posed by the non-traditional threats: terrorism, organized crime and separatist violence.
- China's quest for energy security.

Since its independence, China has made several 'historical territory' claims. On different occasions, China has conveyed 'historical losses' of territories through its maps and atlases. After occupation of Tibet, it is reported that Mao Tse Tung described Tibet as China's palm with Nepal, Sikkim, Bhutan, Arunachal (then NEFA) and Ladakh as its 'five fingers'. Some maps had also claimed that the entire Assam, even Andamans, were 'historically' a part of China.

Here, the problem is what is Chinese territory? Which era is its benchmark? China recognizes McMahon Line as its boundary with Myanmar but not with India. Some Sinologists say that China does not nurse extraterritorial ambitions. There are many who feel that China never gives up its border claims.

In its 2004 White Paper, China had affirmed that 're-unification' of China is a 'sacred duty' of the People's Liberation Army (PLA), suggesting that this task was to be accomplished by the military than through political-diplomatic processes. Recently, the Chinese Ambassador to India publicly laid claim to Arunachal Pradesh. China's territorial integrity in terms of its grand strategy can

certainly be interpreted to include parts of Indian territory. Beijing has been dragging its feet on the delineation of the LAC. That makes the disputed areas a potential flashpoint for local border wars.

An India-China strategic dialogue must take into account the 'lip and teeth' Sino-Pak strategic nexus between China and Pakistan. Ever since 1965, China has provided Pakistan not only with conventional weapons but also strategic weapons technology to pose a challenge to India. The Sino-Pakistan Treaty of Friendship, Cooperation and Good Neighbourly Relations signed in April 2005 (ratified in January 2006) conveys Beijing's 'clear, unambiguous and categorical assurance' to Islamabad to 'defend Pakistan's sovereignty, independence and territorial integrity' and for 'the two countries to work as close allies against any foreign threat'. The Treaty requires both nations to desist from joining any alliance/bloc and forbids them to conclude a similar treaty with any third party.

China recognizes Pakistan Occupied Kashmir (POK) and has no problem with its military personnel visiting the area. But it does not give similar recognition to the Indian part of Jammu and Kashmir. In the late 1990s, after agreeing with the Indian officials on the visits of senior army officers to opposite sectors in Ladakh as a CBM, the PLA refused to send its Military District Commander to Leh for talks. This may also be a reason for China not agreeing to Indian pilgrims using Leh-Demchok-Kailash Mansrover route. After Kargil war, when most Defence Attaches (DAs) in New Delhi were keen to go and were taken to Kargil sector, the Chinese DA declined to go.

Beijing also indulges in arms sales to Myanmar, Bangladesh and Sri Lanka which complicates India's security planning to some extent. It must be remembered that India's South Asian neighbours, historically, tend to resort to 'politics of counterweights'. In case of adverse balance against India vis-à-vis China, these nations have sought to distance themselves from India and secure greater concessions and accommodation towards their demands and interests. They prefer a degree of hostility and competition between India and China which gives them greater scope for manipulation. A war between India and China, however, puts them into some predicaments and is, therefore, considered a dangerous development.

Another Sino-Indian strategic reality is that the balance of military capabilities between China and India has been shifting to our disadvantage. In

August 2007, President Hu Jintao reiterated that China must build “slim but strong” armed forces by striking a sound balance between speed, quality and efficiency in the modernization drive of the country’s 2.3 million troops.

PLA is spending huge amounts on military modernization. PLA Army is engaged in increasing the number of rapid deployment units and improving mobility, logistics support capability and institution of command and control systems. PLA Navy is moving from green water to blue water status gradually. Its submarine and sea domination patrols are extending their ranges to Spratley Islands and in the Pacific Ocean. It is unlikely, however, that the PLA Navy will be able to initiate any direct action in the Bay of Bengal or Arabian Sea for a considerable period. PLA Air Force is gradually moving away from quantity to quality. It has deep penetration strike and strategic lift transport aircraft capability as well as for mid-air refuelling. It has AWACS; is upgrading its Electronic Support Measures capability and acquiring beyond the visual range air-to-air missiles.

Unlike India, China has an integrated defence structure wherein Army, Navy, and Air Force function under a single military regional commander. It has common logistics for all services, which is more economical than the system followed in India. The PLA has a young age profile as 50 per cent of its personnel are drawn from those attending compulsory military service. And, as stated already, China has increased its capability to rapidly induct, deploy and sustain large military forces into Tibet substantially.

India too is taking steps to equip its armed forces with more sophisticated weapons and equipment. But that does not match the modernization pace of China’s PLA. Our major handicaps are comparatively poor civil and military infrastructure on the Northern borders, lack of self-reliance in weapons and military equipment, lack of integrated command structure, and an ageing profile of the army.

It must be noted, however, that after acquisition of nuclear weapons, long-range fighter bombers and missile capability by India, the military equation is not completely one-sided. Besides, on account of these capabilities and other geo-political factors, there is less likelihood of an intense conventional war along the border. In this environment, local wars, border skirmishes and low-intensity operations are more likely and cannot be ruled out.

Policy Options

China's new global power status could have two possible directions: (a) it would act more responsibly in international affairs, would promote more equitable distribution of resources, would contribute to the stability of weaker states which do not have the capacity for legitimate security and would thus contribute to greater regional tranquility, or (b) its intense nationalist sentiments would cause its present sensitive and assertive stance to harden further, and would lead to clash with the existing and emerging powers.

In recent years, several developments have increased the comfort level in the Sino-Indian bilateral relations. Bilateral trade has increased to US\$ 26 billion and is growing at the rate of about 30 per cent a year. There is progressive increase in the investment and business possibilities. Multi-dimensional individual, governmental and non-governmental contacts are growing fast. While these developments are being rightly highlighted, the proverbial Chinese firmness in sticking to their strategic and national interest, as seen from the negligible progress in the border dispute, Sino-Pakistan relations, and elsewhere is quite evident. While China takes a long-term view of its foreign policy goals and has devised strategies to achieve these goals, India has largely adopted a firefighting approach to its foreign policy. We need to develop a comprehensive understanding of China's grand strategy and its global linkages and respond to the challenges that allow for India's rise as a potential power rather than restrict ourselves to bilateral understanding of Sino-Indian relations.

In 2003, China agreed to give up its oft-reiterated claims on Sikkim and to restore trans-border trade across Natula. Latest reports, however, indicate that Beijing has put the demarcated and historically undisputed border with Sikkim back in contestation. Chinese nationalism has been affirmative, assertive and aggressive. Its Indian counterpart is perceived as relatively pliant, accommodative, and willing to make compromises. Since the possibility of a full-scale conventional armed conflict involving India on a single or two fronts (Pakistan and China) are remote, there is no reason for India to follow a weak-kneed policy in safeguarding its territory along the LAC.

India's interests require a cooperative relationship with all its neighbours. China has, of late, adopted a policy of cooperative peace with India leaving behind some past hiccups. Our past experience, however, shows the importance of taking adequate precautionary measures to deal with possible reversal in our

relations. While we must continue to improve relations with China and reduce the potential for disagreements and possible conflict, it would be less than prudent to ignore the rising Chinese military power and capabilities that may be used for coercion in a possible conflict scenario on the ground, air or sea anywhere. We must, therefore, develop economic, technological, industrial and military capabilities to protect our interests, and remain alert on the border till the LAC dispute is settled. Such an approach alone would improve the prospects of a balanced and cooperative relationship.

India's grand strategy should be to 'cooperate with power and confidence', or as Air Commodore Jasjit Singh has put it, "to cooperate and insure" i.e. seek cooperative peace while ensuring a credible politico-military capability. With this objective in view, our current land connectivity options can be prioritised as follows:

- Immediate development of road communications in the border areas to facilitate integration of Northern states and their people with the rest of India, and to improve our defence capabilities.
- Improve road communications and border trade infrastructure wherever it has been mutually agreed to in the past and where its defence is assured.
- Review our Inner Line policy in the North and East to facilitate greater integration with India, particularly through tourism.
- Project political, economic and cultural interests in South Asian neighborhoods with greater vigour.
- Persuade China to open the less hazardous and easier route Leh-Demchok-Kailash Mansarovar for the Indian pilgrims. This will act as an important CBM, will reduce tension in the area, and will be economically beneficial to locals on both sides.
- Facilitate road communications between India and China through Myanmar, in support of India's 'Look East' policy.

In June 2006, India took the decision, rather belatedly, to build roads along the Sino-Indian border. We can expect China to (a) show concern with regard to our effort to integrate border areas, including Arunachal Pradesh, considered 'disputed' by Beijing, with the rest of India, and (b) ensure that Sino-Indian negotiations on the Arunachal Pradesh border are governed more and more by strategic factors.

Maritime Connectivity: Economic and Strategic Implications

Vijay Sakhuja*

The 21st Century economic order driven by globalization has had a profound impact on every country of the world, be it land-locked or coastal, resulting in greater access to global markets. Most countries have experienced burgeoning trade and are highly dependant on maritime transport, which carries 90 per cent of global freight. Maritime connectivity is thus critical to the states that are reliant on trade for growth and prosperity and wish to harness the benefits of the current trends in globalization.

The United Nations Conference on Trade and Development (UNCTAD) Report, "Review of Maritime Transport 2007"¹ notes that, in 2006, world seaborne trade increased by 4.3 per cent to touch 7.4 billion tons. The global fleet tonnage witnessed impressive growth of 8.6 per cent to touch 1.04 billion dwt and crossed the 1 billion-deadweight tons mark in 2006. In 2007, the global shipbuilding grew at an impressive rate of 72 per cent accounting for 164.8 million grt compared with 93.8 million grt in 2006.²

At a more micro level, in 2006, the global container port throughput improved by 13.4 per cent to touch 440 million TEUs led by developing countries accounting for 65 per cent of the total. During the period under review, shipping services increased by 5.5 per cent to reach 30,686 billion ton-miles in 2006 and the global economy recorded a vigorous growth rate of 8 percent, twice the rate of increase in global GDP. This was led by Asia and over one-third of seaborne cargo comprised of energy-related merchandise of crude oil and petroleum products. Over all, 2006 was another growth year and similar trends have continued through 2007. The World Bank estimated that global sea-based commerce is expected to increase from 21,480 billion ton-miles in 1999 to

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1. UNCTAD, "Review of Maritime Transport 2007", available at <http://www.unctad.org/Templates/WebFlyer.asp?intItemID=4398&lang=1>
2. Archana Shukla, "Global shipbuilding slows, but no worry for local players", available at <http://sify.com/finance/fullstory.php?id=14655971>

35,000 billion ton-miles in 2010 and a large proportion of this trade would transit through the Indian Ocean.

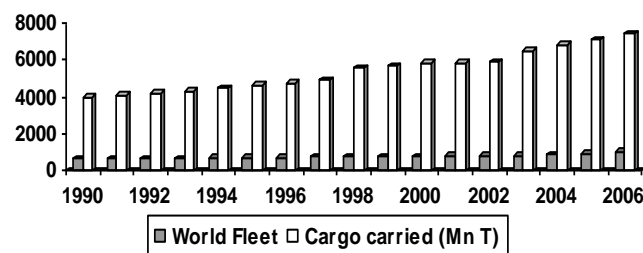
There is also a transformation in the global logistic system with accents on seamless supply chains focused on 'just in time cargo' and 'door-to-door delivery' system. The emergence of mega ships, hub ports, container shipping, and information technology driven transactions are sparking a new coalescence of power, which is globalizing the supply chain system with accents on 'volume' and 'reach'. Large volumes of cargo and freight are transacted among customers in distant destinations across the seas. The modern container vessels carry as many as 14,000 containers, Ultra Large Crude Carriers (ULCCs) that displace over 500,000 dwt and modern bulk carriers of tonnage exceeding 350,000 dwt are being built. These trends have resulted in a burgeoning maritime industry. Also, foreign and domestic investment-driven innovations have enabled several countries such as China into predominance of maritime activity.

The graph below is reflective of the fact that seaborne commerce has experienced sustained growth and if the global security environment remains peaceful, high oil prices do not lead to unprecedented inflation and food shortages do not result in slowdown of the economy, it is fair to argue that the global economy will experience continued growth and support human prosperity.

Since the 1990s, the Asia Pacific region has been experiencing economic dynamism led by China, which is expected to grow at over 9 per cent annually, and rest of East Asia at 7.5 per cent.³ The

reverberations of this economic boom have impacted India too with its economy growing at nearly 7 to 8 per cent annually in the last few years and there are strong indicators to suggest that it is expected to grow over nine per cent in the coming decades. Perhaps what merits attention is the fact that Asia could

Figure 1: World Fleet and Goods Carried



Source: UNCTAD Review of Maritime Transport 2005 and 2007.

3. Lee Kuan Yew, "Asia's Growing Role in Financial Markets", *Business Times*, March 3, 2008.

produce 'fifty per cent of the world's GDP by 2030, regaining the position it held at the beginning of the 19th Century, when China and India produced more than one-third of global income'.⁴

To a large extent, a burgeoning seaborne trade and large investments in maritime infrastructure support the economic boom in the Asia Pacific region. Most of the Asia Pacific states are maritime states and those that are not, seek access through trade and transport agreements with coastal states. There is an increased sensitivity to the safety of sea lines of communication (SLOC) through the strategic choke points in South East Asia and the Persian Gulf for energy and commodity. In the event of such a situation leading to the closure of the Southeast Asian strategic choke points, maritime traffic would have to sail farther south of Australia, placing increasing demands on vessel capacity, bringing about higher costs of transportation and disruption in both energy and material supply chains. The geo-strategic and economic realities in the region are thus complex for several countries, particularly for China, India, Japan and South Korea, the large and growing economies in Asia. These states seek an enhanced role in the Asia Pacific region for the safety and security of their long and often vulnerable sea lines of communications.

A close relationship between sea-based commerce and security is becoming increasingly evident. The upward trajectory in global trade is a welcome sign, but a careful consideration highlights that sea-based commerce is vulnerable to disruption from disorder at sea arising from terrorism, piracy, and other illegal activities such as drug trafficking, gunrunning, human smuggling, maritime theft and fraud, illegal fishing, and pollution. In the past, sea-based commerce did not see security as an economic advantage; instead it was perceived as a burden with a huge attendant cost. Today, however, requirements of security have to be built into the system and carefully chosen so as not to impede economic growth resulting in a potential slowing down in the flow of commerce. Also, these security measures have to be stringent and comprehensive enough to secure and defend against a new array of threats in the post 9/11 World, ranging from nuclear/bio/chemical attacks to suicide boat attacks on the *USS Cole* and *MV Limburg*. Although the globalized nature of the economy calls for open markets, more international trade/commerce and greater openness, security of commerce

4. Ibid. Singapore's Minister Mentor Lee Kuan Yew has noted that it is the first time that when America sneezes Asia will not catch cold.

needs greater attention. The question is how to manage the competing requirements of security and economic vitality in this new world?

Towards that end, this paper attempts to examine the interrelationship between economics and security in the maritime domain. The paper highlights the role of maritime enterprise in the current economic order in India and the attendant security challenge. The paper makes the point that maritime trade is the soft power of the state and is an important tool for strategic transactions and conduct of international relations.

India is endowed with a long coastline of 7,515 km including the Lakshadweep group of islands in the Arabian Sea and the Andaman and Nicobar group of Islands in the Bay of Bengal/ Andaman Sea. India occupies a dominant position in the Indian Ocean and the peninsula juts out for almost 1000 nautical miles thereby providing it an extended sea frontage. Another feature of India's maritime geography is the shipping lane that transits through Indian waters and serves as the umbilical cord for the Asia Pacific and United States' west coast economies. There are some important waterways in India's maritime areas of interest that have both economic and military importance. These are: the Strait of Hormuz and Straits of Malacca, the global choke points where the bulk of merchant traffic funnels in/out. These strategic passageways facilitate movement of critical energy resources from the Persian Gulf and also provide economical maritime transport routes.

India is highly dependent on sea-based commerce for its economic vitality and this is best demonstrated by the fact that 97 per cent of India's trade by volume and 70 per cent by value is seaborne. India is reaping benefits from the trends in globalization and buoyant Asian maritime enterprise. New Delhi announced the draft National Maritime Policy (NMP)⁵ and the National Maritime Development Programme (NMDP) and these initiatives seek to harness the full potential of India's maritime geography, economic growth, sea-based wealth and seafaring human resource to emerge as a thriving maritime economy.

The draft NMP sets out guidelines for exploiting the marine potential of the country. The Government of India (Ministry of Shipping, Road Transport and

5. "Draft Policy for Maritime Sector", Ministry of Shipping, Government of India, August 2004. Also see, N. K. Kurup, "Shipping Minister's Visit to Mumbai-Wind Taken Out of Shipowner's Sails", *The Hindu*, September 13, 2004

Highways) announced the National Maritime Development Programme (NMDP) that offers a detailed action plan for the marine sector to develop and augment additional capacity to sustain economic growth. The NMDP is comprehensive and facilitates public-private partnership, enhances quality of service based on competition and formulates favourable fiscal policies to achieve the above objectives. The NMDP harmonizes itself with the NMP and identifies sectors, projects, and schemes that merit investment to support the vision and strategy laid down in the NMP.

The NMDP highlights the need for investment in infrastructure development, additional shipping tonnage and capacity building through proactive initiatives, projects, and long-term plans for the shipping sector. The plan visualizes development of about 111 shipping projects totaling an investment of Rs. 44,535 crore over two phases. Phase I ended in 2006-07 and Phase II covers the period 2007-08 to 2014-15. The salient features of the plan include: (a) tonnage acquisition, (b) maritime training, (c) coastal shipping, (d) port development, (e) navigational aids (f) shipbuilding, and (g) inland water transport.

The NMDP notes that by 2013-14, traffic at major ports will be 705.84 million tonne, thus necessitating raising the capacity of ports to around 917.59 million tonnes. Consequently, the government plans to augment existing facilities as also develop new ports. The port infrastructure development has been categorized under five broad heads: (a) construction of jetties, berths etc.), (b) procurement, replacement or upgradation of port equipment, (c) deepening of channels, (e) projects related to port connectivity and (f) other related schemes. The total investment envisaged for above projects is estimated at Rs.55,803.73 crore, to be raised through budgetary support, port's own internal resources, private sector investment and from other agencies, such as the Ministry of Railway, NHAI, etc.

India's coastline is dotted with 12 major, and 187 minor ports.⁶ According to the Ministry of Shipping, Road Transport and Highways Annual Report 2006-07, major ports handled a total traffic of 423.41 million tonnes during the Financial

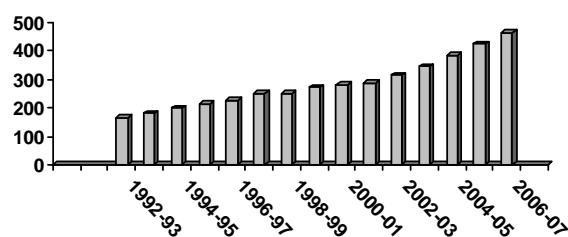
6. National Maritime Development Plan, Ministry of Shipping, Road Transport and Highways, Government of India, p.3. Additional details on major and minor ports in India available at <http://www.shipping.nic.in/index1.asp?linkid=157&langid=1>.

Year 2005-06.⁷ The Indian Ports Association (IPA) figures show that the Indian ports handled 463.7 million tonnes during 2006-07. Although the Indian ports have recorded impressive growth exceeding 10 percent, these facilities are operating at over 90 per cent capacity utilization resulting in congestion and delays in cargo handling.⁸ There are several drawbacks with regard to the performance of Indian ports, such as lack of infrastructure, old equipment, modern cargo handling practices and low human resource productive in handling cargo. At major ports, ship turn-round and waiting time is high and much below the generally accepted international standard and performance of some of the regional ports.⁹

Although the Indian economy has been growing at an average 7-8 per cent during the last decade, port infrastructure has not been able to keep pace with the growing demands of cargo movement. The Indian government has supported Indian ports to compete in the international market by resorting to commercialization, liberalization, privatization and modernization of existing major ports. Several areas have been identified for private sector participation that include cargo handling, maintenance of berths and port equipment. The government is committed to investing in port infrastructure to be internationally competitive.

The NMDP acknowledges the fact that shipbuilding is critical for the development of maritime infrastructure and investments in shipbuilding sector act as a catalyst to national growth. Consequently, the focus is on modernization, enhancement of existing capacity, research in design and building of ships for both domestic and international customers. The government plans to invest

**Figure 2: Traffic Handled at Major Ports
(Mn T)**



Source: INSA Annual Review 2007

7. Ministry of Shipping, Road Transport and Highways, Government of India, Annual Report 2006-07, p.5.
8. "Indian Ports Close to Capacity", April 22, 2008 available at <http://www.portworld.com/news/2008/04/71420?gsid=f193bf3eb4b6fe8ad0b3caffcd6a5142&asi=1>
9. For details on the turn around time at Indian ports see Department of Shipping, Ministry of Shipping, Road Transport and Highways, Government of India, report March 20, 2007 available at <http://shipping.nic.in/writereaddata/linkimages/im6131192005.pdf>

substantial fiscal resources in the shipbuilding sector to be raised through budgetary support from the government, internal resources of the shipyards, through the private sector and other sources. The Indian shipbuilding industry is quite small and constitutes a miniscule percentage (below one percent) of the global shipbuilding market. Some of the shipyards in India are as old as 200 years, but a majority of these are public sector enterprises which in the past remained plagued with inefficiency, high cost of construction, and irregular delivery schedules as also low quality and thus cannot match international standards.¹⁰ As a result, India could not adopt market-oriented policies and strategies in shipbuilding and take advantage of its low-cost labour. Consequently, 90 per cent of all Indian-owned and Indian-flagged vessels were foreign built.

However, over the past few years, led by private shipbuilders, such as ABG Shipyard, Bharati Shipyard, Pipavav Shipyard and Larsen & Toubro and public sector shipbuilders, such as Kochi Shipyard and Hindustan Shipyard, Indian shipbuilding market is showing great promise. This is so because the Korean, Japanese and Chinese yard order books are full till 2011-12, resulting in a boost to Indian shipbuilding capacity. For instance, in 2002, the Indian yards had orders worth Rs.1,500 crore and this figure witnessed tenfold increase with order book pegged at 220 ships at an estimated worth of Rs.15,000 crore in 2006.¹¹ The current order book is valued around Rs.20,000 crore.¹² It is estimated that India's share in global shipbuilding could be around 15 percent, or Rs.88,000 crore (US\$22 billion), by 2020 from the current figure of just about 0.4 percent.

Indian shipping plays an important role in national economic development and ranks 20th in the world in terms of fleet ownership.¹³ On October 1, 2007, the Indian fleet totaling 9.06 million gross registered tonnage (grt) comprising of 839 ships of which 277 vessels were engaged in international trade. Bulk of the Indian fleet consists of crude oil tankers (35.6 percent), product tankers (17 percent), LPG tankers (3.9 percent) and bulk carriers (32.1 percent). Beside, there are a

10. "Can The Indian Shipyards Be Globally Competitive?", *Maritime Monitor*, January 2002 at the website of *I-Maritime Consultancy* at <http://www.i-maritime.com>.

11. P. Manoj, "Shipbuilding firms lobby hard for subsidy extension" July 6, 2007 available at <http://www.livemint.com>

12. Archana Shukla, "Global shipbuilding slows, but no worry for local players", available at <http://sify.com/finance/fullstory.php?id=14655971>

13. Report of *Indian National Shipowners' Association Annual Review: 2006-07*, Mumbai, p.111.

variety of other vessels, such as passenger-cum-cargo ships, offshore vessels, container ships, dry cargo ships and dredgers.

Indian flagged vessels carry 13.7 per cent of national cargo¹⁴ and the balance is transported through operators belonging to several other fleets. The average age of Indian fleet, as on October 1, 2007, was 18 years and nearly 414 vessels are over 20 years old.

The NMDP notes the need for augmenting coastal shipping. The Indian economy is expected to grow at about 8-9 per cent in the coming decade and the freight transport demand is likely to grow to 2000 billion tonne-miles in the next 8-10 years. Investment in coastal shipping would reduce the density of freight on road and rail and develop coastal shipping and according to the Plan, this initiative would divert at least 5 per cent of the cargo currently moved by rail and road in the next 10 years.

The government plans to harness the potential of the large river systems in India through the development of Inland Waterway Transport (IWT) and thus offer efficient, flexible and cost-effective network of inland transportation. The current infrastructure is still in its infancy and its commercial viability is yet to be ascertained. Rail and road infrastructure is being modernized and private participation in IWT is likely to be low and government has entrusted the states to take responsibility of development of IWT infrastructure. In some regions, IWT operations are structured and operated by both public and private

Figure 3: Growth of Indian Fleet

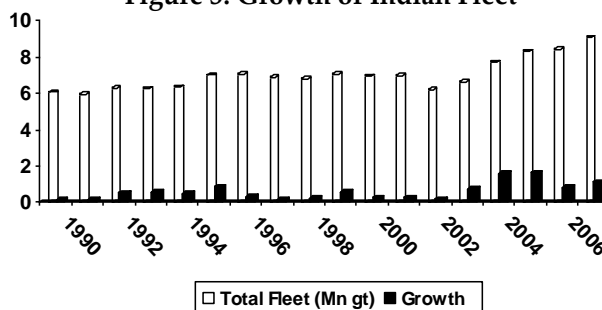
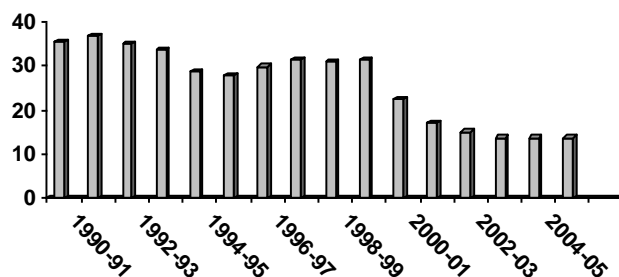


Figure 4: Share of Indian Shipping in Overseas Trade (percent)



Source: INSA Annual Review 2007

14. Ibid.p.125.

enterprises but there also exists unorganized movement by country boats made of wood and steel and assorted capacity that operate in various rivers and canals.

The 2002 National Tourism Policy highlights and outlines various stakeholders and seeks to develop tourism industry within the framework of 'Government-led, private-sector driven and community-welfare oriented'. Under the policy, the government is committed to construct basic tourism infrastructure and provide regulatory mechanisms, and the private sector is to revitalize and invigorate the industry while safeguarding social and economic advancement of the local communities and facilitating growth towards a fair social order. Overall, the policy seeks to position tourism as a major engine of economic growth. The policy seeks to develop India's eastern and western coastal areas by encouraging the private sector to provide tourism resorts on long-term lease and at preferential terms. These are to be developed along the Goa, Kerala, and North Karnataka coast due to their easy air connectivity. The government is developing Kochi in Kerala and Andaman & Nicobar Islands in the Bay of Bengal as international cruise destination. Besides, the policy also seeks to develop river-based tourism in the Ganges and Brahmaputra rivers. In essence, the policy seeks to project India's image in its international tourism industry.

The wave of globalization, expanding international maritime trade and growth in shipping has resulted in extraordinary expansion of the Indian marine workforce. The Indian seafarers dominate the domestic shipping industry and constitute a sizable proportion in the international shipping market.¹⁵ Also, their high education, quality training and capability to speak fluent English have further added to the huge demand for them. There are nearly 130 government-owned and private training institutes that offer training to the Indian seafaring workforce.¹⁶ These include four training establishments in public sector and 124 in private sector, capable of producing 11164 Seafarers (4575 officers and 6589 ratings) annually.¹⁷ According to the data maintained by the Indian National Database of seafarers (INDoS), an agency under the Directorate General of Shipping, a total of 146,245 seafarers are registered and it is estimated that Indian

15. 'T.R. Baalu calls for Early Report on Updation of Equipment of Maritime Studies', Press Release by Ministry of Shipping, Road Transport, Government of India, May 18, 2007. & Highways.

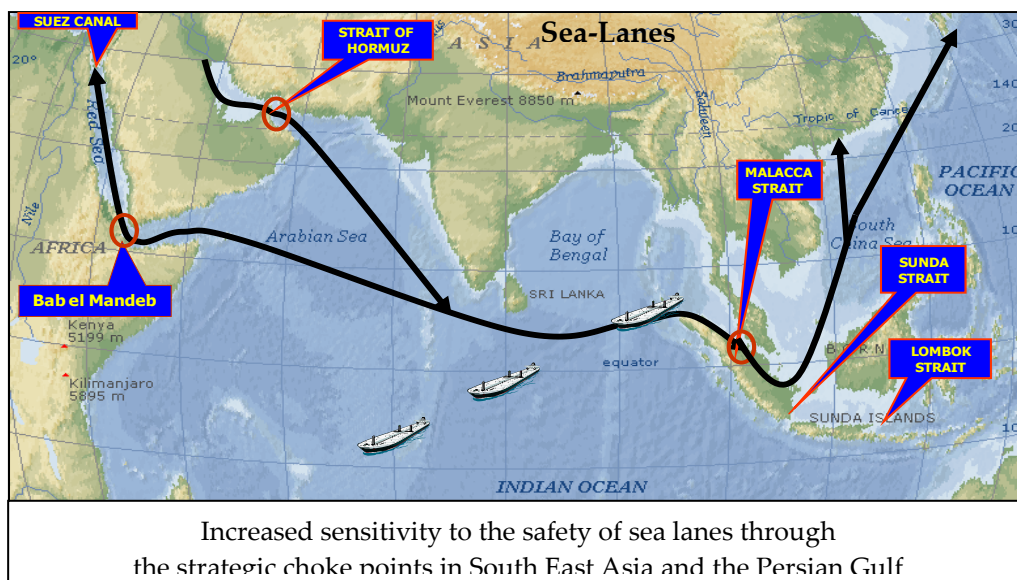
16. Dev Dutt 'Ports & Shipping: Ferrying in the Future' available at <http://www.projectsmonitor.com>

17. 'National Maritime Development Programme', Ministry of Shipping, Government of India, New Delhi, p.46.

flagged ships employ some 30,000 to 32,000 seafarers while 52,000 to 54,000 are serving onboard foreign flagged ships.¹⁸

Security Challenges

There is a symbiotic relationship between infrastructure and sea-based commerce and security that envisages safe and secure littorals and seas. A terrorist attack on maritime infrastructure, such as a port would impact adversely on national economy. Maritime infrastructure is perhaps the most difficult security challenge that exists within a nation's infrastructure. Maritime infrastructure is a combination of commercial, recreational and defence-related facilities that comprise vessels, docks, oil and chemical facilities, railways, roadways and power plants. The security of maritime infrastructure is clearly a complicated affair. Consequence at one site may multiply overall consequence throughout the infrastructure and may entail planning and coordination in which the entire marine community has to be involved to achieve success. Similarly, safe sea-based commerce (transportation of raw materials, energy and finished goods) is critical to domestic and international business. An accident or an incident in the maritime transportation system along the sea-lane would most definitely entail disruption to the sea-based commerce resulting in a range of impacts on global economy, business continuity and economic loss. It would also



18. 'Supreme Court to Rule on Missing Ship Jupiter-6', *Times of India*, July 17, 2007.

have a significant impact on the competitiveness in the region with expected losses to local and regional economies.

In sea-based commerce, insurance costs are a critical issue. For instance, the Lloyd's Market Association's Joint War Committee (JWC) declared the Straits of Malacca and 20 other maritime areas in West Asia and Africa as highly prone to piracy, war, strikes, terrorism and related perils. The JWC declaration was the fallout of a report that warned of attack on "significant maritime target" with fears that Al Qaeda could exploit piracy in the Malacca Straits to attack ships. This resulted in increased insurance costs to shippers. Similarly, insurance underwriters had declared Sri Lanka a war risk zone following the attack on Colombo International Airport in 2001, which led to the destruction of several commercial aircraft. Shipping companies had to pay an extra \$350 per container for Sri Lankan imports and exports to cover vessel calls at Colombo. After suffering for almost one year, the Sri Lankan government had to request global insurance giant to engage in a security audit of Colombo, Galle and Trincomalee ports, and the Bandaranayake International airport.

The premiums were tripled for ships calling at ports in Yemen after the 2002 terrorist attack on the French oil tanker *Limburg* off the Yemeni coast. This forced many vessels to cancel Yemen from their schedules or divert to ports in neighbouring states.¹⁹ More recently, war risk premiums for merchant ships visiting Israeli and Lebanon ports had been raised because of the conflict and naval blockade of Lebanese ports.²⁰ Both Lebanon and Israel were placed on the Lloyd's market Joint War Committee list of risky areas for merchant shipping that were prone to war, strikes, terrorism and related perils. Meanwhile, several foreign multinational shipping companies including Italy's MSC (Mediterranean Shipping Company SA) COSCO Shipping Co. Ltd., China Shipping Group and Grimaldi Group had diverted their ships to the port of Ashdod or to nearby ports.²¹

19. 'Growing Vulnerability of Seaports from Terror Attacks, to protect ports while allowing global flow of trade is a new challenge,' *Viewpoint* - Institute of Southeast Asian Studies, available at www.iseas.edu.sg/viewpoint.

20. Ship War Risk Surcharge Criticized by Israeli Government Jul 30, 2006 available at <http://www.port2port.com/Index.asp?ArticleID=991&CategoryID=43>

21. Haifa Port: Estimated revenue loss of NIS 30 million available at <http://www.port2port.com/Index.asp?ArticleID=989&CategoryID=43>

At another level, the discovery of offshore oil and gas in the Arabian Sea in 1974 and Bay of Bengal in the 1990s resulted in additional roles for maritime forces. The important oil and gas fields are located in the Arabian Sea some 200 nautical miles from Mumbai comprising of Bombay High, Heera Panna and South Bassein. In 2005, an oil platform in the Mumbai High North (MHN) caught fire due to an accident involving an offshore support vessel resulting in a major disruption of domestic crude oil supply. The oil platform, capable of producing 100,000 barrels of oil per day, was damaged resulting in temporary loss of crude production. The restoration time for 70 per cent production was assessed as four weeks and a year to rebuild. The Indian Navy and Coast Guard mobilized and provided ships and aircraft for rescue efforts.

Offshore structures contain large quantities of materials some of which are inflammable and are capable of making lethal mixtures that can produce devastating effect. Consequently, it does not require ordinary explosives to carry out an attack on an oil exploration or production platform. Although these oilrigs and platforms have reinforced materials to withstand hurricanes and storms, what an attacker would perhaps need to do is to commandeer a heavily loaded workboat or a supply vessel and then ram it into the platform while under maximum throttle. This simple act can create an impact similar to the 9/11 terrorist attacks in the US in 2001 that resulted in destruction of the World Trade Center.

In the past few years, several government and industry initiatives focusing on security of maritime commerce have been introduced to make it safe, secure and immune to disruptions. These include International Ship & Port Security Code (ISPS), Container Security Initiative (CSI), and Customs & Trade Partnership against Terrorism (C-TPAT) and several other initiatives and regulatory mechanisms. The main purpose of these initiatives is to reduce the likelihood of maritime-vectored terrorism. Significantly, non-adherence or poor compliance of these initiatives could severely affect safety and security of supply chains.

Indian response to multilateral naval and maritime initiatives, such as the Proliferation Security Initiative (PSI), 1000 Ship Navy (TSN), International Ship and Port Security Code (ISPS) and Container Security Initiative (CSI) conceptualized for the monitoring, surveillance, regulatory and safety mechanisms at sea presents a mixed bag of support and rejection. India has

supported the ISPS Code and adopted it as an amendment to SOLAS 1974 on 12th December, 2002, under The Merchant Shipping (Amendment) Bill, 2004 that further amends the Merchant Shipping Act, 1958 and the Indian Ports Act, 1908.²² As regards the Container Security Initiative (CSI), India has supported the initiative and taken measures to secure the ports by installing equipment to scan incoming and outgoing containers that may be used by non-state actors and terrorists for illegal activities.

The International Standards Organisation has developed ISO/PAS 28000 with its Plan-Do-Check-Act (PDCA) methodology, which is a useful tool for any organisation, whether large, or small, to have in its security toolbox.²³ Fourteen countries together with several international organisations and regional bodies participated in the development of ISO/PAS 28000. These organisations included the International Maritime Organisation, the International Association of Ports and Harbours, the International Chamber of Shipping, the World Customs Organisation, the Baltic and International Maritime Council, the International Association of Classification Societies, the International Innovative Trade Network, the World Shipping Council, the Strategic Council on Security Technology, which has a Memorandum of Understanding with ISO/TC 8, and the US-Israel Science and Technology Foundation.

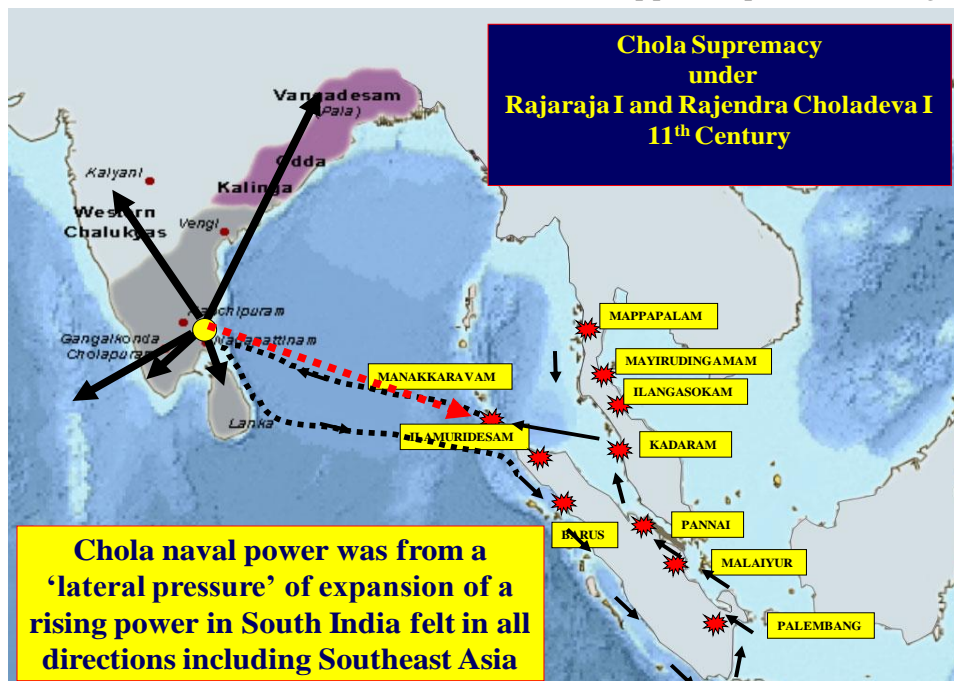
ISO/PAS 28000: 2005 offers detailed guidelines to facilitate a business institution or an enterprise to 'establish, implement, maintain and improve' a security management system, including measures critical to security assurance of the supply chain. These provide guidance to financing, manufacturing, information management and the facilities for packing, storing and transferring goods between different modes of transport and locations. According to the International Standards Organisation, a variety of organisations and enterprises in the manufacturing, service, storage and transportation sectors can use ISO/PAS 28000:2005 and its implementation will reassure business partners that security is taken seriously within the organisations they deal with. However, no effort has been made to insulate the maritime enterprise with a Plan-Do-Check-Act (PDCA) methodology.

22. Bill No. 108 of 2004, available at http://www.prindia.org/docs/bills/1171265268/1171265268_The_Merchant_Shipping_Bill_2004.pdf

23. For more details see, 'ISO Offers Systematic Approach to Security Management in Global Supply Chains', available at <http://www.iso.ch/iso/en/commcentre/pressreleases/archives/2005/Ref981.html>

Maritime Trade and Strategic Transactions

Historically, seas and oceans have facilitated movement of people, cultures, ideas, religions, and trade resulting in growth of maritime enterprise. States have also transported state power, both coercive and benign, beyond national shores through the medium of sea. Trade diplomacy has been in vogue and has been practiced since ancient times by the Greeks and Romans in the Mediterranean, Cholas in India, Srivijaya in Southeast Asia and by several dynasties in China in the furtherance of national interests, be it to appease powerful kingdoms,



enhance trade, safeguard sea-lanes, and also in its coercive format of 'gun boat' diplomacy. For instance, the Chola king Rajendra Chola Deva I dispatched a powerful naval fleet to Southeast Asia targeted against Srivijaya kings ostensibly to protect its trade and maritime interests. As part of their diplomacy, the Srivijaya kings sent ambassadors to India and China with precious gifts for the rulers and also built Buddhist vihara (temples) in these kingdoms as goodwill gestures and also sought protection against attack by powerful neighbours. In China, the Ming rulers dispatched naval fleets to establish trade links and, in their coercive construct, established suzerainty in some countries in Southeast Asia and in the Indian Ocean.

In the 21st century, the economic milieu of diplomacy serves the state in several noteworthy dimensions and blends economics and security to enhance international status. In Asia, China and Japan offer very good examples. First, China: referred to as the 'string of pearls' strategy by the western world, it envisages Chinese attempts to position themselves along strategic maritime gateways or choke-points to protect their sea-lines of communications, particularly, through hostile and unsafe sea spaces. Sun Tzu, the Chinese master strategist in his treatise, *Art of War* noted about the *narrow passes*: "if you can occupy them first, let them be strongly garrisoned and await the advent of the enemy. Should the enemy forestall you in occupying a pass, do not go after him if the pass is fully garrisoned, but only if it is weakly garrisoned." *Narrow passes* at sea are choke points, such as Straits of Malacca, Strait of Hormuz, Suez Canal and Panama Canal. Besides commercial and economic importance, they have military importance too. Beijing has followed an aggressive strategy to acquire bases overseas in distant lands and seas and established maritime foothold astride the critical choke-points.

String of Pearls

- China steadily consolidating its access to the Indian Ocean.
 - Adopted a string of pearls strategy, series of port facilities
 - Building strategic relationships with countries along sea lanes from the Middle East to the South China Sea.
 - Gwadar port in Pakistan
 - Hambantota port in Sri Lanka
 - A container port at Chittagong in Bangladesh
 - Sihanoukville port in Cambodia
 - A deep water port in Myanmar
 - Installed sophisticated surveillance equipment at Great Coco Island in Myanmar

The most convenient opening to the sea for the landlocked southwest China is through Myanmar - an excellent strategic location for access to the Bay of Bengal on one side and the Malacca Straits on the other.

China has long understood the strategic importance of the Straits of Malacca. The Strait has figured in the strategic thinking of ancient Chinese mariners who sailed through these waters first for trade and then for establishing

suzerainty.²⁴ In contemporary times, Chinese planners and practitioners are convinced that Straits of Malacca continues to dominate the commercial and economic lifelines of China. It is estimated that nearly 60 per cent of Chinese crude is sourced from the Middle East and, given the growing demands, this figure is sure to rise beyond 70 per cent in the near future bulk of which would naturally transit through the Straits of Malacca. China is currently engaged in a project on replacement of navigational aids damaged during the 2004 Indian Ocean Tsunami and the estimated cost for the project is pegged at US \$ 276,000.²⁵

As far as Strait of Hormuz is concerned, Gwadar in Pakistan is of strategic importance to China as it lies astride the sea-lane originating from this strategic choke-point and provides the Chinese a forward staging post to protect their critical energy supplies from the Persian Gulf. Gwadar and Makaran coast highways are being developed by Pakistan with Chinese financial and technological assistance. In strategic terms, this initiative helps China monitor the sea-lanes from the Persian Gulf. In 1994, China became a net importer of oil and about 60 per cent of its energy requirements come from the Persian Gulf and transit along this sea-lane. Notwithstanding the prospects of newer and attractive sources of energy, the Chinese reliance on Gulf oil will continue for quite some time and the bulk of this oil must transit through the Strait of Hormuz.

From Chinese perspective, the real importance of the Persian Gulf region is that it continues to be a theatre of strategic interactions between major global, political and economic powers and the regional states. The Chinese have been quick to deny that the joint project at Gwadar has any military dimensions. Though it is fair to argue that Chinese interests in Gwadar development may not go beyond the safety of their energy-related shipping from the Persian Gulf, yet, the facility could provide the Chinese a forward base to monitor US naval activity in the Persian Gulf region as also Indian naval activity in the Arabian Sea. As a matter of fact, similar conditions prevail in the Bay of Bengal where the Chinese have established facilities at Coco Island in Myanmar to monitor Indian maritime activity and missile testing in Orissa.

24. C.P. Fitzgerald, *The Horizon History of China* (New York: American Heritage Publishing Co., 1969), pp.239-242.

25. Hasjim Djalal, "The Role of the Users for the Enhancement of the Safety and the Protection of the Straits of Malacca and Singapore in Relation with UNCLOS 1982", Paper presented at the Symposium on the Enhancement of Safety of Navigation and the Environment Protection of the Straits of Malacca and Singapore, March 13-14, 2007, Kuala Lumpur.

In Myanmar, China has built strategic infrastructure that includes roads, ports, harbours and communication facilities as well as naval facilities. China has also upgraded the road and rail network from Yunan in South China to several ports along the Myanmar coast in Bay of Bengal. The project allows Chinese trade an outlet into the Bay of Bengal and, in military terms, it provides Beijing a strategic foothold in Myanmar by providing assistance in the modernisation of the Myanmar naval facilities, including Hainggyi Island and Great Coco Islands. The Hainggyi base is capable of providing facilities for much larger ships than the Myanmar Navy has, and if the present pace continues, it will soon be capable of hosting large PLA Navy vessels, including SSBNs and SSNs. Meanwhile, the size of the Myanmar Navy has also grown, and facilities for its support have been increasing.

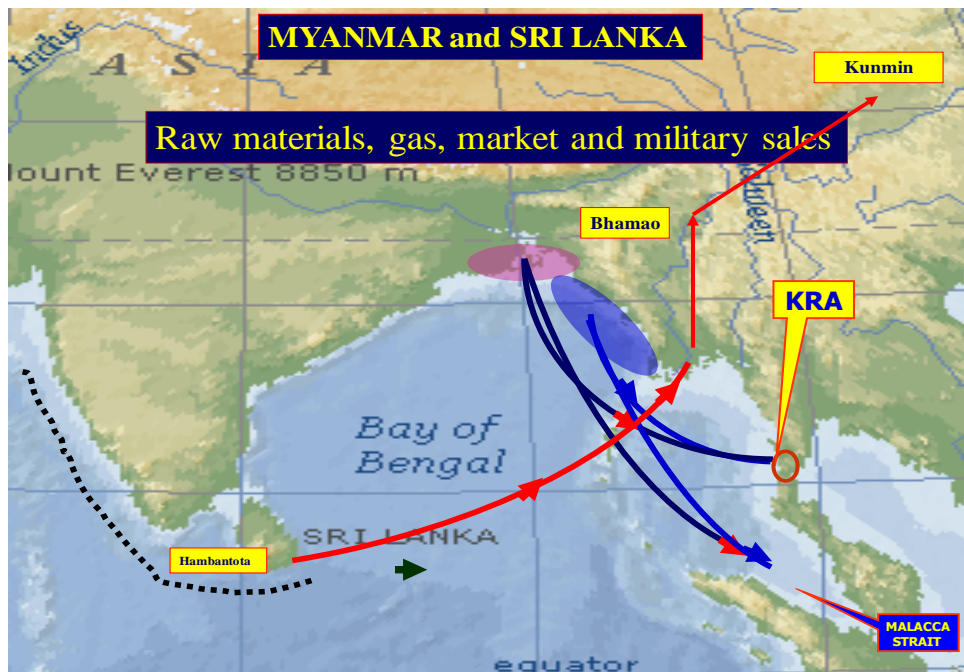
The Chinese approach to maintaining and promoting diplomatic linkages with Bangladesh is also based on long-term maritime considerations. The geo-strategic location of Bangladesh provides a useful territorial overbridge in reaching out to Myanmar, the Bay of Bengal and subsequently into the Indian Ocean. China has emerged as a major supplier of arms to the Bangladesh armed forces, particularly the Navy and the Air Force.²⁶ Admiral Zhang Lian Zhong, the erstwhile Commander of the PLA Navy, had reportedly assured his Bangladesh counterpart of cooperation in the sophisticated management of the Navy.²⁷ Like Myanmar, it appears, that Bangladesh could provide facilities to the Chinese Navy as and when it begins to operate in the Bay of Bengal or the Indian Ocean. The Chinese motivation in coming militarily closer to Bangladesh stems from the perspective that Bangladesh could be used as one of its staging/listening posts in its surge to the Malacca Straits and the Indian Ocean as is the case with the Coco Island. This would facilitate a strategic listening post on Indian naval activity in the Bay of Bengal.

In the recent past, China has emerged as a major source of military equipment to Sri Lanka. The Chinese appreciation of Sri Lanka's geographic location in terms of its sea-lanes as also a strategic base for scuttling any Indian efforts to strangulate the umbilical cord of the Chinese economy in the Indian Ocean need to be viewed carefully. China is also developing the Hambantota

26. *Jane's Fighting Ships, 2007-2008*. The Bangladesh Navy's frigates and patrol crafts are mostly Chinese. Besides, the army's tanks and Air Force combat aircraft are all Chinese. In short, China has forged Bangladesh into a military-equipment client state like Pakistan.

27. R. Chakrabarti, "China and Bangladesh", *China Report*, vol.30. no.2, 1994, p.155.

port in Sri Lanka much to the discomfort of India after Hutchison Port Holdings, a Chinese company, was debarred by India from building a container terminal in Mumbai due to security concerns.



Hutchison Whampoa Ltd. has a mixed bag of reputation. It is known for its management of such facilities around the world as also its close links with the Chinese leadership and the military establishment. Some reports suggest that it is a front for the Chinese Peoples Liberation Army. It also has close ties with the Chinese government and is partly owned by the Chinese communist regime – China Resources Enterprises – that is a known front for Chinese military intelligence. Hutchison Whampoa Ltd. is a Hong Kong-based company, has been granted a 25-year lease, with an additional 25-year option, for control of the two ports Balboa and Cristobal that lie at the ends of the Panama Canal on the Atlantic and Pacific Ocean. The control also includes adjacent facilities. According to the agreement, Hutchison Whampoa will control the loading and unloading of ships at the two ports. It has also forked for itself, sizeable interests in the railroad link between the ports and is also bidding for a major construction project for a new suspension bridge that will ultimately link land and canal

highway to facilitate large cargo containers between the Atlantic and Pacific coasts.

China has been actively engaged in gaining control of several important ports in Latin America. This initiative helps China to have direct access to raw materials. For instance, Chinese enterprises, both private and government, control the Buenos Aires Container Terminal in Argentina, the Panama Ports Company, Cristobal and Balboa ports on either sides of the Panama Canal, Ensenada International Terminal at the international port of Manzanillo, operations in Veracruz, Mexico, and two ports in the Bahamas. Similarly, Fujian province has a cross-Pacific shipping route with Latin America, linking the ports of Hong Kong, Xiamen, Qingdao and Shanghai with Manzanillo (Mexico), Buenaventura (Colombia), Guayaquil (Ecuador), Callao (Peru), Iquique, Valparaiso and Lirquen (all in Chile). All this facilitates China's access to Brazilian iron-ore, Argentinean soyabeans and Venezuelan oil.²⁸

Japan is very poorly endowed with energy resources and has only 59 million barrels of proven oil reserves, which corresponds to only about ten days supply.²⁹ Thus, it imports nearly 4 million barrels of oil per day, which corresponds to 90 per cent of its oil needs, and most of these are sourced from Persian Gulf states. Similarly, Japan is also a major importer of LNG, which constitutes nearly half of the entire world's total, and one-third of the total imports are obtained once again from the Persian Gulf states. Japan's need for gas as a primary commodity for energy is expected to increase from 13 per cent in 2005 to 18 per cent by 2030. It is quite evident that the significance of natural gas is fast increasing in Japan. The Japanese thirst for hydrocarbons is best demonstrated by the fact that it is the world's fourth largest energy consumer and second largest energy importer. For instance, it imported 5.57 mbd of oil in 2003 up from 5.30 mbd in 2002.

Given the long distance to the source of supply and geographical constraints, vessels carrying Japanese energy cargo must transit the Straits of Malacca before setting course to Japan. In 2005, the Japanese government (Director-General of the Agency of Natural Resources and Energy) constituted

28. "Looking Ahead: Strong Growth for Asia Pacific Ports", Report by Fusion Consulting, Singapore.

29. Kent E Calder, "Sino Japanese Energy Relations: Prospects for Deepening Strategic Competition", Paper presented at the Conference on Japan's Contemporary Challenges, Yale University, New Haven, Connecticut, March 9-10, 2007.

the Energy Security Study Group to evaluate policies for Japan's future energy needs and energy security policies.³⁰ In its evaluation, the Study Group identified several risks to Japan's energy security, which included political instability in the Middle East, high demand from China and India leading to higher international prices, and inefficient domestic management of energy resources. The Study Group also highlighted that there were enormous risks to Japanese energy supply chains due to natural disasters, terrorist attacks on energy infrastructure and safety and security of sea-lanes. In the context of the latter, the Study Group specially identified Straits of Malacca as the bottleneck for the supply chain and pointed out that any disruptive incident could seriously hinder the supply of energy. Thus, ensuring safe passage through the Straits of Malacca is a critical factor in Japanese energy and maritime security considerations.

Japan has been the front-runner in international efforts at enhancing safety and security in the Straits of Malacca. In 1981, Japan constituted a 400-million yen revolving fund, to provide initial funding to combat oil spills in the Strait. From 1968 to 1998, the Japanese contributed a total of over 10 billion yen towards the management and maintenance of the Strait.³¹ Significantly, over the past three decades, Japan has provided voluntarily more than US\$150 million.³² It has contributed towards the Straits of Malacca revolving fund for projects like 'preparing of common datum charts, dredging of the Strait of Singapore, and conducting hydrographical surveys'.³³ What is perhaps more significant is the fact that the Japanese contribution has been 'free of conditionality'. Japan, through the Nippon Foundation, has announced that it would provide one-third of the initial five-year cost of the fund, an estimated US\$9 million (RM30 million).³⁴

30. For more details see 'June 2006: Energy Security Study Group' <http://www.enecho.meti.go.jp/english/report/060908c-1.pdf>

31. Osamu Matsumoto, "Who are the Contributors: Littoral States, User States and Stakeholders?" or "Who are the Users", an undated paper. p.2-5, cited in Capt (Rtd) Mat Taib Yasin, 'Sharing the Burden of Maintenance of Safety and Security of Navigation in the Straits of Malacca', paper presented at LIMA '05 Maritime Conference 4th-5th December 2005

32. Consensus Document on Symposium on the Enhancement of safety of Navigation and Environmental protection of the Straits of Malacca and Singapore, March 13-14, 2007, Kuala Lumpur.

33. Mohd Nizan Basiron, 'Sharing the Cost of Enhancing Safety and Protecting the Environment of the Straits of Malacca and Singapore: Some Basic Ideas', paper presented at the Symposium on the Enhancement of safety of Navigation and Environmental protection of the Straits of Malacca and Singapore, March 13-14, 2007, Kuala Lumpur.

34. Mohd Nizan Basiron, 'Securing the Straits', *New Strait Times*, October 18, 2007.

Japan has also provided material support to Indonesia. In 2005, Junichiro Koizumi, Prime Minister of Japan and Susilo Bambang Yudhoyono, President of Indonesia during their discussions had agreed to cooperate and enhance safety and security in the Straits of Malacca.³⁵ In 2006, Japan agreed to transfer three patrol boats costing nearly 1.92 billion yen (US \$16.84 million).³⁶ Although these boats were considered military hardware and Japanese constitution does not permit such sales, the government had clarified that 'the move is in Japan's national interest, as pirates pose a 'direct threat' to Japan's economy and the safety of Japanese nationals engaged in maritime transport'. Recent reports suggest that the patrol boats arrived in Indonesia in December 2007.³⁷ Indonesian Military Commander Air Marshal Djoko Suyanto has noted that the ships would be operated by officers from littoral countries.

Japan has also been instrumental in the establishment of the Regional Cooperation Agreement on Anti-Piracy (ReCAAP) that aims to enhance multilateral cooperation among the 10 members of the Association of Southeast Asian Nations (ASEAN) plus Japan, India, China, South Korea, Sri Lanka and Bangladesh. Japanese Prime Minister Junichiro Koizumi first proposed ReCAAP in October 2001 and, after three years of negotiations, it was launched in Tokyo in November 2004 and was open for signatures on February 28, 2005. The key Malacca littoral states, Malaysia and Indonesia, are yet to sign the ReCAAP. A Japanese Coast Guard officer is part of the ReCAAP Centre and it is hoped that by having an official permanently at the Centre will enable Japanese officials to instantaneously obtain information, as well as issue warnings in close cooperation with the countries concerned. Up-to-date information gathered on pirate activity will be shared with Japanese shipping companies.

In the post-Cold War period, as part of its 'Look East' policy, India has focused its attention on Southeast and East Asia. Naturally, the Asia Pacific region has emerged as the primary focus of its attention, both politically and economically. If one follows the 'direction of trade', nearly 50 per cent of Indian trade transits through the Straits of Malacca. Therefore, the safety and security of Straits of Malacca is extremely vital for India's economic growth and prosperity.

35. 'Japan -Indonesia Joint Announcement on maritime affairs' available at www.mofa.go.jp/region/asia-paci/indonesia/summit0506/joint-5.html.

36. 'Japan to Offer Indonesia 3 Patrol Boats', June 13, 2006, available at www.chinaview.cn.

37. 'Japan Donates Three Patrol Ships To Help Securing Melaka Strait', available at http://www.bernama.com/bernama/v3/news_lite.php?id=288286.

Figure 5: Destination-wise Exports (2006)

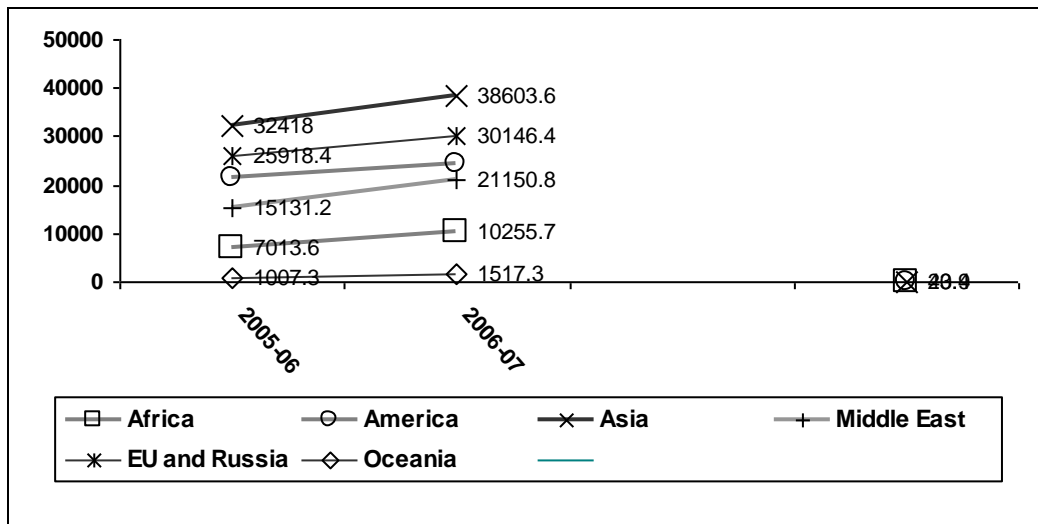
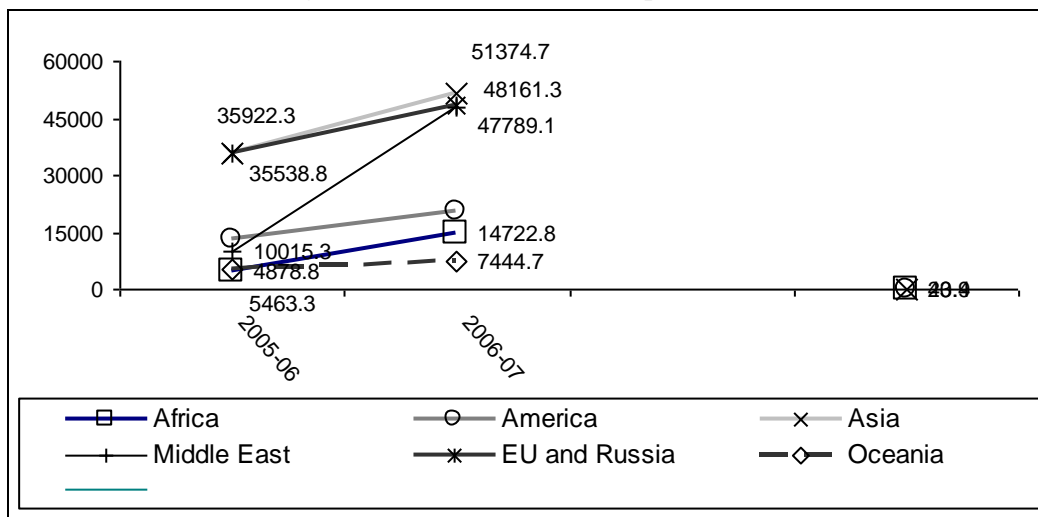


Figure 6: Destination-wise Imports (2006)



Source: Monthly Review of Indian Economy, September 2007.

At the political level, the Indian leadership has consistently offered to provide assistance to the Strait littorals. In July 2004, while attending the ASEAN Plus 3 meetings and the ASEAN Regional Forum (ARF) in Jakarta, India's External Affairs Minister Mr Natwar Singh had noted that India was ready to

provide security in the Malacca Straits and stressed that it was in India's national interest to ensure that the Strait remained a crime-free sea-lane. He further observed: "From our side it is affirmative...details can be worked out but in principle yes... We are neighbours. Nicobar Island and the northern part of Sumatra are only 80 miles apart".³⁸ Similar sentiments were expressed in 2007. At the 14th annual ASEAN Regional Forum (ARF) meeting, Pranab Mukherjee, India's External Affairs Minister said: "India will design and conduct a training module on maritime security, specifically for the ARF member-states, with themes of anti-piracy, search-and-rescue [missions], offshore and port security, anti-smuggling and narcotics control and anti-poaching operations." The nucleus of the module would be "capacity-building" for these and related aspects of maritime security. In this context, the Indian Coast Guard conducted training for Southeast Asian Coast Guard and Marine Police in March 2008.³⁹

At the functional-operational level, the Indian Navy has expressed readiness to undertake anti-piracy patrols in the Malacca Straits provided a specific request was received from South East Asian countries.⁴⁰ Meanwhile, India has been engaged in bilateral naval cooperation with several South East Asian countries with the primary aim of addressing problems related to the safety of sea-lanes and maritime security. This has resulted in coordinated and joint patrols and exercises, common operating procedures, search and rescue at sea and protection of marine environment. For instance, Indian Navy has a bilateral maritime agreement for coordinated and joint patrols with Thailand, Malaysia, and Indonesia. Indian Navy and Singapore Navy have a highly developed maritime cooperation agreement that includes joint naval exercises, submarine training and bilateral exchanges. India and Singapore have been holding joint exercises for the past 15 years and these have provided a platform for exchange of information, interoperability and above all contributed to regional stability.

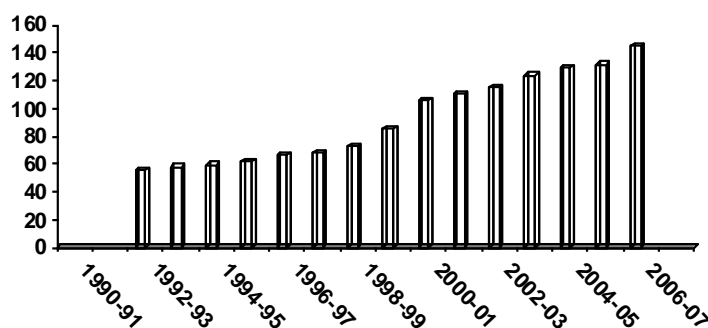
As regards energy requirements, 67 per cent of India's need is sourced from the Persian Gulf and 17 per cent from West Africa. There is very little that is sourced from the South East Asian countries.

38. "India Ready to Protect Malacca Strait: Natwar Singh" July 01, 2004, available at <http://www.rediff.com>.

39. Discussions with India Coast Guard Officer in April 2008 in Singapore.

40. "India For Joint Naval Patrols with Indonesia, Malaysia" available at <http://www.newlerala.com>

Figure 7: Trends in India's Crude Oil Demand and Supply (percent)



	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Domestic Production	26.95	27.03	32.24	35.17	32.90	33.86	32.70	32.50	32.43
Net Imports	29.25	30.82	27.35	27.34	33.91	34.50	39.80	53.50	74.10
	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007			
Domestic Production	32.03	33.04	33.38	34.04	32.20	34.00			
Net Imports	78.71	81.99	90.43	95.86	99.41	110.86			

Source: TERI Report and CMIE

However, in December 2006, in the midst of much fanfare, the first consignment of crude oil from Sakhalin-I project of the ONGC Videsh Limited (OVL), the overseas wing of Oil and Natural Gas Corporation (ONGC) was received at Mangalore Port. This 100,000-ton consignment of crude oil from Yuzhno-Sakhalinsk, Sakhalin I, Russia, was to be refined by the ONGC's subsidiary Mangalore Refinery and Petrochemicals Ltd (MRPL) located at the Mangalore Port. Presiding over the function, the Indian Petroleum Minister Murli Deora noted: " Sakhalin to Mangalore, a new silk route, a route of more than 5700 nautical miles, is the new route of integration. Russia is our important friend and we look towards them when we think of our energy needs and security of the country". The OVL has 20 per cent stake in the Sakhalin-I project that is operated by Exxon Mobil.

Although it was a great moment for the Petroleum Minister and for India that remains energy hungry and seeks alternate and new sources for enhancing energy security, the Defence Minister, AK Antony, speaking at an interactive session at the Pravasi Bharatiya Divas 2007, pointed out that "...Another key foreign policy related issue is security of shipping and sea-lanes," in the Arabian Sea from the oil producing countries of the Gulf. He also noted, "...The Indian Ocean is home to the busiest sea-lanes, with an estimated \$1,800 billion of merchandise trade passing through the region...Thus, India has the potential and the capability to be a significant maritime player. I would even venture to say that the Indian Ocean could, in fact, be India's New Silk Route."

It was a sheer coincidence that both the Petroleum Minister and the Defence Minister had mentioned the sea-based 'Silk Route' in their speeches, but these nautical routes or sea lines of communications in naval parlance would need to be defended. The Indian Navy had watched the delivery of the first consignment of crude oil from Sakhalin-I with great interest, and, as a matter of fact, the naval planners have since been engaged in developing plans to defend this new sea-lane that should see several such consignments originating from Russia's far east, through the Pacific, South China Sea and Malacca Straits to Indian ports. Significantly, the new sea-lane would witness tankers crossing each other either carrying oil and gas from the Persian Gulf to China, Japan, Korea, Taiwan and South East Asia or carrying energy resources from Russia's far east to Asian countries. This will result in higher maritime traffic which will add to the existing problems of security of transport at sea resulting from piracy and armed robbery, terrorism, and drug and gun smuggling.

In recent times, India's political elite, irrespective of their political affiliations, have enunciated their strategic vision and defined the strategic geography in which the Indian navy will be called upon to operate. Addressing the annual Combined Commanders Conference,⁴¹ Prime Minister Vajpayee noted:

"...As we grow in international stature, our defence strategies should naturally reflect our political, economic and security concerns, extending well beyond the geographical confines of South Asia...Our security environment ranges from the Persian

41. Combined Commanders Conference is an annual event in which the political leadership addresses the top military officers of the Indian Army, Indian Navy and Indian Air Force are present.

Gulf to the Straits of Malacca across the Indian Ocean, includes Central Asia and Afghanistan in the North West, China in the North East and South East Asia. Our strategic thinking has also to extend to these horizons."

Under the same government, in 2000, the Indian Defence Minister George Fernandes noted: "India's area of interest extends from the north of the Arabian Sea to the South China Sea".⁴²

Prime Minister Manmohan Singh has articulated the strategic geography in which India has significant stakes. The Prime Minister stated:

"India's growing international stature gives it strategic relevance in the area ranging from the Persian Gulf to the Straits of Malacca.... India has exploited the fluidities of the emerging world order to forge new links through a combination of diplomatic repositioning, economic resurgence and military firmness".

Pranab Mukherjee, as Defence Minister, reinforced the strategic domain for the Indian Navy and defined a large swathe of sea space in the Indian Ocean as the navy's area of responsibility. He noted:

"Our location on top of the Indian Ocean between the sea routes from the Cape of Good Hope and the Mediterranean and the energy sources of the Gulf to the strategic Malacca Straits gives us a vantage point and responsibility to safeguard the security of our energy supplies and shipping in the Indian Ocean region".⁴³

There is a perceptible shift in the strategic thinking among the ruling elite from 'maritime blindness'⁴⁴ and 'neglect' of the Indian Navy to a greater understanding of the capability of the force and its significance in India's economy that pivots on maritime trade. This shift, beginning with the economic reforms in the early 1990s resulted in an improved economic growth, was catalyst for ambitions of the Indian Navy that envisions protecting sea-lanes to safeguard maritime trade, protection of EEZ, and safeguarding other economic interests on the high seas. Also, the Indian political establishment understands the efficacy of the Navy in the political milieu of international relations and sees it as a force with a distinctive profile of being the instrument most suitable for

42. "India Challenges China in South China Sea", *Stratfor.com*, 26 April 2000, available at <http://www.stratfor.com/>.

43. Commodore RS Vasan, 'Mile Stones in Growth of Indian Navy: Strategic Dimensions and Their Relevance in the IOR', available at <http://www.saag.org/papers13/paper1270.html>

44. Admiral Arun Prakash, "At Sea About Naval History", *The Sunday Tribune*, September 02, 2007.

projecting power and influence, both in the national and international contexts, across the globe. That such a force should project power is a recurring theme in the Indian naval articulations too:

“...if India aspires to don the mantle of even a regional entity, New Delhi must shed diffidence, and find not just the ways and means but the will to project power overseas. This did not mean that India was planning to be the aggressors, or planning to invade someone. It needed enough power to eject intruders from its island territories, to come to the assistance of neighbours, to rescue Indian nationals, and as the Tsunami showed, to render aid in natural calamities.”⁴⁵

With nearly 90 per cent of India's oil transported by the sea-route, it is inevitable that the energy sea-lanes should be protected. The security issue has got enhanced manifold since most of the oil originates in the Persian Gulf that has remained plagued with political turbulence and has been making the oil supply from the region its hostage. The closure of the Strait of Hormuz practically cuts off Gulf supplies to all countries in the Asia Pacific and partly the West, which is fed by pipelines. Similarly, the closure of the Straits of Malacca can seriously threaten the economies of South East Asia, China and Japan.

The Indian Navy is entrusted with the responsibility of safeguarding the sea-lanes and, during times of crisis, escort national shipping, vital cargoes and energy assets on the high seas as also when they transit choke-points. In its offensive construct, the Indian navy should be able to engage in 'commodity denial' to the enemy. In that context, the naval strategy is built on the argument that the Indian Navy should be able to interdict and deny critical resources that the adversary 'needs badly and must be transported through the seas'.⁴⁶ The Indian Navy has an energy sea-lane strategy for the route Persian Gulf-India and also the capability to escort/protect critical energy shipments during crisis / wars, but it must develop a new strategy for the 5700 nautical mile long energy sea-lane from East Russia to India via the South China Sea. It is true that to defend

45. Speaking at the Institute for Defence Studies and Analyses (IDSA) Fortieth Anniversary commemorative seminar, on September 1, 2005, titled "Emerging India: Security And Foreign Policy Perspectives", Admiral Arun Prakash, Chief of Naval Staff & Chairman Chiefs of Staff Committee, noted.

46. Admiral Sureesh Mehta, "The Immediate Need is to Augment and Upgrade Our Capacity for Sustained and Long-Range Airborne Surveillance", *Force*, December 2007, pp.18-20.

this sea-lane is a Herculean task and the Indian navy, with its present force structure, is ill-equipped to take on this mission.

In the Bay of Bengal, a unique opportunity has arisen for India. New Delhi has made great friends in Myanmar and decided to revive the past relationship (1948-1962) between Prime Ministers Jawaharlal Nehru and U Nu that was instrumental in early political and diplomatic ties between the two countries. India had provided Burma with military and economic assistance during this period, but in 1962 the then military leader General Ne Win sided with China during the India-China war and ordered all Indians to leave the country. After a hiatus of nearly three decades, Indo - Myanmar relations witnessed a major shift during Prime Minister Narashima Rao's regime. There were at least three reasons for the shift in India's policy towards Myanmar: (a) Contain China, (b) Check insurgency, drug trafficking, and smuggling in India's northeastern states, and (c) The Look East policy.

Notwithstanding the recent Monks-related domestic unrest in Myanmar and Indian reaction thereto, India-Myanmar relationship now covers a wide spectrum of issues, including energy, trade, counter-terrorism and defence. What is perhaps more significant is that both Myanmar and India see this as an opportunity to keep issues, such as democracy and human rights aside and build good neighbourly relations. For India, this strategy fits well into its 'Look East' policy that is making steady headway in all dimensions of international relations. New Delhi announced plans to invest about Rs. 850 crores over the next three years to develop infrastructure for the growth of regional trade. Sittwe port development and the Kaladan river project would facilitate linking Myanmar with the northeast of India, thus bypassing Bangladesh. Also, a bus service from Imphal to Mandalay and air cargo service between Imphal and Burmese cities are other initiatives.

Perhaps, of greater interest to India is the burgeoning energy cooperation that involves both exploration and sale including transportation through ships and pipelines. This is a significant development keeping in mind the fact that crude oil and natural gas production in India over the last four years of the current Five-Year Plan has been almost stagnant at around 33 million metric tonnes, while gas production has been about 31-32 billion cubic meters (bcm). Energy experts point out that Myanmar is sitting over a gas lake that has the potential to provide the much-needed energy requirements of Asia, in particular

that of India and China. It is estimated that Myanmar has 300 billion cubic meters (bcm) gas reserves and India is engaged in drawing out routes of pipelines to transport this gas to its Northeast hinterland that remains poorly developed. Petroleum giants like Gas Authority of India Limited (GAIL) and the Oil and Natural Gas Corporation (ONGC) are actively engaged in exploration activities.

Conclusion

The above discussions have attempted to illustrate that sea-based commerce possesses a unique profile of being an instrument that is most viable for radiating the 'soft power' of the state and can influence in special dimensions over distant seas. The presence of national flagged shipping provides the opportunity to project the dynamic nature of the national economy while the shipbuilding capability offers the state a suitable means to showcase its technological prowess. Similarly, the availability of educated and trained human resource provides the desired resilience to the soft power of the state.

There is a symbiotic relationship between economics and security that is based on safe and secure maritime enterprise. Significantly, a weak link in the maritime enterprise and its associated infrastructure is sufficient to invite vulnerabilities with a range of impacts on the global economy and business continuity leading to financial losses. It would also have a significant impact on the regional economy, thus impacting on individual countries' development processes. It must be remembered that unlike the economic globalization (driven by revolution in information technology), oceanic highways are acting as catalysts for globalization of maritime security. Although the terrorist attacks of September 11, 2001, did not involve maritime infrastructure, the attacks highlighted the fact that maritime supply chains anywhere in the world, present themselves as an attractive and vulnerable terrorist targets. Several studies have reinforced the fact that major disruptions in economy could result from a maritime supply chain related attack.

The government policies should not only be about securing supplies of raw materials, energy and finding markets for goods, but must also about maintaining a broad approach of a generous mix of politico-diplomatic-economic-security initiatives for assured and sustained supplies and transportation security. Also of significance is the necessity of engaging regional

countries by making them important stakeholders through investments and also in securing the maritime enterprise.

Within the overall national economic and security strategy, mutual understanding among the government, security agencies, and maritime infrastructure operators is vital and, in particular, the crosscutting policies that lead to future action plans require detailed consideration. Further, internal and external situations affecting maritime commerce need constant assessment and agencies must gather and analyze information in order to have a clear understanding and to be able to consider, plan and implement a commerce security strategy that also looks at uncertainties arising from geopolitics, wars, terrorism, accidents and disruptions. Also needed is a sophisticated warning system to provide total domain awareness through a network of intelligence activities, surveillance and the integrated presentation and analysis of available maritime information. This has to be reinforced with increased surveillance, intensive security patrolling and demonstration of India's intent and capability for an effective offshore maritime security.

Infrastructure, Northeast and Its Neighbours: Economic and Security Issues

Manoj Pant*

Introduction

It was Adam Smith who argued that economic specialization is limited by the size of the market. Today, we also know that a critical limiting factor on markets is the connectivity of regions/individuals. A region/individual can expand its economic opportunities by trading beyond its border. For this, connectivity is essential. While, in the past, connectivity was a function of roads and bridges, today we know that infrastructure, in general, goes beyond just roads to power, communications, air, etc.

In general, infrastructure is about delivering the essential services that people need to maintain a basic standard of living: water supply, sanitation, electricity, roads and other aspects of transport, and telecommunications. These, in turn, lead to improvements in health, access to education, generation of economic opportunities, and more. Unlike other inputs of production whose magnitudes vary with the magnitude of output and thus are accounted for in the variable cost, infrastructure does not, by and large, vary with the magnitude of production unless the scale of production changes or the technology of production is altered. Thus, for a given technology (or a set of technologies) and scale of production (or the scale of an economy), infrastructure represents a fixed cost.

Depending upon the criterion of ownership (whether private or public/social), infrastructure may be classified as: (i) social infrastructure or social overhead capital, and (ii) private infrastructure. In an economy, there are many instances of roadways, ports, railways, power network, universities, colleges and schools, hospitals, and so on that are publicly owned. There may also be instances of roadways, schools, colleges, hospitals, etc. owned by individuals.

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Depending upon the function, infrastructure may be classified into the following broad categories:

- (i) Transport and communication infrastructure, viz., roads, railways, ports, post offices, telephone exchange network, etc.
- (ii) Power infrastructure, including power generation station, power line network, etc.
- (iii) Agronomic and Agro-marketing Infrastructure, like the system of canals, tube wells, irrigation facilities, fertilizer distribution points, HYV seed distribution shops, warehouses and cold storage facilities, etc.
- (iv) Industrial infrastructure like factories, etc.
- (v) Infrastructure relating to provision of public amenities like education, health, sanitation, etc.

While all these are critical at any point of time, here we will focus our discussion mainly on (i) above. In particular, we will argue that connectivity via infrastructure is crucial to the economic development of the Northeastern Region (NER). What is perhaps even more important, we will argue that economic development also determines the NER's relations with its neighbours and hence has a crucial bearing on the country's security concerns.

In the next section, we will look at a brief summary of the nature of the NER's economy emphasising those features which set it apart from other parts of the country. Section III will briefly describe the infrastructure in the NER indicating which are the constraining factors. Section IV will look at the NER and its neighbours and the state of its trading activity. Finally, in Section V, we will summarise the paper.

The NER Economy

The NER consists of the 8 states of Assam, Nagaland, Arunachal, Mizoram, Tripura, Manipur, Meghalaya and Sikkim. It accounts for about 3.8 per cent of the country's population and almost 8 per cent of the geographical area. Thus, its average population density is well below the national average. However, this hides some wide variations within the region. While most of the hill states are sparsely populated, this is not true of the plain areas of Assam, Tripura and

Manipur. For example, Arunachal has a geographical area larger than Assam, but has a population density of 13 per sq km as against Assam with 340 per sq km against the national average at around 324 (according to 2001 Census). In general, the hill areas are sparsely populated. In addition, in terms of size, Assam is an outlier accounting for about 68 per cent of the total population of the NER.

Second, what really sets NER apart from the other parts of the country is its geographical isolation from the rest of the country. Thus, it shares 98 per cent of its borders with China and Bhutan in the north, Myanmar in the East, Nepal in the West and Bangladesh in the South and West. Only 2 per cent of its borders connects it to the rest of the country via the Siliguri corridor which is also called the 'chicken's neck'.

Third, it is not a homogeneous entity with large linguistic, cultural and ethnic diversity even within a state and substantial religious diversity across different states. In addition, it includes one third of the total number of tribal communities in the country, most of whom live in the hill states of Nagaland, Meghalaya, Mizoram and Arunachal.

Fourth, in both overall and gender-based literacy, all the states rank much higher than the national average with the exception of Assam and Arunachal.

Fifth, while data on poverty estimates based on NSS consumption data are available only for Assam, it is clear that poverty in the hill states is not as pervasive as in some of the other states of the country like Uttar Pradesh and Bihar.

Sixth, the region is one of the richest in terms of forest resources and is considered the biodiversity hotspot of the country. In addition, the extensive water resources make it the principal source of hydroelectric power for the country.

Finally, the NER states (barring Sikkim) have been severely hampered in their developmental experience by regional insurgency, especially in states like Mizoram, Tripura, Nagaland and Assam. For the hill states, in particular, insurgency has implied that the developmental experience dates to just a few years back. In some states like Manipur, insurgency has implied that economic growth has, in fact, decelerated in the 'nineties (for details, see Rao, *et.al.* 2007). In recent years, however, insurgency in most of these states has declined

significantly with the result that they are able to pay more attention to issues like economic development and trade.

As a consequence, the states of the NER are, by and large, subsistence agricultural economies (for a detailed analysis see Rao, et. al. op.cit., Chapter 4) heavily reliant on imports of basic foodstuffs. This is clear from the fact that the NER covers 7.7 per cent of the country's geographical area, yet accounts for only 1.5 per cent of the foodgrain production. As can be seen from Table 1 the manufacturing sector is virtually non-existent in these states, though there are considerable inter-state variations.

Table 1: Composition of GSDP

(Based on the average for the period from 2000-01 to 2004-05) (*percent*)

Sector	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Sikkim	Tripura	NER	All India
Primary	31.3	38.5	27.1	31.8	22.6	36.3	19	23.7	34.1	24.4
Secondary	23.2	15	23.5	15.2	14.4	12.1	25.5	24.6	16.9	23.4
Tertiary	45.5	46.5	49.4	53	63	51.6	55.5	51.7	49	52.2
GSDP	100	100	100	100	100	100	100	100	100	100

Source: www.mospi.nic.in

A detailed examination of the agricultural sector in the NER states indicates that being subsistence economies, the agricultural production profile indicates substantial overlapping in production patterns. For example, the dominance of millets in the production pattern is indicative of the fact that farmers are generally producing for self-consumption. Consequently, the NER states are highly dependent on imports for most of the food items. This is shown in Table 2.

As argued in detail in Rao (op.cit.), this self-sufficient production pattern is largely a consequence of the fact that infrastructure has hampered both inter- and intra-state trading leading each community to fend for itself.

Table 2: Dependency index (DI) for All Products, 2003-04

	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Tripura	NER
Rice	67.55	129.58	90.73	100.37	83.66	136.36	165.96
Wheat	126.61	793.91		1715.11		832.1	676.57
Maize	86.34	54.18		18.61	9.27		343.57
Total cereals	69.62	186.94	122.69	134.52	107.19	191.8	228.63
Total pulses	79.8	455.7	438.04	260.38	152.6	770.66	476.96
Total oilseeds	23.71	398.02	2187.18	529.34	229.93	2081.85	415.03
Fruits	49	69.52	46.25	44.65	126.2	152.75	95.69
Sugarcane	441.11	484.92	595.72		3126.27	1022	618.62
Spices	1.21	183.48	16.82	2.02	1.15	76.77	27.74
Total Foodgrains	45.98	144.64	70.67	146.28	106.34	167.31	182.77
Milk	28.35	135.98		82.74	180.11	197.41	168.72
Meat	5.68	16.96		11.15	16.8	28.09	23.59
Egg	262.14	188.92	-	79.07	108.31	201.98	283.66
Fish	123.38	74.38	-	166.71	137.68	157.24	127

Source: Calculated from NSSO, 2003 and Statistical Abstract of India, 2003-04.

Note: No data is available for Nagaland and Sikkim. The DI measures the ratio of per capita consumption to per capita production. A number greater than 100 indicates dependency on outside sources for consumption. For details see Rao, *et. al.* (2007), volume 3.

In summary, a detailed study of the agricultural sector of the NER indicates that while the plain areas may have some comparative advantage in producing items like tea, rice and rubber, the hill states have no such advantage and, as such, they should be concentrating on producing fruits and vegetables. Lack of connectivity (and hence trade) is one important factor that has prevented some degree of specialisation in the NER states. We will look at this in some detail below.

Infrastructure in the NER

For this article we have defined infrastructure to include electricity, gas, water supply, construction, transport, storage and communication. Looking at the share of this sector in the Net State Domestic Product (NSDP) in Table 3, it would be seen that infrastructure plays a very important role for all the states belonging to the NE region as its share in the Net State Domestic Product (NSDP) ranges from 9 to 28 per cent for NER between the years 1993-94 to 2002-03. The share of infrastructure has been continuously rising for all the NER states, over time. While data for Mizoram at constant prices under the new series

(base 1993/94) is not available, separate calculations show that the share of infrastructure declined from 18 per cent in the year 1990-81 to 12 per cent in the year 2002-03. The share of infrastructure for Nagaland is the highest at 28 per cent in 2002-03.

Table 3: Shares of Infrastructure sector of NER States (at constant base 1993-94)

States	Years	Infrastructure (in percent)		States	Years	Infrastructure (in percent)
Arunachal Pradesh	1993-94	22		Assam	1993-94	07
	1998-99	26			1998-99	07
	2002-03	24			2002-03	09
Manipur	1993-94	12		Meghalaya	1993-94	13
	1998-99	14			1998-99	13
	2002-03	17			2002-03	17
Nagaland	1993-94	26		Sikkim	1993-94	15
	1998-99	26			1998-99	16
	2002-03	28			2002-03	24
Tripura	1993-94	09		India	1993-94	12
	1998-99	16			1998-99	14
	2002-03	24			2002-03	16

- Note: 1. Owing to differences in methodology of compilation, data for different States / Union Territories are not strictly comparable.
 2. Data for Mizoram are not available at constant prices.
 3. Figures are calculated.

Source: Central Statistical Organisation (CSO) website as on 26-11-1999 for old series and as on 23-2-2006 for new series.

However, for a more detailed analysis it is necessary to look at trends in the components of the infrastructure sector. As already indicated, we will concentrate here on transport and telecommunications. Our logic is that, given the long gestation lag and the large amounts of investment involved, it is unlikely that such infrastructure could be provided only by the private sector initiative.

Transport

Transport infrastructure can be classified as road, rail, air and water transport. A greater part of the total area of the Northeastern Region is hilly and undulating resulting in low density of population on the one hand and low *per area* production of merchandise on the other. Location of human settlements is

sparse and the population size of settlements is small on average. In such a terrain, rail, air and inland waterways cannot connect all areas cost-effectively. Consequently, roads are the dominant infrastructure for transportation. This is particularly true for the hill areas of the NER.

(i) **Roads**

It is instructive to look at the road network in the NER states in relation to the network in the rest of the country. Is the road network in the NER deficient relative to the rest of the country? To answer this question, we have normalized total road length in the NER states by both area and population. The results for some indicative years are given in Table 4.

Table 4: State-wise Road Length per 100 Square Kilometers of Area and Per Lakh of Population in India

(Road length in km)

States	1996-97		1999-2000		2001-2002	
	Per 100 Square Kilometres (1)	Per Lakh of Population (2)	Per 100 Square Kilometres (3)	Per Lakh of Population (4)	Per 100 Square Kilometres (5)	Per Lakh of Population (6)
Arunachal Pradesh	16.8	1281.1	21.8	1522.7	21.93	1672.64
Assam	87.2	270.4	109.4	329.9	114.09	335.71
Manipur	49	475.7	51.2	457.4	51.21	498.45
Meghalaya	37.8	385.5	40.7	380.3	42.65	412.49
Mizoram	22.9	536.6	23	538.4	24.07	571.14
Nagaland	110.7	1223.7	122.7	1271.1	126.79	1056.31
Sikkim	25.8	366.8	26.1	370.2	28.45	373.30
Tripura	140.5	433.2	148.4	420.7	155.41	509.38
India	74.9	258.2	76.8	256.1	74.73	238.80

Table 4 indicates that, as expected, the road network per capita (columns 2, 4 and 6 in Table 4) is significantly higher in the NER relative to the rest of the country. To a certain extent, this is expected, given the hilly terrain and the low density of population. However, road length per unit of area is higher only in Assam, Nagaland and Tripura. Since the latter is the correct indicator of the ease of movement of passenger and freight traffic, one can conclude that road infrastructure is relatively deficient in the NER states. This is particularly true for the hill states as other modes of travel here are either too expensive or difficult to provide.

It would also be useful to look at the classification of roads as this has implications for the funding of road development schemes. Table 5 below gives the breakdown of roads according to types.

Table 5: Types of Roads in NER (As on February 2002)

(Length in km)

States	National Highways	State Highways	Major District Roads	Village Roads
Arunachal Pradesh	392	-	12169	4657
Assam	2836	1811	26416	44135
Manipur	954	1118	6638	2172
Mizoram	927	354	3518	NA
Meghalaya	717	991	5416	604
Nagaland	369	398	13754	5137
Sikkim	62	186	1502	NA
Tripura	400	136	5569	7912
All India*	58092	133853	1967080	492585

Source: indiastat.com

Most previous studies have, by and large, looked at the development of either state roads or national highways.¹ As can be seen from Table 5, a large part of these roads are village and district roads. In the case of Assam, in particular, village roads are the dominant category. These are particularly important for facilitating inter-and-intra-state movement of people and freight.² We have already noted that there seems to be little inter-state trading of foodgrains and other commodities. In this context, it may be necessary to give particular attention to these roads within the broad category of state roads.³

State governments have also been asking repeatedly for converting state highways into national highways.⁴ Some of these demands are justified.

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1. See, for example, Shukla Commission Report (1997) for an excellent compilation of planned development of road network as per requests of the state governments.
 2. This point was also stressed in a meeting the author had with officials in Meghalaya. It was pointed out that Central work on roads moved at a very slow speed. The officials also pointed to the need for road connectivity between the Garo, Jainti and Khasi hills under the national highways program. What is also crucial is the immediate creation of a Shillong bypass as traffic is now choking the capital of Meghalaya.
 3. In a meeting with officials of Arunachal, the author was apprised of the severe problem of road connectivity within the state. It was pointed out that 76 per cent of villages are not connected by roads. There was a demand that population as a criteria for fund allocation under the Prime Minister Grameen Sadak Yojna (PMGSY) should be done away with for NER states. This has now been agreed.
 4. See, for example, Shukla Commission report.

For example, the East-West highway demanded by Arunachal is crucial as at present one cannot travel from one district to another district of the state without exiting into Assam. More importantly, without the development of an internal highway, activities like tourism and private transport cannot take off. Tourists (or freight traffic) would have to repeatedly pay entry tax, as they move from one district of Arunachal to another. Here, one must note the importance of regional planning in the golden quadrilateral which is successfully linking the country. Some sort of mini golden quadrilateral could be drawn up for NER.⁵

Another important issue in the context of building the road network is that of maintenance of roads. With no internal resources and small state plans (especially in the hill areas), as the road network expands, maintenance of roads would take up a larger and larger share of the states' resources. It is not surprising that internal roads are falling into disrepair at most places.⁶

While individual state level road building plans are many, there is need for an integrated plan for the NER as a whole, which should include both inter-and-intra-state linkages. Some planning is already evident in the creation of a 7616 km planned inter-and-intra-state road network under the Special Accelerated Road Development Programme announced a few months back.

(ii) *Rail*

In general, rail is the best method of mass transportation in India. However, it is also true that rail networks in hilly areas are generally difficult and expensive to set up.

It is not then surprising that there are no railway routes in Arunachal Pradesh, Manipur, Meghalaya, and Mizoram. On the other hand, Tripura and Nagaland have railway routes only in their plain areas. However, Assam has a substantial length of railway routes. Of late, a substantial length of meter gauge tracks has been converted to broad gauge tracks in Assam. Some relevant details are shown in Table 6.

5. The east-west corridor as it is currently envisaged ends at Silchar. It ought to have gone on to Dimapur or Kohima.

6. In traveling along NH52 from Guwahati to Itanagar, the road shows signs of extreme wear and tear due to erosion. This is likely to happen every year when the Brahmaputra overflows its banks. Yet, no attempt seems to have been made for using better technology to resist erosion even though maintenance expenditure on this account is likely to recur every year.

Table 6 clearly shows that track density in terms of both population and area is much lower than the all India average even in the plain areas of the NER. The Table also shows that the increase in the density of tracks per lakh of population is only marginal or non-existent in most of the NER states compared to an almost five-fold increase at the national level. Even the increase witnessed in the plains of Assam is much lower than the national average. It may also be noted that most of the states have no rail line within the state connecting them to any major rail junction.⁷ Finally, while there has been some conversion of metre gauge to broad gauge, Assam still has a large number of single-track routes which prevent any increase in rail frequencies on those routes.

Table 6: State-wise Density of Rail Routes in India

States/UTs	As on 31.3.2001		As on 31.3.2005
	Route km per lakh of population	Route km per '000 sq km	Route km per '000 sq km
Assam	9.45	32.08	31.95
Tripura	1.4	4.26	6.14
Nagaland	0.65	0.78	0.78
Mizoram	0.17	0.07	0.07
Manipur	0.06	0.06	0.06
Arunachal Pradesh	0.12	0.02	0.02
Meghalaya	0	0	0
Sikkim	0	0	0
India	135.56	700.36	709.91

Source: Indiatat.com

There are some obvious short-run projects which need completion at the earliest. For example, the Bogibeel rail bridge across the Brahmaputra was commissioned in 1996 as a ten-year project, but work began only in 2002. This rail-cum-road bridge has implications of connectivity not only for Assam but also for Arunachal Pradesh and Meghalaya.⁸ Similarly, there is urgent need for some rail link inside Sikkim. But, the more important, issue from the long-run point of view is to view the network of rail lines in the context of inter-state connectivity rather than connectivity to any common hub. This requires long-term planning. In addition, it is necessary to view rail connectivity along with other forms of transport for the NER as a whole.

7. Officials in states like Sikkim and Arunachal Pradesh have pointed out that movement outside their state becomes crucially dependent on the law and order situation in the adjoining states. These states also have no alternative access to the rest of the country. Local disturbances in neighbouring states can thus severely disrupt bulk supplies which are carried by rail.

8. See, Shukla Commission Report, GOI, 1997.

(iii) *Air*

Air connectivity is normally useful for high-end passenger traffic and for high-value freight (example, plants, flowers, valuable documents etc). In general, air connectivity is expensive in the hilly areas because of the terrain. In the rest of the country, very few of the hill areas have any airports: most have some kind of helipads. In the NER, air travel has been made possible because of the subsidy given by the Centre for air travel to and from the NER (excluding Assam). Despite this, air connectivity was extremely unreliable prior to 2002, as the limited traffic made the use of Boeing jets uneconomical and cancellations were more common than actual flights. However, since 2002 the introduction of smaller ATR planes has made flights within NER somewhat more reliable, though Kolkata still seems to be the hub rather than Guwahati. On the other hand, Guwahati seems to be the natural hub for air traffic within the NER. At present, only Meghalaya and Sikkim have no full-fledged airports. Table 7 below gives some data on the movement of aircraft at main airports in NER relative to all India.

**Table 7: Domestic Traffic (Aircraft Movements) in NCR relative to all India
(October 2005 and 2006)**

(In numbers)

Airport	For the month of Oct., 2005	For the period April-Oct., 2005	For the month of Oct., 2006	For the period April-Oct., 2006
Guwahati	1,169	8,356	1,806	10,145
Agartala	284	2,217	468	2,950
Imphal	146	1,126	260	1,358
Dibrugarh	280	1,998	256	1,937
Silchar	164	1,286	288	1,532
Total NER	2,043	14,983	3,078	17,922
India – all airports	54,146	347,658	73,730	465,494

Source: Indiatat.com

From the above table it would be seen that air traffic in the NER accounts a very small proportion of all India traffic. In fact, barring airports in Assam, only Agartala (Tripura) and Imphal (Manipur) figure in the top 40 to 50 airports. It must also be remembered that alternative access to both Tripura and Manipur has been limited thus explaining the use of air travel to these places. On the other hand, Sikkim has no airport, as the heavy tourist traffic for Gangtok comes via

the railhead at Siliguri or the airport at Bagdogra. What is even more problematic in the NER is that there is no direct connectivity between the state capitals and all movements have to be via Guwahati. In fact, in some cases, one may actually have to fly from one state to the other via Kolkata. Any attempt to build airports

in the NER states must grapple with the twin issues of cost of travel and rationalization of air routes.

(iv) *Inland Water Transport*

It is surprising that inland water transport routes have not been given much importance in looking at transport connectivity in the NER. It must be remembered that, until the construction of roads, the rivers of Brahmaputra and Barak plains were commonly used as the medium of transport. During the British rule, with the growth of tea industry, these rivers became important carriers of

Table 8: State-wise Total and Navigable Length of Important Rivers in NER (in Km)

State	Rivers	2000-2001	
		Total length of the river in the state	Navigable length
Assam	Brahmaputra	724	724
	Buridhing	161	161
	Disang	129	129
	Gangadhar	113	113
	Subansiri	143	143
	Kapali	103	103
	Kolodeye	112	112
	Kolong	121	121
	Katakhal	161	161
	Panchas	105	105
	Others	1967	1967
	Total	3839	3839

Source: indiastat.com

trade⁹. The NER has about 3839 km navigable river routes. Table 8 shows that Brahmaputra has the maximum navigable length in the NER. In addition to Brahmaputra, there are other important rivers like, Buridhing, Katakhal, Subansiri, Disang, Gangadhar, etc. Most of the waterways in the NER are in the state of Assam.

The waterways in Assam are used for ferry services, commercial services, crew training centres, and rescue services. So far as the commercial services of IWAT, Assam are concerned, it operates within Assam, in NER and in Bangladesh¹⁰. Table 9 provides the major identified cargo routes in the NER.

9. "Perspective of Inland Water Development in the North East", Background paper No.7, The Inland Water Authority of India, March 2006.

10. See note 9.

It may be mentioned that maximum cargo movements take place on the river Brahmaputra. The major items are tea, coal, bamboo, rice, jute, sugar, urea, etc. Table 10 shows the movement of cargo on Brahmaputra River.

In 1996-97, the movement of cargo on Brahmaputra was 29414 tonnes, which increased to 791522 tonnes in 2003-04. The Calcutta – Pandu route handles the maximum movement of cargo on the river Brahmaputra. The Assam – Bangladesh route also witnessed 2100 tonnes of cargo movement in 2003-04.

Table 9: Major Identified Cargo Routes for NW-2

Identified Route	Nature of Cargo
Kolkata – Pandu	Coal, bitumen, iron and steel
Pandu – Kolkata	Gypsum, tea, coal
Jogighopa – Kolkata	Coal (Meghalaya)
Tezpur – Kolkata	Tea
Dibrugarh – Kolkata	Tea
Silghat – Budge Budge	POL
Namrup	Urea
Bongaigaon Refinery	RP Coke

Source: Background paper No.7, The Inland Water Authority of India, March 2006.

Table 10: Cargo Moved on Brahmaputra in India (in Tonnes)

River/Stretch	1999-00	2003-04	Cargo Generally Moved
A. CIWTC			
Calcutta-Pandu#	3031	600	Rice, Cement, GC, ODC, S. Iron, Bitumen
Pandu-Calcutta#	600	2650	Tea, Coal, Jute, GC, Bitumen, Lime Stone
Jogighope-Kolkata	-	500	Cement
Assam-Bangladesh#	-	2100	Tea, Coal, Jute, GC
Jogighope-Badarpur	-	-	Bamboo
Karimganj-Bangladesh	-	-	Coal
Sub Total	3631	5350	
(As indicated by IWD Deptt, Govt. of Assam)	-	786172	Sugar, Bitumen, ODC, Cement, GC, Coal
B. Other IWT	2700	-	Sugar, Bitumen, ODC, Cement, GC, Coal
Sub Total	-	786172	
Total NW-II	6331	791522	

Note: IWT: Inland Water Transport, NW-II: National Waterways No. II, CIWTC: Central Inland Water Transport Corporation, # : Also shown in movement on NW I.

Source: indiastat.com

Most of the ferry services are operating in the state of Assam, as shown in Table 11. Bagbore – Guwahati – Sialmari is the longest ferry service route in the NER, followed by Dibrugarh – Kacheri – Oriumghat, Sialmari – Vijaynagar – Guwahati and Bohori – Guwahati routes.

The IWT, Assam is the principal service provider in the region both in terms of commercial and ferry services. As shown in Table 12, Assam is connected directly with Arunachal Pradesh through Sadia-Saikhowa route, connected with Nagaland by shortest route through Neamati-Kamalabari & Dhansiri-Gamiri and connected with Meghalaya by Jaleswar-Dhubri & Dhubri-Fakirgang routes.

Table 11: Details of Ferry Services

Name of ferry service	Distance covered (in km)
Dhubri - Phoolbari	17
Dhubri - Chunari	65
Goalpara - Ramapara	16
Bagbore - Guwahati - Sialmari	211
Sialmari - Vijaynagar - Guwahati	96
Bohori - Guwahati	82
Guwahati - North Guwahati	4
Guwahati - Rajaduar	4
Guwahati - Karua	10
Kacheri - Umananda	4
Guwahati - kanchanmari	80
Nemati - Kamalabari	12
Bogibil - Kerangabil	30
Dibrugarh - Kacheri - Oriumghat	100
Sadiya - Saikhowa	12

Source: Background paper No.7, The Inland Water Authority of India, March 2006

Table 12: IWT Water Routes Where Assam IWT is Operating Ferries

Sadia-Saikhowa	Connected with Arunachal Pradesh Directly
Neamati-Kamalabari Dhansiri-Gamiri	Connected with Nagaland by Shortest Route
Jaleswar-Dhubri Dhubri-Fakirgang	Connected with Meghalaya by Shortest Route

Source: Background paper No.7, The Inland Water Authority of India, March 2006.

The IWT has a very limited number of vessels in the NER. As shown in Table 13, the number of cargo vessels is very limited.

**Table 13: Number of IWT Vessels with Valid Certificate of Survey in NER
(1998 to 2004)**

(as on 31st March)

State	Year	Self Propelled				
		Cargo	Passenger	Cargo-cum-Passenger	Tugs Pushers	Total
Assam	2001	7	-	32	-	39
	2002	7	-	32	-	39

Source: indiastat.com

The major strength of the IWT in the NER is the existence of big perennial rivers. It is the cheapest mode of transportation with least pollution in the NER.¹¹ Since the other mode of transportation in the region seems to be costly, the inland water transportation could be a viable alternative. But there exist some bottlenecks like non-availability of night navigation facility, non-availability of sufficient cargo vessels, non-availability of mechanical handling facility in the terminals and limited number of terminals, etc. According to the IWAT study, improved inland water connectivity in the Northeast would increase the employment opportunities and tourism related activity in the region. The improved connectivity would also lead to the opening of the inter-country routes for trade and commerce. But resource has been the main constraint in this regard, since it involves high investment cost which is very difficult to recover. So far as the development of the upper Brahmaputra is concerned, shoal formation makes it difficult for navigation.

The development of IWT has been generally very much limited both because of lack of funds and the insurmountable nature of the Brahmaputra. However, the newly constituted Brahmaputra Board should make an effort to integrate IWT in the general framework of connectivity in the NER. It should be remembered that the IWT has implications not only for Assam but also for other land-locked states in the region like Arunachal.

(v) Telecommunications

Given developments in technology in recent years, it would not make sense to view connectivity infrastructure in terms of physical infrastructure alone. As is

11. This section is based on the discussions of Chapter 10 of the Background paper No.7, The Inland Water Authority of India, March 2006.

well known, telecommunication plays a vital role in connecting any region with the rest of the world. Particularly, in the case of geographically isolated areas, telecommunication may in fact be more important than transport infrastructure and may bring about savings both in terms of time and space. Since transport infrastructure in the NER is generally limited or provides expensive access, telecommunication becomes an important mode of communication. Use of telephone, mobile phone, internet, etc. constitutes the telecommunication sector. The teledensity of fixed phone and the number of telephone exchanges is shown in Tables 14 and 15. Table 14 shows that the number of telephone connections in the NER is low in comparison to the rest of India. The comparison of teledensity among the NE states shows that only Mizoram has a teledensity higher than the national average.

Table 14: Teledensity¹² in North Eastern Region

State	Telephones as on 31.3.2001	Teledensity	Telephones as on 31.12. 2001	Teledensity	Telephones As on 31.12.2004	Teledensity
Assam	338328	1.33	390933	1.55	672160	2.44
Arunachal Pradesh	39269	3.6	43690	4	70056	6.22
Manipur	29503	1.24	30955	1.29	59460	2.41
Meghalaya	46283	2.01	49639	2.15	88796	3.73
Mizoram	37718	4.23	40347	4.52	65600	7.13
Nagaland	33052	1.66	35851	1.8	61075	2.98
Tripura	58845	1.84	64135	2	97186	2.95
NE Circle	244670	1.92	264617	2.23	442173	3.61
NE Region	620951	1.61	655550	1.7	1114333	2.8
India	28108976	3.58	30392608	3.95	68569249*	7.02

* till June 2004

Source: indiastat.com

The teledensity of Arunachal Pradesh is 6.22 which is the second highest in the NER. Other than Mizoram and Arunachal Pradesh, the rest of the NE states show a very low teledensity. It would also be seen that since the early nineties, teledensity has increased in the NER much less than the national average. Table 15 indicates that the low teledensity could also be due to the limited expansion of exchange capacity.

12. Per hundred population.

Table 15: State-wise number of telephone exchanges set up
(During 1998-99 to 2000-01)

States	1998-99	1999-00	2000-01	Total
Assam	52	54	61	167
Arunachal Pradesh	13	8	5	26
Manipur	3	1	1	5
Meghalaya	9	7	13	29
Mizoram	5	4	12	21
Nagaland	2	7	5	14
Sikkim	9	3	3	15
Tripura	5	5	3	13
NER	98	89	103	290
India	1718	2647	4005	8370

Source: indiasta.com

In the area of telecommunication, a major development in the last two decades has been the spread of mobile connectivity. Mobile connectivity is particularly useful for land-locked areas with difficult physical terrain as is the case with most of the NER. Some details of mobile connectivity are given below in Table 16.

Table 16: State-wise Number of Mobile Phone users (as on 31st March)

State	2002	Per Lakh Pop-02	2003	Per Lakh Pop-03	2006	Per Lakh Pop-06
Assam	28711	105.70	47331	171.01	1081136	3761.88
North East	4512	35.47	8692	66.21	469660	3255.87
India	6431520	612.03	12687637	1181.95	92517319	8085.87

Note: North East includes the States of Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. Population figures for the years have been projected from the 2001 Census figures.

Source: indiastat.com

From Table 16, it is obvious that mobile connectivity in the NER is again poor relative to the rest of the country. While in most of the hilly states mobile connectivity came late as compared to the rest of the country, it is seen to be low even in Assam.

It may be pointed out that the telecommunication revolution in the country has led to a dramatic increase in internet connectivity. This has also made

possible the revolution in information technology. To assess the situation in the NER, we have looked at the use of internet in this region. The data is presented in Table 17.

Table 17: State-wise Number of Internet Subscribers

(As on 31st March)

States	2002	Per Lakh Pop-02	2003	Per Lakh Pop-03
Assam	9899	36.45	14440	52.17
Arunachal Pradesh	380	33.70	1010	87.21
Mizoram	743	81.39	959	102.19
Manipur	630	26.80	1026	42.59
Meghalaya	1455	60.56	5285	212.34
Nagaland	452	21.34	2536	97.94
Sikkim	928	166.05	965	167.16
Tripura	816	25.11	1194	36.16
NER	15303	38.37	27415	66.64
India	3239675	3082.89	3500278	3260.78

Source: indiasta.com

As shown in Table 17, the number of internet connections in the NER is rather insignificant. In 2002, the total number of internet connections in the NER was 15303, which was just 0.47 per cent of the total number of internet connections in the country. Similarly, in 2003 the share of internet connections in the NER was less than 1 per cent (0.78 percent) of the total internet connections of the country. The table also shows that the internet access (normalized by the population) is also extremely low in the NER states relative to the national average.

It is thus reasonable to conclude that the NER states have not been impacted by the telecommunication revolution as much as the rest of the country. The low internet penetration is particularly worrying given the long-term plan of rapidly increasing the spread of IT services in the NER.

What we have brought out in this section is that, in terms of comparable statistics, connectivity in the NER is generally low as compared to the all-India average. In particular, we have pointed out that this limited connectivity hampers the development of the dominant agricultural sector of the state which

is still largely subsistence oriented. What we maintain is that a movement to modern techniques of production based on comparative advantage is limited by the lack of connectivity which precludes inter-state trading. Further, the efforts so far have been to look at connectivity of each state to a hub, whereas both economic and security considerations would first require looking at intra-state connectivity which is probably poorer than even inter-state connectivity.

Finally, the primary problem may be the tendency to view the connectivity of individual states, though economic and security considerations require looking at the NER as a regional economic entity. There is some indication that this change of approach does underline official policies in recent years. What a regional approach does is to alter many perspectives. For example, it makes the discussion of inland water transport much more important. In addition, it makes the development of telecommunication connectivity of equal importance. Besides, a regional approach makes the issue of coordinated planning of network of road, rail, etc. much more relevant.¹³

Connectivity of NER with its Neighbours

In section II we have argued that one feature that sets the NER apart is its physical isolation from the rest of the country. In particular, the NER shares 98 per cent of its borders with five countries on all the four sides. With some of these countries it also shares strong ethnic ties: Sikkim with Nepal, Nagaland/Manipur with Myanmar and Tripura with Bangladesh. Since we have already noted the need to enlarge the economic markets of the NER, these countries could provide an immediate neighbourhood for trade, in particular, border trade. We will discuss these issues in more detail below.

On the security front, there is the well-known dispute with China over Arunachal Pradesh. In the past, insurgents in Assam have taken shelter in Bhutan while some insurgent groups in Nagaland, Tripura and Manipur have often operated from the jungles of Myanmar and Bangladesh. In other words, insurgencies in many of the states of the NER can only be handled by building cooperation with the neighbouring countries and hence India's foreign policy vis-à-vis these countries is inextricably linked with the solution to the problem of

13. This is evident in the 7,616 km road network under the Special Accelerated Road Development Programme (SARDP). See also the NECs 20 year Transport Perspective Plan. More recently, we have the much publicized Kaladin road-rail-sea link of the NER to the Sittwe port in Myanmar.

insurgency in the NER. It is important to remember that even in the case of the relatively trouble-free state of Sikkim, it was only in 2003 that China finally accepted that the state was an integral part of India. It is a recognition of the importance of these neighbouring states that has been one of the cornerstones of India's 'Look East' policy which has dominated the approach of the Centre to the NER over the last 15 years or so (see, Rao, et.al., op.cit.). It would thus be useful to look at the issue of the connectivity of the NER to these countries in the background of the 'Look East' policy.

One obvious inference from the above is that security and economic issues are inextricably linked to cultural, political and economic factors, and it might be useful to view these in a little more detail.

Cultural issues

The cultural links of the people of the NER with those of the neighbouring countries have been a result of two hundred years of intermingling.¹⁴ Today, the states of Arunachal Pradesh, Mizoram, Manipur and Nagaland share a border of over 1600 km with Myanmar. Years of intermingling has resulted in a wide ethnic mix of populations. Thus, people in Arunachal are of Tibetan or Thai-Burmese origin, while about 15 per cent are immigrants from Assam and Nagaland.¹⁵ Towards the north, the history of Sikkim comprises a series of wars involving China, Nepal and Bhutan. Way back in 1791, China sent troops to defend Sikkim. In a more recent development, Tripura was heavily affected by the influx of refugees following the partition of India in 1947 and later after the Indo-Pak war of 1971.¹⁶ Hence, the issue of connectivity of the NER with the neighbouring countries is related to the need for promoting people-to-people contact via musical, sporting and other such events.

Security Issues

The history of the NER also indicates that the establishment of the NER has come about not only through domestic political problems involving disputes among the NER states but also through major foreign policy and security challenges facing the country.

14. <http://en.wikipedia.org/wiki/Manipur>

15. Hunter (1897).

16. Palit (2004) and Bhattacharjee (1994).

The first challenge originated during the war for liberation of East Pakistan in 1971. The consequent creation of Bangladesh was followed by a large influx of Bangladesh refugees into the border areas of NER. This has continued even today and created political problems both at the national and the regional level.¹⁷ In Assam, in particular, the influx of refugees from Bangladesh has created major political problems. At the same time, India has tried to promote relations with Bangladesh as a part of various SAARC initiatives.

For the Indian subcontinent, promotion of harmonious relations among the partners of SAARC is as much a security imperative as an economic compulsion.¹⁸ However, recently, Bangladesh has not responded very positively to the Indian requests for trade facilitation for access to Chittagong port for the NER states. Some think that Pakistan via the ISI is fomenting trouble in this region using Bangladesh as a base.¹⁹ There are also some concerns about China's increasing influence in the sub-continent.²⁰ Hence, politically, the border issues with Bangladesh are a security concern.

In recent years, China's emergence as a major economic power has coincided with the decline of the former Soviet Union and the end of the Cold War. Since 9/11 China has also increased its political relations with both Pakistan and Bangladesh. At the same time, the emergence of China cannot be ignored as it is today India's third largest trade partner.

In the context of the NER, we have already noted the role of China in Sikkim's earlier wars. Sikkim was itself once part of colonial China. We have noted that China only accepted Sikkim as a part of India in 2003. In addition, China's aggression during the 1962 war created border problem in the state of Arunachal so that even today China does not openly accept areas like Tawang in northwest Arunachal as part of India. Diplomatic pinpricks on border issues have again recurred in recent months.²¹ Hence, Arunachal is a crucial part of India's security concerns.

17. Indo-Myanmar Border Trade : Status, Problems and Potentials/edited by Gurudas Das, N. Bijoy Singh and C.J. Thomas. New Delhi, Akansha, 2005, x xvi, 310 p.

18. Ibid

19. Ibid

20. Ibid

21. Insurgency or Ethnic Conflict - by S.C. Sharma - Magnum -2000.

Finally, while India's relations with the military regime in Myanmar are stable, the growing economic links of that country with China again create border concerns for India.²² We have already noted the close cultural links of the people of Nagaland and Manipur with the Myanmarese. Even more important, India has had some success with obtaining a sea link for NER states via the much talked about Kaladin road-river-rail link to the Siitwe port in Myanmar. Myanmar is also important for the purpose of dealing with some of the extremist outfits operating in the NER states.²³

However, it is now clear that there is no long-term military solution to the various insurgency movements in the NER. Once again, a military solution assumes that the insurgency movements in the individual states are not connected. In other words, control of insurgency in one Northeastern state requires not only coordination with other states but also the neighbouring countries. What we are arguing is that the long-term security issues in the NER are inextricably linked to economic and cultural development of the region. Given the strong ethnic links of the people of this region with those in the neighbouring countries, security concerns are also tied up with encouraging greater interaction of the people of the NER with those of the neighbouring countries.

Economic Issues

At the outset, it must be remembered that none of the NER states (with the possible exception of Assam) can break out of its economic isolation on its own. In other words, one must start viewing the NER as one economic entity. This economic unification does not necessarily imply political unification. There is some indication that the need for economic unification is now being deeply felt in the region.²⁴

As we have already discussed in Section II, each state of the NER can end its economic isolation by greater connectivity with other states of the region. We have already noted that this economic isolation is manifest in the subsistence nature of the agricultural economies of the region. In the same vein, the NER needs to expand its economic links with the neighbouring countries to increase

22. See, Nagaland, A Trade Model of Growth, AEDR, 1998, Delhi

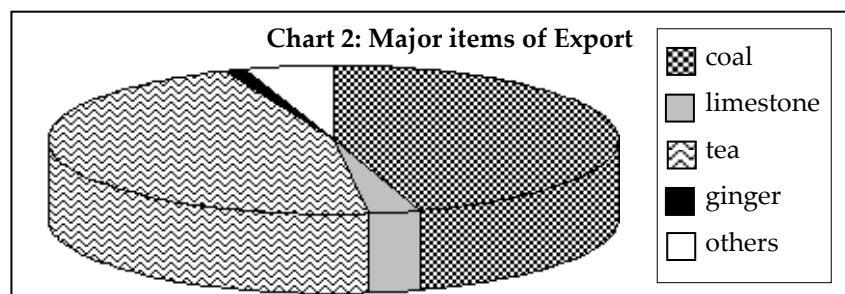
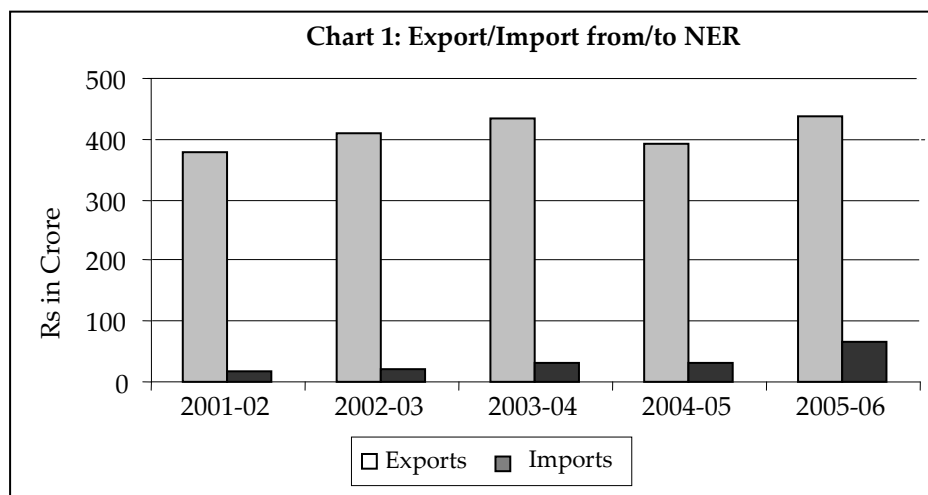
23. Manipur - A British Anthology Vol. I by N. Sanajaoba - Akansha Publishing House - 2003.

24. See, for example, conclusions reached at a symposium held in Mizoram University (2006).

the scope for economic interaction beyond the NER. This becomes particularly important given the weak link of the NER to the rest of the country via the 'chicken neck'. Hence, it is necessary to look at two issues: the current economic links of the NER to the neighbouring countries and the current state of external connectivity.

Economic Links of the NER to Neighbouring Countries

It is not possible here to look exhaustively at the NER's trade with its neighbouring countries (for a detailed study see Rao, et.al. op.cit. Ch. 11). However, the actual trade of the NER is mainly with Myanmar (via the trading point at Moreh), with Bangladesh (mostly informal border trade via Assam and Tripura) and with China (the Nathula pass in Sikkim). Trade of the NER with its neighbours is an important part of the 'Look East' policy. What has been the actual achievement? Some broad details are given below in Charts 1 and 2.



Source: Task Force on Connectivity and Promotion of Trade and Investment in the NER, Planning Commission, GOI, Oct., 2006.

As can be seen from the Charts 1 and 2, total exports and imports through the region have hovered around Rs. 400 crore for the last few years despite the existing trade agreement with Myanmar. About 91 per cent of exports come from tea and coal. The region largely exports primary products like boulder stone, limestone, fruits etc. The contribution of manufactured goods to the export basket is negligible. Exports of items produced in other parts of the country through NER like, motor parts, umbrellas, printed garments, etc., are also not very significant. About 50 per cent of imports into the NER consist of manufactured products and processed food items like fish, dry ginger, yellow peas, cement, laminated poly bags, machinery equipment and parts, mustard, soya and palmolein oil, etc.

Almost all this trade is border trade mostly with Bangladesh and Myanmar. The trade with China via Nathula is of only recent origin. It may be noted that trade agreements have limited the scope to border trade in agricultural items and restricted mainly to the residents of the border areas. In addition, the trade agreements, by and large, encourage only small volumes of barter trade (see, Rao. et.al. Chapter 11 for more details).

While the trade may be limited due to the nature of the trade agreements, it is also seen that road connectivity is still extremely poor. Thus, the main trading point at Moreh is barely functional. Similarly, the Nathula link is still in its nascent stage. It is worth noting that connectivity via sea routes is almost non-existent. Here, the Kaladin project linking NER via road, rail and sea to the Sittwe port in Myanmar should give a big boost to the connectivity of the region not only to the neighbouring countries but also allow an alternative link to the rest of the country via Kolkata.

Some important infrastructure initiatives have also been launched to promote NER trade with the neighbouring countries. The Asian Highway Link, Asian Railway Network and a Natural Gas Pipeline Grid — projects under active consideration of BIMSTEC — have tremendous implications in removing the communication isolation of NER. While NER will have access to the Asian Highway through the Imphal-Tamu feeder road, the railway systems of India and Myanmar are planned to be linked at the Dibrugarh railhead, which will give the NER access to Asian Railway Network.

India has already constructed a road in 2001 in Myanmar linking the township of Tamu with the railhead at Kalembo which connects Mandalay, the commercial hub of Myanmar. There is a proposal to construct a 1,360 km Trilateral Highway from Moreh (India) to Mae Sot (Thailand) through Bagan (Myanmar). The detailed project report on this is under progress (Strategic Digest: 2004). With the signing of India-Thailand Free Trade Agreement (2003), the steady rise in two-way trade with Myanmar and spectacular growth in Sino-Indian trade, the prospect of NER becoming a hub for transit trade is brightening.

However, despite attempts to address the connectivity issue through various proposals, it remains to be seen how many will actually fructify. Here, one must add that there is a perception that the LE thrust has not yet produced any perceptible tangible benefits for the NER²⁵. The opening of the border trade with Myanmar, through the provision of the Indo-Myanmar Border Trade Agreement (1994), has not had any major impact on the regional economy,²⁶ as India's ASEAN trade continues to be conducted mainly through the sea route. The continental land route via NER-Myanmar-Thailand is not yet considered safe and cost-effective. Moreover India and Myanmar have also agreed to open four checkpoints for increasing trade between the two countries. These include the Pangsau Pass, Paletwa, Lungwa-anyong and Pangsha-Pangnyo. There has been one significant downside to India's trade links with Myanmar. According to the Annual Report, 2001, of the International Narcotics Control Bureau, the 1,643-km Indo-Myanmar border has been utilised as a transit point between the Golden Triangle and the Golden Crescent. Some studies have argued that the mismatch between India and Myanmar's trade statistics is largely due to the drug trade.²⁷

We have noted that border trade is crucial to the region. This usually requires fully functional land custom stations (LCS) at the link point. There are presently 11 such LCS in the NER, but the only one which is somewhat functional is the one at Moreh, though all the 11 have been notified for prioritisation for infrastructure development. Some other administrative measures have also been taken in the Ministry of Commerce to promote trade in

25. This was the conclusion reached by a number of participants at a symposium held in Mizoram in November, 2006. See Mizoram University Symposium (2006), for example. J.K. Patnaik in the same volume.

26. Das (2005), *op.cit.* See also report of the Task Force on Connectivity, Planning Commission, Oct. 2006.

27. See Association for Environment and Development Research (1999).

the NER, including setting up of a focused Inter-Ministerial Committee for monitoring NER trade. Yet little gains seem to be accruing.

The primary problem seems to be to view the connectivity issue merely from the point of view of economic gains. From this angle, the economic gains from NER trade may be limited largely because of the low production capacity of the region. Yet, it is often forgotten that security issues require the same attention to connectivity as economic issues and it is often difficult to separate the two. It is hoped that the new awareness of security implications will lend some urgency to make the proposed plans for infrastructure connectivity a reality.

Conclusion

We have tried to argue in this paper that security and economic issues are inextricably linked and it is difficult to be certain as to which should gain precedence in priority. However, for the NER it is clear that infrastructure for connectivity is severely deficient even in comparison with the rest of the country. In addition, if one adds the security implications for the country of the geographical isolation of the NER, the deficit in infrastructure connectivity becomes even more pronounced.

Second, we have also argued that connectivity is crucial for making the NER viable economic entity. Here, the poor connectivity today is partly a consequence of viewing the NER as a set of individual states rather than as one geographical entity facing physical isolation from the rest of the country. The locational issues imply that connectivity must extend to linking the NER to the neighbouring countries.

Third, we suggest that ethnically and culturally the NER is closely linked to the neighbouring states. This is a factor that must be incorporated in security considerations, as most of the internal and external security threats stem from the porous borders of the NER. Since military solutions are only short-run solutions, it is crucial to encourage people-to-people contact with the neighbouring countries. This can be done through promoting cultural, educational and other such events which bring together the people of the NER and those of the neighbouring countries. Such measures are also necessary to bring about economic oneness among the people of the NER. In all these, connectivity will play a crucial role.

Fourth, the private sector is almost non-existent in the NER except in a few areas like horticulture farming. While measures to promote increased private sector participation must be encouraged, PPP forms of participation in infrastructure are unlikely to bear fruit in the near future. Hence, the state must play a leading role in this area. Security concerns would also justify such an approach.

Finally, there is no dearth of proposals for infrastructure connectivity in the NER. However, of late, a welcome feature that has emerged is an approach which views connectivity in the form of an integrated plan for the entire NER. This integration requires viewing road, rail, air, sea and telephonic connectivity as parts of a whole. A telling example is the Kaladin project linking the NER to the Sittwe port in Myanmar. In general, what seems to be the main problem is the lack of timely implementation of proposals. This needs to be addressed on a priority basis.

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India-China Border Trade Connectivity: Economic and Strategic Implications and India's Response

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China is everywhere in South Asia, both physically, as an agent of globalisation, and temporally, as a growth model. There has been a marked change in its approach and strategy. In the last 30 years, China transformed itself from an astute proponent of ideological influence and covert supporter of insurgency to builder of cross-border modern infrastructures and wild market grabber. It ignores Maoism, has disrobed itself of socialist paradigm and yet hesitates to accept that it is in the capitalist mode. It is trying to prove that democracy and development have no correlation. South Asians devour this ambiguity of China, as the subcontinent itself is a reservoir of scattered thinking, ambiguous planning and actions based on marginal utility. A potentially powerful neighbouring South Asia realised the wider usefulness of China only when the latter showed meteoric rise in terms of growth, global market influence and as an advocate of exclusive Asian values.

There are three very abiding and powerful objectives in China's emerging 'forward policy' in this region. These include: expansion of its military base and strategic access; economic and commercial penetration into the huge South Asian market and through it to the Middle East; and finally to tackle its own potential internal instabilities.

By the mid-1980s, China had realized that national security could be ensured through *mulin zhengce*, the better relations with the neighbouring countries. For a country with 'diverse international regions', the end of the Cold War brought an opportunity to broaden its foreign policy options. It faced an enigmatic challenge of remaining 'a regional power without a regional policy'. This is where Deng Xiaoping's advocacy of comprehensive *zhoubian zhengce* (periphery policy) became handy and far-reaching.

China started consciously designing a clear regional policy based on *wendingzhoubian* (stabilizing periphery). The determinants like political system-

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ideology linkage (*buyi yishi xingtai he sheshui zhidu lun qingsu*) and super power alliance (*yimei huaxian, yisu huaxian*), which used to be the fundamental basis and hallmark of its foreign relations, were increasingly abandoned.

Rapprochement Process

It was Prime Minister Rajiv Gandhi's visit to China in 1988 and his exuberance to build relations with the neighbouring countries based on newer realities that actually melted much of the ice around the frigid and hibernated McMahon line. This is how India and China started rethinking and renegotiating their respective positions. The process of rapprochement between India and China started with a memorandum signed in 1991 for the resumption of border trade with the Tibet Autonomous Region (TAR) of China through two passes of Shipkila in Himachal Pradesh and Lipulekh in Uttar Pradesh (now Uttarakhand) in India. This was a major foreign policy shift for India. On the Chinese side, it clearly indicated that economic attractions weighted very heavily in its rapprochement strategy.

Interestingly, it was during the then Prime Minister Narasimha Rao's visit to China in 1993 that there was a major breakthrough on the issue of territorial disputes.

"India-China boundary question shall be resolved through peaceful and friendly consultations. Neither side shall use or threaten to use force against the other by any means. Pending an ultimate solution to the boundary question between the two countries, the two sides shall strictly respect and observe the line of actual control between the two sides. No activities of either side shall overstep the line of actual control" (Article I).¹

The two agreements 'Maintaining Peace and Tranquility' and 'Confidence Building Measures' signed during President Jiang Zemin's visit to India in 1996 reflected the urge and compulsions for these countries in going for a 'No War Pact' as it very specifically pointed out details of reduction in deployment also²:

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1. Agreement between the Government of the Republic of India and the Government of the People's Republic of China on the Maintenance of Peace and Tranquility along the Line of Actual Control in the India China Border Areas, signed at Beijing on the 7th September, 1993.
 2. Agreement between the Government of the Republic of India and the Government of the People's Republic of China on Confidence Building Measures in the Military Field along the Line of Actual Control in the India-China Border Areas, signed in New Delhi on 29 November, 1996.

“The reduction of military forces shall be carried out by stages in mutually agreed geographical locations sector-wise within the areas along the line of actual control.”

The visit of the then Prime Minister Atal Behari Vajpayee to China in 2003 brought a significant politico-strategic gain to India as China recognised Sikkim as a constituent state of India through a border trade agreement:

“The Indian side agrees to designate Changu of Sikkim state as the venue for border trade market; the Chinese side agrees to designate Renqinggang of the Tibet Autonomous Region as the venue for border trade market.”³ (Article I)

Till then, all the Chinese maps showed Sikkim as a separate country clubbed with Bhutan and Nepal as neighbours of Tibet. During his visit to India in April, 2005 Premier Wen Jiabao, formally presented a map showing Sikkim as a constituent state of India. Besides signing 12 accords to enhance trade and economic cooperation, aviation and cultural links, Prime Minister Manmohan Singh and Premier Jiabao decided to establish a strategic and cooperative partnership for peace and prosperity. The two sides stressed that an all-round expansion of China-India economic cooperation, including trade and investment, constituted an important dimension for deeper China-India friendship. The two sides agreed to look into the India-China regional trading arrangement proposed by the Joint Study Group.⁴

Non-traditional Instruments

“Relations between India and China are *sui generis* – they stand on their own; neither do they parallel the relations that either of them has with others, nor are there applicable precedents or models for their conduct.”⁵ However, the most discernible aspect in the Sino-India rapprochement process has been the in-built presence of remarkably interactive matrices of trade, investment and development as a dominantly driving force. The other very vital attribute is the broad replication of successful policies practiced by China in other theatres of

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3. Memorandum between the Government of the Republic of India and the Government of the People's Republic of China on Expanding Border Trade, signed at Beijing on 23 June 2003.
 4. Joint Statement of the People's Republic of China and the Republic of India, F: India-China/125627-jt.commu.htm.
 5. Ranganathan, CV, 'The China Threat: A View from India' in Herbert Yee and Ian Storey (eds), *The China Threat: Perceptions, Myths and Reality*, Routledge Curzon, London, 2002, p 300.

neighbourly disputes and past controversies. The 'market' and 'development' are the 'mantra' here which can even bring concessions and compromises in resolving otherwise intractable issues of disputes. Though India has been a late entrant in this game, for the Chinese side, along with the politico-security rapprochement and negotiations, the most significant thrust has been on widely engaging the former in the commercial and economic plane at three levels - the local, national and regional.

These policies emanated partly from the realization that the reforms and growth – key to halt and prevent domestic political turmoil – needed a larger playing field. Deng Xiaoping remained doubly convinced if China were to emerge as an economic power house and a flag bearer in the emerging 'new Asianism' and 'prospect of Pacific century', a favourable international environment was inevitable. South Asia, and more specifically India, has been central in this rapprochement game.

A new China has been trying to woo South Asia in exactly the same model as it has successfully done in other neighbouring regions. The model has three-level engagement viz., the regional, national and local.

Regional Approach

At the regional level, China's silent quest to enter into SAARC has partially been fulfilled as it has recently been given the observer status in this regional forum. This is another route through which China could effectively and expansively enter into South Asian market. China has never been a part of the sub-continental past; its political ethos and cultural panorama do not fit into this region's complex socio-economic composition and political culture. Possibly to camouflage this oddity, the US, EU, Japan and Korea have also been given the same status in SAARC. China, however, can make a big difference in either consolidating SAARC through substantive cooperation-integration action or erode the functioning of SAARC through counteractive action against traditionally established pivotal role of India.

China's SAARC venture is again parallel and germane to its membership of Association of South East Asian Nations (ASEAN) Regional Forum where it is doggedly pursuing to be its full-fledged member. The vital role it has played in the East Asia Summits only shows that it aspires to remain within the region and thwart the other global powers collectively with other Asian neighbours.

National Perspective

At the national level interactions, economic interests of both India and China deeply coincide. The Chinese side would gain tremendously both through market access to India and in specific areas like imports of pharmaceuticals, software, primary commodities like cotton, rubber, iron ore, bauxite, mica and even semi-finished engineering and chemical goods. India also sees a huge scope in the market of China.

Last one decade has shown a significant national level integration between India and China in terms of trade, investment, tourism and infrastructure projects. The total volume of Sino-India trade increased from a mere \$3.4 million in 1970 to \$2.9 billion in 2000 and further to over \$14 billion in 2005. This is expected to reach over \$46 billion by 2008 (Table 1).

The two-way investment links between India and China are deepening. Indian investment in China is mostly in pharmaceuticals, information technology, agricultural items, automobile components, software, graphite electrodes, machine tool building, etc. Some of the well-known Indian companies include Tata Exports (Shanghai), Dr. Reddy's Laboratories, Lupin Laboratories (Guangzhou), State Bank of India (Shanghai), Aditya Birla Group and IT software companies like Aptech, NIIT, Tata Consultancy Services and Infosys. China also ranks quite high in the list of countries in terms of cumulative FDI, approved by the Government of India. Investments are mainly in the telecom, metallurgical, transportation, electrical equipment and financial sectors.

Table 1: India-China Trade Volume: 1980-2007

(Million US \$)

1970	1990	1995	2000	2007
3.4	270.14	1162.78	2833.64	43345.09

Source: Direction of Trade Statistics Yearbook, International Monetary Fund (IMF),

Local Integration: Focus on Border Trade

China has been consciously trying to make economic dents at the local level. It has extensively used the border trade as its main instrument to realize this goal of local economic integration. It is broadly estimated that border trade through its 120 inland towns and ports constitute nearly half of China's total foreign trade of \$1.3 trillion. This has been largely supported and regulated by a comprehensive policy document known as "Provisions of Administration on Border Trade of Small Amount and Foreign Economic and Technical Cooperation of Border Regions" promulgated by China's Ministry of Foreign

Trade & Economic Cooperation and China's Customs General Administration in 1996.⁶ This document has in fact been the basic guiding factor in China's border trade related policies and agreements with the trading partners. The memorandums that relate to resumption of border trade are the policy instruments of this local penetration.

On the India-China borders, the examples are: Lipulekh pass trade route in central Himalayas that connects Dharchula-Pithoragrah, Uttaranchal in India with Taklakot in Purang county of TAR in China and the Shipkila Pass that connects Namgya-Kinnaur, Himachal Pradesh and Jiuba in Zada County in TAR. Both these trade routes are in difficult and rugged terrains and are highly seasonal.

Though a significant section of policy echelons in India considers reopening of Nathula Pass route in Sikkim as a mere symbolic border trade venture, China at least in the long run looks at it as a vital physical economic entry into the 1.3 billion people market of South Asia. In terms of feasibility, this is arguably the shortest route (roughly 590 km between Lhasa, Tibet and Gangtok, Sikkim) to reach the ever-bourgeoning middle class in the Indian mainland, Bangladesh, Bhutan and Nepal. The completion of 1142 km railway from Golmud city in Qinghai province to Lhasa in 2006 and the refurbishing of overland access through Sichuan-Tibet Highway could transform the entire physical accessibility to and from mainland China for Tibet and the neighbouring provinces and also the neighbouring countries.

It could drastically reduce the tortuous sea-route entries to these compulsive markets. The domestic impulse in China is that the resulting gains and prosperity could trigger a major development action in the otherwise backward and frigid western China. This may ultimately provide succour in positively dealing with traditional and emerging pockets of discontentment in the region including Tibet. For India, besides Lhasa, these new transport infrastructures could open access to other business centres in western, eastern and south-eastern sea-coast of China.

China has a history of using other countries as a base for exporting their goods. In the case of South East Asia, China has used Singapore as a base to tap

6. This was actually promulgated in 1984 as the "Provisional Regulations for the Management of 'Small Volume' Border Trade". The 1996 version of this promulgation took shape after a series of amendments.

the markets of Thailand, Malaysia, Indonesia and even far-off Australia. Hong Kong too is used as a base to export Chinese goods to European and American markets.

The Chinese patterns of executing these strategies are much in contrast to that of India. For instance, there have been several visits by the trade, development and investment officials and private sector from Yunnan Province mostly to the Eastern states of India, including West Bengal and some of the eight Northeastern States. With their single-point agenda of establishing trade and investment linkages with the vast untapped market and naturally contrasting but well-endowed regions of eastern India, these delegates give an impression that they have been given a 'free hand' by their federal government to negotiate the larger process of 'Kunming Initiative'. Its advocates are actively promoting the reopening of Stilwell road (named after General Joseph Warren Stilwell 1883-1946, Chief of Staff to Allied Forces in China-Burma-India). Built by the US forces during the Second World War, this double-track all-weather road connects Assam (61 km) in India, with Kunming (632 km) in China via Myanmar (1,033 km). It remained unused for the last six decades. The single-mindedness with which the Chinese are pursuing this 'initiative' even involves Bangladesh, Myanmar and other neighbouring countries.⁷

This is certainly a successful sequel of decentralising strategy China has been following since 1979. Then the Party Central Committee had allowed the Guangdong and Fujian provinces to adopt 'special policies and flexible measures' particularly with regard to investment and trade in the Special Economic Zones (SEZs). The single-mindedness with which they are pursuing this initiative is reflective of Yunnan's involvement in other economic zones at the provincial level, such as Greater Mekong Sub-region (GMS).

The provinces are no longer confined to their administrative role and have increasingly adopted economic functions. The Centre has voluntarily reduced its own role. Preferential policies have made the provinces in the coastal regions economic actors and they have their own economic policies. Even the inland provinces are moving in the same direction. "The inability of the Centre to dictate regional economic policies and the strong economic role of provinces is reflected in a new type of regional planning which focuses on smaller trans-provincial

7. Lama, Mahendra P, 'India and China in Border Trade', *Hindustan Times*, New Delhi, April 27, 2005.

economic regions growing out of economic interchange between sub-provincial regions with specific economic advantages".⁸ In 1995, the state transferred one of its key powers, grain (food-security) policy, to the provinces.⁹ This new role of provinces will change China politically and economically.

There are several arguments advanced to explain the Centre's liberal policy vis-à-vis the provinces in China. The very nature and structure of decision-making and political system at the Centre's level ensures a high degree of political compliance and vertical accountability thereby reassuring the Centre that these provinces will not go astray in their decisions and actions. Perhaps the most plausible argument for extending such autonomy emanates from 'the province at the provincial level' paradigm that exists in today's China. This paradigm has been primarily an outcome of the reforms-led growth and development needs.

"The equation of 'one China' and 'a centralized (Communist) party-state' makes clear and unequivocal sense at the political center. At the provincial level things look rather different. Here, the equation is certainly not the salient feature in decision-making. At this level, lofty ideas of a socialist utopia or of a singular Chineseness need to be translated into enforceable policies. Constraints imposed by natural and cultural endowment need to be taken into account, lest social and economic changes escape the control of the party-state with the unwarranted effect that the center can no longer steer their development. Provincial leaders need to weigh carefully the trade-offs between compliance with the center and need to respond flexibly to actual requirements in the province, the more so as the demand side makes itself heard."¹⁰

On the other hand, India traditionally maintains foreign trade and investment as an exclusive domain of the Union Government wherein the relevant constituent states are 'consulted' and taken into confidence for any new

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8. Hendrichske, Hans, "Provinces in Competitions: Region, identity and cultural construction", in Hans Hendrichske and Feng Chongyi (eds) *The Political Economy of China's Provinces*, Routledge, London, 1999, pp 6-7.
 9. Keng, CW Kenneth, "China's Economic Prospects in the New Century" in Andrew J Nathan, Zhaohui Hong & Steven R Smith (eds), *Dilemmas of Reform in Jiang Zemin's China*, Lynne Rienner, London, 1999, p 189.
 10. Krug, Barbara, 'Why Provinces?' in John Fitzgerald (ed), *Rethinking China's Provinces*, Routledge, London, 2002, p 260.

trade and investment ventures with the foreign countries. Though an initiative like Kunming fits well into India's 'Look East' policy and its participation in the Bay of Bengal Initiative for Multi-Sectoral Techno-Economic Cooperation (BIMSTEC) consisting of Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka and Thailand, the primary notions of 'local engagements' and using trans-local actors which are inherent in the geo-economics of Kunming initiative are something new that the Indian Government is trying to cope up with. More interestingly, such initiatives gradually build the relevant states and the people of this Eastern fringe in India as the core stakeholders. In federal structure like that of India, such stakeholders' ability to act as potent pressure- interest groups and influence the political permutations and combinations can never be ignored and discounted. This is more so in today's context when the regional political parties have gained more influence in the structure and composition of national polity.

China has achieved much success in similar trade and investment related initiatives in its other neighbourhoods including that in the South China Growth Triangle (SCGT) comprising of Hong Kong, the Guandong and Fujian provinces of China and Taiwan; the Greater Mekong Basin Growth Triangle (GMBGT) consisting of Myanmar, Cambodia, Laos PDR, Southern China, Vietnam and Indonesia, and the Golden Quadrangle covering Thailand, Myanmar, Laos PDR and southern China. The northern Chinese provinces of Heilongjiang, Xinjiang and Inner Mongolia have been in the forefront of border trading with Russia and other Central Asian republics. The Kunming and Nathula initiatives, therefore, could be categorically called as an extension of these lab-to-field models wherein China has pocketed handsome and largely sustainable gains.

Nepal-China Border Trade Engagement

Besides the older Kathmandu-Kodari Highway overland trading arrangement between Nepal and China, the other seven important transit trade posts including those at Rasuwa (Rasuwagadhi), Mustang (Nhechung), Olangchungola (Taplejung), Kimathanka (Sankhuwasabha), Lamabagar (Dolakha), Larke (Sirdhibas), Mugu (Mugu) and Yarinaka (Yari, Humla) are being strengthened. Though the agreement is for the 30 km radius zone as a Trade Free Zone (TFZ) within the epicenter of the Tatopani Custom Office, the Nepal-China trade through this route has acquired a robust dimension.

Officially the Nepal-China overland trade (Kathmandu-Kodari highway) was expected to be a very small percentage of the total Nepal-China trade. This implied that 95 per cent of Nepal's trade with China has been through the sea-route (Calcutta port) or air route. This was the impression for decades together till the Nepalese government made it compulsory to conduct Nepal-Tibet trade through proper banking channel in 2000-2001. In the very first year after this stipulation was made, the letters of credit opened by the Nepalese banks for trade with Lhasa and Khasa amounted to Rs 1.32 billion (\$18 million). The total trade jumped from Rs 2.2 billion in 1998-99 to Rs 5.4 billion in 2000-01. Since then it has very steadily increased to Rs 6.8 billion.

This showed unofficially the Kathmandu-Kodari road was actually widely used by the traders for deflecting the Chinese goods to other parts of the region. Nepal's export to Tibet Autonomous Region has been increasing in recent years. Nepal's exports to Tibet increased from NRs 203 million in 1991-92 to NRs 1835 million in 2004-05. Nepal's export to China through Tatopani has mostly been confined to traditional items, including rice, white flour, vegetable ghee, noodles, copper vessels, incense sticks, sugar, chocolates, biscuits, copper wire, leather, solar sets, and edibles. Nothing much has been added to the list.

On the other hand, Nepal's import from China through Tatopani, has seen very significant changes, both in terms of volume and contents. It increased from NRs 464 million in 1991-92 to NRs 5997 million in 2005-06. This was nearly a 13-fold increase in the 14-years period.

At the same time, the import from China mostly through Calcutta port has also very sharply increased from a mere Rs 693 million in 1991-92 to Rs 6.63 billion in 2005-06. It is interesting to note that the trade deficit of Nepal with China has shot up from Rs 953 million in 1991-92 to over Rs 11 billion in 2005-06 without Nepal raising it in public forum. The rising demands for Chinese goods and products are strongly supported by quick and efficient supplies by the Chinese. Most of the Chinese goods that come to Nepal find their way into the Indian market via Dhulabari, Pashupatinagar, Kakarbhitta, Raxaul, Gorakhpur, Nepalganj, Sunaoli, Tanakpur and Birgunj. Most of these are smuggled. Nepal Government has recently taken the initiative to formalise and regulate this traffic of goods. The agreement signed between Nepal and China on March 19, 2006 is expected to have a long-term impact on the trade and economy of Nepal. As per

this agreement, China will provide Nepali products duty-free access to the Chinese market.

Are the Nepalese markets really in a position to absorb such huge and consistent imports of last so many years from China? If not, where are these imports going? Are the Chinese making Nepal as an entrepot and a transit route to enter into huge Indian market? Are the Chinese using the same technique and mode of operation in other SAARC countries to make an entry into the Indian market? Are the Chinese adopting the same *modus operandi* like they have done in the Indo-China region of South East Asia? If so, the Sino-Indian trade which has steadily increased from \$49 million in 1990 to over \$40 billion in 2007-08 could in fact be much higher given the steady increase in imports of Chinese goods through borders with Bangladesh, Bhutan, Myanmar, Nepal and Pakistan. This is going to be much more widespread and deep-rooted once China completes the Karakoram highway link to Gwadar port in Pakistan and opens 5 to 10 more passes in the mountain border areas for trade with Nepal.

If this is so, what is India doing? What stops India from making Nepal and other SAARC countries as an entrepot and as key transit routes to enter into the huge market in the western region of China and also its major cities and further to the South East Asia through Myanmar? Why India is unable to do so despite so very friendly and special relations with Nepal and some other neighbouring countries? Are India's policy-makers and diplomats aware of this entry of huge quantities of Chinese goods into the region? What are its political implications as the first area of exposure and the first groups of communities that are hit by such huge entry of Chinese goods are the country's sensitive borders and the vulnerable border communities. Given the state of developments and poor access to social and other physical amenities in the border areas, the influence of China's ideology and its acceptance could only be expected.

Internal Restructuring

A major driving force for China to open its borders for more trade and investment intercourse has been the urgent need to bring its own provinces in the periphery, mainly the western region, to the national mainstream. This could supplement mainland China's efforts at expanding its politico-military leverages over these units. The western region which covers two-thirds of the nation's territory, with a population making up nearly 23 per cent of the national total,

comprises nine provinces and autonomous regions, namely, Gansu, Guizhou, Ningxia, Qinghai, Shaanxi, Sichuan, Tibet, Xinjiang and Yunnan, in addition to Chongqing Municipality. This region has plenty of land and natural resources, including oil and gas. It is hoped that after the Eastern China's 14000 km long coastlines brought fortunes to China in the last two decades, it is now western China with 3500 km land frontier that will become the second golden area of reopening.

Geographically, how uneven has been the development process is partly indicated by the contributions made to the national trade by administrative divisions other than those located in the western region. For instance, Guangdong alone accounted for about 40 per cent of China's total exports and imports. This, along with Fujian, Zhejiang, Shanghai, Jiangsu, Shandong and Liaoning, China's seven coastal divisions, handled 75 per cent of the national exports, more than 90 per cent of all processing exports and 67 per cent of imports. Tibet (Yuan 710) and Gansu (Yuan 939) not only have the lowest per capita rural consumption but also have just a half of the national average of Yuan 1590. Over 80 per cent of the foreign direct investments are directed to coastal provinces and major cities.

The resulting accelerated growth and development in these politically volatile provinces and regions could to a large extent quell the political dissent in a much more smooth and durable manner. Premier Zhu Rongji's "Report on National Economic and Social Development during the Tenth Five Year Plan" identified eight most important tasks to be achieved during the Tenth Five Year Plan period (2001-2005). These tasks included developing the western region for achieving regionally balanced economic development and also for deepening reforms and the open-door policy.

Chinese government launched 'develop-the-west' campaign in 2000. Under this, a number of preferential policies, including capital input, investment environment, internal and external opening up, development of science and education and human resources were offered to the western region. The Chinese government also liberalized the labour policies under which professionals working in western China could retain both old and new registration in the place they work. This had hardly happened in the past.

Concept of Border Trade

The trade across borders predates formation of present-day national boundaries. Despite clear demarcation of borders and the subsequent regulations governing the cross-border trade, most of these traditional border routes have remained fairly active in terms of informal trade and other economic exchanges. Over 98 per cent of the North Eastern States' border is shared with the neighbouring countries. There is a range of informal trading centres; some of the major ones are given in Table 2.

Table 2: Border Trade Routes

Border Descriptions	Trade routes
<i>Indo-Bangladesh (North East - Bangladesh)</i>	
Assam	Fakiragram, Mankachar, Suterkhandi and Karimgunj
Meghalaya	Baghmara, Lichubari and Dawki
Mizoram	Tlangbung, Champai
Tripura	Kailashsahar, Agartala, Sonamora, Bilonia and Sabroom
Manipur	Moreh
<i>Indo-Bangladesh (West Bengal- Bangladesh)</i>	Petrapole, Bagdha, Mejdia, Lalgola, Mohidpur, Radhikapur, Kaliaganj and Hilli
<i>Indo-Nepal</i>	
West Bengal	Kankarvitta and Sukhia Pokhari (Pashupati in Nepal)
Bihar	Jogbani and Raxaul
Uttar Pradesh	Barhi, Nautanwa and Gorakhpur
<i>Indo-Bhutan</i>	Gelephu and Samdrup Jhonkar
<i>India-China (Tibet)</i>	
Jammu-Kashmir (Ladakh)	Khardung la and Chang la
Uttaranchal	Lipulekh
Himachal Pradesh	Shipkila
Arunachal Pradesh	Bumla, Nyamjunag Chu valley (Tawang districts)
Sikkim/ West Bengal	Nathula and Jelep la

Note: Some of these routes are officially recognised as the formal trade routes.

Northeastern states' long borders with Bangladesh, Bhutan, China and Myanmar have been a symbol of traditional pattern of economic exchange and long socio-cultural intercourse. In the pre-independence period, the entire region was an integrated market with all the basic infrastructures. Though because of the insurgency many of the traditional modes of economic exchanges have now

turned into security threats, the majority of the Northeastern people continue to look at these borders as massive opportunities for trade, services and livelihood.

There have been undue restrictions on the cross-border economic exchanges. As a result, the market remains fragmented, the economic space has shrunk and economies in the North East have become highly inward-looking. The restrictive regimes have also led to massive unrecorded trans-border trade (UTT) known as 'informal trade' running into million of dollars. There are varying estimates of the volume of UTT in the Northeastern region with the neighbouring countries. The state exchequer is gaining nothing out of it. The gains have been pocketed by a handful of economic agents and cross-border magnates.

Government of India has entered into formal border trade agreements also. For instance, the India-Myanmar border trade agreement signed in 1994 clearly mentions that the border trade shall be conducted through Moreh (Manipur) in India and Tamu in Myanmar and Champai (Mizoram) in India and Hri in Myanmar wherein "adequate measures will be made to enable buyers of either country to inspect and take delivery of goods at the customs posts in the country of the seller".¹¹ There are a number of formal border trade routes which have been recognized for trading purposes. There are three approved land customs stations on the Indo-Myanmar border viz., Moreh (Manipur), Champai (Mizoram) and Nampong (Nagaland) for regulating trade with Myanmar. Both India-Myanmar and India-Bangladesh agreements allow trade to take place primarily among the communities living on the border surrounding periphery areas.

The most critical aspect of the border trading regime is to bring forth the genuine traders who are looking forward to a sustainable and legal exchange of goods and services with the neighbouring countries. The 'Look East' policy of the Union government and the emerging trends of sub-regional cooperation, including BIMSTEC, have in them cross-border trade through the Northeastern region as the core element. This is where a serious policy intervention is required mainly with a view to harnessing the comparative advantages of all the eight

11. Agreement between the Government of the Republic of India and the Government of the Union of Myanmar on Border Trade between the Two Countries as quoted by VL Rao, Srinath Baruah & Ram Upendra Das, *India's Border Trade with Select Neighbouring Countries*, Research and Information System for Non-aligned and Other Developing Countries, New Delhi, 1997, pp 123-125.

Northeastern states. This can be done by a protracted and cogent institutional intervention through the North Eastern Council.

Border Trade with China

Traditionally, in some of the border areas there have been major trade exchanges between India and China.¹² There are interesting accounts and empirical studies in some cases.¹³ The team members of the Nathula Trade Study Group visited a number of such trading points. The team conducted a detailed survey in areas of trade facilitation measures in these border-points and also examined the direction, volume and composition of trade.

Trade Route: Shipkila

In the pre-Independence period, Tibetan traders used to frequent a place called Rampur, a small princely kingdom (4 hours drive from Shimla) for their trading activities. Trade used to peak during the Lavi *mela*. The Hindustan–Tibet Road, developed during 1854–1858 was later abandoned due to the opening of the road to Tibet via the Chumbi Valley via Sikkim’s Nathula. Hindustan–Tibet Road was only a bridle path upto 1950. The National Highway No.22 connects Shimla from Kalka and extends to Kinnaur. It enters Kinnaur near Chaura (162.40 km from Shimla). Its distance within Kinnaur upto Wangtu is approx. 34 km from where it goes up and passes through village Kalpa. The distance from Tapri–Shyaso Khad is about 93 km. It connects most of the villages on the right bank of the Sutlej at an average elevation of 2,740 mtrs. From Shyso Khad it passes through Hango and Shipki before entering Tibet.

Shipkila is officially a ‘No Man’s Land’, fenced on both sides of the border by the respective governments and manned by sentries and border patrols. About 3 km away from Shipkila, on the Tibetan side, lies the first Tibetan village of Shipki.¹⁴ Kew gaon (‘Q’) is the next village from Shipki village and lies 12 km

12. China is a mountainous country with two-thirds of its total land area covered by mountains, hills and plateaus. It has land border of 22143.34 km and is bordered by 14 countries: Korea in the east; Russia in the north east and north west, Mongolia in the North; India, Pakistan, Bhutan and Nepal in part of the west and South west; Myanmar, Laos and Vietnam in the South. China also has borders with Kazakhstan, Kyrgyzstan, Tajikistan and Afghanistan.

13. Also see Rizvi, Janet, *Trans-Himalayan Caravans: Merchant Princes and Peasant Trades of Ladakh*, Oxford, New Delhi, 1999.

14. Lama, Balaram, a trader that after crossing over Shipkila pass, 2 km downhill lies the village of Shipki. After that comes another town called the Kew gaon (‘Q’) which is hardly 5 km walk from Shipki. After that it is all plains, the starting of the Tibetan plateau region.

further down the same hillside. Kew onwards is a military outpost which has a double lane (approx. 40 ft. dirt and paved road-head). This road connects to major army outposts and also goes to Lhasa. It takes over 5 days by road to reach Lhasa.¹⁵

The road till Khab (National Highway 22) comes under the jurisdiction of the PWD. From Khab, one has to take the link road to Nyamga village which is roughly 7 km long (half an-hour drive). GREF is constructing road from Nyamga village to Chuppan, and have reached a place called Hoobsung Nalla (6-7 km away). The distance between Chuppan to Shipkila (3 km) still has the old traditional mule track in use. Village Namgya has been identified as the point of origin of the traditional trade on this route and Chuppan has been identified as a 'trade mart'.

The 1992 agreement between India and China led to the reopening of border trade between India and China through Shipkila Pass in Himachal Pradesh. The Shipkila Pass trade route mainly caters to the people living on both sides of the border. Namgya village (more specifically, it is Chhupan which is 10 km along the old Hindustan-Tibet Road [mule track] and 6 km by motorable roads from Namgya) in Kinnaur District (in Himachal Pradesh) in India and Jiuba in Zada County in Tibet Autonomous Region of China have been identified as the border trade markets. Shipkila has been identified as the pass for entry and exit of persons, commodities and means of transport engaged in border trade, exchange of commodities and means of transportation (Article II). Chhupan is 2 km away from Shipkila.¹⁶

Chuppan identified as a 'trade mart' on the Indian side covers an area of approx. 14 bighas i.e 8000-10,000 sq. mtrs. The entire area is in a geographically hostile location and hence does not permit any permanent settlement. This 'trade mart' has provisions for an immigration check-post manned by the police who also monitors the trade. There have been plans to have a customs office, army and the ITBP security posts, a bank counter, a small market complex, post-office, etc. These are, however, yet to come up. Provision for water has been made from the Hoopsang Nalla with canals carrying water to the trade mart at Chuppan.

15. Population is 450 persons of which 80 are traders.

16. Protocol between the Government of the Republic of India and the Government of the People's Republic of China for Extension of Border Trade across Shipkila Pass signed on September 7, 1993 Ministry of External Affairs, Government of India, 1993.

Electricity has been provided for by 2 gensets and solar panels for the lights and wireless sets.

Except the prohibited items, all other items could be traded through this route. According to the Central Customs Act, all daily items of trade have no duty charges. Unless notified, these items will continue to be traded without any duties. The Union Government has identified a list of items which can be traded without any duties. All other items outside this list attract customs duty. This trade has been open for all the citizens of India on fully convertible currency as well as barter system basis. Trade volume has shown erratic trends and does not reflect any match with the national trend. Goods for export to the Chinese side (mostly from Rampur and Shimla in Himachal Pradesh) are utensils and silverware of religious value. Traditional religious items of trade from Kalimpong are still in demand.¹⁷

Besides the limited period of trading and rather hostile topographical and climatic conditions, the trade has not really taken off partly because the Chinese side has shown rather lukewarm interest in the promotion of this trade route. Though both India and China have participated in the trade exchange since this route was reopened, it has been mostly a 'one-sided trade' as far as exchange of traders is concerned. No official account of any visit by Tibetan traders has been recorded on Indian soil from any of the trading points. A trader quipped that "the Chinese do not encourage Tibetan traders coming into India for fear of them divulging their military secrets."¹⁸ However, many traders mention that there is no proper structure and mechanism in place on the Chinese side to issue trade passes. In such a situation, the Tibetan traders are apprehensive of being harassed by the Indian authorities.

Trade Route: Lipulekh Pass

Another border trading arrangement that was initiated after a long spell of time was again an outcome of the India-China Agreement of 1993.¹⁹ This is

17. For instance, 'chuba' or the traditional Tibetan attire from Kalimpong are famous for both quality and workmanship. They come in 3 varieties. Rather: Rs 70 –80, terri-cotton: Rs 255 and woolens (cordroy) which Tibetans refer as 'American': Rs 385.

18. Interview with a trader in April 2004.

19. Protocol between the Government of the Republic of India and the Government of the People's Republic of China for Extension of Border Trade across Lipulekh Pass signed on September 7, 1993, Ministry of External Affairs, Government of India, 1993.

conducted through Lipulekh pass (5200 meters) in Uttaranchal. The Lipulekh pass trade route connects Dharchula in Pithoragrah district of Uttaranchal with Taklakot in Purang county of Tibet Autonomous Region. The two governments agreed to establish the border trade at²⁰ Pulan in the Tibet Autonomous Region of China²¹ and Gunji in the Pithoragarh District of the State of Uttar Pradesh of India. The border trade activities at these trade marts take place during mutually agreed time-period of each year. With a view to facilitating the visit of persons engaged in border trade and exchange of commodities and means of transportation, Lipulekh (Qiang La) has been identified as the border pass.

Soon after this pass was reopened in July 1992, a Kalimpong-based businessman, D.C. Khati, went to the Tibet Autonomous Region of China through this trade route to study the export-import potential in the two countries. He later mentioned that in order to reach Taklakot from Dharachula in India through the Lipulekh pass, he had to walk about 100 km from Gunji village in Uttar Pradesh. There is a motorable road between Dharachula and Gunji, but from Gunji onwards one has to follow a narrow mule track through uninhabited mountain terrain. The risky trek, along a route at heights ranging from 4,500m to 5,200 m and facing high winds at Lipulekh, will take a physically fit person at least 10 days. Goods for trade had to be carried by porters, as well as mules and *jubboos*, which are male yaks.²² There has been a steady increase in the border trade through this trade route. It increased from Rs 3.67 lakh in 1992-93 to Rs 69.39 lakh in 1996-97.

Nathula Trade Route

The reopening of the traditional trade route between Tibet Autonomous Region (TAR) of China and Sikkim in India through Nathula Pass after 42 years in 2006²³ is likely to bring about a significant change in India's economic exchanges through the land border areas. This route is likely to have a much larger scope both in terms of the coverage of geographical regions and the nature of goods and services. This is because of a relatively easier accessibility to the

20. Memorandum between the Government of the Republic of India and The Government of the People's Republic of China on the Resumption of Border Trade, signed in New Delhi on 13th December 1991.

21. Gunji village in India and Taklakot in Purang (Tibet).

22. Chaudhuri, Kalyan, 'Routes of Promise', *Frontline*, July 05 - 18, 2003.

23. Memorandum between the Government of the Republic of India and the Government of the People's Republic of China on Expanding Border Trade, signed at Beijing on 23 June 2003 signed during Prime Minister Atal Behari Vajpayee's visit to China in 2003.

Nathula Pass leading to markets and more developed physical and institutional infrastructures in and around the trading points. Further, this trade route was a very active means of economic exchanges for Tibet vis-à-vis India and to other countries mainly through Calcutta port before it was closed in the early 1960s. Institutions like banking, post offices and customs points had been set up and remained functional for many years.

As per the projections made by the Nathula Trade Study Team Report 2005 the Scenario I of higher projection showed that trade flow through Nathula will be \$48 million (Rs 206 crore) by 2007, \$527 million (Rs 2266 crore) by 2010 and \$2.84 billion (Rs 12203 crore) by 2015. The Scenario II lower side projection shows that the trade volume passing through Nathula route will be Rs 353 crore in 2010, Rs 450 crore in 2015 and Rs 574 crore in 2020.²⁴

It could drastically reduce the tortuous sea route entries. The distance between Siliguri and Phulbari corridor is hardly 10-30 km. Bangladesh, Bhutan and Nepal can in the long run plan to use this route. The Nathula Trade Study Group in its report recommended the following:

2005-2010: Initiation of trading on both sides backed by existing and some additional infrastructures. Meanwhile, taking steps to build wider and deeper infrastructural facilities.

2010: Trading on a larger scale based on upgraded and more developed infrastructures.

2012: Integration of trade with tourism for which a fresh bilateral legal basis needs to be concluded to facilitate the movement of tourists across the border.

Package Tours: During 2012-2015, only Indian and Chinese tourists are permitted to cross the border through Nathula on a package tour basis.

Open tourism: 2015 onwards movement among Indian and Chinese tourists to be allowed both on package and individual basis.

2015: Inclusion of movement of freights to and from the neighbouring countries, including Bangladesh, Bhutan and Nepal through this route.

24. Lama, Mahendra P, *Sikkim-Tibet Trade via Nathula: A Policy Study on Prospects, Opportunities and Requisite Preparedness*, prepared by Nathula Trade Study Group for the Government of Sikkim, August 2005.

2018 onwards: SAARC tourism: Integration with tourism activities of third countries of the region, including Bangladesh, Bhutan and Nepal. Permission for all the tourists to cross the border.²⁵

As usual, there are status quoists with a rigid mindset. Their arguments against reviving this traditional trade route vary from security to influx of Tibetan refugees and flooding of local markets by cheap Chinese goods to environmental concerns. It was the same mindset that literally marginalised India in Myanmar where it once had unparalleled historical stronghold, political and social constituency and substantive economic influence. India should have, in fact, long harnessed these huge cross-border opportunities. Prime Minister Manmohan Singh's well-acclaimed plea for cross-border infrastructure projects at the last SAARC Summit in Dhaka in 2005 belatedly yet definitely recognizes this clamour for lost opportunities.²⁶

However, in the last two years no significant trading has taken place at Nathula. Hardly few lakhs worth of goods are exported and imported. This is mostly attributed to poor road conditions, nascent infrastructural facilities, limited tradable items and lukewarm attitude of the policy-makers. Table 3 presents the status of the Siliguri- Nathula road.

Table 3: Siliguri-Nathula Road*

Road	Formation Width (m)	Carriageway width (m)	Gradient
Sevoke (Coronation Bridge - Teesta	8.00	5.50	Gentle
Teesta - Malli	8.00	5.50	Gentle
Malli to Rongpu	8.00	5.50	Gentle
Rongpu to Ranipul	8.00	5.50	Gentle
Ranipul to Gangtok	8.00	5.50	Steep
Gangtok to Changu	6.10	3.66	Gentle gradient with intermittent steep gradient
Changu to Sherathang	6.10	3.66	-do-
Sherathang-Nathula	5.00	3.00	Steep

Note: * The entire stretch of the road is black topped. Source: 2004, 87 RCC Coy

25. Ibid.

26. Lama, Mahendra P, 'Trade is only the beginning of the Story', *Indian Express*, June 18, 2006.

Though these roads were in existence since 1920, most of them were rebuilt and reconstructed in the 1960s.²⁷ The *Final Feasibility Report for all three Segments by Archtech Consultants Pvt. Ltd of India and Halcrow Group Ltd of UK* on behalf of Sikkim Industrial Development & Investment Corp. Ltd. (SIDICO) prepared in February 2004 brings out revealing deficiencies in the National Highway 31 A. This survey was conducted while also keeping in view the traffic movement triggered by the reopening of Nathula trade route.

For operational and phased development purposes the entire highway of the existing road (143.2 km) has been divided into three segments.

Segment A - Sevoke to Rangpo	–	52.0 km
Segment B - Rangpo to Gangtok	–	40.6 km
Segment C - Gangtok to Nathula	–	50.6 km
Sub Total	–	143.2 km

In addition, new construction for 2 bypasses has been conceived as:

Segment D - Melli to Singtham (approx. 53 km) – a new 2-lane road

Segment E - Ranipul to Kyangnosla (approx. 45.5 km) – a new 2-lane road

All the three segments indicated above were found to have deficiencies in areas of operation, safety and road conditions.²⁸ The 50.6 km road from Gangtok to Nathula climbs from 5,500 feet to 14,600 feet. Though it is well-maintained by the Border Roads Organisation (BRO), it is too narrow to accommodate two trucks. A senior BRO official mentions that “machines work at only 50 per cent capacity at such altitude. Continuous snowfall during winter also makes it difficult for construction work,”²⁹ The present road condition and its carrying capacity would not be able to cope with the expected trade and tourist traffic even in the very short-run scenario.

Containerisation

Presently, no one uses containers for transport of goods and services. The reason for this is that multi-axle truckers are not allowed to ply on the existing highway. The other reason is plain business as there are no out-bound loads

27. The road from Sevoke to Gangtok was originally built in the 1960's. Improvement of the road to National Highway intermediate lane specifications was done during 1990's. The road from Gangtok to Nathula was also built in the late 1960's. This road was developed to District road specifications in the 1970's. The road from Sherathang to Nathula was developed from Jeepable to other district road specifications in the 1970's.

28. This is sourced from 87 RCC Coy.

29. Interview with Sanjay Prakash, Chief Engineer of BRO at Gangtok.

either from Siliguri or Gangtok that justify the need to be carried on containers. Containerization as a concept just does not exist at the present moment.

Since there are no major heavy industries in the region, there has been no need for the local trucking industry to invest in multi-axle trucks or in containerization. Most of the load traffic comes into the region and very little load is exported out of the region. The goods that are exported out of the region are seasonal agricultural products like broom grass, ginger, cardamom and tea. No containers are needed to transport these goods. The only time multi-axle trucks come into Siliguri is when Maruti, Tata Motors or Hyundai transport their cars to their respective dealers in Siliguri.

Air Cargo Facilities

The demand for full-fledged cargo and freight handling centre in the region is going to be more conspicuous in the very first few years of Nathula trade route reopening. These facilities could be either developed in Bagdogra airport or somewhere in the vicinity so that users can easily access the same. There is some thinking going on in this direction. The West Bengal Government has already initiated the process by asking the Siliguri-Jalpaiguri Development Authority (SJDA) to prepare a feasibility report on setting up a cargo and airfreight handling centre at Bagdogra airport. SJDA is looking into the needs of various sectors, including food processing, horticulture and floriculture.³⁰ The object is to make Siliguri and surrounding areas a major trans-shipment hub.

In fact, if adequate cargo facilities are developed in strategically located Bagdogra airport, it could serve as a major air cargo ferrying centre of the eastern and northeastern regions wherein all the major produce particularly in the agriculture and horticulture sectors could be transported to anywhere in the world. It is due to the absence of such quicker transport options and easier access to potential markets (including South East and East Asia, Europe and America) that both the farmers and the economies of the this region have suffered in the past.

There is a fairly good distribution network of power. However, electricity has not reached Nathula and surrounding areas, including the proposed trade mart at Sherathang. Telecommunication facilities are most inadequate. In fact, no mobile phones work in the entire trading zone.

30. Dasgupta, Anupam, *The Telegraph*, Siliguri, June 9, 2004.

The Chinese Side: Preparations

There is visible euphoria on the Chinese side in the reopening of Nathula trade route. For instance, the officials in Lhasa clearly stated to the visiting Nathula Trade Study Team that the Chinese Central Government has set a high priority on the resumption of trade through this corridor. Chiefs from various trade-related departments were asked to form a Team/Committee on each of the crucial segments of trading operation. These Teams had already visited Yatung (Chumbi Valley) 12 times in this regard (i.e. by September 2004).³¹ Following were some of their important findings:

- (i) The Chinese Central Government has set a high priority on the resumption of trade through this corridor.
- (ii) The Tibet Autonomous Region Government (TAR) see tremendous opportunity for them to enter into the Indian market in the near future and to enter into other countries of South Asia in the long run.
- (iii) TAR Government also see that there is a huge scope for the Indian goods and services to access the markets of Tibet and western China which has a large population and for which the accessibility through India (Sikkim route) is much easier and economical than through the other routes of mainland China.
- (iv) The TAR Government is not thinking of the trade in the typical border trading sense. Their preparations give the impression that they are considering it to be a full-fledged trade with a range of exports and imports passing through this route. They plan to extend the railway line upto the Nathula border. They feel that India could also use this train service to reach mainland China.
- (v) The Tourism officials stated that they were greatly interested in integrating trade with tourism.

31. Members of the Nathula Trade Study Group visited Lhasa and surrounding areas in September 2004. This section is largely based on the discussions held during this visit. Tibet Autonomous Region is divided into 6 prefectures viz., Nyitri, Lhoka, Shigatse, Chamdo, Nakchu, Ngari with Lhasa as a district. These prefectures have several counties. Yatung is a county of them under Shigatse prefecture. Lhasa district also has 7 counties. The other neighbouring provinces are Sichuan (state capital Chengdu) with 2,155 kms distance from Lhasa, Yunnan (state capital Kunming) 2,320 kms and Qinghai (state capital Xining) with 1,937 kms from Lhasa and Xinjiang. See Tibet Tourism Bureau, *Guide to Holy Tibet*, Lhasa, (www.tibettour.org). All the roads are good especially to Qinghai (II Class). Some of the roads especially on the Chengdu and Kunming routes are under reconstruction.

Distance in Km***Lhasa to Nathula:*³²**

Lhasa – Shigatse	–	261 km (using the 318 national road)
Shigatse –Yatung	–	291 km
Yatung – Nathula	–	37 km
Total	–	589 km

In China, the roads have been given standards from I to IV³³ (for details, see footnote). The road from Yatung to Nathula is not a pitched road and so is not a standard road. The technical standard of this road is not good at present. The work of reconstruction is underway now. The proposed road from Yatung to Nathula will be a 2-way lane road. It is being built as the III Class standard road because of the geographical complexities. Passage of 500 – 2000 vehicles in 24 hrs is likely to be the carrying capacity of this new road. It would be able to ferry trucks approximately 15 mtrs in length.

Post-reconstruction, the road from Yatung to Nathula:

- Will have a total distance of 37 km. This will be a III Class standard road.
- Will have a width of 7.5 mtrs.
- Design speed for vehicle(s) plying on this road will be 30 km/hr. (actual speed higher than that.)
- Gradient of the road = 7 per cent for every 100 mtrs.

The road is being built on the old road itself, because of the complicated natural conditions. Upgradation of the road to make it a two-lane and high-speed road is being undertaken. The idea is to move only the containerised vehicles with sufficient carrying capacity. The present road conditions are:

- Lhasa – Shigatse : High Standard Road. (II & III Class)
- Shigatse –Gyantse : Black Pitched Road (III Class)

32. There are 3 routes from Lhasa to Shigatse and there are 2 routes from Lhasa to Yatung viz., Shigatse – Gyantse – Yatung and straight from Lhasa to Yatung bypassing Shigatse. The Lhasa – Shigatse Road renovation is going and is soon being completed.

33. I Class: width 15 mtrs. for speed over 100 kms./hr.; II Class: width 12 mtrs. for speed upto 80 km/hr. Under this 2,000-5,000 vehicles can move within 24 hrs in the mountain region; III Class: width 7.5 mtrs for speed between 30 –80 kms/hr and IV Class: width 5 mtrs, speed less than 35 km/hr.

- Gyantse – Khydung : Black Pitched Road (III Class-will be completed this year)
- Gyantse –Kangmar : 40 km
- Kangmar- Yatung : 162 km
- Khydung –Yatung : Black Pitched Road (III Class)

The Chinese have worked out the details about the Trade Mart and trade infrastructure at Renqinggang (a village in the Yatung county 31 km away from Nathula). The proposed Trade Mart covers an area of approximately 20,000 sq.mtrs. The main Mart building is an integrated building with all the concerned Government Departments offices. There is provision for 200-500 shops. There is adequate storage and warehousing space. The Mart also includes an area of over 5000 sq. mtrs. specifically demarcated for parking and packaging. The Trade Mart will be able to accommodate approximately 100 trucks at a time. The Mart will be basically a point for inspection by the custom officers on the goods being imported and exported. The rest of the area is meant for future expansion. Also, the Mart area would be 'clean and green'. The Chinese also have plans to set up the most modern customs systems. Recently, a power station has been built on the Yatung side.

Investment Opportunities

Opportunities for investment in the western region of China are huge. Sikkim can even export electricity and other energy sources to the energy hungry western region of China. The key elements while preparing for trade through Nathula are infrastructure, institutional capacities and regulatory framework that adequately safeguard and promote both national and local interest. The state of infrastructure at the moment is utterly inadequate and fragile. The Expert Group Report has recommended an Infrastructure Development Package of Rs 1650-1700 crore for roads, airport, banking, communications, trade mart, customs, warehousing and rest and recreation to be used in a phased manner by 2012. Since this is going to be a very vital project for the entire East - North East regions and the country as a whole, some of these infrastructure projects could be very attractive both for private sector and for agencies like the World Bank and the Asian Development Bank.

Tourism Potential

Tourism is Sikkim's major strength. It has the potential of acquiring the status of backbone of Sikkimese economy and society. Therefore, a conscious attempt should be made to gradually integrate trade through Nathula with the movement of tourists across the border. Most of the scenic sites and tourist spots in Tibet are now open to tourists. Tourism has emerged as a major industry in Tibet. Historically also trade was done alongside tourism, mainly pilgrimage. "Often trade and pilgrimage were combined. For example, pilgrims from Mongolia visiting the shrines of Lhasa would bring goods to sell in the capital to finance their trip. At the same time, Mongolian traders going to Lhasa with Chinese silver, silk and ponies would, as a matter of course, visit the holy places once they arrived³⁴."

The exchange of tourists between Nepal and Tibet through the land route of Kathmandu-Kodari highway can be cited as an important example. A large number of tourists (30000) from China, Nepal and other parts of the world already use this route for tourism purpose. This route is likely to be used more extensively for tourism as the Kathmandu-Lhasa bus service has been started a few months back. The ribbon development on this highway in terms of wayside hotels and other tourist amenities could itself generate a huge source of income for the Nepalese and the Chinese as it has done in the Solokhumbu region of Nepal. This region has been largely developed because of adventure tourism triggered by Mount Everest.

Tourists are making a beeline to watch how trade actually takes place between India and China at Sherathang and Renqinggang, respectively. In the last couple of years, the Nathula Pass itself has been a major tourist spot with hundreds of people visiting the border and enjoying the 'pleasure' of shaking hands with the Chinese soldiers.

Globally known as the 'roof of the world', Tibet lately has focused on 'eco-tourism'. In 2003, the tourists inflow into Tibet was recorded as 9.28 lakhs (0.928 million). The total income from tourism in Tibet amounts to approximately one billion Yuan (US\$125 million- Indian Rs 563 crore). Since 2003, an annual increase of 20 per cent in tourist arrivals has been recorded. There are over a

34. Clarke, John, *Tibet: Caught in Time*, Garnet Publications, Reading, 1997, p39.

hundred high-quality tourist attractions within the Tibet Autonomous Region. Most of the tourists are Europeans, Americans, South East Asians, Japanese and Koreans. There has been a huge surge in domestic tourism also.

The eco-tourism activities of Sikkim can be well integrated with the pilgrimage to places like the Mansarovar Lake in China. The journey could be much easier and could take shorter time from Sikkim. Tourists flow would also be affected as tourists visiting destinations like Kailash -Mansarovar in Tibet would opt for the pass instead of using Nepal as transit.³⁵

Buddhist circuit has now been identified as one of the priority areas in the tourism development policy of the Government of India. Sikkim could be the hub connecting all the major Buddhist destinations in India and neighbouring countries – Bodh Gaya in Bihar, Rumtek in Sikkim, Tawang in Arunachal Pradesh, Lumbini in Nepal and Taktsang in Bhutan to Jokhang and Potala in Lhasa. Though belated, this is an appropriate strategy. Most of the Himalayan states will be a direct beneficiary of this new thinking and intervention. This is going to be further strengthened by the proposed air link between Bagdogra and Kathmandu. The Nathula trade route if opened to tourist traffic could integrate the tourism industry of Himalayan states in the Northeast along with the regions having similar features in the neighbouring countries like China, Bangladesh, Bhutan, Myanmar and Nepal. This type of integration will transform the entire tourism potential into a galore of development opportunities.

The other most attractive areas of interest for the people of Tibet Autonomous Region and nearby areas will be the health and educational facilities that are available in and around Sikkim. The entire Sikkim-Darjeeling belt has been famous for educational institutions and the quality of education they impart. The huge surge in demand for the English-speaking students and professionals in China could, in fact, trigger a beeline for educational institutions in Sikkim and surrounding districts. The people of TAR have long been sending their children to various educational institutions in places like Darjeeling. A formal reopening of the trade route and according the permission for the movement of people through this route would give a great boost not only to traditional tourism that relates to sightseeing and pilgrimage but also for

35. Wagle, Narayan, "Opening Nathula would affect Nepal's trade", [http:// www.cybernepal.com/news/news_more.php?nid=2380](http://www.cybernepal.com/news/news_more.php?nid=2380).

education and health purposes. This would transform the basic nature of Sino-Indian cooperation.

Infrastructural Benefits: An Example

There are very high prospects for both creating newer infrastructure and civic amenities, including roads, bridges, warehousing, drinking water, electricity, hotels and restaurants, communications and also in making more effective use of the existing facilities. On the other side of the border, this reopening of trade route would improve the infrastructure of Tibet as it still is very backward in terms of many indicators. The Western China would gain tremendously in the process as it would relieve it from the morass of poverty and laggard syndrome.

On the Indian side, the infrastructural points, for instance, the Bay of Bengal ports of Kolkata and Haldia docks are the closest to China's southern and western regions. At present, the entire area is bottled up and has to do trade via Myanmar ports, which are in the vicinity of 5,000 km away. Kolkata, in contrast, is hardly 1,250 km away from these southern regions of China.³⁶ China can make use of these ports rather effectively in its exports to some of the South Eastern, Southern and Central Asian countries. Kolkata and Haldia ports³⁷, therefore, can make major gains out of the movement of goods and services generated by the Nathula trade. Kolkata Port Trust chairman Anup Chanda remarked that 'the new trade route will augur well for us. We are ready to handle any additional cargo that may come from Tibet'.³⁸

The Port Trust is repairing infrastructure both at Kolkata and Haldia docks to handle additional cargo and has embarked upon a project to develop cargo-handling in deep draft areas at Saugor Island and Sandheads. The railways are working on a new container handling facility at Kolkata docks to be managed by the Container Corporation of India (CONCOR). Cargoes can now move between Kolkata and Siliguri by rail directly and switch modes between rail and ship. China will also have the option of using the rail link from Howrah to Siliguri (roughly 700 km south of Lhasa).

36. <http://www.rediff.com/money/2003/sep/08trading.htm>

37. Including the proposed new greenfield ports of Kulpi, Sagar and also the ports of Paradip, Vizakapatnam and Chennai.

38. Ibid.

Recent Announcements

The Union Government has also decided to lay a two-lane highway upto Nathula and a railway line upto Rangpoo. It would be particularly naïve to expect traditional items like yak tail and goat skins to dominate the trade exchange through the Nathula route. Even Tibet is no more a market for religious/cultural items alone. It is a growing market that absorbs cement to latest cars and from *yerchagon bu* to tulips. The composition of products could, in fact, be much varied than that exists at the bilateral national level, as this route could cater to very specific needs and demands in a much quicker and cheaper manner than other national routes.

It will be a mere historical negation and an impractical assumption to consider this trade as a limited interaction among the communities that inhabit the borders. This was the assumption with regard to the border trade between Nepal and Tibet at Khasa and India and Myanmar at Moreh (Manipur). However, the actual volume, composition and direction of trade in these routes do not at all reflect the border trade phenomenon. Restrictions have only encouraged the illegal and surreptitious aspects of trade. However, given the level of infrastructure on the Indian side and the wretched condition of the road, particularly the 50.6 Km stretch between Gangtok and Nathula, it would be highly unrealistic to expect brisk trading instantly.

The following measures must be undertaken on an urgent basis in order to give a boost to the border trade through this route.

- (i) Making this trade based on most favoured nation (MFN) treatment principle rather than the existing restrictive border trading practice.
- (ii) Drastic revision in the list of exports and imports, so as to match the market realities on both sides of the border.
- (iii) Putting in place the most modern trade facilitating measures including customs, banking, warehousing, insurance, etc.
- (iv) Ensuring steady increase in the vehicular permits to and from Sherathang for trading purpose.
- (v) Reorganisation of trading season from the present one from June to September to a period that covers May to October.
- (vi) Removal of the value of the existing trading limit of Rs 25000 per trader per day.

- (vii) Evolving a strong regulatory framework to oversee the entire trading and tourism operations.
- (viii) Constant monitoring of the likely impact of trading activities on smuggling, environment, social interactions and other security parameters.
- (ix) Arranging regular visits to TAR and western region of China by the Sikkimese businessmen and entrepreneurs to study market and investment opportunities.
- (x) Establishing institutional linkages in all fronts, including tourism and other services sectors with the TAR of China.
- (xi) Preparation on the part of Sikkim for the sale/export of huge surplus power likely to be generated in the next few years.

Keeping the larger vision in mind and in order to harness and realize the 'Prospects, Potentials and Opportunities' triggered by the reopening of Nathula trade route, the Expert Group Report has suggested two alternative routes.

First Alternative

The most feasible alternative route to Nathula has been the existing border road from Dam Dim to Nathula which goes from Dam Dim via Lava, Pedong, Kupup to Nathula Pass (The other route is the mule route from Kalimpong to Jelep la Pass³⁹). The advantage of this route is that it bypasses the urban centres and most of the existing landslide and slip zones. This road has been built and maintained by the BRO. Dam Dim has a railway station and can be the railhead

39. The distance between Kalimpong and Jelep la is not more than 60 km. The route through Kalimpong, said to be the most convenient one, remains closed. On March 1, 1993, West Bengal Chief Minister Jyoti Basu wrote to Prime Minister P.V. Narasimha Rao, suggesting the reopening of the Kalimpong-Lhasa route via Jelep La. The Chief Minister wrote: "I understand that very recently a team from the External Affairs Ministry visited Beijing where the modalities for border trade between India and China were formalised. The State government is extremely happy that once again trade between the two countries is going to be opened. However, it appears that only Nathula in Sikkim will be utilised for this purpose. If the historical perspective under which trade between Tibet and India flourished in the pre-1962 period is considered, it may be noted that Kalimpong, a sub-divisional headquarters of Darjeeling district of West Bengal, was the centre. The entry point for the imports and exports of goods and commodities was Jelep la, which was connected to Kalimpong. Along with Nathula in Sikkim, Jelep la in West Bengal also [ought to] be considered as a point through which trade between the two countries can be conducted. I will be happy if the route through Jelep la is opened again. This will immensely benefit not only the people of Kalimpong but also the entire hill population of Darjeeling district and provide an impetus to economic activity." Kalyan Chaudhuri, 'Routes of Promise', *Frontline*, Chennai, July 05 -18, 2003.

for the movement of goods and services. All the traffic can be marshalled here both at loading and unloading times. The container handling and loading system can also be developed here.

Second Alternative

Another study conducted by Sur Technical Services⁴⁰ along with their collaborators Geo Consult ZT GmbH of Salzburg – the world leaders in Tunneling technology – has recommended a new tolled 4-lane Expressway to be built linking Sevoke (other side of the Jubilee Bridge) to Gangtok by tunneling and bridges, whereby the distance could be reduced from 93 km at present to only 47 km. This Expressway will be all-weather unlike the existing NH 31A which has a number of deficiencies, resulting in landslides during the monsoons. The cost will not be very much higher than the construction cost of the 4-lane NH 31A along its present alignment of 93 km.

The total cost of the project can be recovered in 7½ years time, keeping in mind the additional traffic likely to be generated by opening the international trade with China through Nathula. This project will be ideal as a Build-Operate-Transfer (BOT) project. The time taken for coming from Gangtok to Siliguri will be reduced to 60-75 minutes, for a toll payment of Rs. 50 only. This Expressway offers a distinct possibility of having a rail connection between Nathula and Sevoke.⁴¹

The West Bengal Government's proposals for finding alternative routes to Nathula for the traders and tourists need to be further looked into.⁴² The proposed routes that start in Jalpaiguri district could follow the two routes pattern viz.,

- (i) Malbazar via Gorubathan – Lava–Algara – Mongsong – Rangpo – Gangtok – Nathula.
- (ii) Malbazar – Gorubathan – Lava – Algara – Pedong – Rishi – Ranipool – Gangtok – Nathula

40. The same Kolkata-based company has been a consultant of a stretch of 4-lane toll highway including tunnels and bridges of the Asian Highway from Thailand border town of Myawaddi to Indian border town of Tamu (1411 kms).

41. Excerpted from the letter written by Somenath Sur, proprietor, Sur Technical Services, Kolkata to Managing Director, SIDICO, Government of Sikkim on December 21, 2003.

42. This was discussed at a meeting attended by West Bengal's Tourism Minister local officials of stakeholders in December 2003. *The Telegraph*, Siliguri, 10 December 2003.

Airport Facilities

Bagdogra airport should be declared and developed as an international airport with clear linkages to various airports/helipads in Sikkim, neighbouring states and countries, including, Bangladesh, Bhutan, China, Myanmar, Nepal and Thailand. Airport being constructed at Pakyong in East Sikkim at the cost of Rs. 339 cores must be expedited so that it can serve as a reliable means of transport for those participating in trade and tourism activities through Nathula.

The helipad near Nathula now used by the army should also be opened for the use of traders and tourists with strong regulatory mechanism and be connected with other helipads in the state and in the adjoining areas. These services should be thrown open to the private sector to ensure commercial viability and competitive reliability.

However, there is still a huge gap in what the Chinese side is thinking and what the Indian side is conceiving. The asymmetry in the level of preparedness in the two countries is conspicuous. On the Chinese side, it is just a matter of few initial years as they have already moved into comprehensive action mode. They have two-fold strengths. Firstly, they have gained lot of experience while conducting the border trade across their 22000 km land border with 14 countries.⁴³ And secondly, because of the their politico-administrative system and work culture they are able to mobilize resources, technology, manpower and management to finish a project on a war footing. On the other hand, on the Indian side, actions are contrastingly hesitant and incremental in both nature and substance. The state of preparedness here at this juncture is at a very nascent stage. The choice is again between fast movement based gains and laggard syndrome based lost opportunities.⁴⁴

43. These include among others India, Bhutan, Nepal, Myanmar, Mongolia, Russia, Pakistan, Afghanistan, Thailand, North Korea and three Central Asian Republics.

44. However, in between the presentation of the draft report of this Group to the State Cabinet, Members of the Legislative Assembly, senior officials, private sector and members of the civil society in Sikkim in June 2005 and the submission of final report in August 2005, there have been some very visible developments on this front. These include the high-level meeting of all the concerned ministries and the Sikkim government officials called by the Union Cabinet Secretary in New Delhi and also the decision to reopen the trade route in October 2005. There have been definite moves in putting in place some very basic infrastructures, including construction of sheds for Trade Mart at Sherathang, electricity connections, water supply and identifying the actual trade corridor.

India has to re-emphasise on infrastructure projects between India and the neighbouring countries and through neighbouring countries to other parts of Asia and other regions. Why India does not really make its position clear on Steelwell road from Assam to Myanmar and finally to Kunming in Yunnan province in China or Nathula road in Sikkim to Tibet Autonomous Region of China, transit route through Bangladesh to the Northeast region, trade corridor to Afghanistan, land bridge project to Sri Lanka and, of course, a number of other infrastructural projects? Why should India wait for the moment where it will be pushed to do so? For instance, in the Sittwe project in Myanmar and the issue of developing its huge borderlands, India was literally forced to react, forced to act and forced to realize by the massive constructions carried out by the Chinese.

It is only after the reopening of the Nathula trade route that there has been some realization among India's top brass of strategic thinkers and policy-makers that the border regions need to be developed to ensure comprehensive security in the country. Defence Minister AK Antony said this while on his visit to Sikkim in 2007 and, very recently, the Chief of the Army Staff, General Deepak Kapoor also said this. Since India has long international borders, such transformation in thinking would not only be beneficial but would make some major dent into managing its borders more effectively.

There is no evidence to show that India is seriously trying to move into a non-traditional and dynamic mode to balance the entry of Chinese goods into the South Asian economies. There are no indicators to show that India has now designed new instrumentalities to cope up with and overwhelm Chinese presence in South Asian markets. If this continues, can India really stop China from becoming a full-fledged member of SAARC?

These questions must be answered with very pro-active policy interventions which also include developing massive infrastructures on the Nepalese border with China with Indian economic assistance and also on the Nepalese side of the India-Nepal border. The Chinese have, in fact, already started undertaking such ventures like they did in Myanmar, Pakistan and other ASEAN countries.

Connectivity with Central Asia – Economic and Strategic Aspects

Rajiv Sikri*

The swathe of land extending from Turkey to Xinjiang and from the Siberian steppes to the Persian Gulf and the Arabian Sea needs to be viewed in its totality rather than through the simplistic prism of the Cold War era. From a historical, cultural and geopolitical perspective, Central Asia is not only the Central Asian republics of the former Soviet Union, as is commonly thought, but comprises the entire Eurasian space enclosed by Russia, China, India, Turkey and Iran. It includes Afghanistan, Northern Iran, the Caucasus region, Tibet and Xinjiang regions of China, Mongolia, as well as Ladakh and the Pakistan-occupied areas of the Indian State of Jammu and Kashmir. Considering that the seminal geopolitical event of our times has been the break-up of the Soviet Union, it is important to grasp the significance of the far-reaching geopolitical transformation that is taking place in this vast region that is better described as 'Eurasia', with the ex-Soviet Republics of Central Asia forming only one part, though admittedly the core, of this vital strategic space.

As a geographical area that abuts on the borders of major powers in Asia, including India, Central Asia will always attract foreign presences. It is what one may call a 'negative security space', where the major powers cannot afford to let other powers or forces exercise a dominating influence. A century ago, Mackinder called this the 'Heartland,' which plays a key role in shaping global geopolitics. The reason was simple. It was a huge territory – the largest, most populous and richest of all possible land combinations – in the middle of the Eurasian continent, wedged in by other powers facing the Atlantic, India and Oceans.

For more than one millennium starting from the Huns in the fifth century, Central Asia had dominated the world, as a succession of nomadic peoples, most notably the Mongols, emerged from Central Asia to conquer or threaten the states and peoples located in the "marginal crescent" from China in the east to

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Russia and Central Europe in the west and up to the borders of India in the south. The ever-present threat emanating from Central Asia has been fundamental to shaping the history and the psyche of both the Russians and the Chinese. In its search for security from marauding Turks and Mongols, Tsarist Russia expanded its frontiers to Siberia and the Pacific, as well as Central Asia. Generations of Chinese emperors sought to establish control over Central Asia, but their successes were only partial and sporadic. For long times, they had no alternative but to simply hunker down behind the protection of the 'Great Wall' they had built at great cost and effort stretching thousands of miles.

Unlike China and Russia, India was fortunate to enjoy the natural protection of the Tibetan plateau and the Himalayas. It did not need to expand its territorial conquests to ensure its security, but it had to deal with frequent invasions of tribes of Turks, Mongols and Afghans from this region through the narrow northwest opening of the Khyber Pass. It was only after the Europeans developed sea power and constrained the strength of the continental powers by outflanking them from the sea that the global role and clout of Central Asia declined. But this inevitably led to a periodic clash of interests of the great powers of the day. These were the imperatives behind the 'Great Game' between Britain and Tsarist Russia as well as the confrontation between the expanding Tsarist and Manchu empires in Central Asia in the 19th century resulting in what the Chinese call the 'unequal treaties' of the mid-19th century.

These geopolitical realities remain in place even today, only the players have changed and the 'game' has become far more complicated. All the major global players, including the US, are present in the region today, and energy has emerged as an additional important factor in influencing the strategic equations. Many influential US thinkers and strategists like Zbigniew Brzezinski continue to be influenced by Mackinder's theories. For more than four decades, because of the closed borders between the Soviet Union and China, and their mutual hostility, there was no danger of a single entity emerging as the dominant power in the Eurasian strategic space. However, after the break-up of the Soviet Union and the vastly improved relations between Russia and China, the possibility of these two countries, plus India, getting together has become a geopolitical nightmare for strategists like Brzezinski, as they can potentially challenge US global hegemony.

India itself is not merely a South Asian power. India – or at least northern India – has always had a Central Asian character too. While the region south of the Himalayas has determined the mainstream features of India's life, the history of Tibet, parts of Xinjiang, Afghanistan, and the land north of the Amu Darya has been intertwined with that of the Indo-Gangetic plains. Even today, Ladakh has more in common with the cultures of neighbouring regions of Central Asia than with South Asian traditions. Similarly, the Kashmir valley has historically had equally intensive trading and cultural contacts with Central Asia and the plains to the south. The Himalayas have undoubtedly given birth to and sustained India's civilization, but they have never constituted India's geopolitical and security frontier. Central Asia has always been fundamental to India's security, an important role it continues to play even today. This means that India cannot adopt a passive approach to Central Asia; it has to be a player in the region.

Without delving too much into the past, certain examples from India's experience even during the 20th century bring out the strategic importance of Central Asia to India's security. Whenever India has vacated the trans-Himalayan strategic space, India has suffered – be it the 1947-48 war against Pakistan which left Pakistan in control of a substantial part of the State of Jammu and Kashmir; the failure to bring Nepal into India's security perimeter, which has created many security problems for India; the inability and/or the unwillingness to resist the entry of China into Tibet that has made China a direct neighbour of India and increased India's security concerns; and, most recently, the intrusions by Pakistan in Kargil in 1999. Conversely, by acting firmly and decisively in respect of Sikkim and Bhutan, India's security interests have been preserved in these regions. It appears that India under Nehru did not sufficiently imbibe the lessons of Britain's strategic thinking in the 19th and early 20th century about the security imperative for India to exercise at least some degree of control over the trans-Himalayan strategic space.

It is not just the security aspects that make Central Asia important for India. Throughout India's history, the Central Asian connection has been the most important one in India's contacts with the outside world. Central Asia has been India's door to the outside world. It has deeply influenced India's history, culture and polity. Of all India's neighbouring regions, whether across its land or maritime frontiers, it is with Central Asia that India has had the longest association, and the deepest historical, cultural, religious, economic and people-

to-people ties. Thus, the Central Asian aspect of India's foreign policy needs to be adequately understood and studied in order to enable India to draw the necessary lessons that could serve as a guide for the contemporary dynamic situation in Central Asia.

Similarly, India too had enormous importance for Central Asia. Although it is Russia and China that dominate Central Asia today, it is with India that Central Asia had the most intensive contacts in the past. After all, India's was the closest developed civilization to Central Asia, an extensive rich and fertile land that was relatively easily accessible from Central Asia, and therefore drew conquerors from all across Central Asia but, in turn, posed no threat to Central Asia. India's impact on Central Asia, which has been the most enduring for this region, has been that of religion and culture. That is why India remains for many Central Asians the land of their dreams, and why Indian culture strikes a deep chord in the hearts of Central Asians, unlike the culture of China or Russia. All this has been possible only because for centuries there had been excellent connectivity between Central Asia and India, via Afghanistan, Kashmir and Ladakh, much better than the connectivity that existed between Central Asia and any other civilization.

This connectivity was unfortunately lost during the time of the Soviet Union when the borders of Central Asia with South Asia were closed. Even after the Soviet Union broke up and the frozen borders of the former Soviet Union thawed and became porous, South Asia was denied the benefits of connectivity because of the rise of the Taliban in Afghanistan and the continuing disorder and violence that has persisted despite the presence of US and other foreign troops in Afghanistan since 2001. In any case, Pakistan's refusal to give India overland transit rights has barred India's access even to Afghanistan, the traditional stepping stone between India and Central Asia.

Meanwhile, after the break-up of the Soviet Union, Eurasia has diversified its connectivity with the outside world and has developed new transport and energy corridors to the rest of the world other than those via Russia. The Sarakhs-Mashad railway link has connected the railway systems of Central Asia and Iran. Iran and Kazakhstan have a swap deal arrangement whereby Kazakh oil goes to Iran's Caspian Sea port of Neka and Kazakhstan gets in return Iranian oil in the Persian Gulf for export to world markets. There is a Turkmenistan-Iran

gas pipeline that supplies Turkmen gas to Iran for the latter's domestic consumption in the north of the country. Turkey and the Mediterranean have become economically more linked to Central Asia as a result of the Baku-Tbilisi-Ceyhan oil pipeline. Exploratory work is being done on oil and gas pipelines across the Caspian that would take Central Asian energy right up to Europe via the Nabucco pipeline. A new bridge across the Amu Darya links Tajikistan with northern Afghanistan.

The most dramatic improvement in Central Asia's connectivity has been with China. The final settlement in 1996 of the old Sino-Soviet frontier in Central Asia paved the way for the restoration of traditional links and establishment of new road, rail and pipeline links in an east-west direction between China and Central Asia, as well as between Europe and Central Asia. As a result of these developments, Central Asia is poised to recover its traditional role as a transport and trading hub between China and Europe – the revival of the so-called 'Silk Route.' There are at least a dozen trade and transport hubs between Xinjiang and Kazakhstan, including an important rail link via Druzhba, and another one coming up via Korgos. The road along the main branch of the traditional Silk Route between Osh in the Ferghana Valley and Kashgar in Xinjiang via Erkeshtam is being upgraded. There are plans to have a rail link too between Osh and Ferghana, which would create yet another east-west rail link between China and Europe, this time passing through Kyrgyzstan, Uzbekistan and Tajikistan.

China has also built a road link via Badakhshan in Tajikistan to the Karakoram Highway. Energy pipelines are also being rapidly built between China and Central Asia. There is already an oil pipeline between Kazakhstan and China, and plans are underway to build a gas pipeline between Turkmenistan and China that will also undoubtedly draw in surplus gas available along the pipeline route in Uzbekistan and Kazakhstan. China is ready to step into the Iran-Pakistan-India gas pipeline project in place of, or even in addition to, India. To complete the picture, China has established in the east new transport corridors into Myanmar, Thailand, Laos and Vietnam, sucking these countries into its economic whirlpool. These mushrooming transport and communication linkages will create new long-term political and economic interdependencies and intertwine the interests of the concerned countries.

South Asia is not absent from China's grand strategy. India's strategic planners should carefully note how China is systematically reaching out through roads, railways and pipelines right to the edges of India's borders. Within China itself, China has established railway connectivity up to Kashgar in Xinjiang and Lhasa in Tibet, which it plans to extend to the borders of Nepal and India over the next five years or so. For many years, it was the Karakoram Highway, of which Kashgar is the railhead, which constituted China's lone attempt to extend its reach to South Asia. This is now likely to be upgraded and expanded to cover not just road but rail and pipeline connectivity too from Gwadar port on Pakistan's Makran coast up the Indus Valley and along the Karakoram Highway up to Kashgar. There is also talk of linking Nepal to the Karakoram Highway across the Tibetan plateau and Aksai Chin. Having got Myanmar to agree to a multiple road, rail and pipeline link between Kyaukphu on Myanmar's Rakhine coast to Yunnan province in China, China is now trying to establish a road link to Bangladesh via Myanmar, presumably by extending the proposed Yunnan – Kyaukphu link to Chittagong.

The interesting aspect to note is that China is coy about establishing connectivity with India, except when it suits it. Thus, it refuses to even allow Indian pilgrims to travel to Kailash-Mansarovar via Demchok on the ground that there is inadequate infrastructure on the Chinese side. But it is enthusiastic about establishing transport links with India that serve its strategic interests. These include opening the Nathula route via Sikkim and reviving the old Stilwell Road from Ledo in Arunachal Pradesh to Kunming in Yunnan via Myanmar.

As India is unfortunately absent from these far-reaching transport connectivity projects that are taking place, it remains strategically and economically boxed up in South Asia, mired in dealings with fractious neighbours. That cannot be an acceptable state of affairs as India has important strategic interests in Central Asia. India would like to see a stable and secular Central Asia. Weak, unstable states with centrifugal tendencies could become a haven for terrorists, separatists and fundamentalists who could link up with their counterparts in Afghanistan and Pakistan. Moreover, instability and chaos in the region carries the danger of a 'domino effect' that could affect the entire region. India also needs to watch Central Asia since developments in Xinjiang and Tibet, which border India, would have a direct bearing on India's security.

Thus, India must work actively to get a firm foothold in this strategically located region, which should not be dominated by forces inimical or hostile to India's interests. Among other things, India must track any military presence in the region that could potentially threaten India. On the economic side, while the Central Asian market is relatively small, India would very much like to gain access to the rich natural resources of the region, such as oil and gas, uranium, rare earths and minerals, copper, gold, diamonds, and to acquire, if possible, some specialized defence technologies and defence production facilities.

As Eurasia is integral to contemporary global geopolitics, India cannot afford to be absent from this region. In order to be able to protect its vital national interests in Central Asia, India must try to be a player in Central Asia on an equal footing with the major global players viz., Russia, China and the United States that have a significant presence and influence there. From a geopolitical perspective, India should try to leverage the geographical proximity of India's heartland to Central Asia, a unique advantage that none of the other major players in the region have. The densely populated plains of North India are much closer to Central Asia, and about the same distance from both West and East Siberia as are the European heartlands of Russia and the eastern coast heartland of China. India's warm water ports are the closest to Central Asia. If it plays its cards well, India could become not only an important market for Eurasian oil and gas but also a transit hub for export to other parts of the world. As the 'new Great Game' is being played around energy issues, India must remain integral to Eurasian energy politics, not only for its energy security, but for political and strategic considerations too.

The major drawback and dilemma that India faces is how to access Central Asia. The absence of reliable and easy access to Central Asia severely constrains India's options in this region, particularly in promoting trade, as the long and cumbersome existing trading routes render many Indian products uncompetitive. Traditionally, India's contacts with Central Asia have been mainly via Afghanistan, which provides the easiest access. But given the current dangerous security situation in Afghanistan, and the necessity of having to cross Pakistan to reach Central Asia, India cannot realistically hope to have overland access to Central Asia by this route in the foreseeable future. So far, Pakistan's attitude has not given much ground for optimism about its willingness to cooperate with India on Central Asia, since this negates the Pakistani regime's

fundamental objective of seeking to check India at every opportunity and of acquiring the so-called 'strategic depth' against India. It is felt that with a new popularly elected government in power now in Pakistan, possible India-Pakistan cooperation in respect of Afghanistan and Central Asia should be actively explored.

It is undeniable that India's connectivity with Central Asia will remain sub-optimal without the cooperation of Afghanistan and Pakistan. At the same time, Pakistan, on its own, cannot hope to have an exclusive sphere of influence in Afghanistan and reach out to Central Asia. The reason is simple: Pakistan is not a sufficiently powerful economic magnet that can effectively compete with even Turkey and Iran, much less with Russia and China in Central Asia. Moreover, the traditional hostility and suspicion between Afghanistan and Pakistan imposes limitations on Pakistan's strategic ambitions in this region. Other countries too will not let Pakistan have a free hand in Afghanistan; the deleterious consequences of this are seen as having been the Talibanization of Afghanistan and its conversion into a narco state. Pakistan is now reaping the negative consequences of its traditional Afghan policy that has adversely affected its security and stability and brought it no benefits. Ironically, Pakistan has voluntarily transformed itself into a virtually landlocked country that has no worthwhile economic, cultural and normal people-to-people contacts with its two principal neighbours viz. India and Afghanistan.

On the other hand, were Pakistan to open the locks of its mind, it would realize that its geographical position as India's gateway to the west could bring enormous all-round benefits. It is significant and encouraging that in respect of energy, it has deviated from its traditional position on transit. It obviously sees that it could solve its own energy problems at a more economic cost through gas pipelines that bring gas from Iran and Turkmenistan not only to Pakistan but to India as well. Moreover, if Pakistan is regarded as a responsible stakeholder and a reliable transit country for global and regional energy flows, this could bring Pakistan many benefits, both economic and political. It can also become a critical player in global energy geopolitics because of its geographical location between India and the major sources of gas in the world. Were Pakistan to extend such logic to transit trade between India and Eurasia, it could earn substantial additional sums as transit fees, and get many other indirect economic benefits. Current negative international perceptions about Pakistan would change, and

give many countries, including India, and businesses a huge stake in Pakistan's stability. A stable Pakistan would, in turn, bring stability to the region as a whole.

A conscious policy of creating a mutual dependency in the fields of energy and trade between India and Pakistan could lead to a long-term improvement resulting in a much-needed normalization of Pakistan's relations with India. On the other hand, if Pakistan remains caught up in its traditional geopolitical approach of blocking India in every possible way and of dominating Afghanistan, then Pakistan will not only risk getting marginalized and ostracized by the international community, but will also have to bear the overwhelming burden of a turbulent, lawless and fractured Afghanistan. Will the new rulers of Pakistan understand these dynamics, or will their approach remain confined to the traditional rut of the last six decades? As India has huge stakes in Pakistan, Afghanistan and Central Asia, it cannot but remain optimistic and patient and actively try to work with Pakistan in Afghanistan and Central Asia, howsoever improbable this idea may seem at present.

India has also been trying to access Central Asia via Iran. However, Iran does not provide a practical or economically efficient access route. Without an overland corridor across Pakistan, all transit to Central Asia via Iran involves cumbersome multimodal transport, first by road or rail to a port in India, then by ship to an Iranian port, then again by road and/or rail to Central Asia. All possible routes via Iran – whether it is the North-South transport corridor from India to Russia via Iran, the route delineated in the trilateral India – Iran – Turkmenistan agreement, or the Iran-Afghanistan route where India is assisting Afghanistan in building the Zaranj-Delaram road that will connect to the Afghanistan girdle road – have so far turned out to be unreliable. Poor infrastructure, multiple trans-shipments involving different modes of transport, and inefficiency and corruption are the ills that plague all the legs of the transport corridors. Nor are the routes via Iran optimal for accessing the eastern parts of Central Asia like Kazakhstan, Kyrgyzstan and Xinjiang. In addition, the international pressures on Iran today inevitably impose limitations on relying on Iran as the principal access route to Central Asia.

While Pakistan remains reluctant to give India overland transit access to Afghanistan and Iran, it is far more forthcoming when it comes to gas pipelines. For the purpose of gas imports by pipeline, the most promising, but also the most

controversial, is the Iran–Pakistan–India (IPI) gas pipeline project. Although it is a logical project since Iran is a major producer of gas while both Pakistan and India are large consumers with a growing demand, for many years India refused to countenance the idea of such a pipeline since it could not trust Pakistan and apprehended that it might disrupt supplies.

It was only after Prime Minister Vajpayee's visit to Islamabad in January 2004 and the initiation of the India-Pakistan composite dialogue to address outstanding bilateral issues that India agreed to de-link the question of the gas pipeline from outstanding bilateral issues such as grant of MFN treatment in trade, and transit facilities to Afghanistan. As a result of the Indian Government's decision – which itself reflects how important energy security issues figure in its foreign policy priorities – a series of trilateral and bilateral meetings between Iran, Pakistan and India have been held over the last three years. Iran and Pakistan appear to have resolved most of the issues between them and intend to sign an agreement for an Iran-Pakistan gas pipeline regardless of the fact whether India gets involved in the project or not.

India's participation in the IPI which had been uncertain for the last three years, now seems to have been firmed up. More than the financial and security issues, political considerations were principally holding back India's participation. Despite official denials, India had given the impression that it was deliberately going slow on the IPI because of pressure from the United States, which has linked India's participation in the gas pipeline project to the fructification of the India-US nuclear deal, to which the present government in India attaches high priority. India has grievously erred in succumbing to US pressure since it has created deep mistrust and loss of credibility for India in Iran, leading to Iran abrogating an attractive and significant LNG deal with India agreed upon in 2005. India has also lost other opportunities in Iran for investment and cooperation in the energy sector. Fortunately, as a result of President Ahmedinejad's visit to India in end-April 2008, India-Iran relations now appear to be back on track. Differences between India and Pakistan over transit fees have been sorted out, and if the three countries can agree on pricing, assurance of supplies, as well as other technical, administrative and financial issues, the formal agreement could be signed soon.

The geopolitical significance of an Iran-Pakistan-India pipeline would be immense for all the three countries as well as for the region as a whole. On the energy front, it would provide Pakistan and India with plentiful gas supplies for many decades. Politically, it would be a huge confidence-building measure between India and Pakistan that could create a momentum for a fundamental transformation of their relations. There are enormous benefits for Iran too. For both political and logistical reasons, Iran cannot easily break into the European gas market dominated by Russia. Gas exports to Pakistan and India would give Iran valuable long-term customers and a steady stream of much-needed revenue. The IPI would undermine the US policy to impose sanctions and isolate Iran. As a regional energy project, IPI could form the nucleus of a regional cooperation arrangement, in the first instance, between South Asia and Iran (which has become an Observer of SAARC), and later perhaps within the framework of the Shanghai Cooperation Organization, where Iran, Pakistan and India are all Observers.

Another gas pipeline proposal that has been under consideration for some time is the Turkmenistan–Afghanistan–Pakistan–India (TAPI) project. However, there are many unanswered questions that need to be addressed before India can seriously commit itself to a gas pipeline from Turkmenistan to India. The extent of Turkmenistan's proven gas reserves is not known. Turkmenistan has already pledged considerable quantities of gas to many other parties that have great influence on Turkmenistan. Turkmenistan has its traditional commitments to Russia, which Turkmenistan will keep especially after the generous price increase it has recently managed to negotiate with Russia. Turkmenistan has also made generous promises to gas-hungry, cash-rich China, and is being wooed by Europeans keen to reduce their dependence on Russian gas.

Thus, there are legitimate doubts whether Turkmenistan has adequate surplus gas available that would take care of the present and anticipated demand of Afghanistan, Pakistan and India over the next couple of decades or more. Without assurances on this front, it would not be prudent to make the huge investment needed for this project in a politically risky country like Turkmenistan. India will also have to bear in mind the Russian opposition to TAPI, if that were to result in a reduction of Turkmenistan's gas supplies to Russia and consequently Russia's hold over Turkmenistan. So far, the existing pipelines have ensured that Central Asian gas flows to Russia, and Russia can be

expected to use all its available leverages with the Central Asian countries to restrain the latter from stepping out of line. The security situation in Afghanistan and in the Afghanistan – Pakistan border regions in the North West Frontier Province (NWFP) and the Federally Administered Tribal Areas (FATA) also raises questions about an international consortium's ability to construct and maintain a pipeline.

Yet, suddenly there is an air of optimism in respect of this project too. Despite so many uncertainties surrounding TAPI, India has finally agreed to participate in the ADB-supported consortium on TAPI for, among other things, geopolitical considerations. A Turkmenistan–Afghanistan–Pakistan (TAP) gas pipeline that leaves out India would pave the way for Pakistan emerging as the key country outside the Central Asian region with which Turkmenistan (and later the other Central Asian countries too) would be anchored economically, politically and strategically through oil and gas pipelines, roads and railways. This would give Pakistan the dominant influence and strategic depth it has been seeking for a long time. Pakistan would become a key long-term strategic partner of the US in this region. This would enormously strengthen Pakistan strategically and economically, and be a disincentive for its military leadership to seek an enduring peace with India.

A gas pipeline across Afghanistan could well generate much-needed income and jobs in Afghanistan, which would go a long way in persuading its youth to turn away from insurgency. A stable, united Afghanistan is in India's interest, but not if it becomes an economic appendage of Pakistan. Thus, India would not like a gas pipeline to come up from Turkmenistan to Pakistan via Afghanistan without India being involved in it. Since India's interests are better served if it is part of such a project than remain outside it, India has wisely managed to get its foot in the door in the TAPI project.

It is likely that India's growing gas demand may require gas from both Iran and Turkmenistan. However, if a choice has to be made between the IPI and the TAPI projects, IPI may be preferable from India's point of view since it involves only one transit country as compared to two in the case of TAPI. Iran's gas reserves are also much larger than Turkmenistan's. Geopolitically, Iran is no less important (because of its intrinsic size, resources, location etc.) than Afghanistan.

Moreover, Pakistan is unlikely to let India be a part of TAPI if there isn't already an agreement on IPI, which in any case is on a much faster track than TAPI.

At the same time, it would be prudent for India not to rely exclusively on pipeline transit routes via Pakistan. The only possible alternative, or supplement, to a route to Central Asia via Pakistan and Afghanistan is via China. Thus, India needs to seriously explore the possibility of establishing links with Central Asia via China, since that is the only other overland viable transportation route between Central Asia and India. Any pipeline from Eurasia to India that does not come via Afghanistan/Pakistan has to be routed via the Xinjiang region of China and then across the Karakoram and the Himalayan mountain ranges. Apart from the considerable technical challenges, the political obstacles to such an alignment are likely to be more daunting, since the pipeline route would have to cross the disputed Aksai Chin area, and China may not be enthusiastic about facilitating India's access to Central Asia where it could become a competitor. But a mutual understanding should not be ruled out if India and China conclude that such a project would bring long-term energy as well as strategic benefits to both the countries.

A mere transport corridor between Eurasia and India via China may not be economically viable. It is an energy corridor that can compel serious consideration of such an unconventional idea. There are potentially large gas deposits in Russia and the other countries on the Eurasian landmass that could be tapped for supplying natural gas to India. Although the technical complexity of building pipelines over difficult terrain and in extreme climate zones cannot be underestimated, in general, pipelines can be built more easily and cheaply along existing road/rail alignments that would facilitate transport of heavy equipment for pipeline construction. Secondly, it is much easier to transport gas, compared to oil, at high altitudes and low temperatures. However, once the idea is accepted in principle, a proper topographical and techno-economic feasibility study would have to be done to examine the proposal in detail and determine the optimal routes for gas pipelines.

Following are, *prima facie*, the possible routes for pipelines from Eurasia to India:

- (a) *Russian natural gas from west and north Siberia.* The easiest and cheapest alignment of pipelines could be in a rough north-south direction along

existing railway lines and roads in Kazakhstan and the Xinjiang region of China. Kashgar is the last railhead in Xinjiang. Some possible pipeline routes could be:

- West Siberia – Tyumen–Omsk–Semey–Druzhba–Urumchi–Korla–Kuqa–Aksu–Kashgar–Yarkand–Shahidullah–India.
[Alternate route: branch off from Korla to the southern branch of the Silk Road along the southern rim of the Taklamakan desert, on to Khotan and Shahidullah].
 - West Siberia–Tyumen–Petrovsk–Astana–Karaganda–Bishkek–Issyk Kul–Naryn–Kashgar.
 - North Siberia–Tomsk–Novosibirsk–Barnaul–Rubtsovsk–Semey, thereafter the same route as above.
- (b) *Caspian basin fields in western Kazakhstan.* There could be a west-east pipeline network across the Kazakh steppes to Druzhba and Urumchi.
- (c) *Turkmen gas from Daulatabad, and Iranian gas from South Pars.* Pipelines could be laid from Iran (via the new Zaranj–Delaram transport alignment being jointly developed by Iran and India via Afghanistan) and Turkmenistan via Uzbekistan, Tajikistan and Kyrgyzstan along a main branch of the traditional Silk Road viz. Bukhara/Mazar-e-Sharif–Samarkand–Khujand–Andizhan–Ferghana–Osh–Erkeshtam–Kashgar. (A railway line exists up to Osh, and there are plans to build a line connecting Osh and Kashgar via Erkeshtam, along which alignment a road already exists). [Alternate route: branch off from Samarkand to Kashgar via the route Tashkent–Chimkent–Bishkek–Almaty–Yining–Korla–Kuqa–Aksu].
- (d) *Kovykta deposits in eastern Siberia.* There could be a pipeline from Irkutsk via Ulan Ude–Ulan Bator (in Mongolia) and Yumen (in China) to Dunhuang, and thereafter follow the southern branch of the traditional Silk Road to Khotan, Shahidullah and India.
- (e) *Tarim basin gas deposits in Xinjiang.* These are the most accessible gas deposits, with the shortest pipeline routes to India, if China finds it economically more advantageous to supply the gas to India than to transport it to east China.

In Xinjiang, the main hubs of this pipeline grid would be the transportation hubs of Urumchi and Kashgar. Pipelines from Siberia and Central Asia could converge on these two points, from where pipelines could diverge in two broad directions - one, south to the main markets of northern India, the other, east to China's heartland. The most difficult and challenging section is across the Karakoram-Himalaya ranges. There are various possible routes from Shahidullah in Xinjiang to India. These include:

- (i) Via the Karakorum Pass and Khardung-la to Leh. (India's control of the Siachen glacier region can ensure this, but it is a technically very difficult, if not impossible, route as this route is prone to avalanches).
- (ii) Via the existing Aksai Chin road alignment connecting Xinjiang to Rutog in western Tibet. From Rutog it is a relatively short distance along the plateau skirting the Pangong Lake to Chushul and the Leh-Manali highway (This is an easier route).
- (iii) Via Aksai Chin and the Xinjiang-Tibet road up to Tashigang, and then down the Indus valley from Demchok to Upshi along the alignment of an existing motorable road, and thence along the Leh-Manali highway (Prima facie, the optimal option, according to a desktop study commissioned by ONGC Videsh Ltd. a few years ago).
- (iv) Ingress routes from western Tibet into India along the Sulej (Rutog-Gartok-Shipki pass-Hindustan-Tibet road via Kinnaur to Simla); via the Niti pass and Garhwal; or via Rutog- Gartok-Mansarovar-Taklakot-Lipulekh Pass-Pithoragarh (May not be practicable as the Himalayas in this region are considered unstable).

If, on detailed examination, it turns out that gas pipelines are technically difficult and economically too expensive to construct across the Karakoram and Himalayan ranges, the project could be modified. Eurasian gas could be used to set up gas-fuelled power plants in Central Asia and Xinjiang region of China, and the electricity generated could be transmitted across the Karakoram-Himalayas ranges. This would provide value addition to the gas reserves, generate local employment and promote regional economic development. Another complementary approach would be to set up hydropower plants in Kyrgyzstan and Tajikistan, both of which have enormous hydropower potential, for export of electricity to South Asia. It might be cheaper and simpler to import hydropower

from north of the Himalayas than to set up hydropower projects in the Himalayas. The latter have not taken off meaningfully because of political hesitations on the part of Nepal, apart from environmental concerns, geological considerations and the problem of resettling displaced populations.

A gas pipeline project across the Karakoram-Himalaya ranges could lead to the development of a major energy corridor between Eurasia and the Indian Ocean. Although technically much more challenging, there is the possibility that oil pipelines could be built along the same alignment as the gas pipeline, but in the opposite direction. That could be of great interest to China, which is reportedly examining a Pakistani offer of creating an energy corridor for oil from the Gulf to China via Pakistan. India could offer a similar transit oil corridor. An Indian transit route may not only turn out to be more secure and technically feasible, but also have the advantage of creating a mutual dependence – of China on India for transit of Gulf oil destined for China, and of India on China for transit of Eurasian gas destined for India.

Both China and India would gain from cooperating in creating a north-south energy corridor from Eurasia to the Indian Ocean. They would get assured energy supplies for their own domestic needs, and become central to the energy flows out of Eurasia. Although they may be competitors for finite global energy resources, India and China share a larger long-term interest that the energy resources of Eurasia remain available to meet the demand of Asian consumers too, not just those of the West. To ensure this, the two countries need to use their clout as large and growing consumers of energy. If they cooperate, and act quickly, boldly and imaginatively, they can offer a viable, more secure pipeline route for export of Eurasian gas than the alternatives being currently considered.

There are other benefits outside the energy sector that could flow to China from pipelines connecting China and India. China could earn considerable amounts of money as transit fees from pipelines transiting Xinjiang and Western Tibet. Investments for pipeline projects would provide employment opportunities and stimulate the economic development of, and stabilize, Xinjiang and Western Tibet. China may welcome more people-to-people contacts and economic ties between Xinjiang and India (as an outlet for the frustration of the Uighurs and to relieve the drain on China's own financial resources) in

preference to linkages of Uighur separatists with fundamentalist elements in Pakistan.

China realizes that the unresolved problem of Xinjiang separatism, which is also linked to the situation in the Central Asian Republics, has the potential to spin out of control. Thus China has an important stake in the prosperity and stability of both the Central Asian region and Xinjiang. If China feels that closer economic ties of Xinjiang with India serve its long-term interests, it may welcome proposals for sub-regional cooperation for Xinjiang along the lines of, and perhaps as part of a package deal including China's own 'Kunming initiative' for sub-regional cooperation between Southwest China, Myanmar, Bangladesh and India. While Pakistan can be expected to put pressure on China to oppose any such links, there are recent encouraging signs of a more even-handed and realistic Chinese approach to India-Pakistan relations.

India too stands to gain enormously from such a project. Eurasian-Indian pipeline project would not only boost India's energy security but also bring India many significant long-term advantages. Availability of a cheap and plentiful clean energy source like gas would go a long way towards resolving growing problems of deforestation and environmental degradation in the Himalayas. This would also stimulate the economic development of the States of Jammu and Kashmir and Himachal Pradesh. Most important, this could open the way for a long-term solution of the Kashmir problem, as it would generate large-scale employment opportunities for the Kashmiri people. This makes the economic angle as important as the military and political ones in finding a solution to Kashmir. Geographically remote from India's heartland, Jammu and Kashmir has not attracted private investment, and tourism has not proved to be a sufficient catalyst for the State's economic development. As a state in the Central Asian geostrategic space, Jammu and Kashmir could benefit enormously from a re-opening of its traditional links with Xinjiang and western Tibet via Ladakh.

An energy project between India and China traversing sensitive and strategic areas like Jammu and Kashmir as well as Xinjiang would have a positive fall-out on overall bilateral relations. Notwithstanding mutual security concerns and suspicions between India and China, there is no logical reason why proposals for energy pipelines between Eurasia and India via China should not be pursued. After all, India and Pakistan, who share a similarly antagonistic

relationship, have agreed on road links across the Line of Control in Jammu and Kashmir, and are actively discussing a gas pipeline from Iran to India crossing Pakistan. Major joint energy projects such as pipelines would not only give an enormous catalytic boost to economic relations, but would also hardwire India and China into a interdependent relationship, helping to create a climate of greater mutual trust and confidence.

If both China and India remain stable and grow more prosperous and powerful, as is likely, they need to work out a non-hostile and cooperative relationship. Moreover, there will be a more stable Pakistan-China-India strategic equilibrium if China feels that its long-term national interest lies in closer ties with India too, rather than an exclusive strategic relationship, cemented by shared animosity towards India, between China and Pakistan. Both China and Pakistan could be reassured that the gas which flows from Eurasia to India could also be shared with Pakistan, if needed, through pipeline extensions from Jammu and Kashmir to Pakistan-occupied Kashmir across the Line of Control and from the Indian State of Punjab to Pakistan's Punjab Province across the international border. Such an arrangement would, in fact, build in a reciprocal Pakistani dependence on gas transiting via India that would assuage India's security concerns about gas supplies to India transiting Pakistan, whether by IPI or TAPI.

An energy pipeline project could perhaps even create a better climate in India for eventually resolving the border dispute with China on the basis of the Line of Actual Control. Both sides have reiterated, during the visit of Indian Prime Minister Manmohan Singh to China in January 2008 that there has to be a political solution to the India-China border dispute on the basis of the April 2005 Agreement on Political Parameters and Guiding Principles on this matter. The 1962 Indian Parliament resolution on the subject complicates the task for any government to settle the issue with China on the basis of the existing ground realities, even though it is widely recognized that China is unlikely to give up control of Aksai Chin across which it has built a strategically important road, whereas Aksai Chin is not of much use to India militarily. Perhaps the Aksai Chin problem can be finessed.

It is likely that there would be acceptance by the Parliament and the public of a settlement broadly along the Line of Actual Control in the Western Sector if the Aksai Chin road built by China at great cost and effort is seen to benefit India

economically by serving as a major economic artery linking India and China, including gas and oil pipelines in both directions. While this would not resolve all the issues in the long-standing India-China border dispute, a major strategic energy-related project across the disputed border would definitely constitute a vital confidence-building measure. India must propose such a project to test out China's intentions. This has become even more urgent after the Chinese have upped the ante on Arunachal Pradesh, and in view of the issue of Tibet re-emerging as a major divisive factor in India-China relations. If China rejects cooperative proposals in Central Asia, India will have to draw the necessary conclusions for its Tibet policy as well as its approach to the border talks and accordingly work out suitable counter-measures to put China under pressure.

Russia has an important role to play in the realization of this concept. A successful Eurasian energy project is possible if Russia, as a major energy producer, develops a strategic understanding with India and China, both major energy consumers. If the three countries agree in principle that they should have strategic cooperation in the field of energy, the details can be quickly worked out. Perhaps this could constitute a concrete project within the India-China-Russia trilateral framework, where energy would be an agreed area of cooperation. It could also be considered subsequently within the framework of the Shanghai Cooperation Organization (SCO), where Russia, China, Kazakhstan, Uzbekistan, Kyrgyzstan and Tajikistan are Members, while India, Pakistan, Iran and Mongolia are Observers. Turkmenistan and Afghanistan are neither Members nor Observers. Nevertheless, they have an interest in the SCO, as was seen in the presence of their respective Heads of States at the 2007 Bishkek summit of the SCO. In this way, all the countries involved in the SCO are either major producers or consumers of energy, or key transit countries in energy flows between Eurasia and South Asia. It is felt that, over time, an Asian energy grid could come up.

In the new geopolitical realities of the 21st century, bold and innovative, even visionary, approaches are needed in inter-state relations, including in the area of energy security. Naturally, the fructification of the Eurasian energy blueprint outlined above would bring enormous benefits to India. However, it would have much larger, indeed global, strategic ramifications. It would offer the exciting prospect of transforming the Central Asian region into a strategic space

uniting major Asian energy producers, consumers and transit countries in a web of interdependence.

Instead of being the battlefield of a new 'Great Game', Central Asia could become the crossroads of a 21st century version of the traditional Silk Route, with gas and oil pipelines replacing caravan convoys. The Himalayas-Karakoram region could truly become a frontier zone of peace, friendship and development, rather than one of confrontation and conflict. A mega-project like this would also act as a huge stimulus for the global economy. Such a conceptual breakthrough would have far-reaching long-term consequences. It would not only bring all-round economic advantage, prosperity, social and political stability, but also create a solid and enduring foundation for greater trust, confidence and understanding, extensive people-to-people ties and communication links that will hopefully lead to new, lasting and stable political and strategic relationships.

China's Thrust at Connectivity in India's Neighbourhood

TCA Rangachari*

It is said that the 21st century will be the Asian century. For the first time since the advent of the colonial phase in world history, three centuries ago, Asia is moving to regain its place at the centre of the global economy. China, over the last three decades, has emerged as the epitome of the new Asian economic 'miracle', while India is enjoying an unprecedented growth trajectory.

Within the Asian region, new connectivities are emerging based on commerce and culture that hold the prospect of binding Asia together again. If, indeed, Asia succeeds in the realization of its vision for political stability through participatory governance, sustainable and equitable economic growth, and a cooperative partnership in the quest for regional and global peace and security, it could signal the emergence of a shift in global power to Asia. But we have to remember that Asian cooperation is not based, like Europe, on a shared commitment to democracy, human rights and rule of law.

China commemorates 2008 as the 30th anniversary of implementation of the reform and opening-up policy. In these thirty years, having really taken to heart Deng Xiao Ping's exhortation "To be rich is glorious", the Chinese had achieved the following as on 2007.

Gross domestic product (GDP)	US\$ 3 trillion
Exports	US\$ 1.238 trillion
Imports	US\$ 0.90 trillion
Trade surplus	US\$ 41 billion
Foreign exchange reserves	US\$ 1.682 trillion

China's GDP now ranks fourth in the world and its foreign trade ranks third in the world. Its GDP per capita has reached (approx.) US\$ 3,000; the numbers of the rural poor have dropped from 250 million to 20-odd million; the per capita consumption of its urban and rural population increased by over four times in real terms. Today, China is the factory of the world, the vacuum-cleaner

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of global FDI with nearly a million foreign-funded enterprises. Cumulative FDI inflow has surpassed US\$ 750 billion. Of the world's top 500 companies 480 have made investments in China and MNCs have set up nearly 1000 R&D institutions. China's outbound non-financial direct investment was US\$ 17.63 billion in 2006 ranking 18th in the world. Nearly two-dozen Chinese companies are among the world's top 500. By 2010, over 50 million Chinese tourists will join the outbound travel.

China has now become the third largest export market (after neighbouring Canada and Mexico) for the US, surpassing Japan. China has overtaken France as the 2nd largest trading partner of Africa after the US. China's trade with Latin America has exceeded US\$70 billion; that with Central and Eastern Europe US\$ 20 billion.

China is building capacity of about 90 GW annually – enough to power the United Kingdom or Brazil – but consumption is also racing ahead with rapid industrialization and urbanization. The State Grid planned to boost investment in upgrades and expansion by a fifth to \$35 billion in 2007, part of China's plan to spend over \$140 billion on the nation's power web by 2010. In 2007, China purchased five third-generation nuclear reactors from Western companies. More power generating capacity came on line in 2007 as large-scale investments – including the Three Gorges Dam across the Yangtze River – were completed. (The Three Gorges Dam, when fully operational in 2009, is expected to generate 18000 MW.)

President Hu Jintao, last year, set “Building a moderately prosperous society in all respects” as a “fundamental goal for the Party and the state to reach by 2020”. China's Premier Wen Jiabao noted on 6 September 2007 in his address at the Summer Davos at Dalian, “The pursuit of peace, development and cooperation is the trend of our times and this has made it possible for us to secure a long-term peaceful international environment...We need to pursue the right domestic and foreign policies and be able to adapt to change to fully seize these opportunities and make good use of these favourable conditions.”

China's process of industrial modernization is expected to continue till 2020. We can expect that the course set out by President Hu and Premier Wen will continue to guide the state policy.

China is far ahead of India in growth, reforms, infrastructure, FDI, scale of productivity, foreign exchange reserves, nuclear, space and military prowess. Its \$1.8 trillion foreign exchange reserves dwarf India's \$300 billion as does its \$ 750 billion in cumulative FDI against India's \$ 75 billion. It has put a man in orbit and is working on a manned moon mission, while India's Chandrayan project is just getting off the ground. It has demonstrated anti-missile capability, while India is still far away from one.

President Hu Jintao, during his visit to India in 2006, stressed that China, desiring to build a strong and cooperative relationship based on shared and common interests, had taken a "long-term and strategic view" of the relationship with India and characterized the present phase in the relationship as marking a "new historic beginning" signaling to the international community that India and China were willing to work hand-in-hand for long-term friendship and common development.

India-China relationship has gone through turbulent times, including a border war as a result of which India has a deep trust deficit compounded also by the contrary positions maintained by China on many issues of interest to India. Recently, the Sikkim sector has re-emerged in contention despite the understanding on the Indian side that the problems relating to Sikkim's status had been resolved with the 2003 agreement; Arunachal Pradesh continues to remain contentious; there are other areas along the India-China border where transgressions cause concern. China has unresolved territorial problems with Bhutan, Japan, Vietnam (and other ASEAN countries), North Korea. With Russia and CIS countries, while boundary treaty has been signed, there are areas that remain un-demarcated/un-delimited. It is difficult to escape the conclusion that from time to time, China asserts its claims and bides its time to enforce them.

Thus, even as India and China have declared that they have established a strategic and cooperative partnership; a "ten-pronged strategy" to give it content has been agreed upon; and, the two sides wish to encourage comprehensive economic engagement, including promoting trans-border connectivity and cooperation; and even as Indians are awed by, and admire, the tremendous achievements of China, there remains a deep distrust in India about China's long-term intentions towards India.

So, whatever the government of the day might say and whatever hopeful and helpful declarations might be made, China remains – and will remain in the foreseeable future – a major concern. It is in this context that we have to focus on the connectivities that are possible and desirable, taking into account the economic and strategic considerations that we might wish to. India shares a 4000 km long border with China across Tibet and South West China. Can there be connectivities, e.g Central India-Nepal-Tibet or Central and North East India-Bangladesh-Myanmar-South West China?

The opening of the Beijing-Lhasa railway line has created new opportunities and also poses challenges that have to be analyzed. The Beijing-Lhasa line covers 4,064 km (2,500 miles) and the run, which commenced operations in July 2006, takes 47 hours 28 minutes, at a speed of 160 km per hour on the plains, and 120 km per hour in the Qinghai-Tibet section. Trains from Shanghai and Guangzhou were started on 1 October 2006. The 1,142km (710-mile) final section of the line connecting Golmud in Qinghai to Lhasa in Tibet was formally started on 29 June 2001 and completed in October 2005 – signaling work and track testing took another eight months – at a cost of \$3.68 bn. The 815-km section from Xining to Golmud, both in Qinghai, opened to traffic in 1984. But resource constraints delayed construction of the remaining section to Lhasa; it is the recent economic growth of China that has enabled the construction.

The Qingzang Railway project (as it is called), considered one of China's major accomplishments of the 21st century, involved more than 20,000 workers and over 6,000 pieces of industrial equipment. The workers who built the line had to breathe bottled oxygen in order to cope with the high altitudes. Over half the length of the railway is laid on permafrost and the line boasts of high-tech engineering to stabilize tracks over permafrost and, in parts, the train line has been built on bridges elevated above the most unstable permafrost; Elsewhere, cooling pipes have been sunk into the ground to ensure it remains frozen to stabilize the tracks; sealed cabins protect passengers from the high altitude.

At its highest point, the railway will reach Tanggula Pass at 5,072m (16,640ft) above sea level, the world's highest rail track. The 1,338 m Fenghoushan tunnel is the highest rail tunnel in the world, at 4,905 m above the sea level; the 3,345-m Yangbajing tunnel is the longest tunnel on the line at 4,264 m above sea level, 80 km north-west of Lhasa. There are forty-four railway stations with the Tanggula Mountain railway station, at 5,068 m being the

world's highest in the world (Condor station, at 4,786 m, on the Rio Mulatos-Potosi line, Bolivia, and La Galera station at 4,781 m, in Peru, being the next highest). More than 960 km, or over 80 per cent of the railways, is at an altitude of more than 4,000 m. There are 675 bridges, totalling 159.88 km. Several foreign companies were involved in the construction of the project.

The Dalai Lama's spokesman, Thupten Samphel, observed, "The railway line itself is not a cause of concern for the Tibetan people," "How it will be used is the main concern." China says the line will contribute to its Western Development Strategy by promoting the development of impoverished Tibet. Traffic has been one of the major obstacles to economic development of Tibet, which makes up about one-eighth of China's territory and was the only provincial-level region without a single inch of operating rail track. More than 95 per cent of the cargo transported in and out of Tibet, and 85 per cent of the passengers, go by road to and from Qinghai or Sichuan, according to the Ministry of Communications. Because of high cost of transportation, raw materials in Tibet cannot easily be transported out of the province, and there is a big imbalance in the cargo entering and exiting the region.

Tibetan Autonomous Region can be the largest mineral resource in the country, with a potential value of more than RMB 1 trillion (\$125 billion). It is estimated that Tibet has the largest chromium and copper deposits in the country. Prospecting has already discovered deposits of 101 other minerals and more than 2,000 more potential mining sites. Reports say that less than 1 per cent of discovered mines have been prospected, only 15 per cent of mines under commercial operation have completed reconnoiter works, and only 10 per cent of mining companies have passed resources assessment by local authority. Production output could surpass RMB 10 billion (\$1.25 billion) and account for one-third of the province's GDP within five to 10 years.

The Tibetan government will focus on mineral deposits development in areas covering 100 to 200 km away from both sides of the railroad and areas nearby rivers. It is seeking RMB 1.5 billion (\$187.5 million) in financial support from the central government for the purpose of prospecting for mineral resources in the next four years. The major concern relates to environment. This will be compounded by the requirement of power for the mining industry as it develops which, in turn, will bring in its own environmental problems.

In continuation of the same strategy, China is extending the railway to the region's second largest city. Work on a 270 km (168 mile) rail link from Tibet's capital, Lhasa, to Xigaze began last year and is expected to take three years to finish, according to the Xinhua news agency. Xigaze lies at 3,800 metres (12,468 feet) above sea level and is the traditional seat of the Panchen Lama. The cost of the new line has, however, not been disclosed yet. Later, the railway will be extended to Zhangmu via Xigaze to the west, and Dali via Nyingchi to the east. A further extension is planned to link Shigatse with Yadong near the India-China border.

On 25 April 2008, in response to a Nepalese request that the railway be further extended to promote trade and tourism, the Chinese announced their intention to extend the Qingzang railway from Lhasa to Khasha on the Nepalese border. Construction of the extension is planned to be completed by 2013. Reports say that the possible stations, enroute, might include: Khasha, Xigaze and Yatung. There is speculation that the line might be further extended to Birganj and Raxaul; perhaps even to Nathula on the India-China border and possibly Nyingchi in Arunachal Pradesh at the India-China-Myanmar trijunction. The Nathula post could then become a major border trading point between Sikkim and Tibet because of the all-weather road that connects the border region with the hinterland. It would provide for easier transportation of goods as compared to the two existing trading points at Lipulekh in Uttranchal and Shipkila in Himachal Pradesh which do not have a motorable road to the border as a result of which trading takes place only for a short time of the year during the fair-weather season.

The Tibet government has indicated the requirements of power to be able to develop the mining and other industry in the region. This could have implications for river waters flowing into India. Many of our northern rivers originate in Tibet. If the Chinese choose to develop hydropower instead of thermal power in Tibet, they would have to build dams on these rivers depending on the flows and feasibility. Even if these dams are small in size, they would affect the availability of water on the Indian side since control of the flows would be with China. (Arunachal Pradesh suffered devastation some years ago due to the collapse of a dam caused naturally by accumulated falling rocks). The other possibility that we should bear in mind is that China might build transmission lines for using the power generation potential of Nepal. If there is a

growing requirement of power in Tibet, China might find these alternatives more economical and viable than shipping power from the mainland.

While the Chinese have opened up opportunities for the development of the Tibet region and cross-border trade with Nepal and India as a result of the transport connectivity, the prospect cannot be realized unless there is corresponding connectivity on the Indian side. Sixty years after Independence and four and a half decades after the 1962 conflict, India's border regions remain remote – for developmental and border management purposes. To take one example, to enable the workers to remain productive at high altitudes during the construction phase, the Chinese had set up a series of oxygen factories. If they continue to remain functional, they would contribute to easing the pains of acclimatization and training at those altitudes.

It is not clear what assessments have been made of the enhanced capabilities for transporting human and material resources and, consequently, for force projection, that the Chinese would have with the Tibet railroad in place. But if there is no action to develop similar transport connectivities on our own side of the border, it is clear that in the years to come, India would find itself in a highly disadvantageous situation in its dealings with China.

It is not that the awareness of the requirements is lacking. Speaking at a two-day seminar on 'Emerging Trends in India-Nepal Relations' a few weeks ago, the Chief Minister of Bihar state, Nitish Kumar, said India is undertaking projects for the development of an over 1500 km road network that would provide easy access to the East-West Highway in Nepal. There is, however, no indication of the time frame. It is also not clear whether there are any proposals to provide rail networks in the border areas.

By way of comparison, China proposes to expand the railway network from the present 70,000 km to 120,000 km by 2012. For this purpose, China is encouraging private investments to supplement government investment. Chinese Minister of Railways Liu Zhijun has said "We welcome overseas and domestic private investors to get part ownership of the railway lines, except the trunk rails." "Future investment opportunities will increase because we are going to raise some incentives to change the situation," Liu said without giving details of the pricing regime reform. Overseas and domestic investment in the railways from 2003 to last year was 10 billion yuan (\$1.4 billion) – a share of less than 2 per

cent of the total investment of 522 billion yuan (\$73.4 billion) in the past five years. He said the government will spend up to 300 billion yuan (\$42.18 billion) to build 7,820 km of tracks this year, when separate power generating units will be set up at more than 2,000 railway stations.

The Northeast region has nearly 40 million people, spread over eight states that cover a vast 2,63,000 square kilometers – about 4 per cent of the population and 8 per cent of the territory of India with some 160 Scheduled Tribes, besides an estimated 400 other tribal or sub-tribal communities and groups.

The Partition in 1947 changed the Northeast from a well-connected region to a landlocked area without adequate connectivity. Here, armed insurgent organizations are operating and fighting the Indian State to push demands ranging from secession to autonomy and right to self-determination. It has a bare 27 km stretch of connectivity with India while the rest is with the neighbouring countries – China, Bangladesh, Myanmar, and Nepal.

Government of India recognizes the significance of border trade for the economics of Northeastern States and simplification and facilitation of border trade is treated as a priority area. Myanmar and Bangladesh account for the major portion of border trade in the Northeast. But the quantum of trade remains small. With Myanmar, fourteen years after a bilateral agreement, only one border trade point is functional (at Moreh). Though there are other trading points possible in Nagaland and in Arunachal Pradesh, Myanmar is not enthusiastic. (Myanmar has a total of 13 main border trade points with its four neighbors, namely Muse, Lwejei, Laizar, Chinshwehaw and Kambaiti established with China since 1998, Tachilek, Kawthoung, Myawaddy and Myeik with Thailand since 1996, Tamu and Reedkhawdhar with India since 1995 and Maungtaw and Sittway with Bangladesh also since 1995).

With Bangladesh, India's border trade is taking place without a formal agreement. India has a free trade agreement with Bhutan, but none of the three notified land customs stations on Indo- Bhutan border are operational. The India-China boundary being still unsettled, there is no border trade with China possible. In any case, these areas are not well-connected with the State and National Highways. The air and rail links with the Northeastern states are also inadequate.

The NER Vision Document 2020 envisages augmenting infrastructure including air, rail, road and inland waterways to promote two-way flow of peoples and goods; expansion of communication networks; attracting public and private investments; opening up of markets and generating employment. The investments required to help the region catch up with the rest of the country and be an attractive partner for neighbours through creation of the necessary infrastructure would require an estimated US\$ 350 billion over the next decade or so. Successive Prime Ministerial visits to the region have resulted in enhanced allocations for developmental and infrastructure projects, but they remain largely unimplemented.

That the region has potential is adequately recognized. Speaking at a North-East India Trade and Investment Opportunities Week in October 2007, the Deputy Industry Minister of Thailand referred to “innumerable synergies” worth exploring in agro-business, infrastructure, mineral exploration, downstream petrochemicals, information technologies and tourism, adventure and leisure sports. He wryly noted that the Northeast region of India could be described as one of India's best kept secrets.

ASEAN and China are now the fourth largest trading partners of each other; in 2007, two-way trade was US\$ 161 billion. ASEAN investment in China was US\$42 billion.

The Economist has noted that this year work will begin on a pipeline to carry gas from South-East Asia's biggest proven gas reserve in the Shwe field, just off the coast of Ramree Island in Myanmar. From 2009, a parallel pipeline will carry Middle Eastern and African oil from a new deep-water harbour at Kyaukphyu, bypassing the Strait of Malacca and fuelling the economy of China's south-west. (India was edged out by China. India signed a \$150m contract for gas exploration further south in the Gulf of Martaban.) The new pipelines will follow the route of the old British-built Burma Road, which still carries timber, gold, gemstones and other Burmese raw materials north to China and brings in cheap manufactures.

Around 20 Chinese companies are working in Myanmar on scores of projects including hydropower, mining and road-building as well as oil and gas. Under construction, and soon to eclipse the Burma Road is a new “Southern Silk Road”. Parts of the long-derelict route were first opened by the Allies during the

second world war to supply Chiang Kai-shek's Chinese army in its war with the Japanese. There is speculation that Myanmar may conduct all its Chinese trade in the Chinese currency, the yuan, to avoid Western banking sanctions.

Since 2001, China-Myanmar border trade exhibitions have been held annually and alternately in respective border towns. Myanmar has established a 150-hectare border trade zone in Muse, the first and largest of its kind in the country for transformation of its border trade with China into normal trade. In March 2007, the Governor of Yunnan Province led a 350-strong economic and trade delegation to Yangon and signed seven trade accords which dealt with agricultural, mining and trade cooperation.

China-Myanmar trade is estimated at around US\$2 billion with Chinese exports accounting for over two-thirds of the trade and running a favourable balance of over a billion dollars. This will of course change once the gas starts flowing from Myanmar to China. Trade between Yunnan province and Myanmar accounts for half of the two-way trade. Main items that Yunnan imports from Myanmar are agricultural products, aquatic products, minerals, rubber and its products, while main items that Yunnan exports to Myanmar are electric goods and machinery, textiles, chemicals, steel, products of daily use and, pharmaceuticals. In 2006-2007, India-Myanmar trade was estimated at \$650 million falling short of the target of \$ one billion. In 2004-2005, China-Myanmar trade was \$1.145 billion as against India's figure of \$341.40 million.

The Greater Mekong Subregion (GMS) led and largely funded by Asian Development Bank (ADB), could lead to the creation of an interconnected Mekong River Basin, with an extensive road and railway network linking southwestern China to Southeast Asia. This will accelerate the growing economic interdependence of China and its ASEAN neighbours. This interdependence has economic and geopolitical implications since, apart from contributing to the development of its landlocked western provinces, it could also serve as an element for promoting regional and global strategic interests.

As China's economic might is increasing, it is overshadowing the role that Japan has been playing in the economic uplift of the sub-region. Thus, China has provided a package of financial and other assistance programmes directed at the under-developed countries of the GMS; preferential tariff treatment to three of its immediate neighbours – Burma/Myanmar, Laos, and Cambodia; funded a

series of transportation projects, such as the Lao section in the North-South Corridor Project; and introduced preferential commercial policies. China has largely funded the main GMS infrastructure projects in Burma, most notably the transportation improvements that will increase its access to the Indian Ocean.

Yunnan Province is one of the three provinces that have the lowest per capita GDP in China. China is seeking to remedy the imbalance by developing the hydro-electric power potential of the upper Mekong. In late 2000, China adopted this goal as part of its Tenth Five-year Plan. Its new national economic development plan features a 'Go West' strategy aimed at turning the vast but poorer western part of the country into a magnet for domestic and foreign investors, and correcting the widening gap in wealth vis-à-vis the flourishing eastern coastal areas. The six countries signed the memorandum of understanding on the Guidelines for the Implementation of the Regional Power Trade Operating Agreement on July 5, 2005, under which China has committed to supply power to its neighbours.

China is seeking to promote Kunming as the regional transportation hub. There is emphasis on completing the construction of the Kunming-Bangkok Highway via Laos. There are proposals to build four cross-border railways. One of them is intended to connect Kunming to Ledo (Assam, India) via Northern Burma/Myanmar, eventually linking Southwest China, Southeast Asia and India, thereby integrating the domestic and international markets. This would fit in with the Trans-Asian Railway Network promoted by United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP).

Today, the Indian vision to develop the Northeast and China's plans to close the gap between its booming east coast and the laggardly western interior have similar objectives. The crucial difference is that while China has taken major strides in fulfillment of its stated objectives, we are far from doing so. Large tracts of our border areas are unconnected even by a road network; there are no immediate plans for connecting them by rail; and, not all the capitals in the NER have direct air connection. The hindrance in development that this lack of connectivity imposes is evident.

Then, there is the question of river water resources. How do we deal with our Lower Riparian status vis-à-vis China? (We are Upper Riparian vis-à-vis Pakistan and Bangladesh so we would have some idea of that position!) What are

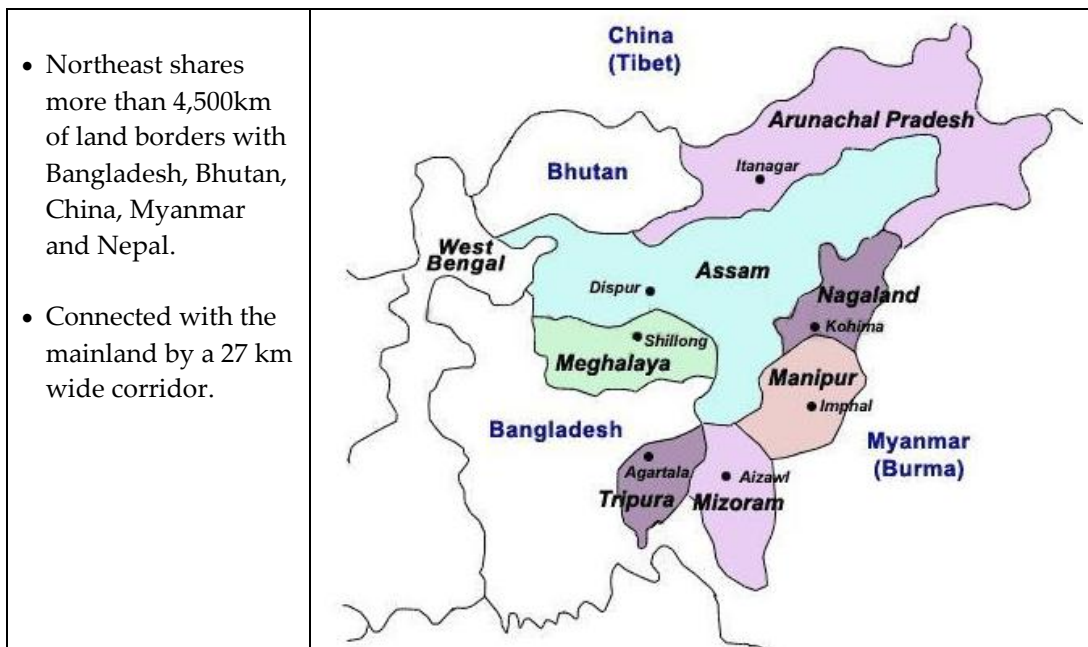
our options if China seeks to develop and utilize Nepal's hydropower potential for developmental prospects in Tibet/Nepal now that the rail link to Tibet has opened up? (We are yet to implement the hydro-power project under the Mahakali Treaty signed in 1997 at the level of PMs of India and Nepal.) Are there implications for the revision of the 1950 Treaty with Nepal? Can China become the trading partner of choice for Nepal replacing India, the partner under compulsion?

There are also issues for consideration regarding the eastern and southern borders. The connectivities being developed by China do serve the developmental requirements of the region just as they serve China's requirements. Could these linkages be used for creating a political hegemony leveraging the economic hegemony? To what extent would China use the enhanced access facilitated by the transport linkages to transform its claims in the eastern sector into actual ground positions?

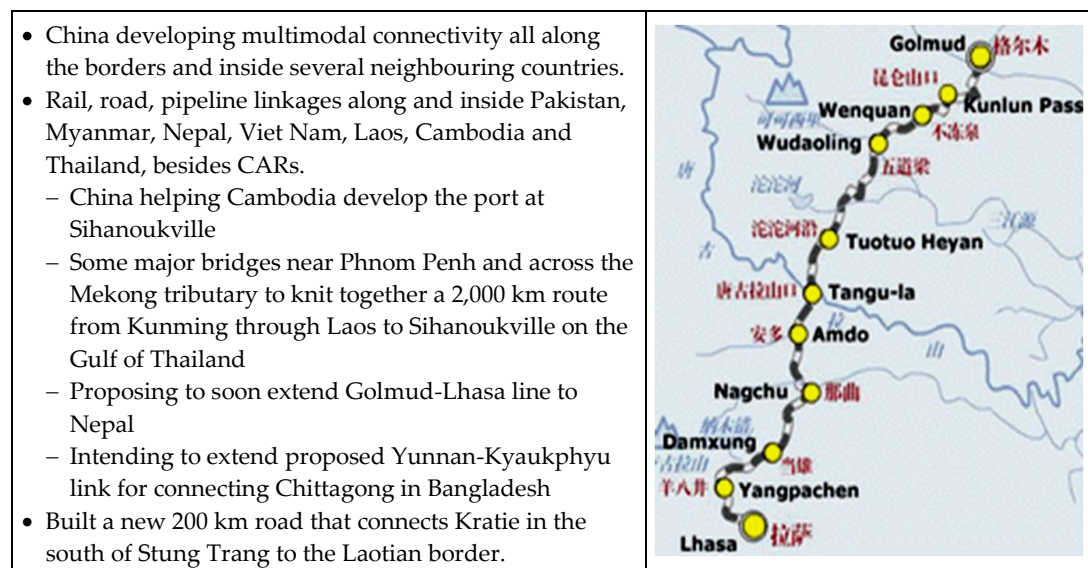
For our part, even for the annual pilgrimage to Kailash and Mansarovar, pilgrims have to trudge long distances on foot in highly inhospitable mountainous terrain to the Lipulekh pass where they find Chinese buses waiting to transport them! And this is in the Middle Sector, an area where there is no territorial dispute not even what might be called differences in perception. The situation is much worse in the eastern and western sectors where there are real differences, both in perception as well as in substance. But if the Chinese can brave the elements and, in a magnificent tribute to human endurance, build connectivities where required – whether for purposes of development or for strategic considerations – why can't we? We do not lack technical capability as the railway lines already built in India testify. If there is a resource constraint, it needs to be addressed. If it is a problem of will, it needs to be debated and resolved in the larger national interest.

Regional Connectivity

Border Expanse



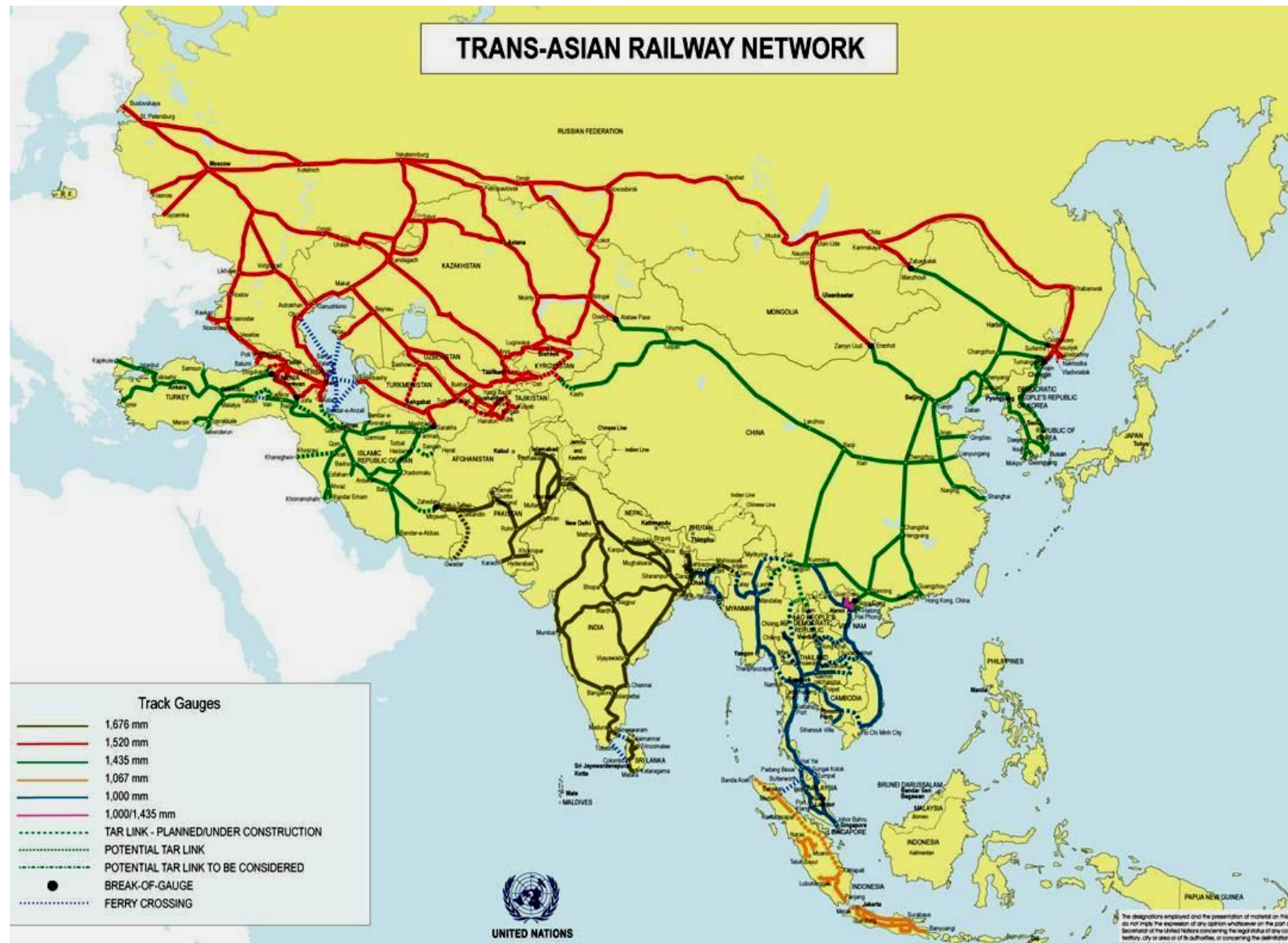
China Encircles



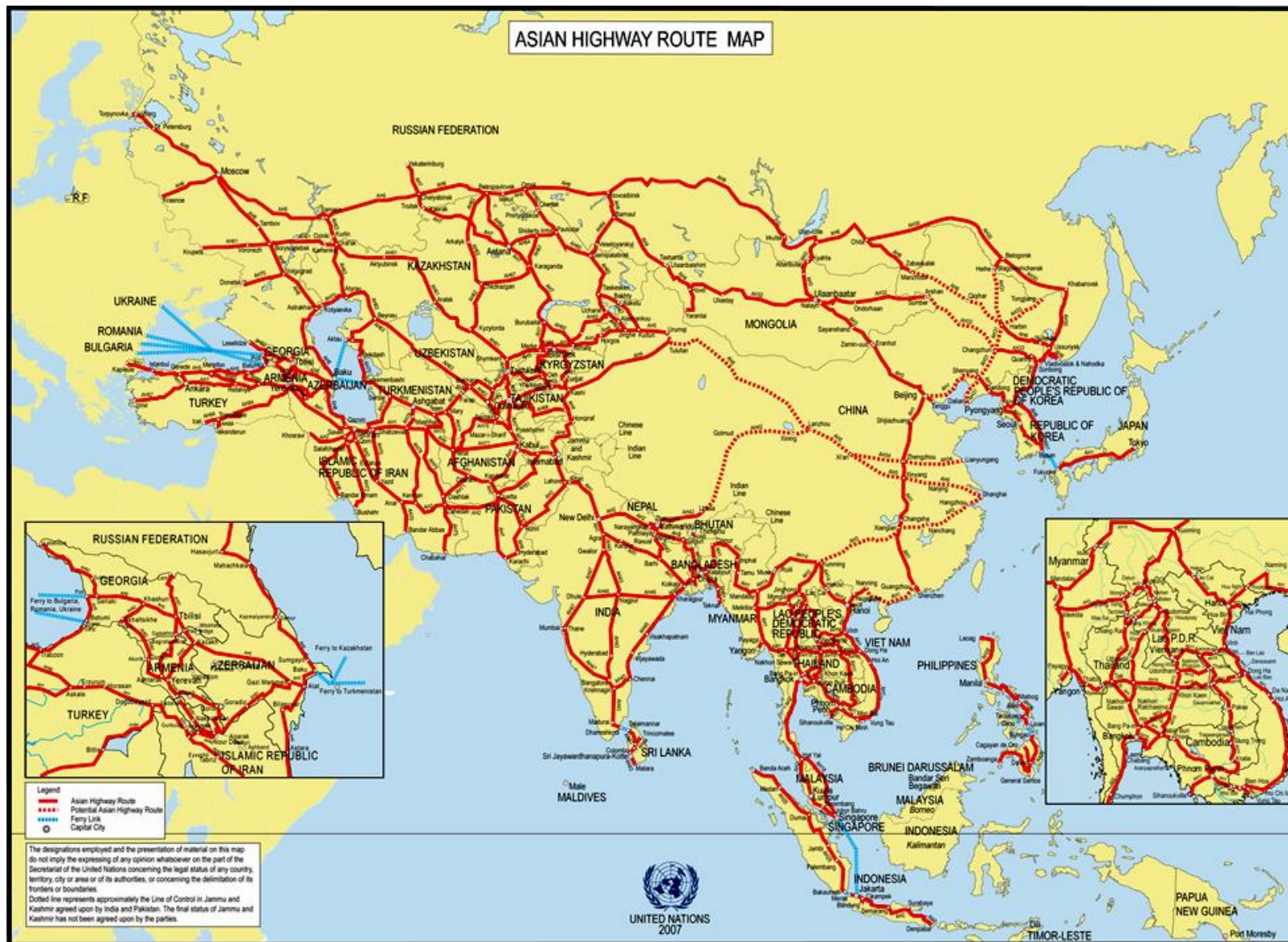
Karakoram Highway



TRANS-ASIAN RAILWAY NETWORK



ASIAN HIGHWAY ROUTE MAP





ASIAN INSTITUTE OF TRANSPORT DEVELOPMENT

The Institute is an independent, not-for-profit organisation devoted to non-partisan research, education and training in the area of infrastructure with special focus on transport sector. Its principal purpose is to promote balanced, equitable and sustainable development for enhancing overall welfare of the community.

The Institute has been granted special consultative status with United Nations Economic and Social Council. It also has a collaborative agreement with UNESCAP for undertaking joint activities. The Institute's membership from south and south-east Asian countries facilitates its well-defined mandate of promoting regional cooperation.

The Institute provides substantive support to various regional initiatives – BIMSTEC, SAARC, Mekong-Ganga Cooperation, etc. It promotes human resource development by organizing training courses for the personnel from the member countries of these groupings.

AITD also fosters research in universities by awarding scholarships to students pursuing M.Phil, Doctoral or post-Doctoral research. The Institute is a founder member of the Asia-Pacific Network for Transport and Logistics Education and Research (ANTLER) established by UNESCAP.
