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TOPIC/SUMMARY

Land Reforms and the Institutional Mechanism for its Effective Implementation

- Around 70 percent of the country's population lives in rural area. Accessibility to land is not only economically important to them; it also leads to a host of other benefits. As 'land' is a State subject under the Constitution, different States have evolved differently in the field of land management. In fact there may be different systems in different regions of the same State also. The Central Government has only a limited role to play in this regard. But surprisingly most of the initiatives have come from the Central level only. The Central Government persuades and incentivizes the States through schemes or policy initiatives.
- India faces tremendous challenges on the issues related to land governance. The following data will make it clearer:
- India has approximately 2.16 million sq. km. of cultivable area;
 - India has about 18 percent of world's population;
 - 15 per cent of world's livestock population is to be supported from this land;
 - India has about 2 percent of world's geographical area and 1.5 Percent of forest and pasture land;
 - The per capita availability of land has declined from 0.89 hectares in 1951 to 0.37 hectares in 1991;
 - The average agriculture land holding has declined from 0.48 hectares in 1951 to 0.16 hectares in 1991;
 - 95.65 percent of the farmers are within small and the marginal category owning about 62 percent of the land, while the medium and the large farmers who constitute 3.5 percent own about 37.72 percent of the total area;
 - Most of the cases pending in the Courts relate to land disputes;
 - 7.9 million persons are without dwelling units to live in;
 - In the rural areas alone, there are more than 140 million land owners, owning more than 430 million records;
 - There are approximately 55 million urban households;

- In most of the States last cadastral survey was done around 70 to 80 years ago. In fact in some States, e.g., North Eastern States this survey has not been done till now.

The issues related to land may be described in following five divisions.

1. Land Reforms

As stated above, access to land is of critical importance in large parts of India. Agriculture and primary sector activities based on land and other natural resources are the primary source of livelihood for a vast majority of economically vulnerable rural population of Indian. So, land reforms initiatives have been undertaken to ensure equitable distribution of the Zamindari system after independence of the country. Second round of major initiatives were taken in the year 1972 with the enactment of land ceiling laws in majority of the States. These initiatives in land reforms can be broadly categorized into the following fields:

- Land Ceiling- Ceiling limits have been prescribed by the States, above which a family can not own the land. The surplus land is taken over by the State Government and distributed to the land less persons.
 - Bhoodan Lands- The land owners who has large quantities of land were persuaded to surrender some parts of their lands voluntarily during the time of Shri Vinoba Bhave. These lands were also distributed to the land less persons.
 - Tenancy Reforms- Many land owners do not practice agriculture themselves. They lease out their lands to other needy persons on written or oral agreement for agriculture. Some States have enacted laws to protect the interest of the tenants in such cases.
 - Common Property Resources- The village commons are used by the community for various purposes like pasture lands, for collection of minor forest produce and fuel wood etc. Some States have conferred rights to the community over such resources through enactments.
 - Waste Lands- States also distribute the wastelands available with them to the land less persons.
 - Tribal Land Alienation- Scheduled Tribes living in various parts of India are particularly in a vulnerable position as their lives are intertwined with the land. Most of the States have enacted laws to protect their rights on the land. They cannot sell their lands to non STs. If land is alienated fraudulently from them, then the States proactively pursue such cases so that the land is restored to the tribals.
- The issues related to land reforms are being considered by the Government of India at the highest level. In order to evolve a comprehensive policy on the matter, two very high level bodies have been formed as follows:
- i. A “Committee on State Agrarian Relations and the Unfinished Task in Land Reforms” under the chairmanship of Minister of Rural Development, and
 - ii. A “National Council for Land Reforms” under the chairmanship of the Prime Minister.
- The composition, terms of reference, etc. of the Committee and the Council were notified in the Official Gazette on 9th January, 2008.
- The Committee has submitted its report for consideration of the National Council. In the mean time, it has been decided that the recommendations of the Committee may be examined by an appropriate Committee of Secretaries (CoS) before they are placed for consideration of the “National Council for Land Reforms”. The

CoS has submitted its recommendations on the Report which are being placed before the Council. The decisions of the Council on various land reforms issue will give a fresh impetus to the land reforms programmes in the States.

2. Land Management

- Land figures as Entry 18 in the State list of the Constitution as “land, that is to say, right in or over land, land tenures including the relation to landlord and tenant, and the collection of rents; transfer and alienation of agricultural land; land improvement, and agricultural loans; colonization.” Entry 45 in the State list is “Land revenue, including the assessment and collection of revenue, the maintenance of land records, survey for revenue purposes and records of rights, and alienation of revenues”.
- So, the land and its management fall in the exclusive domain of the States. Each State has a different set up for land and land records management. In most of the States Revenue Department handles the land records along with the other issues related to land management. Survey Department deals with the survey of lands, Consolidation Department deals with the consolidation of lands, and Gram Panchayats do undisputed mutations in some States. The change of the land records by any one of them makes the records of another obsolete. So, the records are out of date in most of the States and they do not reflect the ground reality.
- Before independence, the revenue from the lands was a major consideration for the proper management of land and land records. But after independence as revenue from the lands dwindled, the land and land records management was also neglected. In fact in some of the States the land revenue has been abolished altogether. The surprising fact is that the States hardly give nay priority to this subject and most of the initiatives have been taken from the Central Level.

3. Land Reforms Modernization

- As stated above, the result of the decline of land revenue as major sources of revenue for the States was a declining investment in this sector through the Plan funds. This led to a gross neglect of the survey and maintenance of land records, making them hopelessly out-of-date and, therefore, unreliable.
- With the advent of the industrial and commercial sectors, land emerged as an important economic resource. For development to take place at a rapid pace it was imperative to have updated and accurate land records at all time. However, the traditional manual methods of maintenance of land records could not keep pace with the requirements of the modern State. It was the advent of modern technology which made the availability of real-time records an achievable objective.
- Modernization of land records was first suggested by State Revenue Ministers in a Conference held in New Delhi in 1985. As a consequence, two programmes were launched by the Central Government, viz.:
 - a. Strengthening of Revenue Administration and Updating of Land Records (SRA&ULR), in 1987-88.
 - b. Computerization of Land Records (CLR), in 1988-89.
- Under these schemes, support was provided to the States and Union Territories for strengthening of the land records maintenance infrastructure, adoption of modern survey and information technology for updating and computerization of both textual and spatial records, digitization of maps, training and capacity building.
- The way the schemes were framed, the exit modes were not defined; nor were technology options for

survey firmed up; neither was the system of monitoring emphatically spelt out. Further, both the schemes of CLR and SRA&ULR excluded interconnectivity, geographic information system (GIS) mapping, connectivity with banks and treasuries, and Registration – the last of which is a vital link in updating the land records.

- Progress was uneven across the country; some States moved forward rapidly, pooling together the Central Government support and their own resources and initiatives, e.g., Karnataka and Goa; others lagged behind, or made progress only in some areas, such as, computerization of outdated textual records.
- Keeping in view the above position, the Cabinet approved on 21st August, 2008, the merger of these two Centrally-sponsored scheme of CLR and SRA&ULR, and their modification and replacement with the Centrally-sponsored scheme of the National Land Records Modernization Programme (NLRMP).
- The NLRMP combines the key components of the two schemes, adds new components such as integration of textual and spatial records computerization of Registration and inter-connectivity between Revenue and Registration systems, firmed up modern technology options for survey and core GIS. This integration and enhanced scheme has a its goal the introduction in the country of conclusive titling with title guarantee and indemnification, instead of the present land titling system which provides merely for Registration of deeds and documents and “presumptive” property titles.
- The NLRMP has four major components – (i) computerization of property; (ii) survey and preparation of maps using modern technologies; (iii) computerization of the Registration process and (iv) training and capacity building.
- The NLRMP is being implemented in a methodical manner and all the district in the country are expected to be covered by the end of the 12th Plan. Further, the activities are being undertaken in a systematic manner, which are to converge in the district and district is the unit of implementation. So far 206 district in 29 States/UTs have been covered under the programme and funds to the tune of Rs. 518.63 crore have been released towards Central share.

4. Land Acquisition

- Land is required for various development purposes. The Government uses the provisions of the Land Acquisition Act, 1894 to acquire land in such cases. The indiscriminate use of this Act has caused various agitations and social unrest in the country. The main objections have been that the good agricultural land is being acquired which is endangering the food security of the country, excess land is being acquired for a project which is further sold at a premium, market rate is not provided to the land owners, farmers are paid the rate of agricultural land while the land is used commercially, adequate rehabilitation and resettlement of the displaced persons is not being ensured etc.
- To address these issues, the Central Government has notified a comprehensive National Rehabilitation and Resettlement policy 2007 (NRRP-2007) on 31st October 2007. The Policy provides for basic minimum requirements which must be extended to all the affected families, while the States, Public Sector Undertakings or agencies are free to put in place greater benefit levels than those prescribed in the policy. To give legal backing to the above policy, the Central Government has introduced the Land Acquisition, Rehabilitation and Resettlement Bill in the Lok Sabha on 7th September, 2011.

5. Land Use Planning

- Impacts due to poor land use are being highlighted in terms of river pollution, industrial hazards, conflicts in land use etc. Acute problems of drinking water, disposal of industrial waste on land and water have become

hazardous to human well being in rural areas of many States. In recent years, conflicts between farmers and proposed industrial projects have been reported from various States. The land use/land cover pattern has also been significantly changing over a period of time and land suitable for one purpose is being used for other purposes. The prime agricultural land producing three crops are being used for industrial purposes whereas large stretches of waste lands not far off from the proposed site continue to remain unproductive for both purposes of industry as well as agriculture. Land use planning is, therefore, essential all the more for the country to meet the requirements of socio-economic development by safeguarding the environment and food security. Land use planning is also essential in physical environmental management as well as bio diversity conservation.

- Some States have done good work in this field. One example of Gujarat may explain the benefits of the land use planning. In Gujarat, all the cadastral maps have been digitalized and around 600 GIS layers of 20 Department have been placed over these digitized maps. Based on these layers only, State Government could locate the land for NANO plant of TATAs and give them possession within 72 hours. The yardsticks for the selection of the area were that the land should be government wasteland; it should be near the Highway and availability of power etc.
- Therefore, we need a proper, integrated land use policy for the country which may cover usage of land for various purposes such as agriculture, industry, commerce, forests, housing infrastructure, urban area settlements, mining, etc. By addressing all uses of land in an integrated manner, it is possible to minimize conflicts, to make the most efficient trade-offs and to link social and economic development with environmental protection and enhancement.
- Today, we have modern technology of remote sensing which includes both aerial as well as satellite based systems which allows us to collect physical data rather easily, with speed and on repetitive basis, and together with GIS helps us to analyze the data spatially, offering possibilities of generating various options of modelling, thereby optimizing the whole planning process. These information systems also offer interpretation of physical (spatial) data with other socio-economic data, and thereby provide an important linkage in the total planning process and making it more effective and meaningful.
- So, in a nut shell proper and scientific plans for the land use are essential. The Department of Land Resources (DoLR) is already working in this field and it proposes to have a National Land Use Plan in place. The States will also be helped by the DoLR to prepare the State Land Use Plans. In fact the vision is go down up-to the village level with such plans. Such land use plans will capture the overarching concerns: ecological, food production, livelihood and allocating land for the industry and developmental purposes.

Land Reform a Panacea for Agriculture Development

- Productivity in Agriculture is mainly dependent on two sets of factors-technology and institutional changes. The institutional reforms include the redistributive reforms include the redistribution of land ownership in favour of the cultivating classes. Land reform usually refers to redistribution of land from the rich to the poor.
- Land reform involves the changing of laws, regulations or customs regarding land ownership. Land reform may consist of government-initiated or government-backed property redistribution generally of agriculture land. Land reform can, therefore, refer to transfer of ownership from the more powerful to the less powerful. Such transfers of ownership may be with or without compensation; compensation may vary from token amounts to the full value of the land.

- India at independence inherited a semi feudal agrarian system. The ownership and control of land was highly concentrated in the hands of a small group of landlords and intermediaries, whose main intention was to extract maximum rent, either in cash or in kind, from tenants.
- In the years immediately following India's independence, a conscious process of nation building considered the problems of land with a pressing urgency. In fact, the national objective of poverty abolition envisaged simultaneous progress on two fronts: high productivity and equitable distribution. Accordingly, land reforms were visualized as an important pillar of a strong and prosperous country. India's first several five-year plans allocated substantial budgetary amounts for the implementation of land reforms. A degree of success was even registered in certain regions and states, especially with regard to issues such as the abolition of intermediaries, protection to tenants, rationalization of different tenure systems, and the imposition of ceiling on landholdings.
- In an agrarian economy like India with great scarcity, and an unequal distribution of land, coupled with a large mass of the rural population below the poverty line, there are compelling economic and political arguments for land reform. Not surprisingly, it received top priority on the policy agenda at the time of Independence. In the decades following independence, India passed a significant number of land reform legislations. The 1949 Constitution left the adoption and implementation of land and tenancy reforms to state governments. This led to a lot of variation in the implementation of these reforms across states and over time.
- The most obvious argument in favour of land reform is equity. An argument in favour of land reform is also based on efficiency considerations.
- Land reform legislations in India consisted of four main categories: abolition of intermediaries who were rent collectors under the pre-Independence land revenue system; tenancy regulation that attempts to improve the contractual terms faced by tenants, including crop shares and security of tenure; a ceiling on landholdings with a view to redistributing surplus land to the landless; and finally, attempts to consolidate disparate landholdings. Abolition of intermediaries is generally agreed to be one component of land reforms that has been relatively successful. The record in terms of the other components is mixed and varies across states and over time. Landowners naturally resisted the implementation of these reforms by directly using their political clout and also by using various methods of evasion and coercion, which included registering their own land under names of different relatives to bypass the ceiling, and shuffling tenants around different plots of land, so that they would not acquire incumbency rights as stipulated in the tenancy law.
- Most studies indicate that inequalities have increased, rather than decreased. The number of landless labourers has risen, while the wealthiest 10 percent of the population monopolizes more land now than in 1951. Moreover, the discussion of land reforms since World War II and up through the most recent decade either faded from the public mind or was deliberately glossed over by the national government of India. Vested interests of the landed elite and their powerful connection with the political-bureaucratic system have blocked meaningful land reforms and/or their earnest implementation. The oppressed have either been co-opted with some benefits, or further subjugated as the new focus on liberalization, privatization, and globalization (LPG) has altered government priorities and public perceptions. As a result, we are today at a juncture where land—mostly for the urban, educated elite, who are also the powerful decision makers—has become more a matter of housing, investment, and infrastructure building and land as a basis of livelihood—for subsistence, survival, social justice, and human dignity—has largely been lost.

- The National Government since independence has been continuing to play its advisory and coordinating role in the advisory and coordinating role in the field of land reforms as the subject is under exclusive legislative and administrative jurisdiction of the States as per Entry No. 18 of the List II (State List) of the VIIth Schedule of our Constitution. Even then, agrarian reforms remained as a central issue of our National Agenda for rural reconstruction ensuring social justice to actual tillers as well as landless rural poor and thus for creating sustainable base for the overall growth of industrial and tertiary sector of our economy. Generating greater access to land by the landless rural poor is also considered as an important programme for poverty alleviation in the rural sector.
- The Land Reforms (LR) Division has been, since the First Plan Period, playing a crucial role of evolving national consensus at various stages for taking up major steps towards effective land reforms which include abolition of zamindari and all intermediaries since the beginning of fifties, introduction of family ceiling limit in 1972 and monitoring the progress of distribution of ceiling surplus land as a part of the 20-Point Programme of the Government.
- But, despite this vision of the leaders of the nation, there was inertia, lack of sincerity by governments and pressure tactics of powerful land owning class discouraged land reforms in most of the states. Moreover, land demand for industrial development and other complicated economic development issues have resulted in many thousands of marginal farmers and those who were living in agriculture oriented cottage industries were thrown out of their livelihood drove off their habitats, who have settled in the outskirts of big cities making slum clusters.
- The UPA government's latest land acquisition bill is expected to fill gaps in the archaic 1894 act and streamline the process of land acquisition and ensure fair compensation to farmers and landowners. But even before the bill was introduced in Parliament, murmurs of dissents were heard. The Land Acquisition Bill, piloted by Rural Development Minister Jairam Ramesh, has drawn fire from critics for legitimizing purchase of vast tracts of land, which could be used to exploit tribals and marginal farmers with state and muscle power. Critics say the legislation has failed to strike a balance between development and displacement and its provisions are likely to be re-examined in the standing committee of Parliament. Pro-farmer critics too feel some key aspects need to be fixed. For instance, some say a district level regulator should be out in place to resolve any dispute when small and marginal farmers are either forced or induced to sell and by powerful contractors.
- On the whole, this bill recognizes land not only as property but as a means of livelihood. For the first time, rehabilitation and resettlement are part of the land acquisition process. It is clear on the rehabilitation and resettlement issue. No doubt the government can't dictate how compensation funds are to be used as it would mean encroaching on privacy (stated by Ex RBI Governor Bimal Jalan), but, there is a need to raise the level of literacy, particularly female literacy. Studies have shown that areas where female literacy is high, there is less wastage in welfare programmes. Also village-level institutions should be used to raise awareness so that farmers are better informed. Hope this Bill will help the poor, deserving and needy farmers and pave way for a transparent system facilitating development through empowerment of the poor.

Services Sector and its Contribution to the Indian Economy

- The country's high growth path in the post-reform period since 1991 is mostly paved with the spectacular and consistently robust growth of its tertiary sector, i.e., services sector. This is particularly so as both the primary (agriculture) and the secondary (manufacturing) sectors' growth remained substantially subdued. That the services sector has emerged as an indisputably important component of the country's overall gross domestic product (GDP) is a testimony and recognition so much so that the Pre-Budget Economic Survey of the Ministry of Finance did set apart a separate chapter to chronicle the developments in this crucial sector for the first time. Rightly did the Survey contend that "having a separate chapter on services will be a catalyst for better and more regular data on this sector."
- Be that as it may, it would be important to recount the role and share of this sector in the country's growth story. The share of services in India's GDP at factor cost (at current prices) rose rapidly from 30.5 percent in 1950-51 to 55.2 percent in 2009-10. If construction segment is also included, then the share increases to a lion's share of 63.4 percent in 2009-10. A caveat is in order here because RBI and international institutions like WTO included construction industry under services, although from a national accounts classification it is part of the secondary rather than the tertiary sector.
- Central Statistical Organization (CSO) classification of the services sector consist of four broad categories viz., (i) trade, hotels and restaurants; (ii) transport, storage and communication; (iii) financing, insurance, real estate and business services and (iv) community, social and personal services. Among these, financial, insurance, real estate and business services and trade, hotels and restaurants remain by far the largest groups accounting for 16.7 percent and 16.6 percent respectively of the national GDP in 2009-10. The community, social and personal services category accounts for a 14.4 percent share, while transport, storage and communications accounts for a 7.8 percent share. Construction industry, which is a borderline services category, has a share of 8.2 percent.
- It is being pointed out in official reports that the ratcheting up of the country's overall growth rate (compound annual growth rate-CAGR) from 5.7 percent in the 1990s to 8.6 percent during the period 2004-05 to 2009-10 was to a large extent due to the acceleration of the growth rate in the services sector from 7.5 percent in the 1990s to 10.3 percent in 2004-05 to 2009-10. The services sector growth was markedly faster than the 6.6 percent for the combined agriculture and industry sectors annual output growth during the same period. In 2009-10, services growth was 10.1 percent and in 2010-11 it was 9.6 percent (advance estimates). WTO's latest statistics show that services continue to be the most dynamic sector in India in recent years, expanding at an average annual rate of around or over 10 percent, thus exceeding GDP growth and exhibiting resilience to the negative repercussions and ramifications of the global crisis since 2008.
- According to WTO, India is a net exporter of services. The services trade surplus as a percentage of GDP rose from \$29.5 billion or 3.1 percent in 2006-07 to \$54 billion or 4.7 percent in 2008-09 as software and information technology (IT) exports, as well as transportation, travel and business services grew considerably. After peaking in 2008-09, however, services exports from India declined, as were strongly buffeted by the global financial meltdown, while imports of services continued to rise. This led to a substantial reduction in the surplus to \$35.7 billion or 2.8 percent of GDP in 2009-10. WTO reckons that the surplus for 2010-11 is also likely to be significantly lower than in 2008-09 with most affected by the global crisis being business services and communications, while exports of India's software services continued to grow. The Survey report contends that India with a services sector share of 52 percent in national GDP in 2009 and 55.2 percent in 2009-10 compares favourably even with the advanced nations in the top dozen countries with the highest overall GDP. China's share of services in its national GDP at 39.2 percent is relatively low, though it is ahead of Indian in absolute terms (as its overall GDP is more than three times that

of India). In terms of services growth rate, China (10.5 percent) followed by India (8.9 percent) remain the two fastest growing economies in the top 12 countries. Interestingly when most of the top 12 countries logged negative growth in services in the global financial tsunami, only China (9.4 percent), India (6.8 percent) and Brazil (2.6 percent) recorded positive growth, attesting to the ascendancy and inherent resilience of this robust services sector in the scheme of things.

- Official reports continue to state in no unmistakable terms that India is moving towards a services-led export growth even as the export-led growth era in the manufacturing sector for goods appears uncertain in recent years in the face of global slowdown and rising protectionist sentiments among India's traditional and non-traditional trading partners. The Survey report citing balance of payments data show that during 2004-05 to 2008-09, merchandise (goods) and services exports grew by 22.2 percent and 25.3 percent respectively. Services growth slowed in 2009-10 as a result of the global recession, but the decline was less pronounced than the slowdown in merchandise export growth and has recovered rapidly in the first half of 2010-11 with a growth of 27.4 percent. Some services contributed to this improved show. Software is one sector in which the country has compassed a remarkable global brand identity. Tourism and travel-related services and transport services are also major items in India's services. The potential and growing services include many professional services, infrastructure-related services and financial services.
- Official reports that refer to the services sector rightly laid the stress on the vast and untapped potential of the tertiary sector, given the myriad activities in services. Hence underpinning this sector underscores the need for careful and differentiated strategies to the variegated components of the services sector as each segment has its own strengths to build on and weaknesses to overcome. Undoubtedly there is unanimity of view on the need for retaining the country's competitiveness in those services sectors where it has already distinguished such as information- technology and information technology enabled services (ITeS) and telecommunications. The next task is to make foray into some traditional realms such as tourism and shipping where other nations have already established themselves. But here more homework and ground work ought to be done in the form of fostering an enabling milieu for attracting tourists and providing facilities in the country's major and minor ports to accommodate sea-faring business on a seamless fashion.
- The Survey report aptly identified the third task as that of making serious inroads into globally traded services in still nascent but niche areas for India such as financial services, health care, education, accountancy, legal and other business services where the country possesses a huge domestic market but has also displayed signs of making a dent in the global market. But this requires reciprocal movements on the part of India in opening up its own market, liberalizing Foreign Direct Investment (FDI) not only to improve the infrastructure but also to absorb the best practices universes that are so universally acclaimed. It is a sensitive domestic issue as most of the political parties do not see eye to eye on liberalization of services trade with the domestic stakeholders expressing unrelenting reservations over the entry of Foreign Service providers upsetting their domestic appellation and filching business from them. In order to overcome such apprehensions, the onus is on the authorities to set up strong institutional bodies in the form of regulatory agencies to take care of both domestic and international interests in case when market-distorting moves are made by either party.
- It is also a small consolation that most of the States in India too are showing up higher share of services in the gross state domestic product (GSDP). States such as Delhi, Chandigarh, Kerala, Maharashtra, Bihar, Tamil Nadu and West Bengal have shares equal to or above all-India share of services in the GDP. The Survey report recounts how even small States such as Chhattisgarh and Rajasthan which have relatively low overall growth rates have begun piggy-backing on the sound performance of their services sectors to climb up the ladder of progress to catch up the ladder of progress to catch up with the rest of India. It is sobering to note that the services revolution in the country appear to be becoming more broad-based rather than being

concentrated in only a few States. If this trend gets pan-India and if all the major political parties sink their short-term gains to score political points, the services sector's unobtrusive revolution to change the profile of the Indian economy and to push it into higher growth trajectory would become a reality devoutly to be relished.

Foreign Direct Investment in the Services Sector

- The importance of the services sector in India's economy does not need highlighting. The services sector accounts for over 55 percent of India's Gross Domestic Product. It growing by 10 percent annually, contributes about a quarter of total employment and over one-third of total exports and then is growing at a fast clip.
- What, however, should be emphasize is how do we sustain high growth of the services economy. This is because, the continued growth of the services sector is predicated on certain reforms. Among the various policy reforms, the single on than can contribute most to the further growth and maturing of India's services sector is making it easier for foreign direct investment in services.
- So far, the FDI window into services has been opened only slightly. Many areas of the services sector are altogether out of bounds for the foreign direct investor. But, despite severe restrictions, the services sector has attracted no less than 44 percent of the total FDI equity flows between April 2000 and December, 2010 in only four sectors, namely, financial and non-financial services, computer hardware and software, telecommunications and housing and real estate. If the construction sector is included, then the share of the services sector in the total equity flows will jump to 51 percent. Of these sectors, financial and non-financial companies have attracted the largest FDI equity flow with a share of 21 percent. Larger FDI flows can radically improve some of India's critical services sectors and help overcoming the challenges that are before India's services economy today. The Economic Survey of 2010-11 has very clearly pointed out the challenges that are facing the services economy.

Three challenges:

- The first, and the biggest challenge, is to retain India's competitiveness in those sectors where it has already made a mark such as IT and ITeS and Telecommunications. The second challenge lies in making inroads in traditional services, such, tourism and shipping where other countries have already established themselves. The third is to make India's presence felt in globally traded services in niche areas, such as, financial services, healthcare, education, accountancy and other business services. It should be noticed that greater integration with large global players through investment and international relationship building could help in overcoming these challenges and making India a services superpower. Indeed, the opportunities in this fast growing employment oriented sector are striking. But allowing greater FDI into these activities is fraught with policy restrictions.

New Areas for FDI:

- As mentioned already, vast areas of services economy are beyond FDI. One such area is railways. Indian railways system is government run and private investment in core railway functions is not permitted. This has through not created a railway system which is ideally suited for a fast growing economy. Earlier, Rakesh Mohan Committee on infrastructure has recommended throwing up the entire railway sect open to private investment. The finance ministry paper (2010) suggests allowing 26 percent foreign investment in railways which can help overcome the current drought in investment in the railway. Liberalization and opening up to

FDI can help in modernizing the railway system which is badly needed at present. Additionally, international linkages can allow Indian railways to tap niche areas like exporting railway services.

- Another areas of transport Industry, namely shipping services could attract FDI and take India to the status of a major maritime nation. Here, while there are no policy issues regarding FDI cap, domestic tax and rigid regulations like manning norms in India work as deterrents to the foreign investor. India's shipping tonnage is inadequate, accounting for a meagre 1.17 percent of global registration. The tax structure on Indian shipping needs to be rationalized at the earliest so as to make investment in shipping services worthwhile.
- It is one of the challenges before India's services sector to broad base exports of services. Indian can make forays into globally traded services such as accountancy, legal services, healthcare and education services. The legal system in India, USA and UK are all rooted in British common law and this enables India lawyers to deal with legal businesses without much additional training. Preparing and reviewing legal documents, drawing up contracts and vetting these are some of the areas where India can be a very cost efficient outsourcing location. Already, 'legal process outsourcing (LPO)' has emerged as a new area. Unfortunately, there are laws strictly forbidding foreign law firms to enter the Indian law business space. As a result, Indian law firms also face similar disabilities in the UK or US markets. Mutual recognition of law degrees and access to each other's lawyers could open up this market for Indian law firms. In the same manner, healthcare and educational sectors could flourish through international linkages.

Conclusion:

- Unless the service sector growth quickens, India cannot attain the professed double-digit growth target. The varied problems and challenges of the service sector will have to be resolved in this context. Attracting FDI and forging more effective international linkages are the key to this objective. If there are policy obstacles, efforts should be made to overcome these in other ways.

Services Sector: Can it be the Engine of Inclusive Growth?

- Services sector is the engine of growth—is the newly coined growth slogan which has gained enough momentum in present day globalised world. And, like other economies, India is nowhere behind in harnessing this sector. Services sector has a great contribution in Indian growth miracle of 8-9 percent in the last one decade.

Emerging Opportunities in Services Sector:

- Services sector is heterogeneous and wide. For simplification, this sector can be categorized into three –
 - Traditional services – Includes tourism and hospitality sector eg. Hotel restaurant etc. retail trade and wholesale trade service storage, transport etc.
 - Modern services – Includes business services, software, IT, IT enabled Services, telecommunication, banking etc.
 - Hybrid of traditional and modern services includes Education, Health etc.
- Similarly, retail trade and wholesale trade also generate employment in the economy. And Foreign Direct investment (FDI) in multi-brand retail can be a step-ahead measure in deepening of retail trade services in Indian Economy.

- On the other hand, modern service sector is relatively skill –intensive. Especially, IT, ITeS, Software Services require high level of skills. In the last one decade export services sector like ITeS, telecommunication etc, have been registering high growth on account of General Agreement on Trade in Services (GATS) of WTO and opening up of global trade in services. Despite this optimism, it is argued that this skill-intensive services sector has driven out substantial rural labour force because of lack of high level skill.
- Therefore, this emerging trend and opportunities in service sector can be utilized in deriving further productivity gain and employment in Indian Economy and simultaneously it can accommodate burgeoning Indian labour force. And this could be a cornerstone for Indian Economy in its quest for “Inclusive Growth”.

Challenges:

- The opportunities in this sector is surrounded by certain challenges for India as well.
 - The foremost challenge is the collection of reliable data to harness the growth potentiality of this sector. Although, for the first time a separate chapter on ‘Service Sector’ has been added in Economic Survey 2010-11 a lot needs to be done.
 - Secondly, Skill Enhancement of Human Resource as both traditional and modern services require differentiated Skills and National Skill Development Scheme initiated by XIth Five Year Plan is a welcome step in this direction.
 - Investment in social infrastructure like health and medicine, education etc. Investment in elementary education and secondary education is necessary to utilize the ‘Indian Demographic Dividend and others, like opening up of quality ITI’s, Hotel Management Institute etc.

Conclusion:

- It is evident that by and large the emerging Services sector is not only “the engine of growth” but it can bring about “inclusive growth” in India as well for which our XIth Five Year plan had laid down its foundation. The Indian policy makers need to develop a prudent service sector specific policy and an intra-service sector specific policy as this could be a key to poverty reduction, inclusive growth and overall development. This could unleash a new slogan i.e. “Services sector–the engine of inclusive growth”.

Education in Indian Economy: An Overview

- The individual goals of education are cognitive (knowledge), affective (values) and skill formation while the collective goals are employability, socio-economic development, better quality of life, peace and social harmony, well-informed citizens’ participation in governance, national character and prosperity. For any productive activity, labour and entrepreneurship are as much required as land, capital and organisation. Labour is mainly of two types – manual and mental – though both are complementary to each other. However, one can do manual labour without specific skills but mental labour (skilled jobs) requires specific skills and training. Hence for getting skilled and semi-skilled jobs, one is to be educated and trained in a particular area and direction of knowledge.
- National Knowledge Commission has diagnosed ten ailments of higher education:

- i. outdated curricula have not kept pace with the times;
 - ii. learning places premium on memory rather than understanding;
 - iii. the milieu is not conducive to anything beyond class;
 - iv. academic calendar is no longer sacrosanct for classes or examinations;
 - v. the infrastructure is on the verge of collapse;
 - vi. the boundaries between disciplines have become 'dividing walls';
 - vii. the importance of research has eroded;
 - viii. decline in volume of research (frequency of publication) and quality of research;
 - ix. little accountability – no rewards for performance and no penalties for non – performance;
 - x. governance structure not responsive to changing times and circumstances that the system is readily subverted by vested interests.
- In India, it is a contradictory situation that the products of academics (supply) do not match with the demands of three sectors of economy – agricultures, services and industries. Most of traditional industries, especially textiles, jute and sugar, have collapsed in India. Agro-industries have also not prospered. At present service (tertiary) sector is growing very fast and contributing to the extent of 50 percent of the Gross Domestic Product (GDP). About 20 lakh Indians are working in the Gulf and maximum number of skilled labour is from Kerala as nurses, teachers and technicians, while unskilled labourers are from Bihar, U.P. etc. Paucity of funds is also one of the reasons for the poor quality of higher and technical education in India. D.S. Kothari Commission had recommended that 6 percent of GDP should be spent on education (all sectors) but only about 3 percent of GDP is spent here on education at present and about 1 percent on higher education. UNSECO has observed that India has the lowest public expenditure on education per student in the world.

Policy Implications:

- For better contribution of education to the Indian economy in general, and service sector in particular, following steps need to be taken by the Union, State and local governments at the earliest;
- **First**, public expenditure on education, (with special focus on technical education) should be enhanced to 6 percent of GDP so that both central and state educational institutions are provided adequate fund for various academic and infrastructural facilities. Higher education should get 1.5 percent of GDP.
- **Second**, still access is less than desirable, hence a massive drive is to be launched; drop outs should be removed through mass awareness campaigns, making curricula more student-friendly, providing facilities like labs, libraries, toilets, classrooms etc. adequately.
- **Third**, there should be a paradigm shift from literature type education to productive, job-productive, job-oriented education as per requirement in public and private sectors after secondary education. This will provide assured employment to skilled and semi-skilled manpower, and finally unnecessary burden on higher education (especially in humanities/social sciences) would be eased. There should be regular

interface of industry and service sectors with educational institutions. Like Germany, there should be sandwich pattern of education and employment – after studying for sometime one needs to join factories and again to join academics. Gandhian motto of ‘earning while learning’ may be popularized.

- **Fourth**, individual rate of return from secondary education is usually less (in terms of employment) than social rate of return (in terms of collective consciousness, basic citizens’ rights and duties). On the other hand, from higher education individual rate of return is more than social rate of return because a graduate/post graduate gives top priority to his/her job and tends to be highly mobile and migrate to urban areas, metros or foreign countries for individual gains. Therefore quality education at all stages (primary, secondary and tertiary) should be ensured, because if the foundation (schooling) remains weak, superstructure of higher education can not sustain for long. Moreover, 25 percent of teachers positions being vacant should be filled in a transparent manner at the earliest. Dr. Manmohan Singh, Prime Minister of Indian rightly remarked in 2007: “In almost half of the district in the country, higher education enrolments are abysmally low, almost 2/3rd of our universities and 90 percent of our colleges are rated as below average on quality parameters..... there are complaints of favouritism and corruption.
- **Fifth**, the argument that all foreign universities should be freely allowed to open campuses in India does not hold good. In 2010 Tri Valley University (US) was detected as a fake University where thousands of students were illegally studying and many Indian students were arrested. Similarly in 2001 in the University of Northern Virginia 2400 foreign students were enrolled against the legally permitted strength of 50 foreign students. About 90 percent of such students were from India. Thus craze for the west is dangerous. Therefore, there should be limited and careful entry of only selected world class universities who would care for the socio-cultural values of India and would not charge very high education fees. Further world class scholars should be invited by Indian universities frequently for exchange of new ideas and experiences with teachers and students. On the other hand, Indian Universities should be capable of attracting foreign students in engineering, medicine and management as well as opening of their campuses abroad. This will result in huge capital–formation necessary for the growing Indian economy.
- **Sixth**, though the literacy rate in India increased from 65 percent in 2001 to 74 percent in 2011, there still remains a wide gender gap – 82.14 percent of males and 65.46 percent of females are literate. That is, women are lagging behind males by 16.2 percent points. Though women’s literacy growth during 2001-11 was higher than men’s, yet this gender gap is to be bridged at the earliest. Kerala tops the list with highest literacy rate (93 percent) and Bihar is at the bottom with 63.8 percent. Further for adults, literacy should be made more functional and meaningful by focusing on productive skills and life skills, rights and duties, government schemes, clean environment, health, sanitation, values, peace and social harmony, and empowerment of the weaker sections including women. Literacy drives should be aimed against child labour through team efforts of educational administrations, labour officers, district administration, NGOs and teachers to cover 26 percent illiterate Indians. Towards this end, GOI has launched Sakshar Bharat Mission for Female Literacy.
- **Finally**, the bitter truth is that 90 percent of India’s workforce is in unorganized sector (comprising mainly agriculture and service sector) where jobs are casual, insecure, with less salary, more work, unhealthy working conditions, drudgery, no leisure, no insurance, no provident fund etc. Further due to liberalization, privatisation and globalization, many labour laws/provisions, restricting employers from firing, have been relaxed or repealed, therefore there are new trends of casualization and contractualization of labour (hiring and firing) and feminization of poverty (as women- headed households have suffered most). But for this new economic reforms is more responsible than the education because the motto of these economic reforms is that ‘privatization is the panacea of all ills’. Even the Public-Private-Partnership (PPP) model has been implemented only where it suits the private sector which does not venture in remote North-East region or

naaxal – affected areas. Still 80 percent of schools are in public sector in India, mostly in rural areas where private schools are rare.

- A notable fact is that the policies of liberalization, privatization and globalization became a part of higher academics curricula as well as training module for working civil servants in Union and State governments.
- Many private schools, colleges and universities do not give adequate salary (at par with government) to teachers and staff and most of them are untrained (55 percent) and there is no in service training. Needless to say that GOI's Tandon Committee (on higher education) found that 44 deemed universities did not fulfil eligibility norms and were running as family fiefdoms but government's decision to cancel these was challenged in Supreme court. Similarly UGC found 39 fake institutions operating in the country.
- We may conclude that in order to become a prosperous global economy within first five ranks, India has to qualitatively strengthen her education, especially higher and technical education; that is, at as the catalyst for bringing about visible economic change with more skilled jobs with higher earnings leading to a prosperous society. We need job-led growth and for this the thrust should be on quality and vocational/technical education.

Growth of IT and ITeS Sector

- Till three decades ago, Indian economy was considered as a rural and agriculture based economy. It was a distant dream at that time to think that India would move from the agro-based economy to a world class knowledge based economy. One of the main reason of India becoming a leading knowledge based company, is its strong IT (Information Technology) and ITeS (IT enable Services) sector.
- During the past decade, the IT and TeS sector has become one of the most significant growth catalysts for Indian economy. Take any sector, it has made direct or indirect impact on almost all sectors. Rather it has also played a significant role in transforming India's image from a slow moving bureaucratic economy to a land of innovative entrepreneurs and a global player in providing world class technology solutions and business services.

Contribution to Country's Growth:

- The ratio of an industry's output to the Gross Domestic Product (GDP) of a country is an important indicator of the impact of that industry on the country's economy. Nearly two decades ago, the contribution of IT and ITeS industry to GDP was almost negligible. In late nineties it touched 1 percent of the total GDP. And today it is around 6.4 percent-almost six times increase in country's GDP. The sector continues to be on a constant high growth path and the revenues have grown over fifteen times from the financial year 1998 to financial year 2009.
- The immense contribution of the sector has also made major impact on the country's foreign exchange earnings, contribution to exchequer and employment generation. Besides contributing to the country's growth through direct channels, it has also played a key role in driving the growth of other sectors including real estate, telecom, and retain sector, by creating demand for the output generated by these sectors.
- According to study conducted by NASSCOM, IT and BPO employees spent almost Rs 76,000 in various areas which indirectly helped the country's growth.

- During the past one decade, the IT-BPO sector is at the forefront of investment activity and has played a key role in bringing the attention of Private Equity and Venture Capital (PE/VC) investors to India as an investment destination. The ROI (Return on Investment) in IT-BPO sector has further made a positive impact on the perception of the international investor community.

Domestic IT and ITeS Sector:

- So far the general impression is that IT and ITeS industry mainly caters to USA and Euro countries and has little contribution from the domestic industry. However, in the past one decade the trend is changing and domestic industry is also emerging as a major consumer of IT and ITeS sector. The IT-BPO sector is growing at around 16 percent annually.
- The revenue from domestic IT and ITeS is expected to grow at Rs 501 billion financial year 2011. Even IT experts admit that domestic IT sector is also the fastest growing segment and is driven by localized strategies designed by service providers. Besides private players, government sector would also become a key catalyst for increase IT adoption—through sector reforms that encourage IT acceptance, National E-Governance programmes, and the Unique Identification Development Authority of India (UIDAI) programme that creates large scale IT infrastructure and promotes corporate participation.

Export, employment, and revenue generation:

- Export comprises two third of the revenue generated from India It and BPO industry. The IT and BPO export has grown faster than total Indian export during the past five years and account for the 14 percent of the total export. According to a rough estimate export from IT and BPO sector is more than the combined value of exports from traditional export sector—gems and jewellery and textiles. For the fiscal year 2011, export revenue is expected to cross USD 59 billion/
- The steady growth in this sector has further created large number of employment not only of IT professionals, but also of those who are indirectly assisting the sector. The employment provided by the sector has increased more than eight times during the past decade. For the year 2011, it is expected to give employment to nearly 2.5 million professional directly and another 8.3 million people indirectly.
- Presently the sector has made impressive impact in tier 1 cities, however, due to price competitiveness and spread of broadband, the sector is now moving to tier II and tier III cities. The expert in the industry are even trying to explore the advantage of operating centres in rural areas. Some players have even started their small units in rural areas though on an experimental basis.
- IT-BPO sector is also making a significant contribution to the tax collection of the Government of India. It contributes almost Rs 15,000 crore in direct taxes. This all is when the industry receives benefits in terms of lower effective tax rates and tax holidays for select units.

History of IT sector in India:

- How India reached the number one position in IT sector is no one day's job. The roadmap to build the country's large scientific workforce was prepared by Prime Minister, Mr. Jawaharlal Nehru and the then Union Education Minister, Mr. Maulana Abdul Kalam Azad. Mr. Azad built IITs modelled after the Massachusetts Institute of Technology. It is their vision that India today produces nearly 5,00,000 engineers every year.

- The first IT service industry was born in Mumbai in 1967 with the establishment of Tata Group in partnership with Burroughs. The first software export zone (SEEPZ) was set up in Mumbai in 1973, and till eighties more than 80 percent of country's export was confined to SEEPZ. In 1975 the National Informatics Centre was constituted followed by Computer Maintenance Company (CMC). In mid eighties, the Rajiv Gandhi Government created three wide-area computer networking schemes: INDONET—intend to serve the IBM mainframes in India, NICNET (The network for India's National Informatic centre), and academic research oriented Education and Research network (ERNET).
- In 1991, the Department of Electronics broke this impasse, and created a corporation called Software Technology Parks of India (STPI). These parks provided satellite links to companies working in STPIs and this was the beginning of the exponential growth of Indian IT sector.

Future:

- The Indian IT and ITeS sector suffered slightly during the two year recession period. It was the time when the worldwide GDP had declined by 0.6 percent. But immediately after the recession was over, global GDP grew by 5 percent. Worldwide IT spending was benefited from the accelerated recovery in emerging markets. The growth has generated more demand for IT and ITeS sector. NASSCOM in a study observes that the year 2011 will see a major surge in the use of private and public cloud and mobile computing on a variety of devices and through a range of new applications.
- NASSCOM further says that worldwide IT services are expected to grow by about 3.5 percent in 2011, 4.5 percent in 2012. Worldwide packaged software revenue is estimated to reach USD 297 Billion in 2011 with a year to year growth of 5 percent, led by emerging regions, such as Asia Pacific and Latin American Countries.
- And since India is one of the main leading player in this sector, it is the one which would be most benefitted out of it. However, to retain its number one position globally, the IT-ITeS industry has to invest in training its employees and aiding the expansion of talent pool. Presently Indian IT-ITeS companies spend nearly Rs. 6,450 crore on training their employees—45 percent of which is spent on training it toward skill development of new recruits. At first glance the investment seems impressive, but going by the fact that Indian industry is growing at 22 percent annually and need around five lakh professionals annually the investment needs to be increased.

Access to Education: Emerging Opportunities for Minorities

Sachar Committee Report on Educational Status of Muslims:

- The Government of India constituted a High Level Committee (HLC) under the Chairmanship of Justice (Retd.) Rajinder Sachar to prepare a report on the "Social, Economic and Educational Status of the Muslim Community". The High Level Committee (popularly known as the Sachar Committee) submitted its report on 17th November, 2006. In its Report the Committee observed that Muslims have been left behind Muslims have been left behind in the growth and development process. It recommended setting up of an autonomous Assessment Monitoring Authority (AMA), creation of National Data Bank and constitution of an Equal Opportunity Commission (EOC). It also suggested provision of hostel facilities at reasonable cost, inclusion of minority aspects in the general curriculum for teacher training, setting up and strengthening of state run Urdu medium schools, linkage of Madaras to Higher Secondary Board, recognition of the degrees from Madaras for eligibility in competitive examinations, provision of financial and other support to Madaras. It also suggested that the outreach of upper primary schools, particularly for Muslim girls, should

be expanded with “girls only” schools, wherever required and by opening residential Kasturba Gandhi Balika Vidyalaya (KGBV) schools, on priority, in areas with substantial Muslim population, opening of secondary/senior secondary schools in areas of Muslim concentration, a special literacy drive to be taken up in these districts to improve the overall literacy rate and especially the literacy rate of Muslim women.

Some facts highlighted by Sachar Committee about educational conditions of Muslims:

- The literacy rate among the Muslims in 2001 was far below the national average.
- Muslims have not been able to respond to the challenge of improving their educational status.
- 25% Muslim children in the 6-14 years age group have either never attended school or have dropped out.
- Only one out of every 25 Under-Graduate and 50 Post-Graduate students in premier colleges is a Muslim.
- NCAER figures show that only about 4% of all Muslim students are enrolled in Madaras.
- A comparison across Socio Religious Communities (SRCs) reveals lower level of Mean Years of Schooling for the Muslim community.
- The increase in enrolments has been highest among SCs/STs followed by Muslims.
- Drop out rates among Muslims are highest at the level of Primary, Middle and Higher Secondary compared to all the SRCs.
- Muslims are at much larger disadvantage at the higher secondary level.
- Lower enrolment in Urdu medium schools is due to limited availability of such schools at the elementary level.

Enhancing Educational Opportunities for Minorities:

- The government is trying to enhance educational opportunities for the minorities through a number of programmes. These include

Scholarship Schemes:

- The Ministry of Minority Affairs has implemented three scholarship schemes, a coaching and allied scheme specifically for students from the minority communities. Students from minority communities are being benefited under Meritorious Girl’s Scholarship Scheme of Maulana Azad Education Foundation (MAEF) and a fellowship scheme called Maulana Azad National Fellowship.

Multi-Sectoral Development Programmes:

- A Multi-Sectoral Development Programme (MsDP) was launched in 90 identified minority concentration districts in 2008-09.

Prime Minister’s New 15- Point Programme:

- Prime Minister’s New 15 Point Programme was launched in 2006 aimed at ensuring the well-being, protection and development of minorities. The focus of the new Programme is to make certain that benefits

of various schemes/programmes flow equitably to the minorities. For this, it quantifies a certain portion of development projects to be established in the areas with minority concentration. It stipulates that wherever possible, 15% targets and outlays under various schemes will be earmarked for the minorities. All Central Ministries/Departments, State Governments/UT Administrations have been advised to implement this new Programme. One of the objectives of the Prime Minister's New 15 Point Programme is to enhance opportunities for education for students belonging to minority communities.

Conclusion:

- The problems of educational backwardness amongst minorities, especially Muslims, are being addressed in a holistic way and the efforts being taken in this regard would need to be sustained. The efforts being made in this direction have already started showing positive results.
- More effort is required to publicize the benefits of education through awareness campaigns in vernacular languages especially in minority concentration areas. Innovative methods like use audio-visual, nukkad natak etc could be included in the awareness campaigns. Further, local conditions, means of livelihood and occupation of minority communities would need to be factored in. For example, the approach towards children engaged in assisting agricultural activities or in handlooms etc. for attending schools would need to be flexible.

Sustainable Food Security

- Food security is now defined as physical, economic, and social access to balanced diet, clean drinking water, environmental hygiene, and primary healthcare. In spite of all the progress we have made in industry and economic growth rate, our reputation in the field of eradication of hunger and malnutrition is poor.
- Thus, food and non-food factors relating to food security need integrated attention. Fortunately, we have many schemes which address these issues. The Rajiv Gandhi Drinking Water Mission, the total Sanitation Programme and the National Rural Health Mission can all ensure that whatever food is consumed is beneficial. The various employment generation schemes and more particularly, the Mahatma Gandhi National Rural Employment Programme are helping to provide the minimum essential purchasing power. For increasing the availability of food, several steps have been taken such as the following:
 - Rashtriya Kishi Vikas Yojana with an outlay of Rs. 25000 crore
 - National Food Security Mission with an outlay of about Rs. 6,000 crore
 - National Horticulture Mission with an outlay of Rs 10,363.46 crore during the 11th Five-Year Plan period
- There are many other schemes dealing with different areas of production, such as soil healthcare, crop protection, and irrigation. In spite of all these schemes our agriculture is still very vulnerable to the behaviour of the monsoon.
- The National Commission on Farmers (2004-06) has provided a detailed strategy for the agricultural progress of India. The strategy has the following four components:
 - Defend the Gains already made in the heartland of the green revolution namely, Punjab, Haryana, and Western UP through conservation and climate resilient farming and agronomic techniques.
 - Extend the Gains to the green but no green revolution areas such as Bihar, Jharkhand, Chhattisgarh, West Bengal, Assam and Orissa. NCF has described this region as a "sleeping giant". The large untapped

production reservoir of this region should be tapped through an appropriate blend of technology, services, input and output rising policies and above all, farmers' enthusiasm.

- Make new Gains in rainfed areas which constitute nearly sixty percent of the cultivated area. Here again there is a considerable difference between potential and actual yields. Most of the pulses and oil seed crops are grown under rainfed conditions. An important requirement for success is rain water harvesting and watershed management.
- In addition to the above measures we should take steps to bridge the growing mismatch between production and post harvest technologies. We are not deriving benefit from the opportunities for value addition to primary produce and to agricultural biomass. A national grid of grain storage based on modern technology should be established as soon as possible.
- Food is the first among the hierarchical needs of a human being. Therefore, food security should have the first charge on the available financial resources. Spoilage of grains through lack of investment in storage is a sad reflection on our sense of priorities. A National Food Security Act giving legal rights to food can be implemented only by attending to the safe storage of both grains and perishable commodities like fruits, vegetables, and milk. At the same time animal nutrition will also require greater attention. Unfortunately, grazing land is fast shrinking. Animals are underfed, and are therefore low yielding. Animal food security is essential for human nutrition security.

Climate Change and Agriculture Factors to cope with:

- Unfavorable changes in temperature.
- Unfavorable changes in precipitation.
- Snow Melt and floods.
- Higher carbon dioxide levels in the atmosphere.
- Sea level rise.

A. Temperature: Impact of a rise in mean temperature by 1 to 2 degree Celsius (Copenhagen Accord)

- Wheat yield is a gamble in temperature: Major consequence of 1 degree Celsius rise in mean temperature will be a reduction in the growing period in the case of wheat, and greater risk of vector borne diseases in crops like potato.
- Response measures should include shifting the breeding strategy to per-day rather than per-crop productivity in the case of wheat, and developing and spreading the True Potato Seed (TPS) methodology in the case of potato.
- Rice has a wide range of adaptation. Short duration varieties or hybrids together with efficient agronomic practices like SRI should be promoted. Hybrid rice strains characterized by hybrid vigour in the development of the root system should be recommended.
- In all crops, the problem of pests and diseases may become more serious. Plant protection measures should particularly be tailored to meet the threat to crops and farm animal arising from the outbreak of vector-borne diseases.

B. Unfavorable alterations in precipitation.

- Both drought and floods may become more serious. Building a sustainable water security system and spreading more crop and income per drop of water technologies should receive priority attention. Drought and high temperature tolerant crop varieties should be developed through Marker Assisted Selection. A good example is the work done at MSSRF, Chennai in transferring to crop plants genes for drought tolerance from *Prosopis Juliflora* and for salinity tolerance from *Avicennia Marina*.
- In the case of floods, post-flood agricultural rehabilitation measure as well as flood tolerant rice varieties with the submergence (Sub) tolerant genes should be developed. After flood waters recede, crops like yellow-flesh sweet potato (rich in Vitamin A) Sathi maize (short duration) and sunflower, as well as fodder crops can be introduced.
- The implement alternative cropping strategies based on different weather conditions, seed reserves should be built. Seed reserves are as important for crop security, as food grain reserves are for food security.
- Drought and Flood Codes indicating the scientific strategies needed for reducing to the extent possible the adverse impact of drought on agriculture should be developed based on computer simulation models. The codes should spell out in implementable terms alternative cropping strategies and contingency plans. Along with Drought and Flood Codes, a Good Weather Code should be developed for each agro-climatic region, in order to help in maximizing production during good monsoon season.

C. Meeting the challenge of sea level rise

- The strategy should include the following components:
 - Developing Mangrove and non-mangrove bio-shields to minimize the impact of coastal storms and sea water inundation.
 - Promoting Sea Water Farming through agri-aqua farms.
 - Promoting Below Sea Level Farming, as already practiced by farmers in the Kuttanad area of Kerala.
 - Breeding salinity tolerant crop varieties for cultivation in coastal areas, based on genetic engineering techniques.
 - Preparing contingency plans for the resettlement of climate refugees.
- 2010 Marks the 80th anniversary of Gandhiji's Dandi March (Salt Satyagraha), which emphasized that sea water is a social resource. 97% of the global water is sea water. We should launch a dynamic programme in the area of sea water farming involving salt tolerant crop varieties, agro-forestry and marine aquaculture.

A. Livestock

A food and Fodder Security Pan should be developed to safeguard our Dairy, Poultry, Sheep, Wool and other animal based enterprises which are the ones coming to the rescue of families living in the desert and semi-arid areas. Fodder and Food Banks should be developed with the help of local self-help groups (SHGS).

Mitigation and Adaptation strategies:

- Mitigation efforts should include both carbon sequestration through green plants and building Soil Carbon Banks through fertilizer trees, which enhance soil nutrient status. Soil carbon enrichment will help to enhance fertilizer use efficiency and thereby help to reverse diminishing factor productivity. A Farm Pond to collect rain water, a biogas plant and a few fertilizer trees in each farm should be promoted in rainfed areas.
- Adaptation Measures should include the steps already indicated. In addition, green house horticulture should be promoted to take advantage of higher carbon dioxide content in the atmosphere. Arid and semi-arid horticulture combined with animal husbandry, and agro-forestry systems of land use, will help to enhance both livelihood and nutrition security.

Research and Development Infrastructure:

A. Research and Training Centres for Climate Risk Management

According to ICAR, there are 15 major agro-climate zones and 128 mini-agro-climatic zones. We should establish in each of the 128 zones, a Research and Training Centre for Climate Risk Management. These can be virtual centres headed by an agricultural scientist with computer simulation capability. He/she should prepare computer simulation models of alternative weather probabilities and suggest how to checkmate the adverse effect. Each of these Centres should have the following facilities to convert plan into action.

- A village Resource Centre with Satellite Connectivity established with the help of ISRO.
- A Meteorological Station, capable of facilitating farm decisions on the basis of integrated weather forecasts.
- A Seed Bank containing seeds of the alternative crops to be sown, if the first crop fails due to drought or flood.
- A Fodder and Feed Bank to cater to the needs of Farm Animals.
- A Grain Bank should be established adjoining each Centre particularly with reference to underutilized crops like millets, ragi etc as well as bajra, jowar and maize.

B. Capacity Building

The Research and Training Centre for Climate Risk Management should train at least one woman and one male member of every Panchayat as Climate Risk Managers. They should be well versed in the art and science of climate risk management.

In each of the major agro-climate zones, there should be warehousing and safe storage facilities at least for a million tones of good grains. Such a decentralized network of Grain Banks will help to respond quickly to urgent needs.

We thus face many challenges on the farm front. We have to run twice as fast to stay where we are. The current obsession with bricks in institution building should give way to nurturing brains. We will then have a bright agricultural future.

Food Security: The Challenges Ahead

- Agriculture in India still accounts for 52% of employment, 12% of national export and 17.8% of GDP. The country has achieved a fourfold increase in food grains from 50mt in 1950 to 219.3mt in 2007-08 against a threefold increase in population from 33 million to more than 100 Million. Today, India has become the largest producer of milk, vegetables, fruits, fish and eggs. But, what a tragedy in a country which is the one of the largest producer of food in the world, nearly 300 million go without two square meals a day.
- Food security is the “the access of all people to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”. It has four basic components: availability, accessibility, utilization and stabilization. The four components of food security viz. availability, is a function of production, accessibility is related to purchasing power, utilization is determined by the availability of minimum basic needs i.e. safe drinking water, primary health care, primary education, proper housing facilities, environmental hygiene and fourth one, stabilization is influenced by the extent of attention given to the sustainability of the system. The challenge of meeting the food requirement of even increasing population and plateauing productivity of agriculture can only be met through sustainable agriculture. This will involve approaches like integrated nutrient management, Integrated pest management, Integrated disease management, eco agriculture, increased investment in Agro-infrastructure, improving farm productivity by crop diversification, developing suitable site specific farming system models; developing innovative methods like System of Rice Intensification, removal of barriers to both internal as well as external trade, institutional reforms, input provisioning, greater thrust on rain fed areas, value addition, research and development particularly on the impact of climate change on agriculture and stream lining the Public Distribution System for an effective delivery mechanism.

Major challenges before Indian agriculture:

- **Stagnation in Indian agriculture:** A National survey shows that nearly 40% of farmers want to give up farming if an option was available. The reason is obviously low profit. Today, yields in India for almost all crops are stagnant and lower than other countries, Indian wheat yield in 2003-05 was 26.89q/ha while that of major wheat producing countries was 64.49q/ha. Production of pulses decreased from 14.28 million tonnes in 1990-91 to 13.38 million tonnes in 2004-05. At 638 kilogram per hectare our yield is way below the best of the countries which produce 1800 kilogram of pulses per hectare. Indian rate of growth of rice production is least in Asia, even lower than Pakistan, Myanmar and Srilanka.
- **Small and marginal land holdings:** The Indian economy is predominantly rural and agriculture oriented. Per capita availability of land in India has declined. Nearly 60% of the farmers on an average own 0.4 hectares, while another 20% on an average hold 1.4 hectares. This puts the population of small and marginal farmers at about 80% of the total. Such meagre land holdings by a large majority of the farmers are neither viable nor sustainable for a country with billion plus mouths to feed. The declining trend in the average size of farm holdings also poses a serious problem.
- **Hunger and poverty:** Our food grain production is now food grain production is now well over 220 million tonnes. We are facing double digit inflation in case of food items. There is an extremely high prevalence of hunger and malnutrition. At some places the poorest families are eating on alternative days. As we celebrate the 64th year of our independence, the rampant malnutrition, anemic mothers and stunted children indicate our failure to feed the empty stomachs. The International food policy research institute, Washington has placed India in the 66th position out of 88 countries for global hunger index. India ranks below all other South Asian nations, except Bangladesh; Kenya, Nigeria, Cameroon and Sudan fared better than India. India has more states under ‘alarming to extremely’ categories with Madhya Pradesh being the

worst affected. No state in India is in the 'low to moderate hunger index' category.

- **Food wastage:** A recent headline that captured the attention of all was that food grains worth 580 million got spoiled due to lack of storage facilities with the Food Corporation of India. It is no less than a sin to waste such huge quantities of food grains when millions in the country remain unfed and their daily ration of calories of many others is much below the minimum necessary for their survival. It necessitates looking for alternatives to Public Distribution System. The use of food stamps can be such alternative. Under this scheme the intended beneficiaries are provided with food stamps which recipients can exchange for an equivalent amount of food at any shop. The shopkeepers can get the credited in their Bank accounts. The biggest advantage of Food stamps is that it can plug the leakages associated with the PDS.
- **Little accountability in investment in agriculture research and education:** We have the largest area under cultivation (161mh), have highest area under irrigation (55.8 mh), are one of world's largest users of fertilizers, have a fairly high degree of farm mechanization and largest scientific men power with over 30000 scientists and technicians employed in about 40 SAU's and near about 600 KVK's in the country. But, still those varieties are popular that were developed 20 years ago. In 1997, ICAR developed 72 varieties of field crops. By 2001 the figure was reduced to 35.
- **Climate change:** Threat of climate change looms large over Indian agriculture. This is due to global warming. A 10c increase in the temperature will reduce the duration of wheat and rice in north and western India by a week. This will result in reduction of rice yield by 4 to 5 quintals per hectare). The corresponding decrease in yield of the wheat will be 4 to 5 million tons. Day and night high temperatures are having an adverse effect on tilling of wheat plants. In Northern parts in December the night temperature continues to be 7-80c and day temperature is hovering about 200C in the country. At this stage the night temperature should not be more than 40C can the day temperature should not be more than 14-160C. High temperature at this stage of winter stunts the growth of wheat plants and affects the tillering process. In Haryana wheat production has declined from 4106 Kg per ha in 2000-01 to 3937 Kg per ha in 2003-04 with maximum temperature rising by 30C during February- March in last seven years. Besides affecting the productivity, Climate change will result in the emergence of new insect pests, shifting the range of various species, decline in the milk production and increased susceptibility to various diseases.
- **Dry land agriculture:** Dry land is home to more than 450 million farming people. It contributes 42% of total food grains especially coarse grains, 75% of pulses and oilseeds and 40% of wheat. Climate change would expand dry land by 11%. Dry land are characterized by low level of fertility, low productivity, frequent crop failure, uneven and untimely rainfall, extensive holdings, prolonged dry spell and low moisture retention capacity.
- **Agro-Infrastructure:** We still are lacking in the desired infrastructure for providing irrigation to the cultivable areas, technology for soil and moisture conservation, infrastructure for storing perishable products, road connectivity for bringing perishable products in the market at the earliest, chain of cold stores at the village level, small scale industries for value addition and water harvesting structures for conserving water.

Ensuring food for all: Paradigm shifts desired:

- **Promoting Farming system approach:** Today, there is a need to improve the overall agricultural scenario with the multiple goals of growth, equity, employment and efficiency. The future food strategy depends on the conversion of green revolution to an evergreen revolution rooted in the principles of ecology, economics, employment generation and social equity. We have entered a millennium where we have to abandon the old concept of a crop centered green revolution and substitute it with a 'farming system' centered evergreen revolution to produce more from the available land, water and labour. Farming system

integrates enterprises like fishery, poultry, livestock, horticulture and others within the biophysical and socio-economic environment of the farmer to make it more profitable. It is considered to be not only a reliable way of obtaining a fairly high productivity but also a concept of ecological soundness leading to sustainable agriculture. This offers advantages such as better utilization of resources, recycling of farm wastes, sustainability, employment generation and reduction of risk. The future of Indian agriculture depends upon the development of specific farming systems as applicable to resource poor farmers and suited to different agro-ecological zones.

- **Strengthening Public Distribution System:** Mahatma Gandhi wrote in 'Young India' in 1920, "We want to organize our national power not by adopting the best methods of production only, but by the best method of both production and distribution". Public Distribution system needs immediate reform. It needs to be strengthened. To avoid the rotting of food grains in open, community grain storage banks should be established at the village level from which the people could get subsidized food grains against food coupons. The management of these storage banks should be decentralized to the local level with the active monitoring in PRIs. The ambit and scope of safety net programmes such as Mahatma Gandhi National Rural Employment Guarantee Act, Integrated Child Development Scheme, Mid Day Meal, and National Old Age Pension Scheme should be broadened to benefit more and more.
- **Thrust on Food processing:** The food processing sector has been described by Prime minister Dr. Manmohan Singh as the 'sunrise sector'. It has potential to dramatically improve rural livelihoods, opportunities and employment and bridge rural urban divide. Our share in the international trade is just 2%. Level of processing in the country is extremely low i.e. 6% as compared to 60-80% in developed countries. There is high wastage and low value addition. Vision-2015 strategy aims to enhance the level of processing from 6 to 20%, increase value addition from 20 to 35% and to increase global trade from 2% to 3%.
- **Institutional reforms:** Consolidation of holdings to avoid further fragmentation and a proactive policy for small, marginal farmers and landless labourers through innovative mechanisms like cooperative farming, contract farming need to be devised. The extension system of the country has to reorient itself to the changing needs of the farming community. Public extension systems have not given the desired results. Private extension systems too are profit oriented. As such suitable public-private partnership models need to be put in place to effectively deliver the services to the farmers.
- **Provision of inputs:** Supply of inputs such as seeds and fertilizers need top priority. Small farmers also need implements for timely sowing, weed control and post harvest management. Public and private sector seed agencies should be revamped to ensure seed production and distribution both qualitatively and quantitatively. Timely supply of inputs is more critical for dry land areas. Dry land areas need varieties which have a short growing period and are resistant to drought. A greater stress needs to be laid on development of watersheds in these areas to conserve water which is a scarce commodity. To combat the effects of global temperature rise researchers should investigate how to make the crops more resilient to environmental stress. Search for biotic and abiotic stress tolerant genes must be intensified to create a gene bank both for plants and animal for development of new heat drought and flood tolerant genotypes. This will also involve converting C4 plants to C3 type.
- **Removal of barriers to interstate trade:** India being a founder member of WTO is supposed to undertake further economic reforms in agriculture. It will have to remove all the interstate and inter country tariff and non tariff barriers, abolition of restrictions on trade, opening future markets and protecting Patent rights. At the same time it will have to improve its competitiveness in the world market through quality produce.
- **Right to food:** The universal declaration of Human rights of 1948 asserts in article 25(1) that "everyone has

the right to a standard of living adequate for the health and being of himself and his family, including food". Food and nutrition rights were subsequently reaffirmed in two major binding international agreements. In the international covenant on Economic, Social and Cultural rights (ICESCR), which came into force in 1976, article 11 says that, "The state parties at the present covenant recognize the right of everyone to an adequate standard of living for himself and his family "and also recognizes the fundamental right of everyone to be free from hunger. India is an active member of the United Nations and a state party to ICESCR. Hence there is an obligation to respect, protect and fulfil right to food of every citizen of India. The National Food Security (NFS) Bill is taking shape. The National Advisory Council has recommended that the Act should provide every family in the 200 most disadvantaged districts of the country will 35 Kg of rice or wheat at Rs 3 per Kg.

- The challenge of meeting the food requirements of an over increasing population can only be met by practicing sustainable agriculture, protecting sustainable agriculture, protecting natural resources from being degraded and polluted and using production technologies that conserve and enhance the natural resource based of crops. We need to look into the potential green revolution areas of Eastern Uttar Pradesh, North Bihar, West Bengal, Orissa, Chhattisgarh and Madhya Pradesh, which have been neglected so far. Without them, the battle for food security cannot be won. Some targets of opportunity in agriculture have been exploited, many more difficult ones lie ahead.

E-Governance for Improving Rural Livelihood

- The most important promises and opportunities of E-Government are increased efficiency of government services and operations; increased quality and the number of services to be offered; increase integration of government services across different ministries, focusing on those being served; help achieve targeted outcomes and broader policy objectives; contributed to government reform, especially anti-corruption and waste; build democratic interactions between government and its citizens by increasing the ease of communication and feedback.
- E-Governance is one of the most promising uses of ICT. In practice, it involves two distinguishable activities:
 - First is the computerization of government functions like registrations, legal proceedings, land records, state offices, police detp., etc. and linking up the district levels with the state level.
 - Second, e-governance many mean government-to-citizen and citizen-to-government connections whereby people obtain direct access to records, rules, and information about entitlements that they need or want in their daily lives, make payments online for availing a service etc.
- The benefits from the rural e-Government projects are categorized into economic and social. Typically, economic benefits are achieved through employment of the rural youth, better prices for the farmers' produce, reduction of produce loss. Social benefits are obtained through knowledge acquisition for farmers, advice on agriculture, health, weather forecasting, crop patterns, education, finance, and insurance, and citizen's enablement to be part of government decision making.
- Some of the major success stories in India are as follows:
 - **Akashganga:** This project is being used as the Dairy Co-operative Society, Gujarat. The project uses IT to help rural milk producers by integrating all operations from procurement of milk to accounting using DISK (Dairy Information Services Kiosk).
 - **eChoupal:** This was established by ITC's Agri Business Division in June 2000. It was specifically designed

to tackle the challenges posed by the unique features of Indian agriculture, characterized by fragmented farms, weak infrastructure, and the involvement of intermediaries. In order to protect agriculture farmers from opportunistic practices of intermediaries, it provides farmers with information relating to farming equipments, weather, crop, and the like.

- **TKS (Tata Kisan Sansars):** The TKs, or farm centres, provide end-to-end solutions, right from what crops to grow to how to sell them for the maximum returns in Maharashtra. A unique concept in the Indian countryside, TKs are changing the face of Indian agriculture and improving the quality of rural life. TKS provides farmers with series for optimum utilization of nutrients, plant protection, chemicals, water, and seeds. TKS tracks key parameters such as soil, ground water, and weather on a real time basis with the help of Geographic Information Systems (GIS) and satellite mapping technologies.
- **Drishtee:** Drishtee is a revenue-generating platform for rural networking and marketing services that enable e-governance, education, and health services. The project provides online buying and selling facilities to citizens through its e-commerce and agri-business services. It maintains the database of people as it issues ration cards. The system tries to redress the grievances raised by the public and enhances customer relationship. It enables the citizens to get government information, education, employment, etc.
- **Gyandoot:** Gyandoot is an Intranet based Government to Citizen (G2C) service delivery portal commissioned in Dhar district of Madhya Pradesh in January 2000. Gyandoot aims to create a cost-effective, replicable, economically self-reliant and financially viable model for taking the benefits of Information and Communication Technology (ICT) to the rural masses. The goal of the project was to establish community-owned, technologically innovative and sustainable information kiosks in a poverty-stricken, tribal dominated rural area of Madhya Pradesh. It provides education online with user interface in local Hindi language.
- **Jagriti E-Sewa:** Jagriti E-Sewa was inaugurated in March 2003. It touches the rural life with activities from agriculture, financial, travel, and e-Government to communication services. The whole system can be adopted to any language in the least possible time. Jagriti is a platform for application of Information technology for the masses, with special focus on the needs of rural areas. Its activities, named as d-commerce (desi commerce), include both physical and electronic mode involvement. Jagriti is being addressed as ITE(R)S (IT Enabled Rural Services) to emphasize its 'rural' outlook and focus. The project involves setting up of rural information kiosks, called Jagriti e-Sewa kendras, in nodal villages and other viable locations across Punjab.
- **Lokmitra:** Developed by the National Informatics Centre (NIC) in Himachal Pradesh State, in order to make people aware of government policies and programmes, and also providing an interface to interact with various government functionaries and solicit their active and direct contribution in the process of governance. Lokmitra maintains a database with details on public, such as address, contact number, age, driver license, etc. It has a grievance redressal system, clarifies the doubts of citizens on various issues, has an e-mail facility to provide communication, and supports local language. It invites people to share their ideas and provides content. People can buy and sell products online. (www.himachal.nic.in/lokmitra.htm).
- **Bellandur:** Developed by COMPUSOL, it is the India's first ICT enabled Gram Panchayat e-Government solution. Bellandur is situated about 20 km from Bangalore.
- **Janmitra:** Janmitra was launched in March 2002. It is an integrated e-platform that was implemented in

the Jhalawar district in Rajasthan and is replicated in the state of Uttaranchal. All sections and departments of collectorate are connected through Local Area Network (LAN). The main objective of the Jan Mitra project is to provide a single-window facility to citizens to access government work, simplify various government procedures through computerisation and use information and communication technologies (ICT) to establish direct communication between the administration and the people to ensure transparent, accountable and responsive governance and to make the right to information an effective tool in the hands of the rural masses.

- **Lokvani:** Lokvani was conceptualised by District Magistrate, Sitapur in September 2004. The project is a public-private partnership program that was implemented within the Sitapur district (88% rural population and 39% literacy rate) or Uttar Pradesh state. The objective is to “connect” rural citizens to the strategy makers in a seamless way. The project incorporates “right to information” policy and offers services, such as grievances and petitions, land records, tender services, employment services, and information related to government schemes. To ensure transparency, details of developmental works, ration allotment to fair price shop dealers, money sent to Gram Sabhas etc., are made available to people. The most popular service till date has been Online Public Grievance Redressal.

Conclusions:

- The success of these projects demonstrates that there are a number of ways in which ICT is enhancing productivity in rural India – by enabling solution sharing between local people and communities, providing access to practical and vital information related to farming, markets etc.

Challenges to Infrastructure Development in North East Region

- Roads are the underlying foundations for the entire economic development of the North East. The region, for geographic and sometimes strategic reasons has very thin railway network and air service cannot be the means to take care of the humungous transport needs of even one state, forget eight states. Thus how the road network shapes up is more than an integral part of the story of the development of the region, it is also a very key index.
- The North East states conceal some interesting paradoxes. Some of them have excellent demographic characteristics like a high literacy rate and consequent access to education. Yet at the same time they all suffer from high infant mortality as hospital care for the mother and child are few and far between. The region has splendid swathes of forests harbouring massive varieties of fauna and flora. Yet development of the states could mean cutting into those regions, as there are few alternatives to not do so.
- The other issues are of course maintaining of the tribal way of life, key to understanding the diversity of the region. The development imperatives often bring up challenges of how to protect the tribal culture, while at the same time help use modern science and education for the benefit of the region.
- A very important step to instill an integrated understanding of these imperatives that are common for the region has been the government of India’s establishing of a ministry for the development of the north east region. The ministry’s mandate is unique in that it does not focus on a state or a scheme but addresses the full gamut of the needs of the region.
- As India moves on to a high growth trajectory, the way the north east region shapes up will impact a large

percentage of that growth rate.

- The process of development had been rather slow in the North Eastern region for many reasons. The traditional system of self-governance and social customs of livelihood in the NER had remained virtually untouched during the British rule. Creation of rail network for tea growing areas for commercial interests was, perhaps, the only major economic activity in the region. This was coupled with extraction of Petroleum and some Coal Mining in the Assam, Meghalaya and Nagaland belt.
- Partition of the country in 1947 which carved out Bangladesh, hitherto East Bengal, completely isolated the North Eastern region save a slender chicken's neck leading to severe distortion in the socio-economic situation. In effect, the market and the centres of production got separated by a political dividing line which had severe economic repercussion on the livelihood of people along the entire Bangladesh border. All the produce from Agriculture, Horticulture and Mines had, hitherto ready-made markets in Bangladesh, which got cut-off.
- The physical infrastructure includes roads, air-ports, highways, power projects, water supply, urban infrastructure, all of which together hold the key for the growth of this region.
- In the vision NER – 2020 Document of the North East Council five basic deficits were identified. These are
 - i. Basic needs deficit;
 - ii. Infrastructure deficit;
 - iii. Resource Deficit;
 - iv. Deficit of understanding with the rest of the country and;
 - v. Governance deficit
- There is a basic governance issue which is plagued by sixth schedule institutions super-imposed on a democratic Government, the illegal migrants problem and egalitarian set up which abhors any authority.
- What are the major challenges to the growth in the North East Regions? Certainly the poor connectivity with the rest of the country is a challenge. The cost of delivery of services is high due to difficult terrain, dispersed and small habitations; Low financial viability of the projects and inadequate project implementation capability. Bilateral arrangements are not in place for optimum rail and road connectivity via Bangladesh. Above all, there are security concerns with our international neighbours because of which telecom and other infrastructure is not extending fully up to the International border.
- There is scope for critical intervention with accelerated development of connectivity in the Road, Rail, Air and Inland Water Transport sectors. Connectivity via Bangladesh, if agreed to, would be a great leap forward provided investment would also come from the private sector into infrastructure development.
- There is tremendous opportunity of more than 60,000 MW Hydro potential which remains largely untapped. However, the environmental problems will have to be addressed. Potential of mineral wealth, especially coal, lime stone and uranium reserves in Meghalaya is yet to be scientifically exploited. Floriculture, horticulture, organic crops with certification and improvement in paddy productivity are areas which have a multiplier effect. However, the supporting infrastructure is required.
- There is a plan to provide railway connectivity to all the State capitals.
- As regards air connectivity, a few new Greenfield airports have been proposed.

- It must be understood that the working season in the North East is only about 5 months and the heavy monsoon and inclement weather leave a toll on the condition of roads. Unfortunately, the maintenance of roads is a matter which requires far greater attention. It is felt that setting up of a “Maintenance Fund” for the roads is required.
- Inland Water between Dhubri and Pandu-Dibrugarh can provide cargo movement of coal gypsum, tea etc. at a reduced cost. Other routes including development of the Barak River Transport System needs to be further developed.
- The Kaladan River Project envisages a sea route from Kolkata to Sittwe (Myanmar) through Bay of Bengal and traversing 255 Kms upsteam on river Kaladan in Myanmar connecting Mizoram. 62 Kms of highway road is to be built in Myanmar connecting the India border at Mizoram and finally merging with the National Highway-54. If this route is to be built, it will cut the cost of infrastructure tremendously in the North East.
- To conclude, with the help of technology the perceived remoteness of North East States needs to be overcome. Further greater efforts at trade and communication through Bangladesh and Myanmar will help restore the economic prosperity of the North East region. Given the geographical parameters of the North East, a logical direction for economic growth must come from the Look East Policy of the Government of India. It is ultimately the people of the North East who hold the key to progress and development of the region.

Tourism in North Eastern Region

Cultural Diplomacy to Boost Tourism:

- Tourism is a sector that has potential for fast growth. It pushes growth of infrastructure, stimulates cultural activity and leads to improved understanding and better relations between the tourists and the hosts. If managed properly, domestic and international tourism can be among the foremost vehicles for growth and development. Tourism has also become an instrument for sustainable human development.

Tourism in India:

- There has been remarkable growth in the recent years in foreign/domestic tourist arrivals to India due to the various efforts made, including promoting India through the “Incredible India” campaign in overseas markets. It is ranked the 14th best tourist destination for its natural resources and 24th for its cultural resources.

Scale of Tourism in North Eastern Region:

- The Ministry of Tourism calls the North Eastern Region a ‘paradise unexplored’. The north-eastern region has incredible tourism potential. The rich natural beauty, exotic flora and fauna, diversity in ethnicity, culture, language, food habits, dresses etc., serve as invaluable assets for the development of tourism in the region.
- Despite of the current hype about India’s Look East Policy and current high growth trajectory and also despite of the “Incredible India” campaign there has not been remarkable growth in foreign/domestic tourist arrivals to the NER.
- The main reason why tourists, both domestic and foreign, are not attracted to the North-East is that the region is particularly backward in physical, social and cultural infrastructure. The budget provision for tourism is also quite inadequate considering the present low level of development.

- Moreover, although it is high time for us to prepare ourselves to derive the benefits that are likely to emerge from India's Look East Policy which is an important strategic shift in India's vision of the world and its engagement with Southeast Asian neighbours, not much has been done to employ cultural diplomacy as a tool for engagement. Northeast India holds an advantageous position in India's Look East Policy (LEP) since the region provides a key historical and cultural relation with Southeast Asia. The case of the Tai ethnic groups of the region brings to light a historically shared but currently disjointed cultural identity, which link India's Northeast with Southeast Asia. The Tai ethnic groups live in a vast area extending from the south of China, and north of Vietnam to Laos, Thailand, Myanmar and India's Northeast states of Assam, Manipur and Arunachal Pradesh. This is absolutely indicative of the potential for boosting economic ties and cultural tourism with Southeast Asia.
- We may therefore conclude that the main problem facing the tourism industry in the North East is the lack of adequate and reliable tourism infrastructure. Infrastructure development is a fundamental prerequisite for the meaningful involvement of the North Eastern Region in India's Look East Policy and globalisation process. All these will require huge investment; and, therefore it is imperative that adequate fund flow for public investment is assured. We need to formulate a comprehensive strategy for the speedy development of the region and deepen the engagement with the ASEAN countries through cultural diplomacy. Tourism development and infrastructure projects should be taken up on war footing without disturbing the social and cultural identities to the various ethnic groups of the region and also taking into account the natural and cultural landscapes, bio-diversity characteristics and the broader visual context of custom and heritage. Focus should be given to using local resources and architectural styles and traditions.

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