SRIRAM'S IAS

GENERAL STUDIES

Civil Services Mains Exam.-2013

(PAPER-III)

Book No.-I

11A/22; 1st Floor; Old Rajender Nagar;New Delhi -60
Ph. 011-25825591; 42437002; 9811489560
73-75; 1st Floor; Ring Road ;Beside GTB Metro Station
Kingsway Camp;New Delhi.
Ph. 08447273027

Inclusive growth

Inclusive growth basically means, "broad based growth, shared growth, and pro-poor growth". Inclusive growth by its very definition implies an equitable allocation of resources with benefits accessible to every section of the society. Inclusive strategy involves a much greater role of the States, and closer coordination between the Centre and the States, than would be needed for a purely corporate-led growth strategy. This is because most of the policy measures and institutional support required for small and medium entrepreneur- led growth lie in the domain of State Governments and local bodies. The Centre's contributions would lie mainly in creating the appropriate macroeconomic framework, financial sector policies and national level infrastructure.

Inclusive growth has been projected as the strategic pillar in the forthcoming 12thfive year plan. The policy designers are of the opinion that the 'inclusive growth strategy for the 12thfive year plan should be based on the experience of inclusive outcomes of the 11thfive year plan'. The approach to 12thfive year plan titled 'Faster, Sustainable and More Inclusive Growth' defines inclusive growth as: Inclusive growth should result in lower incidence of poverty, universal access to school education including skill and education, better opportunities for wage employment and livelihood, improvement in health outcomes, improvement in provision of basic amenities like water, electricity, roads, sanitation and housing.

Has growth of Indian economy been really inclusive during the last plan or since the last two decades of reforms? This question demands a close empirical investigation.

Since July 1991, Indian economy has witnessed several reforms encompassing all the major sectors of the economy (agriculture, industry, trade, foreign investment, technology, public sector, financial institutions and so on). The main objective of these reforms was to put the Indian economy out of the low level equilibrium trap. These reforms have marked a steady break from the previous policy regime of state controlled and insulated economy. Due to these policies, India saw robust rates of growth of GDP. Since the last decade or so, GDP and Investment growth have recorded historical increase in India. However, in the last two years, there is a sharp decline in growth rate due to the economic crisis at the global level. But the economic survey of 2013 predicts that the recovery is on the way as far as growth is concerned. Who is benefiting from this higher growth trajectory is the other important question. The questions that arise are:Can high growth provide better and secure employment to the common people? Has this growth made health and educational facilities more accessible to the common people? Has this high growth rate been able to reduce real poverty? All these issues are closely related to the title of 11th and the current 12thfive year plan (2012-17). The policy designers initially believed that generally higher GDP economic growth will 'trickle down' to lower levels. But in India, this 'trickle down' has not worked. Therefore, we need special interventions in terms of redesigning the growth pattern and also inclusive programmes to address the needs of the excluded.

'Inclusive growth' as a strategy of economic development received attention owing to a rising concern that the benefits of economic growth have not been equitably shared. Growth is inclusive when it creates economic opportunities along with ensuring equal access to them. Apart from addressing the issue of inequality, the inclusive growth may also make the poverty reduction efforts more effective by explicitly creating productive economic opportunities for the

Insurene → showing thought for future
Immensurate → corresponding or in proportion

poor and vulnerable sections of the society. The inclusive growth by encompassing the hitherto excluded population can bring in several other benefits as well to the economy. The concept "Inclusion" should be seen as a process of including the excluded as agents whose participation is essential in the very design of the development process, and not simply as welfare targets of development programmes (Planning Commission, 2007).

diff btw inclusive growth & direct income dist.

Inclusive growth refers to both the pace and the pattern of the economic growth. The literature on the subject draws fine distinction between direct income redistribution or shared growth and inclusive growth. The inclusive growth approach takes a longer term perspective as the focus is on productive employment rather than on direct income redistribution, as a means of increasing incomes for excluded groups. Inclusive growth is, therefore, supposed to be inherently sustainable as distinct from income distribution schemes which can in the short run reduce the disparities, between the poorest and the rest, which may have arisen on account of policies intended to jumpstart growth. While income distribution schemes can allow people to benefit from economic growth in the short run, inclusive growth allows people to "contribute to and benefit from economic growth".

The current policy objective of inclusive growth with stability given in the 12 FYP requires that three be productive and structural growth along with environmental security.

Need for inclusive growth

There are prudential, political and moral reasons. (1) Practically, we need to build an inclusive society because human resource needs to be developed. Education, health and skills for all, will mean huge employment, productivity, innovation, exports and so on. (2) Politically, if there is no inclusive growth, conflicts will arise on a mass basis and could even turn into extremist movements like naxalism and communalism which can strike a body blow to the integrity of the nation. At any rate, Constitution of India promises inclusive growth in the Preamble and the DPSPs and so the nation owes it to all. (3) Morally, it is inhuman to leave millions weak and destitute while the nation is growth at an impressive rate.

Challenges of achieving inclusive growth

Achievement of inclusiveness is a challenge in the following way

- The number of people to be targeted being so large- hundreds of millions, the effort has to be commensurate
- Fiscal, human and administrative resources necessary are huge
- Institutional mechanisms for federal coordination, PPPs, strong LSG bodies(PRIs and Nagarapalikas) need to be developed
- Decentralization is crucial as inclusive governance is an integral part of inclusive growth
- Suitable laws that enable people-centered growth process- be it in land acquisition, environmental field, R&R,- are required

Poverty and recent achievements

The record in recent years of the anti-poverty strategies- the heart of inclusive growth- is encouraging. The percentage of the population below the official poverty line has been falling but even as that happens, the numbers below the poverty line remain large. According to the latest official estimates of poverty based on the Tendulkar Committee poverty line, as many as 29.8 per cent of the population, that is, 350 million people were below the poverty line in 2009–10. Questions have been raised about the appropriateness of the Tendulkar poverty line which corresponds to a family consumption level of `3,900 per month in rural areas and `4,800 per month in urban areas (in both cases for a family of five). There is no doubt that the Tendulkar Committee poverty line represents a very low level of consumption and the scale of poverty even on this basis is substantial. An Expert committee under Dr. C. Rangarajan has been set up to review all issues related to the poverty line keeping in view international practices.(Read ahead for detailed examination of issues)

It is well established that the percentage of the population in poverty has been falling consistently but the rate of decline was too slow. The rate of decline in poverty in the period 2004–05 to 2009–10 was 1.5 percentage points per year, which is twice the rate of decline of 0.74 percentage points per year observed between 1993–94 and 2004–05. Normally, large sample surveys used for official estimates of poverty are conducted every five years, but because 2009–10 was a drought year, the National Sample Survey Office (NSSO) felt that it would tend to overstate poverty and it was therefore decided to advance the next large sample survey to 2011–12. The results of this survey – NSSO 68th Round details came out in 2013 June and are discussed ahead). NSSO 68th Round findings on poverty, consumption and inequality in consumption are: Poorest of poor in the country survive on barely Rs 17 per day in villages and Rs 23 a day in cities. According to the data, which relates to 2011-12 (July-June), five per cent population on the bottom rung had an average monthly per capita expenditure (MCPE) of Rs 521.44 in rural areas and Rs 700.50 in urban areas. On the other end of the spectrum, top five per cent of the population had an MPCE of Rs 4,481 in rural areas and Rs 10,282 in urban areas.
The National Sample Survey Office's (NSSO) 68th round of survey is based on samples consisting of 7,496 villages in rural India and 5,263 urban blocks except some remote areas, during July 2011-June 2012, the release said.On an average on the all-India basis, MPCE was around Rs 1,430 for rural India and about Rs 2,630 for urban India.Thus average urban MPCE was about 84 per cent higher than average rural MPCE for the country as a whole, though there were wide variations in this differential across states".

Inter-group Equality

Inclusiveness is not just about bringing those below an official fixed poverty line to a level above it. It is also about a growth process which is seen to be 'fair' by different socio-economic groups that constitute our society. The poor are certainly one target group, but inclusiveness must also embrace the concern of other groups such as the Scheduled Castes (SCs), Scheduled Tribes (STs), Other Back- ward Classes (OBCs), Minorities, the differently abled and other marginalised groups. Women can also be viewed as a disadvantaged group for this purpose. These distinct 'identity groups' are sometimes correlated with income slabs the SCs and STs, for example, are in the lower income category and all poverty alleviation strategies help them directly. Women on the other hand span the entire income spectrum, but there are gender-based issues of inclusiveness that are relevant all along the spectrum.

Inclusiveness from a group perspective goes beyond a poverty reduction perspective and includes consideration of the status of the group as a whole relative to the general population. For example, narrowing the gap between the SCs or STs and the general population must be part of any reasonable definition of inclusiveness, and this is quite distinct from the concern with poverty, or inequality, though the two are related.

Balance regional development (BRD) and Inclusive growth

Another aspect of inclusiveness relates to whether all States, and indeed all regions, are seen to benefit from the growth process. The regional dimension has grown in importance in recent years. On the positive side, as the PM mentioned in the 57th NDC speech(See ahead), many of the erstwhile backward States have begun to show significant improvement in growth performance and the variation in growth rates across States has narrowed. However, both the better performing and other States are increasingly concerned about their backward regions, or districts, which may not share the general improvement in living standards experienced elsewhere. Many of these districts have unique characteristics including high concentration of tribal population in forested areas, or Minorities in urban areas. Some districts are also affected by left wing extremism, making the task of development much more difficult.

In the Twelfth Plan, govt aims pay special attention to the scope for accelerating growth in the States that are lagging behind. This will require strengthening of States' own capacities to plan, to implement and to bring greater synergies within their own administration and with the Central Government. As a first step, the Planning Commission is working with it's counterpart Planning Boards and Planning Departments in all State Governments to improve their capabilities. An important constraint on the growth of backward regions in the country is the poor state of infrastructure, especially road connectivity, schools and health facilities and the availability of electricity, all of which combine to hold back development. Improvement in infrastructure must therefore be an important component of any region- ally inclusive development strategy.

The efforts of the govt in this regard are

- FC criteria
- PC transfers
- special category states
- BRGF
- Green revolution in the eastern region
- North eastern region Vision 2020

Special focus on North east

Holding that infrastructure deficiency in North-East is a "major concern", Prime Minister Manmohan Singh in 2008 announced linking of all state capitals there by rail to ensure better connectivity and earmarking of Rs 31,000 crores to improve roads.

Releasing 'Vision Document 2020 for the North-Eastern Region' he said besides developing rail and air connectivity, the government is also committed to improve road facilities in the Eleventh Plan. For improving air connectivity, he announced that a green-field airport will come up at Itanagar to connect the region with the rest of the country. He said all villages on the Arunachal Pradesh border will soon be electrified at a cost of Rs 550 crore. The Vision Document, approved by the North-East Council, also lays stress on promoting education in the region. Govt is to set up a NTFT and NIT at Shillong.

Green Revolution in Eastern India

The programme gets Rs 1,000 crore in his Budget for 2013-14.It was during Union Budget 2010-11 that for the first time, separate funds were allocated for the eastern parts of the country. The scheme, which comes under Rashtriya Krishi Vikas Yojana, includes Assam, Bihar, Jharkhand, eastern UP, Chhattisgarh, Odisha and West Bengal. Rice was a priority crop under the scheme. The other areas of focus were asset-building activities such as water management, construction of farm ponds and repair of irrigation channels. The main motive behind this project is to ensure food security. The idea is to tap the eastern region for food grains and pulses. The Centre has also allocated Rs 500 crore for encouraging crop diversification to promote technological innovation. The original Green Revolution States face the problem of stagnating yields and over-exploitation of water resources. The answer lies in crop diversification.

BRGF

The Backward Regions Grant Fund Programme (BRGF), launched in 2007, signifies a new approach to addressing persistent regional imbalances in development. The [illegible]mme subsumed the Rashtriya Sama Vikas Yojana (RSVY).The BRGF Programme cover[illegible]icts in 27 States, of which 232 districts fall under the purview of Parts IX and [illegible] the Constitution dealing with the Panchayats and the Municipalities, respectively. The [illegible]ng 18 districts are covered by other local government structures, such as Autonomous District and Regional Councils under the Sixth Schedule of the Constitution and state specific arrangements as in the case of Nagaland and the hill areas of Manipur.

Objectives

The Backward Regions Grant Fund is designed to redress regional imbalances in development by way of providing financial resources for supplementing and converging existing developmental inflows into the identified backward districts, so as to:

- Bridge critical gaps in local infrastructure and other development requirements that are not being adequately met through existing inflows,
- Strengthen, to this end, Panchayat and Municipality level governance with more appropriate capacity building, to facilitate participatory planning, decision making, implementation and monitoring, to reflect local felt needs,
- Provide professional support to local bodies for planning, implementation and monitoring their plans,
- Improve the performance and delivery of critical functions assigned to Panchayats, and counter possible efficiency and equity losses on account of inadequate local capacity.

The BRGF programme represents a major shift in approach from top-down plans to participative plans prepared from the grassroots level upwards. The guidelines of the Programme entrust the central role in planning and implementation of the programme to Panchayats in rural areas, municipalities in urban areas and District Planning Committees at the district level constituted in accordance with Article 243 ZD of the Constitution to consolidate the plans of the Panchayats and Municipalities into the draft district plan. Special provisions have been made in the guidelines for those districts in J&K, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura which do not have Panchayats, where village level bodies and institutions mandated under other frameworks such as the Sixth Schedule are to plan and implement the programme. The conviction that drives this new locally driven approach is that grassroots level democratic institutions know best the dimensions of poverty in their areas and are, therefore, best placed to undertake individually small, but overall, significant local interventions to sustainably tackle local poverty alleviation. There are three features of BRGF that make it truly unique among central initiatives to combat backwardness. First, the approach of putting the Panchayats and the Municipalities at the centre stage of planning and implementation. Second, no Central funding stream is as 'untied' as the BRGF – the funds can be applied to any preference of the Panchayat/ Municipality, so long as it fills a development gap and the identification of the work is decided with people's participation. Third, no other programme spends as much funds, nearly 11 percent of the total allocation, for capacity building and staff provisioning.

Creation of capacity for effective planning at district and lower level is a key-pre-requisite to participative planning. Hence the BRGF contains a specific component for the capacity building of Panchayati Raj Institutions of Rs. 250 crore per year. A framework that looks upon capacity building in a very comprehensive fashion, encompassing training, handholding and providing ongoing support to Panchayat elected representatives has been developed for States to follow, while undertaking eapacity building.

The planning process under BRGF is based on the guidelines for district planning issued by the Planning Commission. The process of integrated development commences with each district undertaking a diagnostic study of its backwardness and a baseline survey by enlisting professional planning support, to be followed by a well-conceived participatory district development perspective plan to address this backwardness during the period of the Eleventh Five Year Plan. Such plans would integrate multiple programmes that are in operation in the district concerned and, therefore, address backwardness through a combination of resources that flow to the district. District Plans received from the various States indicate that the untied fund allocated to the districts are generally being used for filling infrastructural gaps in drinking water, connectivity, health, education, social sectors, electrification, etc. The basket of works taken up includes construction of school buildings /class rooms, health sub-centres, drinking water facility, sanitation facilities, anganwadi buildings, Panchayat buildings, irrigation tanks/channels, street lights, link roads, culverts, soil and water conservation measures, etc. The BRGF has adopted the National Capability Building Framework (the NCBF) which envisages strengthening of institutional arrangements, including the infrastructure as well as software support for capacity building of elected representatives, the functionaries and other stakeholders of PRIs and thereby improving the vigour of grassroots level democracy.

The finance ministry in May 2013 set up an expert committee under the chairmanship of Chief Economic Adviser Raghuram Rajan to look into a composite development index of states for allocation of money under the Backward Region Grant Fund (BRGF). Rajan committee would consider criteria such as the state's positing in national per capita income and human development indicators to evolve a composite index. The panel would have five members but can invite experts as special invitees for deliberations. Finance Mnister Chidambaram in 2013-14 Budget speech said that the criteria for determining backwardness under BRGF are based on terrain, density of population and length of international borders. "It may be more relevant to use a measure like the distance of the state from the national average under criteria such as per capita income, literacy and other human development indicators."

PURA

Provision of Urban Amenities in Rural Areas (PURA) is a Central Sector scheme re-launched by Ministry of Rural Development (MoRD), Government of India during remaining period of the XI Plan with support from Department of Economic Affairs and the technical assistance of Asian Development Bank. MoRD is implementing the PURA scheme under a Public Private Partnership (PPP) framework between Gram Panchayat(s) and private sector partners with active support of the state governments.

The scheme envisages development of rural infrastructure and is the first attempt at delivering a basket of infrastructure and amenities through PPP in the rural areas.
The primary objectives of the scheme are the provision of livelihood opportunities and urban amenities in rural areas to bridge the rural – urban divide.

Core funding shall be sourced from the Central Sector scheme of PURA and complemented by additional support through convergence of different Central Government schemes. The private sector shall also bring into the project its share of investment besides operational expertise. The scheme would be implemented and managed by the private sector on considerations of economic viability but designed in a manner whereby it is fully aligned with the overall objective of rural development.

Inclusiveness and Inequality

Inclusiveness also means greater attention to income inequality. The extent of inequality is measured by indices such as the Gini coefficient, which provide a measure of the inequality in the distribution on a whole, or by measures that focus on particular segments such as the ratio of consumption of the top 10 per cent or 20 per cent of the population to that of the bottom 10 per cent or 20 per cent of the population, or in terms of rural–urban, such as the ratio of mean consumption in urban versus rural areas. An aspect of inequality that has come sharply into focus in industrialised countries, in the wake of the financial crisis, is the problem of extreme concentration of income at the very top, that is, the top 1 per cent and this concern is also reflected in the public debate in India.

Inequality must be kept within tolerable limits (Art.38, DPSP). Some increase in inequality in a developing country during a period of rapid growth and transformation may be unavoidable and it may even be tolerated if it is accompanied by sufficiently rapid improvement in the living standards of the poor. However, an increase in inequality with little or no improvement in the living standards of the poor is a recipe for social tensions. As a society, we therefore need to move as rapidly as possible to the ideal of giving every child in India a fair opportunity in life, which means assuring every child access to good health and quality education.

India, HDI and IHDI: Human Development Report 2013

Over the past two decades, India has seen a big improvement in its human development index score, from 0.41 in 1990 to 0.554 in 2012, according to the latest report by the United Nations Development Program (2013). However, despite this improvement, India overtook only four of the countries positioned above it in 1990: Swaziland, Kenya, Cameroon and Congo. The rise in India's HDI score is partly thanks to it starting from a low base (countries with high HDI scores have limited room for improvement), and also a rapid increase in per capita gross national income.

Despite the improvement, India remains in the "medium development" category, 136th in a list of 186 countries that stretches from Norway at the top of the "very high human development" category to Niger at the bottom of the "low human development" group. In 2011, India was 134th in the list.

Since 2011, the UNDP report has included an inequality adjusted HDI, also known as IHDI, which aims to capture the effects of inequality on human development. If there is no inequality the IHDI equals the HDI, while a big difference between the readings means greater inequality. India's IHDI score was nearly 30% lower than its HDI reading.

The most glaring inequality in India is in education, the report says, even though it commends the introduction of the Right to Education Act.

Success stories, such as China, invariably show growth in investment in health and education, with a special focus on rural areas to "enable poor people to participate in growth," the UNDP report says.

India also fared poorly on life expectancy and gender equality.

Inclusiveness as Empowerment

Finally, inclusiveness is not just about ensuring a broad-based flow of benefits or economic opportunities, it is also about empowerment and participation. It is a measure of the success we have achieved in building a participatory democracy that people are no longer prepared to be passive recipients of benefits doled out by the Government. They are slowly beginning to demand these benefits and opportunities as rights and they also want a say in how they are administered. This brings to the fore issues of governance, accountability and peoples participation to much greater extent than before. This also covers areas like access to information about government schemes, knowledge of the relevant laws and how to access justice. The growing concern with governance has also focused attention on corruption. How to tackle corruption is now at the centre stage of policy debates.

Empowerment refers to increasing the political, social, educational, gender, or economic strength of individuals and communities. Sociological empowerment often addresses members of groups that social discrimination processes have excluded from decision-making processes through - for example - discrimination based on caste, disability, race, ethnicity, religion, or gender. India being a welfare state has many plans and programmes for the empowerment of the marginalised groups which is the hallmark of a strategy to achieve an inclusive strategy. (The initiatives are discussed in various parts of the Study Material

AP

Andhra Pradesh Scheduled Caste Sub-Plan/Scheduled Tribe Sub-Plan Planning, Allocation and Utilization of Financial Resources Act 2012

Andhra Pradesh made history In December by passing a bill to give statutory status to the scheduled castes and scheduled tribe sub-plans, ensuring allocation of funds to these sections in proportion to their population. The law will also ensure total utilization of funds allocated to these sections in the planned budget. The state assembly passed Andhra Pradesh Scheduled Caste Sub-Plan/Scheduled Tribe Sub-Plan Planning, Allocation and Utilization of Financial Resources Bill 2012, making it the first state in the country to have such legislation. The bill was brought as the funds were either not being utilized or diverted for other purposes.

Inclusiveness through Employment Programmes

The 12th FYP says the following about the Mgnrega : One of the most important interventions for fostering inclusion during Eleventh Plan was the MGNREGA. While its achievements in ameliorating poverty and preventing acute distress during times of drought have been recorded and appreciated, there are also some complaints against MGNREGA, primarily on the grounds that it is a dole, involving huge expenditures that could have been spent more productively. There are also complaints that it is leading to increase in wages of agricultural labour and construction workers. There is also evidence that wherever land productivity has improved and greater water security been delivered, small and marginal farmers working in MGNREGA sites have reverted back to farming and allied livelihoods. There is also evidence that MGNREGA is enabling crop diversification, particularly into horticulture, wherever it has adequately converged with schemes of Agricultural Departments. An important lesson from this experience is that it is the quality of assets created, which will determine whether MGNREGA can go beyond the safety net to become a springboard for entrepreneurship, even at the lowest income levels.

Accelerated growth in recent years has yielded distinct benefits to many and the prosperity which this has generated is visible to all, raising the expectations of all sections of the population, and creating a demand for a fair share of the benefits of growth.

Eleventh Plan Achievements on Inclusive Growth

The following are some important indicators showing the extent to which the Eleventh Plan succeeded in fulfilling the objective of inclusive growth. (In some cases, where the data relate to the NSSO surveys, the time period for comparison is before and after 2004–05.) Aspirants are advised to insert the latest data , for example, NSSO 68th large round data revealed in 2013 June)

- GDP growth in the Eleventh Plan 2007–08 to 2011–12 was 8 per cent compared with 7.6 per cent in the Tenth Plan (2002–03 to 2006–07) and only 5.7 per cent in the Ninth Plan (1997–98 to 2001–02). The growth rate of 7.9 per cent in the Eleventh Plan period is one of the highest of any country in that period which saw two global crises.
- Agricultural GDP growth accelerated in the Eleventh Plan, to an average rate of 3.7 per cent, compared with 2.4 per cent in the Tenth Plan, and 2.5 per cent in the Ninth Plan.
- The percentage of the population below the poverty line declined at the rate of 1.5 percentage points (ppt) per year in the period 2004–05 to 2009–10, twice the rate at which it declined in the previous period 1993–94 to 2004–05. (When the data for the latest NSSO survey for 2011–12 become available, it is likely that the rate of decline may be close to 2 ppt per year. Indeed!!!!)
- The rate of growth of real consumption per capita in rural areas in the period 2004–05 to 2011–12 was 3.4 per cent per year which was four times the rate in the previous period 1993–94 to 2004–05.
- The rate of unemployment declined from 8.2 per cent in 2004–05 to 6.6 per cent in 2009–10 reversing the trend observed in the earlier period when it had actually increased from 6.1 per cent in 1993–94 to 8.2 per cent in 2004–05.
- Rural real wages increased 6.8 per cent per year in the Eleventh Plan (2007–08 to 2011–12) compared to an average 1.1 per cent per year in the previous decade, led largely by the government's rural policies and initiatives.
- Complete immunization rate increased by 2.1 ppt per year between 2002–04 and 2007–08, compared to a 1.7 ppt fall per year between 1998–99 and 2002–04. Similarly, institutional deliveries increased by 1.6 ppt per year between 2002–04 and 2007–08 higher than the 1.3 ppt increase per year between 1998–99 and 2002–04.
- Net enrolment rate at the primary level rose to a near universal 98.3 per cent in 2009–10. Dropout rate (classes I–VIII) also showed improvements, falling 1.7 ppt per year between 2003–04 and 2009–10, which was twice the 0.8 ppt fall between 1998–99 and 2003–04.

Ending of gender based inequities, discrimination and all forms of violence against girls and women is being accorded overriding priority in the Twelfth Plan. This is fundamental to enabling women to participate fully in development processes and in fulfilling their social, economic, civil and political rights, for more inclusive growth.

Environmental Sustainability

While striving for faster and more inclusive growth, the Twelfth Plan must also pay attention to the problem of sustainability. No development process can afford to neglect the environmental consequences of economic activity, or allow unsustainable depletion and deterioration of natural resources. Unfortunately, the experience of development in many countries, and our own past experience in some respects, suggests that this can easily happen unless appropriate corrective steps are taken at early stages. The Twelfth Plan must devise a strategy of development which effectively reconciles the objective of development with the objective of protecting the environment.

Development cannot take place without additional energy and the energy requirement of development will have to be reconciled with the objective of protection of environment. The economy depends heavily on coal and hydro power to meet its energy needs and the development of each of these energy sources involves potential trade-offs with conservation of forests and the objective of avoiding displacement of people. We need to manage these conflicting objectives more efficiently, with adequate compensation for those dispossessed and appropriate remedial steps to correct for loss of forest cover where this is unavoidable. Nuclear energy is another important energy source for the country, and has the greatest potential over the next 20 years, of providing a substitute for coal-based electricity. However, here too environmental and safety issues have arisen, especially after the Fukushima accident. These concerns are being addressed.

The achievement of environmental sustainability will impact the life of communities in several dimensions. It will require the need development of new energy efficient practices in urban housing and transport to contain the growth in the demand for energy. It would mean use of far more energy efficient technologies in coal-based electricity generation such as the introduction of super critical and ultra super critical boilers. It would require active promotion of energy efficiency in industries, farms and offices, and the promotion of more energy efficient appliances through policies of branding and mandatory standards. Transport policies and related technologies for more energy efficient vehicles will need to be developed and adopted.

The issue of sustainability also has a global dimension because of the threat of climate change caused by the accumulation of carbon dioxide and other Greenhouse Gases (GHG) in the atmosphere due to human activity. Since GHG emission in any country accelerates the process of global warming, this is obviously an area where a global cooperative solution is needed. No country will have sufficient incentive to contain its own emissions unless it is part of a global compact. Such a compact in turn is possible only if there is a fair distribution of the bur- den. Developing countries have consistently argued that since it is the industrialised countries that have historically contributed the bulk of the accumulated stock of GHG, and are also the most able to pay, they must bear burden of global mitigation and adjustment. India is participating in the ongoing inter- national negotiations under the UN Framework Convention on Climate Change, but progress thus far has been minimal.

We cannot, however, abstain from taking action to deal with climate change until an international solution is found. It is known that India will be one of the countries most severely affected if global warming proceeds unchecked and as such appropriate domestic action is necessary. A National Action Plan for climate change has been evolved with eight component Missions. Implementation of these missions must be an integral part of the Twelfth Plan. Policies should be closely monitored to ensure that we achieve the stated objective of reducing the emissions intensity of our GDP by 20 per cent to 25 per cent between 2005 and 2020.

Resolving the conflict between energy and the environment is not without cost. It involves additional upfront costs both of mitigating the adverse impact on the environment and of switching to more expensive renewable energy sources. These costs must be built into the cost and the pricing of the energy produced. The reluctance to bear these costs arises largely because the cost of environmental damage is not properly measured. It is only when this is done that the cost of avoiding such damage can be compared with the environmental benefits to reach a rational decision on whether the costs are worth it. Part of the problem is that the conventional ways of measuring GDP in terms of production do not take account of environmental damage caused by production of certain goods which should prop- erly be reflected as a subtraction from GDP. Only if GDP is adjusted in this way for environmental costs that growth of adjusted GDP can be called a measure of the increase in total production in the economy. Recognising this problem, the Planning Commission has commissioned an Expert Group under Professor Partha Dasgupta to prepare a template for estimating green national accounts which would measure national production while allowing for negative effects on national resources. In the aftermath of recent disaster in Uttarakhand, the State government decided to have Green Audit – similar to the Green GDP concept(July 2013)

The capabilities we need to develop to achieve the objective of faster, more inclusive and sustainable growth are to be discussed: human capabilities, which are in many ways the most important; institutional capabilities and the development of infrastructure which is a general capability enhancer for all agents. Both the Central and State Governments have a role to play in developing these capabilities and the Twelfth Plan at the Central and State should accord high importance to this effort.

The development of human capabilities must be the first priority as proper development of human capabilities will also ensure that our growth is more inclusive in the sense that the marginalised and disadvantaged sections of our society will be more able to access the opportunities thrown up by the growth process.

The most fundamental of all human capabilities is life itself and the steady rise in life expectation in the country suggests that significant progress has been made in this dimension. Life expectancy which was only 32 years at the time of Independence is now 67 years. In other words, every Indian can expect to live twice as long as was the case at Independence! Nevertheless, the level of life expectancy in India remains lower than in many emerging market econ- omies and it is appropriate to plan for significant further improvements in this important dimension.

The infant mortality rate (IMR) is another dimension of human capability where we are making progress. IMR fell from 80 in 1991 to 66 in 2001 and at a faster rate thereafter to 47 in 2010. The rate of decline was 14 in the first period and 19 in the sec- ond period. Nevertheless, the level of IMR remains high and we need to do much better for our children. We must strive to bring the IMR down to 28 by the end of the Twelfth Plan. Maternal mortality rates (MMRs) are another indication of weakness in our performance. MMR has been falling over time, thanks to the initiatives for promoting institutional deliveries under the NRHM. The percentage of women giving birth in institutions with the benefit of skilled birth attendants has increased from 53 per cent in 2005 to 73 per cent in 2009. We need to do even better, and the Twelfth Plan must bring MMR down to 1 per 1,000 by the end of the Plan period.

While there has been progress in the dimensions discussed above, the decline in the child sex ratio rings an urgent alarm. This is an area of grave concern since it implies that society is denying life to female children, and increasingly resorting to female foeticide. The spread of diagnostic and medical facilities has paradoxically actually worsened the situation, as the falling child sex rate is being seen in the more developed areas and cities.

Education

India has a young population, and consequently, the labour force, which is expected to decline in most developed countries and even in China, is expected to increase over the next 20 years. This 'demographic dividend' can add to our growth potential through its impact on the supply of labour and also, via the falling dependency ratio, on the rate of domestic savings. Besides, a young population brings with it the aspirations and the impatience of youth, which in turn can become strong drivers for bringing about change and innovation. To reap this demographic dividend we must ensure that our younger citizens come into the labour force with higher levels of education and the skills needed to support rapid growth. The SSA has brought us close to the target of universalisation of primary education and the Right to Education Act (RTE) 2009 makes eight years of elementary education a fundamental right for all the children. The MDM Scheme has ensured that retention in schools has improved greatly. However, the learning outcomes for a majority of children continue to be disappointing. Addressing the quality issue in our schools is critical for the effective development of human capabilities and for achieving the objective of equality of opportunities. The quality of teachers and, even more important, their motivation and accountability will need to be improved. Many of the children who are presently in school are first-generation learners, and these children need supplementary instruction. This is not easy due to shortage of qualified teachers in many schools across the country. New and innovative approaches such as multigrade learning, which has been successfully tried in Tamil Nadu, could be adopted in such cases.

The success of the SSA has put pressure on expanding the capacity of secondary schools and the Rashtriya Madhyamik Shiksha Abhiyan (RMSA) addresses this issue. Although there is considerable focus on providing secondary school access, the dropout rates between elementary and secondary schools continue to be high, and between the secondary and post-secondary stage they are even higher. This is a particularly serious problem for girls, who have to travel longer distances to attend second- ary schools. Curricular and examination reforms in secondary schooling would receive special attention aimed at fostering critical thinking and analytical skills, and preparing students for further education. All this requires innovative approaches, some of which are already in evidence in certain States.

The last decade has also seen a huge increase in the demand for higher education and this is expected to increase further as more children complete school and more and more jobs are seen to require higher- level qualifications. However, our higher education institutions also suffer from problems of quality. Too many of our universities are producing graduates in subjects that are not required by the changing job market, and the quality is also not what it should be. Higher education policy has to be driven by three 'E's:' expansion, equity and excellence. Of these, the third E, 'excellence', is the most difficult to achieve. India cannot hope to be competitive in an increasingly knowledge driven world if our higher education institutions do not come up to the high standards of excellence needed to be able to be glob- ally competitive. Not even one Indian university figures in the latest list of the top 200 universities in the world. We should work towards ensuring that there are at least five by the end of the Twelfth Plan. For this, universities at the top of the quality hierarchy should be identified and generously supported so that they can reach the top league. Centres of excellence within existing universities should be created. A special initiative should be launched to attract high calibre faculty from around the world on non-permanent teaching assignments. All these initiatives should be pooled into an India Excellence Initiative in the Twelfth Plan.

Skill Development

The Skill Development Mission is being launched to skill at least 50 million individuals by the end of the Twelfth Plan. Skill development programmes in the past have been run mainly by the government, with insufficient connection with market demand. To ensure that skills match demand, special efforts are needed to ensure that employers and enterprises play an integral role in the conception and implementation of vocational training programmes, including managing Industrial Training Institutes (ITIs) and in the development of faculty. An enabling framework is needed that would attract private investment in Vocational Training through Public–Private Partnership (PPP). We should try to optimise on the respective strengths of the public and private sector entities engaged in skill development. Mobilising the required investments, setting up first rate ITIs, ensuring efficiency in operations and management and enabling post-training employment will be the primary responsibilities of private sector entities while the government will provide the enabling framework and the requisite financial sup- port especially in respect of SC, ST, Minorities and differently abled persons and other deprived sections of society.

12th Plan and Skills

The foundations of growth in any economy are always based on the skills and knowledge of the human resources. This is a critical element to addressing the challenges and opportunities for growth in this highly competitive and globalised world. As India moves ra[illegible]wards achieving ambitious economic and social targets, engaging the human resou[illegible] skills development will be critical for ensuring success as a knowledge economy.

India has seen a rapid growth in the last few years. This growth cannot be called inclusive as it has not been able to bring about development at the grassroot levels. The overall skill gap in the country is estimated at over 10 million per year and growing.

For India the challenge magnifies due to unprecedented issues of scalability i.e. reaching out to 500 million by 2022 coupled with multiple challenges in implementation.
12th Plan aims to increase the percentage of the workforce which has received formal skills through vocational education and training from about 12.0 per cent at present to 25.0 per cent by the end of the Twelfth Plan. This would mean that about 70 million more people have to be imparted formal skills in the next five years. Priorities are

- Accreditation and certification system need revamp
- Reorientation of curriculum on a continuous basis to make it responsive to the industry needs
- reach out to the millions of dropouts/disadvantaged ones and
- resolve the problem of unemployability of even the so called "trained" by continuous retraining
- Disseminating information about the availability and effectiveness of training programs is crucial. The role Employment Exchanges, NCVT and the SCVTs could play is dissemination of information on the nature and quality of training particularly with respect to enrollment, institutional capacity, completion information and graduate follow-up data from all registered vocational institutions. This will enable the government and the stakeholders to see whether the system is responding to employers' needs and devise policies accordingly. (National Council for Vocational Training (NCVT) State Councils for Vocational Trainings (SCVTs))
- meet the need for establishing flexible learning pathways integrated to schooling on one end and higher education on the other through National Vocational Education Qualification Framework (NVEQF). This would mean addressing the issues of vocationalisation of school education through creative means.
- Imparting soft skills alongside has become highly relevant and has global precedence.
- The system of Industrial Training Institutes and Industrial Training Centres need significant expansion and a lease of fresh energy to skill in numbers required.
- Public-Private Partnerships in financing, service delivery, and provision of workspaces and training of trainers are being promoted but a robust mechanism to regularly assess them is clearly found wanting.

The issue of Skill Development crucially depends on other issues like status of literacy at all three levels, general state of employment, state of labor markets, functioning of labour intensive sectors and industries, and appropriateness and strength of social program.
Even a cursory glance on these parameters confirms the level of challenges that daunt pursuit of skill development of the nation's workforce. Therefore, an integrated approach is a must and all departments have to join hands and support the ongoing policy efforts. Additionally, since states lie at the forefront of implementation of these policies, they must not allow federal tensions to hamper the progress of their respective Skill Development Missions.
Skill development has been accorded a very high priority during the 12th Five Year Plan: number of Industrial Training Institutes (ITIs) in the country had increased two fold during the last five years with the addition of 4,000 more institutes and capacities have been increased to train 13.75 lakh persons annually to cater to the expanding workforce in the country. National Skill Development Corporation has also been actively partnering private sector players to further augment the process of skilling.

NSDA was set up in 2013.

NSDA

In June 2013, Government constituted the National Skill Development Agency (NSDA) by subsuming the Prime Minister's National Council on Skill Development (PMNCSD), the National Skill Development Coordination Board (NSDCB) and the Office of the Adviser to the PM on Skill Development.

The NSDA will coordinate and harmonize the skill development efforts of the Government of India and the private sector to achieve the skilling targets of the 12th Plan and beyond. It will endeavour to bridge the social, regional, gender and economic divide by ensuring that the skilling needs of the disadvantaged and marginalized groups like SCs, STs, OBCs, minorities, women and differently-abled persons are taken care of through the various skill development programmes.

While the Central Ministries and National Skill Development Corporation (NSDC) will continue to implement schemes in their remit, the NSDA will develop and monitor an overarching framework for skill development, anchor the National Skills Qualifications Framework (NSQF) and facilitate the setting-up of professional certifying bodies in addition to the existing ones.

NSDA will be an autonomous body chaired by a person of the rank and status of a Cabinet Minister supported by a Director General and other support staff.

Community colleges
Faced with the task of skilling 500 million youth, India is implementing the US concept of community colleges to ensure that its workforce is trained to meet newer challenges. Visualizing skill development to be an integral part of the country's education system, India has embarked to develop community colleges. India-US Higher Education Dialogue includes this as a priority(June 2013).
In the United States, community colleges (once commonly called junior colleges) are primarily two-year public institutions of higher education. After graduating from a community college, some students transfer to a university or liberal arts college for two to three years to complete a

bachelor's degree, while others enter the workforce. Community colleges are often geared toward local students and local needs. Students who could not afford campus or off-site housing at a four-year college, or for other reasons cannot relocate, can attend courses while staying in their local community (though some colleges do offer student housing). Also, community colleges can work with local businesses to develop customized training geared toward local needs, whereas a four-year institution generally focuses on state-wide or national needs.

Nutrition

Poor learning outcomes in our schools are partly because of poor quality of teaching but they are also partly due to high incidence of child malnutrition, which reduces learning ability. India has had the largest and the longest running child development programme in the world in the form of ICDS, but the problem of malnutrition remains large. Latest data is not available on malnutrition. The latest data on child malnutrition are from the National Family Health Survey (NFHS- 3) conducted in the period 2005–07 which pre-dates the Eleventh Plan. The full impact of the Eleventh Plan programmes on this aspect of human capability is therefore not yet known. Surveys undertaken by the State Governments seem to suggest that mal- nutrition has fallen in many States. The next Annual Health Survey for 2012–13 will include data on mal- nutrition and these data will provide a reliable basis for assessing what has happened since NFHS-3. Meanwhile, the ICDS programme will be expanded and comprehensively restructured in the Twelfth Plan to make it more effective.

Malnutrition is also a problem among adults, especially women. The incidence of anaemia and lowbody mass among women is very high in the country. The causes of this persistent malnutrition are not well understood. The availability of food, especially better quality food products such as fruits, vegetables and dairy products, is significantly better today than it was in the past. Nevertheless, the incidence of mal- nutrition remains high. There is a need to bring this dimension of human capability to the fore front of policy attention. The Food Security Ordinance promulgated in July 2013 (discussed elsewhere) will address some of these issues, but the problem of nutrition is actually much more complex and a multidimensional approach is necessary.

Health

Health is another critical dimension of human capability, which needs much greater attention in the Twelfth Plan. At present, less than 30 per cent of outpatient and less than half of inpatient health care capacity of the country is in the public sector, and the majority of the population relies on private health care provision which often imposes a heavy financial burden. It is, therefore, essential to expand public sector capacity in health care especially in the rural areas. The NRHM, launched during the Tenth Plan, made an important start in expanding health care facilities in rural areas. While additional infrastructure has been created, there are large shortages of personnel, especially specialists in rural health facilities, reflecting the fact that trained human resources in health are in short supply and it takes many years to set up new medical colleges to train the required number of doctors.

Ideally, the public health care system must be expanded to address the health needs of the vast majority of citizens, recognising that upper-income groups may opt for private health care. The Twelfth Plan will therefore see the transformation of the NRHM into a National Health Mission, covering both rural and urban areas. Unlike rural residents, those in urban areas have access to private health care providers, but private health care is costly and large numbers of urban residents especially slum dwellers cannot afford it. An important component of the National Health Mission will be the Urban Health Initiative for the Poor, providing public sector primary care facilities in selected low-income urban areas.

There is a massive shortage of healthcare professionals in the country and their supply must therefore be expanded rapidly if we want to fulfill our commitments in this sector. We must therefore plan for an expansion of teaching and training programmes for healthcare professionals, particularly in the public sector institutions.

Finally, attainment of good health outcomes is not just a matter of providing curative care. We need to give much greater attention to public health which has traditionally suffered from neglect. We also need to focus much more on a provision of clean drinking water and sanitation, which can make a major contribution to improved health. This was the experience in industrialised countries over a hundred years ago, and this is also true for us today.

The longer-term objective of Health Policy must be the provision of Universal Health Care (UHC), whereby anyone who wants it is assured of access to a well defined set of health care entitlements. Putting a UHC system in place will take time, but we need to start building an appropriate architecture.

Drinking Water and Sanitation

The problem of providing safe drinking water is particularly acute in the rural areas. Successive plans have emphasised programmes for expanding the coverage of rural drinking water but they have not had as much success, as desired. The incidence of 'slipped back' habitations appears to be accelerating and serious problems of water quality have emerged in many areas. Part of the problem is that rural drinking water schemes are not fully integrated with national system of aquifer management. Excessive drawal of groundwater for irrigation is leading to lowering of water tables causing drinking water hand pumps to run dry and lowering of the water table is also causing salinity and chemical pollution, making the water non-potable. A sustainable solution to the rural drinking water problem has to be found as part of a holistic approach for aquifer management.

Sanitation and clean drinking water are critical determinants of health and are complementary to each other. Without proper sanitation, the incidence of diarrhoeal diseases due to contaminated drinking water will not come down, and without adequate water supply, improved sanitation is generally not possible. It is, therefore, necessary to adopt a habitation approach to sanitation and to institutionalise the integration of water supply with sanitation in each habitation. The problem of sanitation in urban areas is also very serious since almost all our cities, including even the State capitals and major metros, have a large percentage of the population (45 per cent in Delhi) not connected to the sewer system. Urban development must give top priority to plan- ning for water, toilets and sewerage as an integrated whole taking into account the likely expansion of the urban population.

Enhancing Human Capabilities through Information Technology

The ability to access information is an important institutional capability we need to develop. Lack of ready access information is often a major impediment in efforts to improve the well-being of the people. With improvement in literacy and education, and developments in information technology, we are in a position to provide our people with access to information, including obtaining birth records, land records, payment records for utilities and so on.

The rapid spread of mobile telephony, including in rural areas has facilitated innumerable innovations which directly benefit the ordinary citizen. Farmers in some parts of the country are able to subscribe to commercial services which deliver relevant information for a particular crop to the farmer through Short Message Service (SMS). The parents of babies born in municipal hospitals in Bengaluru get an SMS alert, when the next vaccination is due. Such innovations need to be encouraged. Yet another human capability that is important is the ease and effectiveness of establishing identity. The Aadhar project, which provides a unique identification (UID) number, backed by biometric data capture, to establish identity unambiguously, is a major step forward. Identity can be difficult to establish, especially for the poor, when they move from their place of origin, whether by choice or by compulsion. The UID project has already enrolled 250 million persons. Experiments with using Aadhar to make payments under MGNREGS electronically into no frill bank accounts which can be accessed through mobile phones have begun in 51 districts. It will soon be possible for large-scale use of the Aadhar platform to make various types of government payments due to individuals in a seamless manner electronically, avoiding problems of misuse and leakage.

The Aadhar platform will also facilitate a shift from the physical delivery of subsidised commodities through the Public Distribution System (PDS) to a system of cash payment, if desired. Some States have indicated that they would be interested in such a shift. Adoption of a target to move the major subsidies and beneficiary payments to a cash basis linked to Aadhar by the end of the Twelfth Plan period would be a major step towards improving efficiency.

(Followed up in the Chapter on PDS and Food Security. Read ahead)

Development of Institutional Capabilities

The Twelfth Plan also needs to focus on developing the capabilities of our institutions to perform the increasingly complex and demanding tasks expected of them. We have three pillars of governance (Legislature, Executive and Judiciary) and three tiers of government (Centre, State and Panchayats/ULBs). The capabilities of these institutions to deliver on their mandate need to be greatly improved. The gaps are most evident at the lowest level of PRIs and ULBs, where trained personnel are lacking and the training systems are also inadequate.

Implementation Capability

Planning Commission says that the capacity to implement is low at all levels of government. The government simply does not function with the efficiency that is required in the twenty-first century. This is partly because of the lack of motivation at various levels, but it is primarily because governmental systems and procedures are largely process-driven. They are not outcome-oriented. Accountability is often viewed as adhering to procedures with no incentive to depart from procedures to secure better results. Unless this weakness is overcome, mere provision of more funds for programmes implemented in the same old way will not help.

Where implementation rests within one Ministry, there are problems of (i) insufficient attention to evidence-based analysis in the design of policies and programmes, (ii) insufficient concurrent evaluation that would give feedback on outcomes achieved and (iii) lack of willingness or ability to bring about systemic changes needed to improve outcomes. Even when it is known that a change in procedures will help, it takes very long to bring about that change. The problem is greatly multiplied when the effectiveness of a programme depends, as it often does, on actions that have to be taken by several different Ministries. Inter-ministerial consultations take far too long, and more importantly, are typically not oriented to resolving problems. This is because each Ministry works in a silo, applying its own rules and procedures. The effort is to seek a consensus if possible, with little ability to overrule positions taken by individual Ministries in the interest of a holistic problem solving approach. Resolving conflicting stands by consensus is of course desirable if possible, but beyond a point, it may not be possible, and some systems for conflict resolution are needed.

To deal effectively with these problems it may be necessary to redesign governmental decision-making systems. There has been a great deal of sys-tem redesign in the private sector in response to the new environment created by economic reforms. A similar redesign of government is needed. For example, the CCI that was set up earlier in 2013 has demonstrated its usefulness. It is chaired by the Prime Minister and including all key Ministers and to amend the Transaction of Business Rules so that statutory clearances under various Acts for all infra- structure projects above a given size are given by the Board, taking into account the views of all Ministries. The allocation of business rules could provide that such clearances would be issued by the Cabinet Secretariat based on the decision of the Board. This would be a systemic change which would ensure a holistic consideration of complex issues and greatly accelerate decision-making. Several other changes are discussed in Chapter 6 including in particular the need for greater reliance on industry specialists with domain knowledge.

Delivery of Public Services

Delivery of public services in many States is hampered by weak institutional capacity. Thus, although public hospitals may have trained doctors and nurses, and public schools may have trained teachers, neither of these institutions will have administrators who are trained in the operation of health care or educational institutions.

The first step in reforming public service delivery is to devise mechanisms for measuring the extent of public satisfaction with public services and publicising the results. The Public Affairs Centre at Bengaluru has done excellent work in conducting systematic surveys of public perception or satisfaction with various types of public services ranging from water and sanitation, health and education, public transport, police and so on. Such surveys peri- odically conducted produce valuable information for the political leadership on where performance is felt to be poor and where it is improving.

Greater involvement of citizens' organisations can help focus government attention on these problem areas. The Delhi Government's experiment with Bhagidhari is example of citizen involvement and consultation operating through Resident Welfare Associations. (To be expanded ahead)

Regulatory Institutions

An area where the lack of institutional capability is beginning to manifest itself is in our expanding system of regulatory bodies. As areas that were earlier dominated by the public sector have been opened up for private operators, often competing among themselves or with existing public sector operators, independent regulatory institutions have been established to oversee the functioning of the players in the system. The effectiveness of regulatory organisations depends critically upon the quality of the personnel running the institutions and the degree of independence established. Too many of the regulatory agencies are staffed by former bureaucrats and there is not enough induction of specialists with domain knowledge. A thorough review of the regulatory system established in different sectors is needed to determine the weaknesses of the system currently in place and recommend ways of correcting them. This is especially true as the next two five year Plans are likely to see faster change in the global economy and in the structure of the Indian economy too.

By July 2013, GOI is in the process of setting up coal, road and civil aviation regulators that contribute to policy; regulate/rationalize tariffs with all stake holders in mind; keep competition healthy and public interest is protected in the operation of the sector.

Development of Infrastructure

Infrastructure provides the basic support system for other sectors of the economy expanding capabilities everywhere. A distinguishing characteristic of infrastructure is that while in other areas imports can meet the gap between demand and supply, deficiencies in infrastructure cannot be made good through imports- for example, power. Infrastructure requirements can only be met through development of the relevant infrastructure capacity in the domestic economy. Furthermore, Good quality infrastructure is important not only for faster growth but also to ensure that growth is inclusive. Small businesses spread throughout the country need access to good quality and reliable infrastructure services to compete effectively. Large enterprises can often develop their own infrastructure as they often do with captive power, and being large can even locate themselves *ab initio* where other infrastructure is better, that is, nearer ports and near transport hubs. Small enterprises on the other hand.

The 12th Five year Plan (2012 – 2017) and inclusive growth

12th FYP aims to achieve faster, more inclusive and sustainable growth in India. The plan is broadly classified under sections – macroeconomic framework; sustainable development; water; land issues; environment, forestry and wildlife; science and technology; innovation; governance; and regional equality. Financing the 12th plan estimates resource availability of Rs 80,50,123 crore with the target GDP growth rate of 8 percent. This implies public sector resources of 11.8 percent of GDP compared to 10.96 percent of GDP expended in the 11th Plan.

The key achievements of the 11th plan (2007/8 to 2011/12) as stated in the draft 12th plan document have been given above.

12 FYP and faster and more inclusive growth

Shri. Chidambaram (In his lucid style):

The theme of the 11th plan was faster and more inclusive growth and the theme of the 12th plan is also faster, more inclusive and sustainable growth. In the initial years of economic reforms and liberalization, the emphasis was on growth.

Having demonstrated our capacity to grow at a higher rate, the emphasis rightly shifted to more inclusive growth. We need to define what inclusive growth is. It , inclusive growth can't be measured in any one parameter. Higher per capita income can be achieved by small section shaving very high incomes while people at the bottom continuing to have low incomes; still statistically one can say we have a higher per capita income. Inclusive growth can't be merely the GDP number. The GDP number can be contributed by a few states leaving out half a dozen poor states. The GDP number can be contributed by a few sectors leaving out sectors which employ unskilled or low skilled people. The 12th FYP lists the following as indicators of inclusive growth. First is lower incidence of poverty. Poverty must decline at a higher rate. The second is, growth must be reflected in day to day lives of ordinary people as only if the members of the family especially the children have access to school and higher education and it is reflected in better health outcomes particularly infant mortality rate and maternal mortality. Another measure of inclusive growth is the quality of education and by the skills a person acquires. Skill development is an important measure of inclusive growth. And finally, social inequalities between the marginalized- SC/ST, women etc need to be corrected.

Prime Minister's speech in the 57th NDC meet in December 2002: excerpts related to 12 FYP and Inclusiveness

As we begin our Twelfth Plan journey, it is worth noting that we do so with an economy that has shown many areas of strength.

We achieved an average of 7.9 percent growth in the Eleventh Plan period, despite the fact that there were two global crises in this period. This growth has also been much more inclusive than in the past.

The percentage of the population below the official poverty line declined by about 2 percentage points per year after 2004-05, which is two and a half times faster than the rate of decline between 1993-94 and 2004-05. This basic finding that poverty declined faster would hold even if the poverty line is revised.

Agriculture growth accelerated from 2.4 percent in the Tenth Plan to 3.3 percent in the Eleventh Plan. Real wages in agriculture have grown at 6.8 percent per year in recent years, compared with only 1.1 percent per year in the period before 2004-05. Better agricultural performance is an important reason why poverty declined faster.

States that used to grow slowly in earlier periods have done much better. The average growth rate of the five poorest states exceeds the national average for the first time in any Plan period. I think we may be reaching the stage when the term "BIMARU States" can be relegated to history.

While these developments indicate the strengths of our economy, it is also true that the current economic situation is difficult. The continuing crisis in the global economy has reduced growth everywhere. It is expected to be zero in the Eurozone and Japan and emerging market economies have also slowed down.

The global slowdown, combined with some domestic constraints, has meant that our growth has also slowed down. Our first priority must be to reverse this slowdown. We cannot change the global economy, but we can do something about the domestic constraints which have contributed to the downturn.

The most immediate problems we need to tackle are the implementation problems affecting large projects, including particularly power projects, which are stuck because of delays in getting clearances and fuel supply agreements. We have taken a number of steps to deal with this problem, including the establishment of a new Cabinet Committee on Investment under my Chairmanship.

As the Plan document makes clear, the high growth scenario will definitely not materialise if we follow a "business as usual" policy. The Plan identifies a number of areas where new initiatives and policy innovations are needed. Many of these are areas where the principal responsibility is that of the States. I look forward to hearing the views of Hon'ble Chief Ministers on these suggestions.

While we need to accelerate growth, we do not view growth as an end in itself. Our real objective must be to improve the condition of lives of the aam aadmi, which is why we emphasise that growth, must be inclusive.

There are two reasons why rapid growth is necessary to achieve greater inclusiveness. First, it is necessary to generate the revenues to finance our many programmes of inclusiveness. If growth slows down, neither the States nor the Centre will have the resources needed to implement inclusiveness programmes. We will either be forced to cut these programmes, or be pushed into tolerating a higher fiscal deficit, which will have other negative consequences.

Rapid growth also contributes directly to inclusiveness because it provides greater access to income and employment opportunities. Policies aimed at stimulating growth in agriculture and in medium and small industries, combined with steps to promote education and skill development, will produce a growth process which is inherently more inclusive. The Twelfth Plan strategy contains many elements which will ensure that growth is as inclusive as possible. I welcome your comments on this strategy.

We also need to pay special attention to disparities between socio-economic groups such as SCs, STs, OBCs and minorities. These groups lag behind the rest of the population in key socio-economic indicators. Fortunately, the gaps are closing but the pace at which this is happening is not satisfactory and certainly does not match expectations. We need to consider how we can do better.

Gender inequality is another important aspect which deserves special attention. Women and girls represent half the population and our society has not been fair to this half. Their socio-economic status is improving, but gaps persist. The emergence of women in public spaces, which is an absolutely essential part of social emancipation, is accompanied by growing threats to their safety and security. I have in mind the brutal attack on a young woman only a few days ago in the capital and other such reprehensible incidents elsewhere. We must reflect on this problem, which occurs in all states and regions of our country, and which requires greater attention both by the Centre and the States.

In this particular case, the culprits have been apprehended, and the law will deal with them expeditiously. Government has decided to review the present laws and examine enhanced levels of punishments in cases of aggravated sexual assault. A committee of eminent jurists headed by the former Chief Justice of India, Justice J.S. Verma, has been constituted for this purpose. Let me state categorically that the issue of safety and security of women is of the highest concern to our Government. A Commission of Inquiry is being set up to look into precisely these issues in the Capital. There can be no meaningful development without the active participation of half the population and this participation simply cannot take place if their security and safety are not assured. I urge all Chief Ministers to pay special attention to this critical area in their states.....

Agriculture is an area of critical concern. Although the share of agriculture in GDP has fallen to only 15%, about half of the population still relies on agriculture as its principal income source. What happens in agriculture is therefore critical for the success of inclusiveness. We need to build on the success of the last Plan by increasing land productivity in agriculture so that we not only meet our rising demand for food, but also increase incomes of those dependent on agriculture. Paradoxically, we should not aim at increasing total employment in agriculture. In fact, we need to move people out of agriculture by giving them gainful employment in the non agricultural sector. It is only when fewer people depend upon agriculture that per capita incomes in agriculture will rise significantly and sufficiently to make farming an attractive proposition.

Agriculture is a State subject and most of the policy initiatives needed are in the realm of State Governments. The Minister of Agriculture, my colleague Shri Sharad Pawar will be dealing with these issues in some detail and I look forward to the reaction of Chief Ministers on this important subject.

Growth in manufacturing should be at double digit levels, but this has yet to take place. The Plan mentions many new initiatives aimed at strengthening performance in the manufacturing sector. Small and medium industries are particularly important as they generate more employment. Both the Centre and the States must give priority attention to creating an eco-system in which these industries can grow and flourish.

Better infrastructure is the best guarantee for rapid growth of the economy. Infrastructure development is heavily capital intensive and both the Centre and the States are severely constrained by resource availability. The central government, and many state governments, have been successful in promoting infrastructure development through PPPs. India has the second largest number of PPP projects in infrastructure in the world. It will be necessary to continue this thrust in the Twelfth Five Year Plan.

The Eleventh Plan paid special attention to the North East and I am happy to say that North Eastern states have responded well. GDP growth in a number of states was higher than the national average. We plan to step up the pace of investments in infrastructure, particularly roads, rail, airports, waterways and power transmission systems to support and stimulate economic activity in this vital region of our country. I am hopeful that as a result of our Look East Policy, this region will fast become a major gateway to trade and economic activity with our neighbours.

I have mentioned that both the Centre and the States face resource constraints. Both therefore have to make determined efforts to mobilise resources to fund the Plan. The Plan document points out that we need to increase the tax ratio as a percent of GDP through a combination of tax reforms and better tax administration. Early implementation of the Goods and Services Tax (GST) is critical in this context. I hope we will have the co-operation of the States to introduce GST as quickly as possible.

The Plan also draws attention to the need to control subsidies. Some subsidies are a normal and indeed essential part of any socially just system, but subsidies should be well designed and effectively targeted and the total volume must be kept within limits of fiscal sustainability. Failure to control subsidies within these limits only means that other plan expenditures have to be cut or the fiscal deficit target exceeded. The Finance Minister will be addressing these issues in his intervention.

A common complaint against government programmes is that they suffer from leakages, corruption, delays and poor targeting. The Central Government is taking a major step to deal with this problem by shifting several beneficiary oriented schemes to a direct transfer mode, using the Aadhaar platform. This will begin to roll out for selected schemes in selected districts in the course of January 2013. In due course, a wide range of benefits like scholarships for students, pensions for elderly, health benefits, MNREGA wages and many other benefits will migrate to direct transfer into bank accounts using Aadhaar as a bridge. This is an innovative step which will be watched by the entire global development community. The Central and State Governments must work together to make this a success.

Many State Governments have said that Centrally Sponsored Schemes are often ineffective because of rigid guidelines. The Deputy Chairman has already pointed out that we are taking steps to rationalise the Centrally Sponsored Schemes along the lines recommended by the B.K. Chaturvedi Committee, including proposals to introduce greater flexibility in these schemes. I am sure these changes will be widely welcomed.

There are two areas I wish to mention which pose a major challenge for our economy and these are energy and water.

Energy is a critical input for any growth process and our domestic energy resources are not sufficient to meet our country's growing needs. We import oil, natural gas and in recent years even coal. If we wish to keep our energy import requirement within reasonable limits, we must emphasise energy efficiency to moderate demand and we must increase domestic production of energy. Energy pricing is critical for both objectives. If domestic energy prices are too low, there will be no incentive to increase energy efficiency or to expand even supply.

Unfortunately, energy is underpriced in our country. Our coal, petroleum products and natural gas are all priced well below international prices. This also means that electricity is effectively underpriced, especially for some consumers. Immediate adjustment of prices to close the gap is not feasible, I realise this, but some phased price adjustment is necessary. Energy experts are unanimous that we cannot expect to achieve rapid, inclusive and sustainable growth if we are not willing to undertake a phased adjustment in energy prices to bring them in line with world prices. The Central Government and the states must work together to create awareness in the public that we must limit the extent of energy subsidies. I look forward to hearing the comments of Hon'ble Chief Ministers on this complex issue.

The management of our water resources poses severe challenges. We are rapidly approaching the position where the total demand for water in the country simply cannot be met by available supply. As with energy, we have to respond by increasing water use efficiency and also by expanding supply in a sustainable manner.

The Plan document outlines a comprehensive strategy for dealing with this problem, starting with a serious effort to map available ground water supplies aquifer by aquifer. Available water also needs to be allocated to different uses through a Water Regulatory Authority. This is an area where action lies largely in the domain of State Governments.

The development of our country is necessarily a cooperative endeavour involving many stakeholders. It involves both the public sector and the private sector, the Central Government and the State Governments. It also involves the common people particularly those participating actively in devising new ways of addressing old problems.

Critical view: 11th Plan: Exclusion and Deprivations

Despite an average 7.9 per cent growth in GDP during the 11th Plan Period sometimes peaking to 9 per cent- the performance of India in terms of the Human Development Index (indicative of inclusive growth and the extent of population benefiting from development) saw a downward slide to 136th position among 186 countries. While a handful are reaping benefits and have entered the billionaires club, many are going into into deprivation and disempowerment. By various other indicators, India's inclusive growth has shown weaknesses (In the class). A serious effort is necessary to quantify inclusive growth on lines of IHDI (inequality adjusted HDI) with the help of indices like the Gini Coefficient (the measure of income inequality). According to a report of OECD (Organisation of Economic Cooperation and Development) released in December 2011, top 10 per cent wage earners in India now make 12 times more than the bottom 10 per cent. India spends an abysmal 5 per cent of its GDP on social protection schemes as compared to more than 15 per cent by Brazil, and during the last two decades India's Gini Coefficient has climbed from 0.32 to 0.38 with 0 being the ideal score.

Structural composition of GDP and inclusive growth

As per economic survey of 2013 the share of agriculture in GDP is at all time low (13.9 per cent during this year) but it is still the most important sector in terms of employment share. On the other hand, the manufacturing and services activities which are contributing more than 85 per cent to GDP and getting a lion's share of total capital formation are employing less than half of the total workforce. The higher growth and capital formation in the above two sectors have failed to transfer the workforce from low productive activities (agricultural and allied) to high productive activities (manufacturing and services). For growth to be inclusive it must create adequate livelihood opportunities and add to gainful employment in rural areas too.The 11th five year plan aimed at generating 58 million work opportunities. But the NSSO survey has reported an increase in work opportunities to the tune of only 18 million between 2004-05 to 2009-10. The growth rate of employment in the organised sector (public and private combined) is only 1.9 per cent in 2010. The recent data shows that only 15.6 per cent of India's workforce has regular jobs whereas remaining 84.4 per cent are either self-employed or working on casual basis.

Social Indicators

Social sector spending in India needs to be increased for inclusive growth

In India, public spending on health as percentage of total public spending is 4.1 per cent, which is about 1.2 per cent of GDP. 12th five year plan projected 1.95 per cent of GDP as public health expenditure by the end of the 12th plan which is less than the overall norm of 5 per cent suggested by World Health Organisation.

In primary education, we are well behind the other nations which have comparable level of economic growth and per capita income. During 2011, the mean year of schooling in India was 4.4 and female literacy rate was lower than the overall average. Public expenditure on education as percentage of GDP 3.1 per cent in 2011-12.

Inclusiveness and environment: 12th Plan

The 12th FYP has the following important suggestions for sustainable growth

- Recognition of a number of serious environmental problems facing India, such as water scarcity and pollution, and soil degradation due to overuse of chemical fertilisers.
- diagnosis of environmental governance issues such as non-enforcement of conditions under which environmental clearances are given to development projects, alienation, displacement and dispossession of tribal communities including by the government while using its 'eminent domain' powers, and inadequate decentralisation to panchayati raj and other local community institutions.
- Recommendation to give environmental orientation to some sectors, such as 'green manufacturing' (energy efficiency, recycling), urban sustainability ("energy efficient buildings, management of solid waste and a shift to public transport"), and tourism that is ecologically sensitive and community-based.
- A number of specific steps to address environmental problems, such as rainwater harvesting and groundwater recharge, assistance to rainfed farming, reduction of freshwater use in cities by enhancing recycling and reviving traditional waterbodies, more sustainable methods in agriculture including ecological fertilisation and non-pesticide management, encouragement to community seed banks and to millets including their use in ICDS and Mid-day Meal schemes, environment-friendly and culturally relevant housing under the Indira Awas Yojana, and others.
- Recommendations on some important governance or institutional steps, such as a 'Commons Policy' with secure tenure and management rights to communities using them, creation of Water User Associations to involve communities, mechanisms of conflict resolution relating to land and water, a National Water Commission to monitor compliance of environmental and other conditions, cumulative environmental impact assessments in vulnerable regions, forest produce-gatherers' collectives to optimise returns, speedy implementation of PESA and Forest Rights Act (FRA) in specially disadvantaged areas, and convergence of various government schemes and departmental or ministerial priorities.

MSME sector and Inclusive growth in 12th FYP

The average growth rate during the 11th Plan period was 7.9 per cent, lower than the target of 9%. Despite two global crises, one in 2008 and another in 2011, it must be noted, 7.9% growth was occurred which is slightly more than in the 10th Plan namely, 7.6 per cent, thanks to MSME Sector which has consistently registered higher growth than the overall growth of Industry Sector. On an average the growth rate of MSME was 13 per cent every year in the period of 11th plan which itself indicates au fond MSME Role in Indian Economy. Therefore, MSME has a focus attention in 12th Plan document. Plan Document says:

"The Growth of the MSME Sector must be a central focus of India's Manufacturing strategy. This is the foundation for a strong Manufacturing Sector providing more employment with less capital. It is the entry point for the workers and entrepreneurs who move through it to large-scale enterprises. Whereas much Govt. attention is given to consult with and address the issues of larger enterprises, the development of the MSME Sector must become more central to the deliberations about the challenges of Indian industry and the Indian economy. The sector must be viewed not as a static and weak sector, requiring constant support and protection, but as an integral part of the industrial system with upward mobility for individual units within it."

MSME Plan- The Plan outlay for MSME is nearly doubled and is second highest in the outlays for various industry ministries & departments. The following table speaks about the outlays.

Census indicátes that in Manufacturing, among the MSMEs, 94.9% are Micro, 4.9% are Small and just 0.2% are Medium. It is but natural that with almost everyone is Micro, the entire spending ought to be for 'Capacity Building' and to ensure that Micros grow into Small ón large scale so that by the end of Plan period, in the year 2017, we have at least 10% Medium and 25% Small Enterprises in Manufacturing. Tó achieve such a transformation the role of 'enabling environment' is critical.

Noting key challenges like finance & credit, technology infrastructure, marketing, recommendations to that effect, which are not fresh, are being made to create enabling environment. Report of PM Task Force on MSMEs has narrated it in details. The 2013 Doing Business Report which is on SMEs is an eye opener. 12th Plan document says on –

Industrial Policy, Business Regulatory Framework.

1. "In India, Industrial Policy becomes assaulted under a stifling system of bureaucratic control through licenses. There is no doubt that these controls were highly dysfunctional and needed to be dismantled."
2. "The Key objectives of streamlining of business activities through the regulatory framework should be: • Low compliance cost for doing business in India • Simple regulatory environment, saving time & energy for the business; and • Ensuring fair competition.

The country must improve regulations and implementation in many subjects to make India generally a more attractive country for doing business."

Doing Business 2013: There is vast number of Business Regulations at different levels of Govt. in existence in the country. There are instances of contradictory as well as overlapping business regulations on account of these being administered by the different tires as well as layers of the Govt. Lack of periodic review clauses in regulations and lack of Regulatory Impact Analysis (RTA). Lack of defined mechanism for consultation between Govt. and Industry.

Road Map- A variety of strategies and recommendations and rightly so, have been made in the document of 12th Plan for the robust growth of MSME Sector on the issues of

- Credit & Finance
- Technology up gradation
- Infrastructure Development
- Marketing & Procurement and
- Institutional Structure

All these have been, time & again deliberated at various fora. Introduction of Insolvency Act, Liberalisation of Labour Laws, Changes in Apprenticeship Act, amending MSMED Act, Restructuring DICs etc. has also been insisted. Clusters development is further stressed, and Clusters Stimulation Cell is also recommended.

On 'Single Window' the document notes," decentralized Single Window System should be established with appropriate geographical spread. The Single window System, governed by a common minimum standard, should, rather than being a coordination office, be endowed with access to relevant information and sufficient delegation of powers from all concerned regulators, including Central, State, Local and Sector regulators. This would help reduce the start-up time for businesses by providing all requisite approvals and licenses if any, through the Single window System." A team of Business Facilitation Officers is also advised.

MSME Definitions

The Government of India has enacted the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 in terms of which the definition of micro, small and medium enterprises is as under:

(a) Enterprises engaged in the manufacture or production, processing or preservation of goods as specified below:

(i) A micro enterprise is an enterprise where investment in plant and machinery does not exceed Rs. 25 lakh;

(ii) A small enterprise is an enterprise where the investment in plant and machinery is more than Rs. 25 lakh but does not exceed Rs. 5 crore; and

(iii)A medium enterprise is an enterprise where the investment in plant and machinery is more than Rs.5 crore but does not exceed Rs.10 crore.

In case of the above enterprises, investment in plant and machinery is the original cost excluding land and building.

For the services sector, the definitions are:

Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act, 2006 are specified below):

- A micro enterprise is an enterprise where the investment in equipment does not exceed Rs. 10 lakh;
- A small enterprise is an enterprise where the investment in equipment is more than Rs.10 lakh but does not exceed Rs. 2 crore; and
- A medium enterprise is an enterprise where the investment in equipment is more than Rs. 2 crore but does not exceed Rs. 5 crore.

Sen and Dreze Vs Bhagwati and Panagariya

In recent years, there is a debate between those who say that reforms benefitted the country and those who oppose the view saying that the benefits are not adequate.

Some believe that poverty, illiteracy and ill-health afflict India because its leadership ignored them in favour of growth for its own sake; that the economic reforms that focused on growth have failed to help the poor, especially the socially disadvantaged; that any gains claimed in poverty alleviation derive from the use of progressively lower poverty lines; and that even if gains have been made, with one in two children suffering from malnutrition, reforms have done precious little to improve health outcomes.Jagdish Bhagwati and Panagariya do not agree with the above view.

Sen and Dreze have the opposite view. Following two paragraphs represent their point of view: as articulated in an article titled: "Putting Growth In Its Place."

"The progress of living standards for common people, as opposed to a favoured minority, has been dreadfully slow so slow that India's social indicators are still abysmal." For instance, according to World Bank data, only five countries outside Africa (Afghanistan, Bhutan, Pakistan, Papua New Guinea and Yemen) have a lower "youth female literacy rate" than India (World Development Indicators 2011). To take some other examples, only four countries (Afghanistan, Cambodia, Haiti, Myanmar and Pakistan) do worse than India in child mortality rate; only three have lower levels of "access to improved sanitation" (Bolivia, Cambodia and Haiti); and none (anywhere—not even in Africa) have a higher proportion of underweight children. Almost any composite index of these and related indicators of health, education and nutrition would place India very close to the bottom in a ranking of all countries outside Africa.

Growth and Development

So which of the two stories—unprecedented success or extraordinary failure—is correct? The answer is both, for they are both valid, and they are entirely compatible with each other.....economic growth is not the same thing as development, in the sense of a general improvement in living standards and enhancement of people's well-being and freedom. Growth can be very helpful in achieving development, but this requires active public policies to ensure that the fruits of economic growth are widely shared, and also requires—and this is very important—making good use of the public revenue generated by fast economic growth for social services, especially for public healthcare and public education.

SRIRAM'S IAS

Infrastructure

Infrastructure is basic physical and organizational structures needed for the growth of economy-. It represents the goods and services necessary for an economy to function. It includes roads, bridges, water supply, sewers, electrical grids, telecommunications, and so forth.
Viewed functionally, infrastructure facilitates the production of goods and services, and also the distribution of finished products to markets, as well as basic social services such as schools and hospitals; for example, roads enable the transport of raw materials to a factory.
"Hard" infrastructure refers to the large physical networks necessary for the functioning of a modern industrial nation, whereas "soft" infrastructure refers to all the institutions which are required to maintain the economic system , health, and cultural and social standards of a country, such as the financial system, the education system, the health care system, the system of government, and law enforcement.

Various types of Infrastructure

Transport infrastructure

- Road and highway networks, including structures (bridges, tunnels, culverts)
- Mass transit systems (Commuter rail systems, subways, tramways, and bus transportation)
- Railways (rail yards, railway stations), level crossings, signalling and communications systems
- Canals and navigable waterways requiring continuous maintenance (dredging, etc.)
- Seaports
- Airports, including air navigational systems

Energy infrastructure

- Electrical power network, including generation plants, electrical grid, substations, and local distribution.
- Natural gas pipelines, storage and distribution terminals
- Petroleum pipelines
- Specialized coal handling facilities for washing, storing, and transporting coal.

Coal mines, oil wells and natural gas wells may be classified as being part of the mining and industrial sector of the economy, not part of infrastructure.

Water management infrastructure

- Drinking water supply
- Sewage collection, and disposal of waste water
- Drainage systems
- Major irrigation systems (reservoirs, irrigation canals)
- Major flood control systems

Communications infrastructure

- Postal service, including sorting facilities
- Telephone networks (land lines) including telephone exchange systems
- Mobile phone networks

- Television and radio transmission stations
- Cable television physical networks including receiving stations and cable distribution networks
- The Internet, including the internet backbone
- Communications satellites
- Undersea cables
- Major private, government or dedicated telecommunications networks, such as those used for internal communication and monitoring by major infrastructure companies, by governments, by the military or by emergency services, as well as national research and education networks

Solid waste management
- Municipal garbage and recyclables collection
- Solid waste landfills
- Solid waste incinerators and plasma gasification facilities(**Plasma gasification** is a process which converts organic matter into synthetic gas, electricity, and slag using plasma.)
- Materials recovery facilities
- Hazardous waste disposal facilities

Types of soft infrastructure

Soft infrastructure includes both physical assets such as highly specialized buildings and equipment, as well as non-physical assets such as the body of rules and regulations governing the various systems, the financing of these systems, as well as the systems and organizations by which highly skilled and specialized professionals are trained, advance in their careers by acquiring experience, and are disciplined if required by professional associations (professional training, accreditation and discipline).

Unlike hard infrastructure, the essence of soft infrastructure is the delivery of specialized services to people.

Governance infrastructure

Economic infrastructure
- The financial system, including the banking system, financial institutions, the payment system, exchanges, the money supply, financial regulations, as well as accounting standards and regulations
- Major business logistics facilities and systems, including warehouses as well as warehousing and shipping management systems
- Manufacturing infrastructure, including industrial parks and special economic zones, plus the public safety, zoning and environmental laws and regulations that govern and limit industrial activity, and standards organizations
- Agricultural, forestry and fisheries infrastructure, including specialized food and livestock transportation and storage facilities

Social infrastructure
- The health care system, including hospitals, the financing of health care, including health insurance,
- The educational and research system
- Social welfare systems, including both government support and private charity for the poor, for people in distress or victims of abuse
- Sports and recreational infrastructure, such as parks, sports facilities, the system of sports

leagues and associations
- Cultural infrastructure, such as concert halls, museums, libraries, theatres, studios, and specialized training facilities
- Business travel and tourism infrastructure

Critical infrastructure

The term critical infrastructure has been widely adopted to distinguish those infrastructure elements that, if significantly damaged or destroyed, would cause serious disruption of the dependent system or organization. Storm, deluge, or earthquake damage leading to loss of certain transportation routes in a city, for example bridges crossing a river, could make it impossible for people to evacuate, and for emergency services to operate; these routes would be deemed critical infrastructure.

Critical infrastructure is a term used by governments to describe assets that are essential for the functioning of a society and economy. Most commonly associated with the term are facilities for:

- electricity generation, transmission and distribution;
- gas production, transport and distribution;
- oil and oil products production, transport and distribution;
- telecommunication;
- water supply (drinking water, waste water/sewage, stemming of surface water (e.g. dikes and sluices));
- agriculture, food production and distribution;
- public health (hospitals, ambulances);
- transportation systems (fuel supply, railway network, airports, harbours, inland shipping);
- financial services (banking, clearing);
- Security services (police, military).

Recently(2013), in the cyber field, central government has decided to establish five-year project for strengthening the overall cyber security structure of critical sectors of India. This move has come following increase in the number of incidents of cyber attacks as well as security threats. In 2011, India faced around 13000 cyber incidents.

Who will implement the Project?

It will be realized by **National Critical Information Infrastructure Protection Centre (NCIPC)**. NCIIPC functions under the guidance of National Technical Research Organization (NTRO).NCIPC is the nodal agency which coordinates the cyber security operations related to critical infrastructures in India.NCIPC will set up sectoral Computer Emergency Response Teams (CERTs) and will also install sensors on critical systems for getting real-time information regarding cyber attack of any kind for preparing a quick response.

NCIPC of India has been proposed. NCIPC will ensure critical infrastructure protection and critical ICT infrastructure protection in India.

Sectors whose cyber security falls under NCIPC are:

- Energy (natural gas, coal, oil and power)
- Finance and banking
- Transportation (civil aviation and railways)

- Space
- Law enforcement
- Security
- Telecom
- Defense

Critical infrastructure protection (CIP) is a concept that relates to the preparedness and response to serious incidents that involve the critical infrastructure of a region or nation

Urban infrastructure
Urban or municipal infrastructure refers to hard infrastructure systems generally owned and operated by municipalities, such as streets, water distribution, and sewers. It may also include some of the facilities associated with soft infrastructure, such as parks, public pools and libraries.

Green infrastructure
Green infrastructure is a concept that highlights the importance of the natural environment in decisions about land use planning. In particular there is an emphasis on the "life support" functions provided by a network of natural ecosystems, with an emphasis on interconnectivity to support long-term sustainability. Examples include green belts, wild life sanctuaries; eco sensitive regions, Tiger, lion, and elephant reserves; bird sanctuaries; western ghats being conserved etc.

Hard infrastructure generally has the following attributes.

- **Capital assets that provide services**
- **Large networks**
- **Interdependence:** system components are interdependent
- In public economics theory, infrastructure assets such as highways and railways tend to be public goods, in that they carry a high degree of non-excludability, where no household can be excluded from using it, and non-rivalry, where no household can reduce another from enjoying it.

Ownership and financing: Infrastructure may be owned and managed by governments or by private companies, such as sole public utility or railway companies. Generally, most roads, major ports and airports, water distribution systems and sewage networks are publicly owned, whereas most energy and telecommunications networks are privately owned.

Impact on economic development
Investment in infrastructure is part of the capital accumulation required for economic development and has an impact on socioeconomic measures of welfare. In developing nations, expansions in electric grids, roadways, and railways show marked growth in economic development.
Adequate transportation infrastructure is an essential ingredient for economic development and growth. Beyond simply facilitating cheaper and more efficient movements of goods, people, and ideas across places, transportation infrastructure impacts the distribution of economic activity and development across regions; helps business to multiply; consumer welfare; productivity enhancement; balanced regional development; employment; demand; and makes the government access higher levels of fiscal resources to direct and indirect taxes. It is proved in the case of

Golden Quadrilateral and PMGSY- the latter accounting for benefits for agriculture too.
During the Great Depression of the 1930s, many governments undertook public works projects in order to create jobs and stimulate the economy. The economist John Maynard Keynes provided a theoretical justification for this policy. It is called Keynsian stimulus that increases public spending on infrastructure. Following the global financial crisis of 2008–2009, some again proposed investing in infrastructure as a means of stimulating the economy.

Infrastructure in the developing world

Lack of infrastructure in many developing countries represents one of the most significant limitations to economic growth and achievement of the Millennium Development Goals (MDGs). Infrastructure investments and maintenance contributed to significantly improved growth performance in India and increased investment is necessary to maintain growth and tackle poverty. The returns to investment in infrastructure are very significant, with on average thirty to forty percent returns for telecommunications (ICT) investments, over forty percent for electricity generation, and eighty percent for roads.

Sources of funding

Currently, the source of financing varies significantly across sectors. In India, some are monopoly: railways and nuclear power. Some sectors are dominated by government spending, others by overseas development aid (ODA), and yet others by private investors.PPP is emerging as the dominant model. Debt and equity are, like anywhere else, the ways of raising resources. Read ahead.

Infrastructure Investment and GDP

The share of infrastructure as a percentage of GDP has increased from 5.04 per cent in the Tenth Plan to about 7.21 per cent of GDP in the Eleventh Plan. It can also be seen that the share of private sector as percentage of GDP has gone up from 1.12 per cent to 2.64 per cent during the same period. Starting from a base of 5.61 per cent of GDP in 2006–07, infrastructure investment reached an all- time high of 8.41 per cent of GDP in 2010–11.

12th FYP and Infrastructure

The strategy for the Twelfth Plan encourages private sector participation directly as well as through various forms of PPPs, wherever desirable and feasible. The share of private sector in infra- structure investment will have to rise substantially from about 36.61 per cent anticipated in the Eleventh Plan to about 48 per cent in the Twelfth Plan. It is expected that competition and private investment will not only expand capacity, but also improve the quality of service, besides minimising cost and time overruns in implementation of infrastructure projects.
The Central share in the overall infrastructure investment is likely to decline from 35.34 per cent in the Eleventh Plan to 28.72 per cent in the Twelfth Plan, and the States' share is likely to decline to 23.13 per cent compared to 28.05 per cent in the Eleventh Plan. The share of the private sector is expected to increase from 36.61 per cent in the Eleventh Plan to 48.14 per cent in the Twelfth Plan.

Financing Infrastructure Investment in the Twelfth Plan

The total public sector investment in infrastructure envisaged in the Twelfth Plan by the Centre and by the States is about 52%. Investment by the private sector, which includes PPP projects, makes up the balance of about 48 per cent of the required investment during the Twelfth Plan, a much higher share than the anticipated 36.61 per cent during the Eleventh Plan. Of the projected investment of by the Central Government, about 60% is likely to be funded out of IEBR. (Please raise this issue in the class!)

The total requirement of debt by the public and private sectors is likely to be `27,75,641 crore. However, the availability of debt financing for infrastructure during the Twelfth Plan is estimated at `22,65,171 crore. There is a likely funding gap of about `5,00,000 crore for the debt component.

Institutional Framework for PPP

Cabinet Committee on Infrastructure

The approach to PPPs must remain firmly grounded in principles which ensure that PPPs are formulated and executed in public interest with a view to achieving additional capacity and delivery of quality public services at reasonable costs. These partnerships must ensure investment for supplementing scarce public resources while improving efficiencies. The government's current initiatives in the area of PPPs are designed to achieve these objectives.

The following steps have been taken to promote private investment in infrastructure sector:

1. Setting up robust institutional structure for appraising and approving PPP projects
2. Developing standardised documents such as model concession agreements across infrastructure sectors
3. Increasing availability of finance by creating dedicated institutions and providing viability gap funding

The Committee on Infrastructure (CoI) was constituted in 2004 under the Chairmanship of the Prime Minister, with the objectives of initiating policies that would ensure time-bound creation of world class infrastructure, delivering services matching international standards, developing structures that maximise the role of PPPs and monitoring the progress of key infrastructure projects to ensure that targets are achieved. In 2009, the CoI was replaced by a Cabinet Committee on Infrastructure (CCI) under the Chairmanship of the Prime Minister. CCI reviews and approves policies and projects across infrastructure sectors. It considers and decides on financial, institutional and legal measures required to enhance investment in infrastructure sectors. In 2013, the CCI was merged in the CCAI when the CC on Investment was formed.

Regulatory Framework

In recent years, independent regulatory authorities have been established in the power, telecom, and civil aviation sectors. Tariffs in the port sector are also fixed by an independent authority. These authorities discharge numerous responsibilities, which were earlier in the domain of the government. For initiating further improvements in the regulatory structures and practices, Regulatory Reforms Bill is under consideration of the Government. Regulators for coal, roads and civil aviation are on the anvil (2013 July)

Advisory Services

PPP projects are based on long-term contracts and may involve delegation of governmental authority such as for toll collection, besides enabling private control over monopolistic services. Implementation of PPP projects, therefore, requires appropriate advisory services in terms of preparation of project agreements, structuring of projects and so on. Planning Commission has operationalised a scheme for technical assistance to project authorities by providing consultants for projects. The Ministry of Finance has also created an India Infrastructure Project Development Fund (IIPDF) to provide loans for meeting development expenses, including the cost of engaging consultants for PPP projects.

Viability Gap Funding

The VGF Scheme was notified in 2006 to enhance the financial viability of competitively bid infrastructure projects, which are justified by economic returns, but do not pass the standard thresholds of financial returns. Under the scheme, grant assistance of up to 20 per cent of capital costs is provided by the Central Government to PPP projects undertaken by any Central Ministry, State Government, statutory entity or local body, thus leveraging budgetary resources to access a larger pool of private capital. An additional grant of up to 20 per cent of project costs can be provided by the sponsoring Ministry, State Government or project authority.

India Infrastructure Finance Company Limited (IIFCL)

IIFCL was incorporated by the Ministry of Finance in consultation with the Planning Commission in 2006 for providing long-term loans for financing infrastructure projects that typically involve long gestation periods. IIFCL provides financial assistance up to 20 per cent of the project cost both through direct lending to project companies, and by refinancing banks and financial institutions. IIFCL raises funds from both domestic and overseas markets on the strength of government guarantees. IIFCL has sanctioned loans aggregating `40,373 crore for 229 projects involving a total investment of `3,52,047 crore and disbursed `20,377 crore till the beginning of the fiscal year 2012-13.

IIFCL is expected to graduate in the Twelfth Plan from the existing role of a normal lender to that of a catalyst mobilising additional resources for financing of infrastructure. This could be achieved by IIFCL providing guarantees for bonds issued by private infrastructure companies rather than expanding its direct lending operations. This would enable mobilisation of insurance and pension funds, external debt and household savings. IIFCL would also make subordinated debt available as an additional source of finance. Further, IIFCL may also substitute its take-out financing scheme with an Infrastructure Debt Fund.

IDFC

IDFC was founded on the recommendations of the 'Expert Group on Commercialisation of Infrastructure Projects' under the Chairmanship of Dr. Rakesh Mohan. IDFC, a Public Private Partnership, is incorporated in Chennai. Government holds 54% of the company, rest is held by foreign shareholders and domestic entities.

Infrastructure Debt Fund

Infrastructure projects are capital intensive and have long payback periods, and, therefore, require long-term funds at comparatively low costs. Infrastructure projects in India are financed mainly by commercial banks, as insurance and pension funds do not normally lend for new projects. The present bond market lacks depth to address the needs for a long-term debt. With a view to overcoming these shortcomings, Infrastructure Development Funds (IDFs) are being set up for channelising long-term debt from domestic and foreign pension and insurance funds, as well as from other sources. These IDFs will also carry adequate credit enhancement in terms of implicit government guarantees for repayment of debt. The Reserve Bank of India, and the Securities and Exchange Board of India have already laid down regulatory framework for the IDFs.

Besides augmenting debt resources for financing infrastructure, the IDFs would refinance PPP projects after their construction is completed and operations have stabilised. By refinancing bank loans of existing projects, the IDFs are expected to take over a significant volume of the existing bank debt, and this will release an equivalent volume of fresh lending for infrastructure projects.(Read ahead for more IDFs)

Deepak Parekh committee on financing infrastructure

High Level Committee on Financing Infrastructure under the Chairmanship of Shri Deepak Parekh submitted its Interim Report to the Government of India in October 2012. The Committee in its recommendation has suggested "rationalization of tariff" in order to maintain the inflow of investment. This would also result in improving the collection efficiency and reducing their losses. The report lays down detailed plans for every infrastructure sector, with special attention to the railways. The report titled '**Financing of Infrastructure**' has recommended regulatory reforms through an overarching legislation. It says reforms are necessary for ensuring future investments in the infrastructure sector. It has warned that in the absence of reforms, even existing investments would be jeopardized.

Important recommendations

- Regulatory structure needs to be more responsive to investment and the needs of the sector
- The panel has projected an investment of Rs 51.46 lakh crore in the 12th Plan. Private sector share is projected at 47%, as compared to 37% in the 11th Plan.
- The panel has suggested public-private partnership (PPP) as the means of achieving target levels of investment.
- For this, a time-bound plan for the implementation of its recommendations to create an enabling environment for the private sector has been suggested.
- Sustainable pricing of commodities and services, especially energy
- Privatisation and disinvestment in state-owned monopolies to foster competition
- Increase in foreign direct investment in telecom to 100% from the current 74%
- Privatization of state-owned monopolies
- Issues related to the General Anti-Avoidance Rules (GAAR) and delays in environmental clearances and land acquisition should be resolved to attract investment in the infrastructure sector.
- In the power sector, Government should adopt PPP in distribution
- Import of coal through STC/MMTC or directly through power producers should be allowed.
- Adoption of PPP in coal mining should be explored while setting up a state-run undertaking for engaging in PPP.
- Gas allocations and pricing should be raitionalised within two months
- Gas imports should be undertaken with the objective of increasing power generation and utilize idle capacity. Gas-based power should only be used in peak hours.
- The India Infrastructure Finance Company (IIFCL) should substitute its direct lending operations by guarantee operations to enable the flow of non-bank long term credit for infrastructure projects, particularly insurance and pension funds. IIFCL should only lend to tenures of 20 years or more since commercial banks are able to lend for up to 15 years. IIFCL should start raising funds on the strength of its balance sheet instead of sovereign guarantees.
- The Government should encourage investment through public private partnership mode in redevelopment of railway stations, building of elevated suburban corridors in Mumbai.
- Railway Board should be restructured.

- Low-traffic two-lane highways should be developed through EPC (turnkey) contracts
- An Expressway Authority should be established for overseeing development and regulation of expressways.
- The Government should expedite award of Greenfield airports in Navi Mumbai, Goa, Kannaur and Chandigarh, encourage PPP in operation and maintenance of metro airports at Chennai and Kolkata.

Standardised Documents and Processes

The government has decided to formulate standard documents for bidding and award of PPP concessions. Adoption of a standardised framework ensures transparency in the allocation of risks, costs and obligations while minimising the potential for disputes and malfeasance.are under preparation.

Engineering, Procurement, Construction (EPC) Contract

The conventional item-rate contracts are generally prone to time and cost overruns, particularly in the national highway sector, resulting in enhanced cost to the exchequer, as also considerable delays in the completion of projects. Developed countries have moved to Engineering, Procurement and Construction (EPC) contracts where the contractor is responsible for design and construction on a turnkey basis and for a fixed price. The Planning Commission has published a model EPC contract for Highways. It is expected that about 20,000 km of two-lane National Highways would be developed under this model. A similar document is also being prepared for Dedicated Freight Corridor of the Indian Railways. (More ahead)

PPPs: General Introduction

Public-private partnership (PPP) in infrastructure is a relatively new experience in most developing countries of the Asian and Pacific region. So far, only few countries have established institutional arrangements and developed manuals and resource materials in support of PPP development and for the capacity-building of their public officials. In the absence of such established institutional arrangements and resource materials, public officials face difficulties in project development and implementation, and general public can have many misunderstandings about PPPs.Governments in most developing countries face the challenge to meet the growing demand for new and better infrastructure services. As available funding from the traditional sources and capacity in the public sector to implement many projects at one time remain limited, governments have found that partnership with the private sector is an attractive alternative to increase and improve the supply of infrastructure services.

The partners in a PPP, usually through a legally binding contract or some other mechanism, agree to share responsibilities related to implementation and/or operation and management of an infrastructure project. This collaboration or partnership is built on the expertise of each partner that meets clearly defined public needs through the appropriate allocation of:

1. Resources
2. Risks
3. Responsibilities, and
4. Rewards

Governments worldwide have increasingly turned to the private sector to provide infrastructure services in energy and power, communication, transport and water sectors that were once delivered by the public sector. There are several reasons for the growing collaboration with the private sector in developing and providing infrastructure services, which include:

- Increased efficiency in project delivery, and operation and management;
- Availability of additional resources to meet the growing needs of investment in the sector; and
- Access to advanced technology (both hardware and software). Properly executed planning and development of a project also allows better screening of options, and helps in deciding appropriate project structure and choice of technology considering cost over the whole life cycle of the project.

Often, lack of government funding has been the main reason for considering a PPP option for a project. However, lack of government funding may not be the main reason for dec[illegible] PPP option for the implementation of a project. A project may not be considere[illegible] being implemented as a PPP project unless efficiency gains from improved project delivery, operation and management, and access to advanced technology can offset the costs. In fact, many countries have established value for money as the main criterion in judging the merits of a PPP option for a project.

PPPs have become attractive to governments as an off-budget mechanism for infrastructure development as:

- They can enhance the supply of much-needed infrastructure services.
- They may not require any immediate cash spending. They provide relief from the burden of the costs of design and construction.
- They allow transfer of many project risks to the private sector.
- They promise better project design, choice of technology, construction, operation and service delivery.

There are significant differences between a conventional construction procurement project and a PPP project that need to be clearly understood. The main differences include:

- PPP projects are different from conventional construction projects in terms of project development, implementation, and management. The administrative and approval processes in the case of PPP projects are also different.
- A PPP project is viable essentially when a robust business model can be developed.
- The risk allocation between the partners is at the heart of any PPP contract design and is more complex than that of a conventional construction project. Both partners should clearly understand the various risks involved and agree to an allocation of risks between them.

There are many important economic, social, political, legal, and administrative aspects, which need to be carefully assessed before approvals of PPPs are considered by the government. PPPs have various limitations which should also be taken into account while they are being considered. The major limitations include:

- Not all projects are feasible (for various reasons: political, legal, commercial viability, etc.).
- The private sector may not take interest in a project due to perceived high risks or may lack technical, financial or managerial capacity to implement the project.
- A PPP project may be more costly unless additional costs (due to higher transaction and financing costs) can be offset through efficiency gains.

Often, the success of PPPs depends on regulatory efficiency.

Features of PPP Projects

- Promise of better project structure and design.
- Better service delivery, especially if performance based payment is considered.
- Better chances of completion on time and within the budget.

A wide spectrum of PPP models has emerged. These models vary mainly by:

- Ownership of capital assets;
- Responsibility for investment;
- Assumption of risks; and
- Duration of contract.

The PPP models can be classified into 4 broad categories in order of generally (but not always) increased involvement and assumption of risks by the private sector.
The four broad categories are:

- Supply and management contracts
- Turnkey contracts
- Lease
- Concessions

Each of these four categories has many variants. While the spectrum of models are possible as individual options, combinations are also possible such as, a lease or (partial) privatization contract for existing facilities which incorporates provisions for expansion through Build-Operate- Transfer. In fact, many PPP projects of recent times are of combination type.

Supply and management contracts

A management contract is a contractual arrangement for the management of a part or whole of a public enterprise (for example, a specialized port terminal for container handling at a port or a utility) by the private sector. Management contracts allow private sector skills to be brought into service design and delivery, operational control, labour management and equipment procurement. However, the public sector retains the ownership of facility and equipment. The private sector is assigned specified responsibilities concerning a service and is generally not asked to assume commercial risk.
The private contractor is paid a fee to manage and operate services. Normally, the payment of such fees is performance-based. Usually, the contract period is short, typically three to five years. But the period may be longer for large and complex operational facilities such as a port or an airport.

The main pros and cons of this model include the following:

Pros:

- Can be implemented in a short time.
- Least complex of all PPP models.
- In some countries, politically and socially more acceptable for certain projects (such as water

Projects and strategic projects like ports and airports.

Cons:

- Efficiency gains may be limited and little incentive for the private sector to invest.
- Almost all risks are borne by the public sector.
- Applicable mainly to existing infrastructure assets.

Turnkey /EPC

Turnkey is a traditional public sector procurement model for infrastructure facilities. Generally, a private contractor is selected through a bidding process. The private contractor designs and builds a facility for a fixed fee, rate or total cost, which is one of the key criteria in selecting the winning bid. The contractor assumes risks involved in the design and construction phases. This type of private sector participation is also known as Design-Build.

The main pros and cons of this model include the following:

Pros:

- Well understood traditional model.
- Contract agreement is not complex.
- Generally, contract enforcement is not a major issue.

Cons:

- The private sector has no strong incentive for early completion.
- All risks except those in the construction and installation phases are borne by the public sector.
- Low private investment for a limited period.
- Only limited innovation may be possible.

Lease In this category of arrangement, the operator (the leaseholder) is responsible for operating and maintaining the infrastructure facility (that already exists) and services, but generally the operator is not required to make any large investment. However, often this model is applied in combination with other models such as build- operate-transfer. In such a case, the contract period is generally much longer and the private sector is required to make significant investment. Under a lease, the operator retains revenue collected from customers/users of the facility and makes a specified lease fee payment to the contracting authority. Generally, the government undertakes the responsibility for investment and thus bears investment risks. The operational risks are transferred to the operator. However, as part of the lease, some assets also may be transferred on a permanent basis for a period which extends over the economic life of assets. Fixed facilities and land are leased out for a longer period than for mobile assets. Land to be developed by the leaseholder is usually transferred for a period of 15-30 years. The main pros and cons of this model include the following:

Pros:

- Can be implemented in a short time.
- Significant private investment possible under longer term agreements.
- In some countries, legally and politically more acceptable for strategic projects like ports and airports.

Cons:

- Has little incentive for the private sector to invest, particularly if the lease period is short.
- Almost all risks are borne by the public sector.
- Generally used for existing infrastructure assets.
- Considerable regulatory oversight may be required.

Concessions

In this form of PPP, the government defines and grants specific rights to an entity (usually a private company) to build and operate a facility for a fixed period of time. The government may retain the ultimate ownership of the facility and/or right to supply the services. In concessions, payments can take place both ways: concessionaire pays to government for the concession rights and the government may pay the concessionaire, which it provides under the agreement to meet certain specific conditions. Usually, such payments by the government may be necessary to make projects commercially viable(Like in the VGF) and/or reduce the level of commercial risk taken by the private sector, particularly in a developing or untested PPP market. Typical concession periods range between 5 to 50 years.

The main pros and cons of this model include the following:

Pros:

- Private sector bears a significant share of the risks.
- High level of private investment.
- Potential for efficiency gains in all phases of project development and implementation and technological innovation is high.

Cons:

- Highly complex to implement and administer.
- Difficult to implement in an untested PPP market.
- May have underlying fiscal costs to the government.
- Negotiation between parties and finally making a project deal may require long time.
- May require close regulatory oversight.
- Contingent liabilities on government in the medium and long term. In a Build-Operate-Transfer or BOT type of concession (and its other variants namely, Build-Transfer-Operate (BTO), Build-Rehabilitate-Operate-Transfer (BROT), Build-Lease-Transfer (BLT) type of arrangement), the concessionaire makes investments and operates the facility for a fixed period of time after which the ownership reverts back to the public sector. In a BOT modal, operational and investment risks can be substantially transferred to the concessionaire. In a BOT model, the government has, however, explicit and implicit contingent liabilities that may arise due to loan guarantees and sub-ordinate loans provided, and default of a sub-sovereign government and public or private entity on non-guaranteed loans.

By retaining ultimate ownership, the government controls the policy and can allocate risks to parties that are best suited to assume or remove them. BOT projects may also require direct government support to make them commercially viable.

The concessionaire's revenue in a BOT project comes from managing and marketing of the user facilities (for example, toll revenue in a toll road project) and renting of commercial space where possible. Concessions for BOT projects can be structured on either maximum revenue share for a fixed concession period or minimum concession period for a fixed revenue share, a combination of both, or only minimum concession period.

Suitability and which model to select

The answer to this question needs careful assessment of many things. Each model has its own pros and cons and can be suitable for achieving the major objectives of private-private partnership to a varying degree. Special characteristics of some sectors and their technological development, legal and regulatory regimes, and public and political perception about the services in a sector can also be important factors in deciding the suitability of a particular model of PPP.

There is no single PPP model that can satisfy all conditions concerning a project's locational setting and its technical and financial features. The most suitable model should be selected taking into account the country's political, legal and socio- cultural circumstances, maturity of the country's PPP market and the financial and technical features of the projects and sectors concerned. As an example, for a new project, a BOT type of model may be quite suitable in a matured PPP market while a BOO type of models may be more appropriate in a developing/untested market.

Understanding the basic structure of a PPP arrangement A typical PPP structure can be quite complex involving contractual arrangements between a number of parties, including the government, project sponsor, project operator, financiers, suppliers, contractors, engineers and customers. The creation of a separate commercial venture called a Special Purpose/Project Vehicle (SPV) is a key feature of most PPPs. The SPV is a legal entity that undertakes a project and negotiates contract agreements with other parties including the government.
SPV has many advantages. Protected finance is available. A project may be too large and complicated to be undertaken by one single investor considering its investment size, management and operational skills required and risks involved. In such a case, the SPV mechanism allows joining hands with other investors who could invest, bring in technical and management capacity and share risks, as necessary.

The government may also contribute to the long-term equity capital of the SPV in exchange of shares. In such a case, the SPV is established as a joint venture company between the public and private sectors and the government acquires equal rights and equivalent interests to the assets within the SPV as other private sector shareholders.
Sometimes, governments want to ensure a continued interest (with or without controlling authority) in the management and operations of infrastructure assets such as a port or an airport particularly those which have strategic importance, or in assets that require significant financial contribution from the government. In such a case, a joint venture may be established. A joint venture is an operating company owned by a government entity and a private company (or multiple companies including foreign companies if permitted by law), or a consortium of private companies.

Often, an SPV is formed as a joint venture between an experienced construction company and a service operations company capable of operating and maintaining the project.
Other than its strategic, financial and economic interest, the government may also like to directly participate in a PPP project. The main reasons for such direct involvement may include:

- To hold interest in strategic assets;
- To address political sensitivity and fulfil social obligations;
- To ensure commercial viability of the project;
- To provide greater confidence to lenders; and
- To have better insight to protect public interest. Direct government involvement in a PPP project is usually guided by the legal and regulatory regime of the country and the government policy on PPPs. For example, the government may hold certain defined percentage of the stake in a strategic project such as an airport or a port.

PPPs in Infrastructure

Private investment in infrastructure is being encouraged in an environment which ensures competition and transparency. Protection of public interest is being ensured by institutionalising the necessary frameworks and processes for due diligence, checks and balances. However, it is recognised that unless governance issues, such as those related to competition in service provision, collection of user charges, institutional capacity, regulation, and dispute resolution continue to be adequately addressed, mobilisation of sufficient resources for the requisite infrastructure investment may not be possible.

Till 31 March 2012, the PPPAC had approved 285 PPP projects involving an investment of `2,47,300 crore.

The government has identified several areas for reform of policies and processes.

PPP in Highways

The National Highway network of the country spans about 70,548 km. The National Highway Development Project (NHDP), covering a length of about 54,000 km of highways, is India's largest road development programme in its history. The government has encouraged increased private sector participation in upgrading the arterial road network of the country to world class standards. More than 60 per cent of the estimated investment requirement is expected to be financed through PPP. With several key projects on the anvil spanning a length of about 45,000 km (including six-laning of four-laned roads, expressways and port connectivity projects) and a large number of projects in States, there are increasing opportunities for the domestic and foreign players in the sector. The government has decided to widen 20,000 km of less than two-lane National Highways to two-lane standard in the EPC mode.

PPP in Civil Aviation

During the Eleventh Plan, the private sector played a major role in the development of metro airports through PPP. The development of greenfield international airports at Hyderabad and Bengaluru along with the redevelopment of the Delhi International airport was successfully completed during this period. The redevelopment of Mumbai International airport, which was also taken up through PPP, is at an advanced stage of completion. Investment by the private sector on the four metro airports during the Eleventh Plan periodwas `23,187 crore. Further, it was observed that introduction of PPP has led to a significant rise in the collection of revenues, especially non-aviation revenues.

Airports Authority of India has identified 15 operational Airports for taking up operation and maintenance of both terminal and air side through PPP. This would be taken up in two phases. In the first phase, nine airports, namely Guwahati, Jaipur, Ahmedabad, Bhubhaneshwar, Lucknow, Gaya, Udaipur, Khajuraho and Amritsar would be taken up; and in the second phase, six airports would be taken up for operation and maintenance through PPP. Kolkata and Chennai airports have been constructed by AAI with an investment of about `4,200 crore. PPP in management and operation of airports is not only preferable for reasons of efficiency and superior services but also important for keeping passenger charges low, because of the ability of private entities to raise non-aviation revenues that cross- subsidise airport charges. This proposition is borne out by the international experience and the experience of PPP metro airports in India. It is, therefore, recommended that these large airports should be awarded under the PPP mode for their management and operation.

Five green field airports including Navi Mumbai, Goa, Kannur, Chandigarh and Kota have been identified for development through PPP. For building and operating a Greenfield airport on PPP basis, a precise policy and regulatory framework has now been spelt out in the Model Concession Agreement for Greenfield Airports.

CAA in the place of DGCA

Government decided to set up a new regulator for the aviation sector -- the Civil Aviation Authority -- that will replace the Directorate General of Civil Aviation (DGCA)(July 2013).

The union cabinet chaired by Prime Minister Manmohan Singh "in-principle" approval to the civil aviation ministry's proposal to set up the new regulator.

Government would introduce a bill in the upcoming monsoon session of parliament.

The proposed regulatory authority would have a chairperson, a director general and seven to nine members, including five whole-time members.

The Civil Aviation Authority will be responsible for ensuring safety and regulating the Indian civil aviation sector.

The government has proposed levying of a “safety fee” on each passenger to fund the new proposed Civil Aviation Authority (CAA).

PPP in Urban Infrastructure

Private sector participation needs to be encouraged in urban infrastructure sectors like water supply and sewerage and solid waste management. In urban transport, private sector can provide more efficient transport services, construct and maintain modern bus terminals with commercial complexes, over bridges, city roads and so on. PPP initiatives are also being undertaken to develop metro rail systems in Indian cities

Hyderabad Metro Rail Project

Hyderabad Metro Rail Project is presently under construction on PPP mode with a total project cost of ` 12,132 crore. The project is spread over three high density traffic corridors of Hyderabad with total length of 71 km and is being developed on Design, Build, Finance, Operate and Transfer (DBFOT) mode. The project was awarded to the successful bidder for a VGF of ` 1,458 crore which will be provided by the Central Government while the remaining investment will be made by the concessionaire. This will be the single largest private investment in a PPP project in India. It is also one of the largest metro rail projects built and operated by a private entity anywhere in the world. The project demonstrates how large volumes of private capital can be deployed in public projects in a transparent, efficient and competitive manner. The concession has been awarded on the basis of the Model Concession Agreement for Urban Transit developed by the Planning Commission.

Delhi Metro is a rapid transit system serving Delhi, Gurgaon, Faridabad, Noida, and Ghaziabad in the National Capital Region of India. Delhi Metro is the world's 13th largest metro system in terms of length. Delhi Metro is India's first modern public transportation system,which has revolutionized travel by providing a fast, reliable, safe, and comfortable means of transport. The network consists of six lines with a total length of 189.63 kilometres (117.83 mi) with 142 stations, of which 35 are underground, five are at-grade, and the remainder are elevated.

Delhi Metro is being built and operated by the Delhi Metro Rail Corporation Limited (DMRC), a state-owned company with equal equity participation from Government of India and Government of National Capital Territory of Delhi. However, the organisation is under administrative control of Ministry of Urban Development, Government of India. Besides construction and operation of Delhi metro, DMRC is also involved in the planning and implementation of metro rail, monorail and high-speed rail projects in India and providing

consultancy services to other metro projects in the country as well as abroad.
The Delhi Metro Rail Corporation has been certified by the United Nations as the first metro rail and rail-based system in the world to get "carbon credits for reducing greenhouse gas emissions" and helping in reducing pollution levels in the city by 630,000 tonnes every year.
The Government of India and the Government of Delhi jointly set up the Delhi Metro Rail Corporation (DMRC) registered in 1995 under the Companies Act, 1956.

The **Mumbai Monorail** is a monorail system under construction in the city of Mumbai, India as part of a major expansion of public transport in Mumbai. The project is being implemented by Mumbai Metropolitan Region Development Authority (MMRDA), with a consortium of Larsen & Toubro (L&T) and a Malaysian infrastructure firm Scomi Engineering. It will be the first monorail in India Construction began in 2009. The first line is scheduled to be completed soon.

PPP in Ports

The government has encouraged private sec- tor participation in port development and operations. Foreign direct investment up to 100 per cent is permitted under the automatic route for port development projects. Private investment has been envisaged on PPP basis in ports of Kolkata, Haldia, Paradip, Vizag, Ennore, Chennai, Tuticorin, Cochin, New Mangalore, Mormugao, Mumbai, JNPT and Kandla.

PPP in Power

To attract private sector participation, government has permitted the private sector to set up coal, gas or liquid-based thermal, hydel, wind or solar projects with foreign equity participation up to 100 per cent under the automatic route. The government has also launched Ultra Mega Power Projects (UMPPs) with an initial capacity of 4,000 MW to attract `160–200 billion of private investment. Out of the total nine UMPPs, four UMPPs at Mundra (Gujarat), Sasan (Madhya Pradesh), Krishnapatnam (Andhra Pradesh) and Tilaiya Dam (Jharkhand) have already been awarded. The remaining five UMPPs, namely in Sundergarh District (Orissa), Cheyyur (Tamil Nadu), Girye (Maharashtra), Tadri (Karnataka) and Akaltara (Chattisgarh) are yet to be awarded. To create Transmission Super Highways, the government has allowed private sector participation in the transmission sector. A PPP project at Jhajjar in Haryana for transmission of electricity was awarded under the PPP mode. Further, to enable private participation in distribution of electricity, especially by way of PPP, a model framework is being developed by the Planning Commission.

PPP in Railways

Dedicated Freight Corridor Corporation of India Limited (DFCCIL) has been set up for implementing the Dedicated Freight project and the Ministry of Railways would explore the possibilities of attracting private investment in some segments of this project. Indian Railways has decided to redevelop 50 railway stations in the metropolitan cities and major tourist centers like Delhi, Jaipur, Chandigarh, Patna, Bypanahalli, Bhubneshwar, Mumbai CST, Howrah and so on as world-class stations through PPP. The proposal to set up of production units for manufacturing of electric and diesel locomotives at Madhepura and Marhowra respectively and passenger coaches at Kanchrapara through PPP has already been approved. Further, movement of container trains has already been opened to the private sector, and this has acquired more than 25 per cent share of the market. Construction of an elevated metro rail project in Mumbai is being undertaken through PPP.

PPP in Micro Irrigation

A scheme for setting up Micro Irrigation Systems (MIS) through PPP will be launched in pursuance of the government's objective to enhance irrigation efficiency, productivity and farm incomesby employing more efficient means of irrigation in integrated clusters. The absence of organised operations in the farm sector would be overcome by farmers coming together for the purpose of implementing this scheme through a single entity in every village. The existing subsidies which are provided by the Central and State Governments for on-farm MIS equipment and solar systems would be availed of under this scheme. Similarly, budgetary support would continue to be provided for the development of infrastructure. PPP in MIS would help in doubling the irrigation efficiency as compared to flow irrigation.

PPP in Storage of Food grains

A scheme for setting up modern storage facilities through PPP under the VGF has been formulated in pursuance of the Government decision to create 2MMT of modern storage facilities in the form of silos. This would enhance food security, reduce wast- age and improve the quality of stored food grains.

Silos will be constructed and operated under the PPP mode across several states. Land for construction and operation of silos would be provided on licence to the private entity and up to 20 per cent of the total project cost will be provided as VGF. For storage of foodgrains at the Silos, the Concessionaire will be entitled to receive a recurring storage charge which shall be payable on adherence to performance and maintenance standards. It is expected that in the first phase, a capacity of 2 million MT of silo capacity would be created under the PPP mode.

PPPs in Social Sectors

The Twelfth Plan lays special emphasis on the development of social sectors in view of their impact on human development and quality of life, especially of the underprivileged sections. The physical targets set in the Plan cannot be met out of public resources alone. It is, therefore, imperative that resources have to be attracted from the private sector to ensure that targets, in physical and financial terms, are met by the end of the Twelfth Plan period.

In the social sectors, it may not be possible to adopt the user-charge-based concessions, although they may not be completely ruled out. However, concessions which would provide reimbursement of service costs could attract considerable private investment. The main advantages of adopt- ing the PPP approach in the social sectors would be enhanced investment, reduction in time and cost over-runs, improvement in efficiencies and better quality of performance.

PPP in Education

A scheme for setting up 2,500 schools under PPP mode is being rolled out in the Twelfth Plan. The purpose of the scheme is to meet the govern- ment's objective of establishing world-class schools for providing quality education to underprivileged children who cannot afford to pay the tuition fee that good private schools charge. It is expected that the scheme will help in creating capacity for providing quality education to 40 lakh children, out of which 25 lakh will be from the underprivileged category.

3.104. The respective rights and obligations of the private entity and the government will be codified in an agreement with the former undertaking to deliver the agreed service on the payment of a unitary charge by the government. Recurring tuition support would be provided for up to 1,000 students from under privileged categories at par with the amount that the Central Government spends on a student in Kendriya Vidyalaya. There would be no capital support and land would have to be procured by the private entity. Infrastructure support shall be made available by the government for the under- privileged students at the rate of 25 per cent of the recurring tuition support. The concession would be for a period of 10 years. There will be no financial bidding. Predetermined criteria relating to capacity and track record of the respective applicants will be taken into account in selection of the private entities.

. The scheme for 2,500 PPP schools should be viewed as an opportunity to evolve innovative ways to empower and enable non-government players to engage in providing world-class education, especially to children from low-income families. The objective should be to combine the respective strengths of the public and private sectors to complement each other in pursuit of the shared goal of good education for all. In particular, adoption of the PPP mode would lead to rapid expansion of access to world-class education by low-income families.

PPP in Health Care Services

Several State Governments are experimenting with delivery of health services through different models. Planning Commission is also in the process of preparing a scheme for setting up secondary and tertiary care hospitals through PPPs at various District Headquarters. The principle objective of the scheme is to create a health care delivery mechanism comprising multi-specialty hospital to meet the growing health care needs of the poor, and for supplementing human resources in the sector by setting up nursing schools and medical colleges.

It is expected that in the Twelfth Plan, the pro- posed scheme will be rolled out by the Government, and a 200-bed district-level hospital would serve a catchment area of about 8–10 lakh of population (20 lakh for a 300-bed tertiary care hospital). This will help families from the economically disadvantaged groups get access to quality health care through hospitals set up under this scheme, especially those who are covered under the Rashtriya Swasthya Bima Yojna (RSBY).

PPP in Skill Development

As part of the government's initiative to augment the programmes for skill development, the Prime Minister had announced setting up of 1,500 ITIs through PPP in unserved blocks. The objective is to create centres of excellence in vocational education especially for the youth from low-income families in order to improve their prospects of gainful employment. The programme will be expanded to cover a total of 3,000 blocks during the Twelfth Plan.

A major proportion of the costs incurred by an ITI are of a recurring nature, and it is there- fore, proposed to provide support for the recurring expenditure incurred by an ITI towards training students from underprivileged families. Further, it is proposed to provide capital grant to meet a part of the cost of creating the infrastructure for setting up the ITIs. It is expected that 30 lakh youth, including 15 lakh youth from socially and economically disadvantaged groups would be initiated into vocational training and will acquire skills through the ITIs set up under this scheme.(Read along with the Chapter on Inclusive Growth)

Financial Support to PPPs in Social Sectors

A scheme for financial support to PPPs in the social sectors is being formulated as part of the Twelfth Plan initiative to enhance investments and coverage in social sectors, and also to expand the role of private participation.

The scheme envisages that capital investment and recurring costs to be incurred by a non-government entity on the delivery of services to EWS families, based on a concession agreement between government (or a statutory authority) and a non- government entity, will be provided by the respective State Governments, who in turn will be eligible for Viability Support Funding (VSF) from the Central Government.

Capacity Building in the States

The State Governments generally do not have dedicated staff resources for handling PPP projects or for building the requisite capacity. Such capacity is critical for conceptualising project proposals, engaging consultants, interacting with and supervising consultants, analysing and processing their advice for government approvals, interacting with prospective investors, executing the project documents and monitoring implementation. Therefore, the Planning Commission may need to provide financial assistance (ACA) to the State Governments for the setting up a nodal Secretariat for PPP in each State.

The aforesaid PPP Secretariat in each State would be responsible for identifying areas in the respective States amenable to PPP, conceptualise the projects, initiate and approve feasibility studies, appraise and approve bid documentation, guide the process and so on. This would enable capacity building in the States. The total expenditure on this scheme over the next five years would be limited to about `100 crore.

India Front-Runner in the PPP Race: ADB

According to a study by the Economic Intelligence Unit of the Economist commissioned by Asian Development Bank (ADB), while UK and Australia have been categorised as mature economies, India is positioned in the league of developed economies like Republic of Korea and Japan on implementation of PPP projects for infrastructure development. India has outscored China and Japan to rank second on PPP projects performance among the Asian nations and fourth in the Asia-Pacific nations. As per the Report, PPP development in India has been driven by strong political will and advances in public capacity and processes.

The Report states that PPP projects have a huge level of overall acceptance and use in India. It states that government agencies have a relatively high level of proficiency in PPP projects and that as a result of introduction of Model Concession Agreements, the risk allocation has been improving. In terms of finance, matters have improved, with a variety of initiatives (such as the creation of the Viability Gap Funding and the India Infrastructure Finance Company Limited) enabling greater participation of private finance in infrastructure.

To conclude, the gains of private participation in meeting the policy objectives of the Government have been significant during the Eleventh Plan. These initiatives will be expanded and reinforced during the Twelfth Plan, especially in social sectors such as health, education, skill development and so on with a view to meeting the investment targets, while also ensuring inclusiveness. It is envisaged that by the end of the Twelfth Plan, not only will there be `55,74,663 crore worth of investment in infrastructure sectors, but also that PPPs would have successfully forayed into the social sectors to promote universal access, while ensuring quality in the delivery of services.

Financing Infrastructure

Traditionally, infrastructure development used to occur through the public sector. However, given the scarcity of public resources, and the need to shift scarce public resources into health and education, efforts have been made to induct private participation in the development of infrastructure. These efforts have met with a fair degree of success. As of 31 March 2012, 390 PPP projects have been approved involving an investment of 3,05,010 crore. According to a report published by the World Bank, India has been the top recipient of PPP investment since 2006 and has accounted for almost half of the investment in new PPP projects implemented in the first half of 2011 in developing countries. An Asian Development Bank report states that India stands in the same league as developed economies like South Korea and Japan on implementation of PPP projects and the Model Concession Agreements prepared in India and used in our PPP projects have also been commended.

The total investment in infrastructure sectors in the Twelfth Plan is estimated to be `55.7 lakh crore, which is little more than one trillion dollars at prevailing exchange rates (about Rs.60 for a US Dollar in mid-July 2013). The share of private investment in the total investment in infrastructure rose from 22 per cent in the Tenth Plan to 36.61 per cent in the Eleventh Plan. It will have to increase to about 48 per cent during the Twelfth Plan if the infrastructure investment target is to be met. These projections have also been validated by the high level commit- tee on infrastructure set up under the chairmanship of Shri Deepak Parekh. Its interim report that was presented in October 2012 is given elsewhere in this Chapter) The committee has however qualified its projections as dependent on several policy initiatives that the government would need to take for ensuring this level of investment.

The Twelfth Plan lays special emphasis on the development of social sectors in view of their impact on human development and quality of life. Unlike the case with other infrastructure, experiments with PPP in the social sector have been more limited. Many States have experimented with PPPs in health and education. The Central Government has approved setting up of 2,500 Model Schools in PPP mode and a proposal for setting up 3,000 ITIs through PPP is under consideration. These initiatives will be strengthened during the Twelfth Plan.

Resort to PPPs in the social sector often raises concerns about the commercialisation of services that are normally expected to be provided free or highly subsidised. These are important concerns but they can be addressed by well-drafted concession agreements and strict monitoring to ensure that PPP concessionaires abide by their commitments. This must be reinforced with penalties for non compliance. While extending the concept of PPP to social and urban sector projects, the need for 'people's' participation in the design and monitoring of PPP schemes becomes crucial. Local citizens are direct stakeholders in such projects and therefore their support becomes crucial. Therefore, some cities and States have begun to shape PPPs in the social and urban sectors as People–Public–Private Partnerships (PPPPs). This is a valuable innovation which should be applauded.

Take out financing

In the Union Budget speech for the year 2009-10, the Hon'ble Union Finance Minister stated "To stimulate public investment in infrastructure, we had set up the India Infrastructure Finance Company Limited (IIFCL) as a special purpose vehicle for providing long term financial assistance to infrastructure projects. We will ensure that IIFCL is given greater flexibility to aggressively fulfill its mandate. Takeout financing is an accepted international practice of releasing long-term funds for financing infrastructure projects. It can be used to effectively address Asset-Liability mismatch of commercial banks arising out of financing infrastructure projects and also to free up capital for financing new projects.

Objectives of the Takeout Finance Scheme

- To boost the availability of longer tenor debt finance for infrastructure projects.
- To address sectoral / group / entity exposure issues and asset-liability mismatch concerns of Lenders, who are providing debt financing to infrastructure projects.
- To expand sources of finance for infrastructure projects by facilitating participation of new entities i.e. medium / small sized banks, insurance companies and pension funds.

EPC

EPC Contracts refers to an Engineering, Procurement and Construction contract. In an EPC Contract, the EPC contractor undertakes total responsibilities for the project upto the commissioning stage for a pre-agreed consideration. While conceptually, EPC contract may look similar to turnkey contract, it goes a little further than a turnkey contract as in an EPC contract the EPC contractor undertakes total responsibility as well as liability for the commissioning of the project whereas in a turnkey contract, the contractor is generally responsible for selling up of the plant. Road projects with less traffic density, which are unviable on toll mode, may be executed through engineering, procurement and construction (EPC) contracts.According to a high-power committee headed by HDFC Chairman Deepak Parekh, this will help speed up road construction projects in the country. The conventional item rate contracts are prone to high cost and time overruns.

Viability Gap Funding

The scheme aims at supporting infrastructure projects that are economically justified but fall short of financial viability. Support under this scheme would be available only for infrastructure projects where private sector sponsors are selected through a process of competitive bidding. The total Viability Gap Funding under this scheme will not exceed twenty percent of the Total Project Cost; provided that the Government or statutory entity that owns the project may, if it so decides, provide additional grants out of its budget, but not exceeding a further twenty percent of the Total Project Cost.

The government will provide a Viability Gap Funding (VGF) which shall not exceed 20 per cent of the Total Project Cost; provided that the Government or statutory entity that owns the project may, if it so decides it will provide additional grants out of its budget, but not exceeding a further 20 per cent of the Total Project Cost. VGF under this scheme will normally be in the form of a capital grant at the stage of project construction. Proposals for any other form of assistance may be considered by the Empowered Committee and sanctioned with the approval of Finance Minister on a case-to-case basis. The project should be implemented i.e. developed, financed, constructed, maintained and operated for the Project Term by a Private Sector Company to be selected by the Government or a statutory entity through a process of open competitive bidding; provided that in case of railway projects that are not amenable to operation by a Private Sector Company, the Empowered Committee may relax this eligibility criterion. The project should provide a service against payment of a pre-determined tariff or user charge. The concerned Government/statutory entity should certify, with reasons: That the tariff-user charge cannot be increased to eliminate or reduce the viability gap of the PPP; That the Project Term cannot be increased for reducing the viability gap. Thus, Viability Gap Funding means a grant one-time provided by the Public Sector (Central Government / State Government) for Financial Support to PPPs in Infrastructure, with the objective of making a project commercially viable.

It is a Plan Scheme administered by the Ministry of Finance. Suitable budgetary provisions are made in the Annual Plans on a year-to- year basis for the scheme.

Recently, a government appointed committee headed by the Department of Economic Affairs (DEA) Secretary Arvind Mayaram today approved viability gap funding (VGF) of Rs 1,458 crore for development of Hyderabad Metro Rail.

IDF

Setting up of Infrastructure Debt Funds (IDFs) was announced in the Union Budget for 2011-12. These are aimed at accelerating and enhancing flow of long term debt for funding infrastructure projects in the country. They will also act as a catalyst to channelize domestic savings. IDFs would provide a vehicle for refinancing the existing debt of infrastructure projects which are funded mostly by commercial banks. This would create fresh headroom for commercial banks and enable them to take up a larger number of new infrastructure projects.

An IDF can be structured either as a company or as a trust. If set up as a trust, it would be regulated by SEBI under the Mutual Fund Regulations. If set up as a company, the IDF would be structured as a Non-Banking Finance Company (NBFC) and will be under the regulatory oversight of RBI. Guidelines with enabling provisions have already been issued by the Reserve Bank of India and SEBI.

An IDF-NBFC would issue either rupee or dollar denominated bonds and invest only in debt securities of Public Private Partnership projects which have a buy-out guarantee and have completed at least one year of commercial operations. Such projects are expected to be viewed as low-risk investments and would, therefore, be attractive for risk-averse insurance and pension funds.

Establishment of Infrastructure Debt Fund through PPP model is taking place in India. A Memorandum of Understanding (MOU) was signed, recently for setting-up India's First Infrastructure Debt Fund(IDF) structured as a Non-Banking Finance Company (IDF-NBFC). The fund is jointly promoted by ICICI Bank, Bank of Baroda, Life Insurance Corporation (LIC) and Citicorp Finance (India) and it is titled Infradebt Limited. Ratings agency Crisil assigned 'AAA' ratings to India Infradebt Limited, the country's first infrastructure debt fund under the non-banking finance company structure which is a PPP.

Infradebt Ltd, the IDF, would seek to raise debt capital from domestic as well as foreign resources and would invest in infrastructure projects under the Public-Private Partnership model that have completed one year of operations. The IDF will expand and diversify the domestic and international sources of debt funding to meet the large financing needs of the infrastructure sector, thereby giving an impetus to the creation of the infrastructure necessary to drive India's growth.A higher credit rating would enable IDFs to access long-term funds for infrastructure sector at competitive rates

CCI

The Cabinet cleared setting up of the Cabinet Committee on Investment for fast tracking decision on big projects on in December 2012.December. Prime Minister heads this super investment body which will fast track clearances for mega projects.

The proposed body will not be a substitute for the Foreign Investment Promotion Board (FIPB). FIPB is for clearance of foreign direct investment proposals and if the investment is upto Rs.1200 crores, its decision is final. For FDI beyond the Rs.1,200 crores, CCEA permission is required.

PM will be the chairman of the committee and he will nominate its members. The cabinet committee on infrastructure will be dissolved and all the powers will be vested with the Cabinet Committee on Economic Affairs (CCEA).

The proposal to set up a high-level body for according speedy clearance to infrastructure projects entailing investment in excess of Rs 1,000 crore was initially mooted by Finance Minister Chidambaram who had proposed setting up NIB to oversee and monitoring large projects. NIB could also be called Cabinet Committee on Investment.

The proposal, however, had evoked sharp criticism from the Environment Ministry, which had said that NIB would dilute its powers.

Environment Ministry said that the proposal seems to have been mooted only for the benefit of large firms and investors, while having no provision for redressing the concerns of affected people.

Finance Minister said there were over 100 projects, each involving investment of Rs. 1,000 crore or more, that have been delayed for various reasons. "The main purpose is to oversee and monitor large projects which will give a fillip to India's economic growth. Our problem is not conceptualising projects. Our problem lies in getting numerous clearances and getting the project off the ground within a reasonable time

The functions of the Committee are as under:

(i) to identify key projects required to be implemented on a time-bound basis, involving investment of Rs 1000 cr or more, or any other critical projects, as may be specified by the Committee, in sectors such as infrastructure, manufacturing, etc.;

(ii) to prescribe time limits for issue of requisite approvals and clearances by the Ministries/Departments concerned in respect of projects in identified sectors;

(iii) to monitor the progress of identified projects including the time prescribed/taken to obtain each approval each approval/clearance and delays, if any;

(iv) to review implementation of projects, that have been delayed beyond the stipulated timeframe, including issues causing delay in grant of clearance/approvals;

(v) to review the procedures followed by Ministries/Departments to grant/refuse approvals and clearances;

(vi) to take decision regarding grant/refusal of approval/clearance of specific projects that are unduly delayed , if deemed necessary;

(vii) To consider and decide measures required for expeditiously granting/refusing approvals/clearances in identified sectors including simplification of rules/procedures followed by the respective Ministries/Departments for decision making; and

(viii) to require statutory authorities to discharge functions and exercise powers under the relevant law/regulation within the prescribed time frames for promoting investment and economic growth.

Accordingly, all the concerned Ministries/Departments have been requested to review projects, both in public and private sectors, having investment of Rs 1000 cr or more that are pending on account of delay in according clearances/approvals and to formulate and circulate the proposals for the consideration of the CCI, after due inter-ministerial consultations, in respect of such delayed projects. If the Administrative Ministry/ Department feels that a proposal needs to be considered by the Committee of Secretaries first, it should send a note/proposal for consideration by the Committee of Secretaries to the Cabinet Secretariat.

The CCI took up the task to debottleneck stalled projects involving cumulative investment of Rs. 1.61 lakh crore. Investment of Rs. 69,000 crore has already been made in these stalled projects. This clearance would facilitate future investment of Rs. 92,000 crore. These initiatives include issue of environment clearance to 106 different development projects; clearances to 30 New Exploration Licensing Policy blocks, where clearances were pending with either the ministry of commerce or the ministry of defence; clearances to 10 power transmission line projects and North Karanpura Thermal Power project in Jharkhand. A special cell in the Cabinet Secretariat is essentially in the nature of a project monitoring group for all large projects. If a decision of the CCI is required in any case, the special cell will bring the case to the CCI.

COMPOSITION OF PANEL
Head: Prime Minister Manmohan Singh

Name	Ministry/Department
A K Antony	Defence
Sharad Pawar	Agriculture & Food Processing
P Chidambaram	Finance
Sushilkumar Shinde	Home
M Veerappa Moily	Petroleum and Natural Gas
Kamal Nath	Urban Development
Ajit Singh	Civil Aviation
Kapil Sibal	Communications & Information Tech
Anand Sharma	Commerce & Industry
C P Joshi	Road Transport & Highways
Pawan Kumar Bansal	Railways
Shriprakash Jaiswal	Coal
Dinsha J Patel	Mines
Ashwani Kumar	Law and Justice
Harish Rawat	Water Resources
SPECIAL INVITEES	
Jayanthi Natarajan	MoS, Environment & Forests
M S Ahluwalia	Dy Chairman, Planning Commission
Jyotiraditya Scindia	MoS, Power
Manish Tewari	MoS, Information & Broadcasting

2013-14 Union Budget and Infrastructure

The Finance Minister has promised new industrial corridors, smart cities, bigger role for private firms in coal, a regulator for the dispute-ridden highways sector and support for innovative financing for infrastructure projects

Airport express

The Delhi Airport Metro Express (DAME) is a Delhi Metro line from New Delhi Metro Station to Dwarka Sector 21, linking the Indira Gandhi International Airport. The line, also known as the Orange line is operated by the Delhi Airport Metro Express Pvt. Limited (DAMEPL), a subsidiary of Reliance Infrastructure, the concessionaire of the line, and opened in February 2011. The total length of the line is 22.7 km, of which 15.7 km is underground and 7 km, from Buddha Jayanti Park and Mahipalpur, is elevated.
Service was suspended from July 2012 to January 2013 due to technical problems. After reopening, the speed was cut to only 50 km/hr, extending journey time from the airport to New Delhi Station to over 40 minutes. On 27 June 2013 Reliance Infrastructure Ltd intimated DMRC that they are unable to operate the line beyond 30 June 2013. Following this DMRC took over operations of Airport Express line from 1 July 2013.

Why Reliance Infra pulled out?

Delhi Airport Express Private Ltd (DAEPL) was a special purpose vehicle set up by the parties to operate and run the 22.7-km line. Reliance has pulled out of its 30-year contract to operate the Airport Express line. Lessons for the PPP are: The government, having decided that India needs upgraded infrastructure and lacks the public funds to build it, has focused in its planning on partnerships with the private sector. Reliance Infrastructure won the bid to operate the Airport Express on the assumption that it would carry 40,000 people a day. In effect, it has even at its best been carrying half those numbers, around 17,000. As a result, much advertising space has gone unsold. And so made losses; it costs Rs 7 crore a month to run, but the revenue from tickets and advertising is only Rs 3 crore. That is presumably what lies behind the private sector operator's unwillingness to persist with the project; DAMEPL appears to have decided that the prospects of a turnaround in the line's fortunes are not great. The question is, of course, whether the original estimate of 40,000 metro riders was reasonable - another example of how auctions can lead to unrealistic estimates in the hope of renegotiation later. PPP projects have to work out how this problem can be avoided. The project was built at a cost of Rs 5,700 crore, with Reliance spending Rs 2,285 crore and the DMRC paying Rs 3,415 crore. What went wrong? For one, it appears that construction standards were deficient. That meant that the speed of the train was drastically lowered, and a planned 17-minute trip began to take as much as 45 minutes - which made it difficult to attract riders, as the ticket price of Rs 150 became extremely unattractive for a regular metro-rail ride. Scheduling and track layout itself minimised the attractiveness of the Airport Express as an option for travellers. It shut down before midnight, for example, opening at 5.15 am - whereas most international flights take off and land in Delhi between midnight and 4 am. And the Airport Express did not even run to Terminal 1 of Delhi airport, the terminal through which most of Delhi's cost-sensitive passengers fly; nor did it connect seamlessly with the rest of the Metro. The government intends to launch PPP-financed infrastructure worth Rs 1.15 lakh crore in the coming months. If the lessons of the Airport Express are learned, we can be far more gainful.

SIA

Social impact assessment (SIA) is a methodology to review the social effects of infrastructure projects and other development interventions. The origin of SIA comes from the environmental impact assessment (EIA) model, which first emerged in the 1970s in the U.S, as a way to assess the impacts on society of certain development schemes and projects before they go ahead - for example, new roads, industrial facilities, mines, dams, ports, airports, and other infrastructure projects. It has been incorporated since into the formal planning and approval processes in several countries, in order to categorize and assess how major developments may affect populations, groups, and settlements. SIA is often carried out as part of, or in addition to, environmental impact assessment, but it has not yet been as widely adopted as EIA in formal planning systems, often playing a minor role in combined environmental and social assessments.

Social impact assessment is also of increasing importance as a means to measure and monitor the social returns or social outputs of a business.

Social impacts can be defined as the consequences to people of any proposed action that changes the way they live, work, relate to one another, organise themselves and function as individuals and members of society. This definition includes social-psychological changes, for example to people's values, attitudes and perceptions of themselves and their community and environment. Indeed, some SIA practitioners consider social impacts to be only 'as experienced' (e.g. stress, disruption, hunger) and differentiate these from the causal processes (e.g. over-crowding, infrastructure pressure, poverty)

The main types of social impact that occur as a result of these project-related changes can be grouped into five overlapping categories:

- lifestyle impacts – on the way people behave and relate to family, friends and cohorts on a day-to-day basis;
- cultural impacts – on shared customs, obligations, values, language, religious belief and other elements which make a social or ethnic group distinct;
- community impacts – on infrastructure, services, voluntary organisations, activity networks and cohesion;
- amenity/quality of life impacts – on sense of place, aesthetics and heritage, perception of belonging, security and livability, and aspirations for the future; and
- health impacts – on mental, physical and social well being, although these aspects are also the subject of health impact assessment .

The key points of the above discussion are that:

- social and biophysical impacts are interconnected and should be assessed together;
- SIA is understood to be concerned with the human consequences of development proposals, identifying all significant social impacts that arise in this context; and

National Investment & Manufacturing Zones (NIMZs)

The Government of India has announced a National Manufacturing Policy with the objective of enhancing the share of manufacturing in GDP to 25% within a decade and creating 100 million jobs. The National Investment & Manufacturing Zones (NIMZs) are an important instrumentality of the manufacturing policy.

The basic detail is as follows: State government selects the land and applies to the Central government to accept its proposal to set up an NIMZ. If the central government accepts, it notifies the same and sets up an SPV that manages it. State government owns it itself or makes any other arrangement of ownership.

NMIZs are the cornerstone of the NMP for realising its goals.NIMZs will be developed as green field industrial townships, benchmarked with the best manufacturing hubs in the world.

These NIMZs will seek to address the infrastructural bottleneck which has been cited as a constraining factor for the growth of manufacturing".

The NMIZ will function as "a self-governing and autonomous body and will be declared by the State Governments as an Industrial Township under Art 243 Q (c) of the Constitution. ...They would be different from SEZs in terms of size, level of infrastructure planning, and governance structure related to regulatory procedures and exit policies". NIMZ may also have SEZs located in them. While SEZs mainly concentrated on exports, NIMZs have no such role, though they may export if they choose to. SEZs exist for the services secor s well while NIMZ does not.

Thus, NIMZ is going to be an all-inclusive gigantic structure combining production units, public utilities, logistics, environmental protection mechanisms, residential areas and administrative services. It may also include one or more Special Economic Zones (SEZs), Industrial Parks and Warehousing Zones, Export Oriented Units (EOUs) and Domestic Tariff Area (DTA) units.

The NMP prescribes that an NIMZ would have an area of at least 5000 hectares and that the State Government "will be responsible for selection of land suitable for development of the NIMZ, including land acquisition if necessary".

As regards internal infrastructure of NMIZ, it will be provided by a Developer or a group of Co-developers, while external linkages will be provided by Govt. of India and the concerned State Govt. Thus, it requires Centre-State co-ordination. The NMP says that the administrative structure for NMIZ will be headed by an SPV- Special Purpose Vehicle .

While the Central Govt will be responsible for notifying the NIMZ and issuing necessary clearances, the State Governments really have many tasks to perform. Apart from selecting the land and acquiring if necessary: such as ensuring water requirements, power connectivity, infrastructure linkages, etc. .

The NMP empowers the Central Govt. with the creation of a High Powered Committee to ensure necessary coordination among central ministries and state governments and also monitor the progress of environmental and other clearances, as well as ensuring external physical infrastructure in a time bound manner. The latter includes: Rail, Road (National Highways), Ports, Airports and Telecom and it also talks about using public private partnership model for this purpose and providing Viability Gap Funding.

State Govt may also have to provide such external linkages. Other functions of states government include, among other things,

a) land,
b) funding of initial cost of land,
c) exploring funding arrangements, including from international funding institutions, long term tax free debentures, etc
d) power connectivity,
e) water requirements,
f) state roads connectivity,
g) sewerage and effluent treatment,
h) health, safety and environmental issues, etc.

Besides the above major features of NMIZ, the NMP deals at great length on matters of

a) institutional framework [e.g. making Department of Industrial Policy and Promotion (DIPP) as the nodal department of Govt. of India];
b) rationalization and simplification of business regulations – dispensing with complying with 70 laws and regulations and filing sometimes as many as 100 returns a day;
c) making labour laws flexible;
d) exit policy for units in NMIZs that also ensures prospect of loss of job insurance policy for employees;
e) leveraging infrastructure deficit and government procurement, etc.

A typical NIMZ will be of at least 5,000 hectares in size and will be chosen by the state governments from its own land or through acquisitions. The preference will be for non-agricultural land with adequate water supply. If needed, the states may reserve a certain share of the land for MSMEs.

Ownership of an NIMZ will either be with the state government, a state government undertaking in joint ownership with a private partner or under any other appropriate model.

Wasteland, as far as possible will be acquired and agricultural land will be kept to minimum. It should not be in ecologically sensitive area.

SPV

The administrative structure of an NIMZ will include four entities, namely an SPV, a developer, the state government and the central government. After the central government notifies an NIMZ in the official gazette, an SPV will be constituted to exercise the powers, discharge the functions and manage the affairs of the NIMZ. This SPV can be a company, including a Section 25 company, depending upon the MoU between stakeholders.

The appropriate financial and administrative structure of the SPV will depend on the financial participation of different stakeholders who will also have their nominees on the board of the SPV. However, the CEO of the SPV will be a senior central or state government official. The SPV will include an official/expert conversant with the work relating to pollution control/environmental protection. There will also be representation to the industrial units functioning in NIMZs. The main functions of the SPV will include master planning of the zone, preparation of a development strategy and an action plan for self-regulation to serve the purpose of the policy, formulation of rules and procedures for development, operation, regulation and management of NIMZs and their enforcement.

The SPV will also expedite environmental clearance and clearances under the air and water Acts, work out an arrangements with the state government regarding revenue streams including the levy of user or service charges or fees or rent for the use of infrastructure/properties in NIMZs and the creation of specific mechanisms for specialised services.

The SPV can take up the development work on its own through various agencies/contractors or take up the development in partnership with a developer who shall be selected through a transparent process.

Labour advantages

NIMZs will put in place a comprehensive exit policy that will promote productivity while providing flexibility by reducing some of the moving rigidities in the labour market and by ensuring protection of workers' rights as laid down in the statute.

An exit policy will be worked out, keeping in view the provisions for the protection of workers' rights within the statutory framework. Firms operating in NIMZs will have a job-loss policy to insure workers against loss of employment in the event of closure or retrenchment. This policy will be used to make compensation payment to workers at the time of closure or right sizing. The SPV can also opt for a sinking fund mechanism, instead of a job-loss policy, to be funded by contributions to provide compensation to workers. Or both can operate in combination.

Similarly, the SPV will help redeploy labour from one unit to another in case of closures. This redeployment shall be from the date of closure at the same remuneration and on the same terms as before.

Under Section 25FFF of the Industrial Disputes Act there is a mandatory requirement to pay compensation equivalent to fifteen days' average pay for every completed year of continuous service, or any part thereof in excess of six months. NMP makes it 20 days.

By July 2013, Centre has already given in principal approval for 12 NIMZs.

AP has been granted another National Investment Manufacturing Zone (NIMZ) near Ongole in Prakasam district. This will be in addition to the two NIMZs already cleared in principle by the central government in Medak and Chittoor districts. The zones will be developed as integrated industrial townships with state-of-the-art infrastructure, clean and energy-efficient technology and skill development facilities. Andhra Pradesh would be the second state after Maharashtra to have more than two NIMZs. Japan, Germany, the UK, Russia and China have shown keen interest in investing in these NIMZs.

SEZs

India was one of the first in Asia to recognize the effectiveness of the Export Processing Zone (EPZ) model in promoting exports, with Asia's first EPZ set up in Kandla in 1965. With a view to overcome the shortcomings experienced on account of the multiplicity of controls and clearances; absence of world-class infrastructure, and an unstable fiscal regime and with a view to attract larger foreign investments in India, the Special Economic Zones (SEZs) Policy was announced in 2000.

This policy intended to make SEZs an engine for economic growth supported by quality infrastructure complemented by an attractive fiscal package, both at the Centre and the State level, with the minimum possible regulations. To instill confidence in investors and signal the Government's commitment to a stable SEZ policy regime and with a view to impart stability to the SEZ regime thereby generating greater economic activity and employment through the establishment of SEZs, Special Economic Zones Act, 2005, was made.

The main objectives of the SEZ Act are:

a) generation of additional economic activity.
b) promotion of exports of goods and services;
c) promotion of investment from domestic and foreign sources;
d) creation of employment opportunities;
e) development of infrastructure facilities;

It is expected that this will trigger a large flow of foreign and domestic investment in SEZs, in infrastructure and productive capacity, leading to generation of additional economic activity and creation of employment opportunities.

The SEZ Act 2005 envisages key role for the State Governments in Export Promotion and creation of related infrastructure. A Single Window SEZ approval mechanism has been provided through a 19 member inter-ministerial SEZ Board of Approval (BoA). The applications duly recommended by the respective State Governments/UT Administration are considered by this BoA periodically.

The SEZ Rules provide for different minimum land requirement for different class of SEZs. Every SEZ is divided into a processing area where alone the SEZ units would come up and the non-processing area where the supporting infrastructure is to be created.

The SEZ Rules provide for:

- Simplified procedures for development, operation, and maintenance of the Special Economic Zones and for setting up units and conducting business in SEZs;
- Single window clearance for setting up of an SEZ;
- Single window clearance for setting up a unit in a Special Economic Zone;
- Single Window clearance on matters relating to Central as well as State Governments;
- Simplified compliance procedures and documentation with an emphasis on self certification

Incentives and facilities offered to the SEZs

The incentives and facilities offered to the units in SEZs for attracting investments into the SEZs, including foreign investment include:-

- Duty free import/domestic procurement of goods for development, operation and maintenance of SEZ units
- 100% Income Tax exemption on export income for SEZ units for first 5 years, 50% for next 5 years thereafter and 50% of the ploughed back export profit for next 5 years.
- Exemption from minimum alternate tax(done away with)
- External commercial borrowing by SEZ units upto US $ 500 million in a year
- Exemption from Central Sales Tax.
- Exemption from Service Tax.
- Single window clearance for Central and State level approvals.
- Exemption from State sales tax and other levies as extended by the respective State Governments.

The major incentives and facilities available to SEZ developers include:-

- Exemption from customs/excise duties for development of SEZs for authorized operations approved by the BOA.
- Income Tax exemption on income derived from the business of development of the SEZ in a block of 10 years in 15 years
- Exemption from minimum alternate tax under Section 115 JB of the Income Tax Act(done away with recently)
- Exemption from dividend distribution tax(done away with. Read ahead).
- Exemption from Central Sales Tax (CST).
- Exemption from Service Tax (Section 7, 26 and Second Schedule of the SEZ Act). 2013

The government will soon notify the Special Economic Zones (SEZ) reforms which seek to ease land requirement norms and provide for an exit policy. The government had announced these reforms in the supplementary Foreign Trade Policy (FTP).

Once a major attraction for investors, SEZs lost sheen following imposition of MAT (Minimum Alternate Tax) and DDT (Dividend Distribution Tax), besides the global slowdown.

The government had taken note of the fact that there are acute difficulties in aggregating large tracts of uncultivable land lying vacant, to set up SEZ.

For multiproduct SEZ, minimum land requirement has been brought down from 1,000 hectares to 500 hectares and for sector-specific SEZs, it has been brought down to 50 hectares.

Also, there would be no minimum land requirement for setting up IT\ITES SEZs, besides easing of minimum built up area criteria.

The 170 functional SEZs have attracted an investment of over Rs 2.36 lakh crore and exports from them totalled Rs 4.76 lakh crore in 2012-13, a growth of over 2,000 per cent over the 7 years period. So far, the government has notified about 390 SEZs in different parts of the country.

Land-related Issues

Land reform (also agrarian reform, though that can have a broader meaning) involves the changing of laws, regulations or customs regarding land ownership and cultivation. Land reform may consist of a government-initiated or government-backed property redistribution, generally of agricultural land. Land reform can, therefore, refer to transfer of ownership from the more powerful to the less powerful, such as from a relatively small number of wealthy (or noble) owners with extensive land holdings to individual ownership by those who work the land. Such transfers of ownership may be with or without compensation; compensation may vary from token amounts to the full value of the land.

Land reform may also entail the transfer of land from individual ownership — even peasant ownership in smallholdings — to government-owned collective farms. The common characteristic of all land reforms, however, is modification or replacement of existing institutional arrangements governing possession and use of land.

In the years immediately following India's independence, the 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.

The Government of India saw that agricultural development in India could be achieved only with the reform of India's rural institutional structure. It was said that the extent of the utilisation of agricultural resources would be determined by the institutional framework under which the various inputs were put to use. M. Dandekar observed: "Among the actions intended to release the force which may initiate or accelerate the process of economic growth, agrarian reform usually receives high priority". The First Five-Year Plan stated:"This (land reform) is a fundamental issue of national importance. The former Prime Minister, Indira Gandhi, emphasised: "Land Reforms is the most crucial test which our political system must pass in order to survive." Land reforms therefore became one of the vital aspects of the agricultural development policy especially after the concept of the Five-Year Plan came to stay.

The important objectives of land reform measures in India were: (1) to enhance the productivity of land by improving the economic conditions of farmers and tenants so that they may have the interest to invest in and improve agriculture, (2) to ensure distributive justice and to create an egalitarian society by eliminating all forms of exploitation, (3) to create a system of peasant proprietorship with the motto of land to the tiller and (4) to transfer the incomes of the few to many so that the demand for consumer goods would be created.

The Second Five-Year Plan emphasised the objectives of the land reforms thus:

i. To remove the impediments in the way of agricultural production as may arise from the character of agrarian structure and to evolve an agrarian economy conducive of high levels of efficiency and productivity;
ii. To establish an egalitarian society and to eliminate social inequality;

The land reform legislation was passed by all the State Governments during the Fifties touching upon these measures;

1. Abolition of intermediaries.
2. Tenancy reforms to regulate fair rent and provide security to tenure.
3. Ceilings on holdings and distribution of surplus land among the landlords.
4. Consolidation of holdings and prevention of their further fragmentation and
5. Development of cooperative farming.

The Zamindars acted as the intermediaries. Until Independence, a large part of agricultural land was held by the intermediaries under the zamindari, mahalwari and ryotwari systems. Consequently, the tenants were burdened with high rents, unproductive cultivation and other forms of exploitation.

By 1972, laws had been passed in all the States to abolish intermediaries. All of them had two principles in common: 1) abolition of intermediaries between the state and the cultivator and 2) the payment of compensation to the owners. But there was no clear mention about just and equitable compensation. Therefore, the Zamindari Abolition Act was challenged in the High Courts and the Supreme Court. But the Government accomplished the task of abolishing intermediary tenures bringing nearly 20 million cultivators into direct contact with the state. Nearly 57.7 lakh hectares were distributed to landless agriculturists after the successful completion of the Zamindari Abolition Act. The abolition also had a favourable economic impact on the country. By conferring the ownership of land to the tiller, the Government provided an incentive to improve cultivation. This paved the way for increase in efficiency and yield. This was an important step towards the establishment of socialism and the Government revenue increased. It also ushered in cooperative farming.

The efficacy of the legislation was, however, considerably reduced for the following reasons;

1. The act did not benefit sub-tenants and share croppers, as they did not have occupancy rights on the land they cultivated.
2. Many landlords managed to retain considerable land areas under the various provisions of the laws. Benami holdings became the order of the day in many States.
3. The problems of transferring ownership rights from the actual cultivators of the land, the tenants, the sub-tenants, share croppers, therefore, remained far from resolved.

Result, land reforms remain incomplete and unfinished.

One of the major negative features of agrarian transition in India is the continued concentration of land in the hands of the upper strata of the rural society. This has not undergone any change in the past five decades, despite the reforms. In fact, leasing in by the affluent farmer is common place.

It may be inferred that the steps taken by the Government have not made any significant impact on the agrarian structure to reduce, let alone eliminate the inequality in the distribution of land or income or to afford to lend the poor the access to the land. It is also true that the land reforms did not seriously jeopardise the interest of the landholders. The structural impediments to production and equitable distribution of rural resources are very much in existence. Social, political and economic power still rests with the elite group who were elite prior to 1947 also.

On the question of increasing productivity, it is difficult to assess the exact contribution of land reforms because productivity has been more related to the technical revolution ushered in the Indian agricultural sector.

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 dfferent tenure systems, and the imposition of ceilings on landholdings. But the progress by and large is meager.There are many factors responsible for the tardy progress but important among them are the lack of adequate direction and determination, lack of political will, absence of pressure from below, inadequate policy instrument, legal hurdles, absence of correct-up-dated land records and the lack of financial support.

Most studies indicate that inequalities have increased, rather than decreased. The number of landless laborers has risen. In the opinion of some, after liberalization, privatization, and globalization (LPG) 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; land as a basis of livelihood for subsistence, survival, social justice, and human dignity has largely been lost.

The balance of power in rural India is so heavily weighed against the landless and the poor that implementing land ceiling laws is difficult. It is clear that without massive mobilisation of the rural poor and a deepening of democratic governance in rural India, very little can be achieved in this direction. West Bengal, with more than half of India's ceiling surplus land beneficiaries, provides an example of what could be achieved. Its land distribution programme called Operation Barga has been hailed as a success.

Although half of India's population continues to depend on agriculture as its primary source of livelihood, 83 per cent of farmers operate holdings of less than 2 ha in size, and the average holding size is only 1.23 ha. This is often in fragments and unirrigated. There are also those who are entirely landless, although agriculture is their main source of livelihood. They have inadequate financial resources to purchase and often depend on leasing in small plots, on insecure terms, for short periods, sometimes only for one season. Hence many face insecurity of tenure and the growing threat of land alienation and pressures from urbanisation, industrialisation and powerful interests.

They are unable to take advantage of the economies of scale, or invest in costly inputs such as irrigation, technology or machinery. They have limited access to formal credit. Hence they have few resources for land improvement or crop insurance or adequate inputs (seeds, fertilisers, and so on). They are often ignored by extension agencies and seldom receive information on new technologies or training in skill-intensive agricultural practices.

Absentee landlordism is high in some regions (especially the hill states and rainfed areas), causing huge tracts of cultivable fallows to lie idle. Unfortunately, most tenancy laws have driven tenancy underground or made it even more informal. Micro-studies from different states show that the proportion of leased-in land is significantly higher than reported by both the NSS and Census. In some cases, it is as high as 20–25 per cent of the gross cultivated area. Tenancy contracts are oral and for a short period. The proportion of leased-in land is higher in agriculturally developed regions compared to backward regions. All classes of households participate in the lease market both as lessors and lessees. However, while in backward agricultural regions, the traditional pattern is more common wherein the small and marginal farmers dominate the lease market as lessees and large and medium farmers as lessors, in agriculturally advanced regions, the lease market is in a state of transition where all classes of households participate. The trend towards reverse tenancy is more pronounced in these regions.

There is, therefore, a strong case for legalising tenancy and allowing leasing-in and leasing-out land with adequate safeguards to protect the interests of small and marginal farmers. Liberalisation of the lease market does not mean abrogation of existing tenancy legislations. These must be suitably amended to per- mit leasing-in and leasing-out of land, while making ownership rights non-alienable and secure, fixing tenure, recording of lease and allowing landowners to resume land for cultivation after expiry of lease.

Reforming tenancy laws would allow all sections to appropriately participate in the lease market depending upon their resource endowment. Studies have shown that in states like Punjab and Haryana, large and medium farmers who lease in land from small and marginal farmers invest in modern inputs, reap economies of scale and raise farm productivity. The small and marginal farmers who lease out their land also gain in terms of occupational mobility and higher incomes. In other states like Bihar and Orissa, with low wages and fewer employment opportuni- ties, small and marginal farmers lease in land, enlarge their holding size and thus afford a reasonable level of living with all attendant benefits of tenancy like borrowing from financial institutions. The medium and large farmers in these states migrate to urban areas to take non-farm employment opportunities without any risk of losing their land. When their livelihoods become secure in the non-farm sector,they could sell their land. Liberalising tenancy also helps in consolidation of holdings as farmers prefer to lease out rather than sell the piece of land that is inconveniently located. Long-term tenancy contracts would also help raise agricultural productivity.

These constraints are further compounded for tribal and women farmers. Increasingly, as more men than women move out of agriculture, there is a shift toward the feminisation of agriculture. Many women also serve as de-facto household heads. However, women farmers typically have little direct access to land and highly unequal access to inputs and other services.

Environmental factors further disadvantage poor farmers. Water tables have been falling and soils depleting. All this is happening against the backdrop of climate change. The key question is: *how can these constraints be transformed into opportunities?* Can the disadvantaged farmers attain sustainable livelihoods and become India's advantage for both higher growth and more inclusive development?

The Way Forward

The Twelfth Plan Working Group on Disadvantaged Farmers, including Women has proposed several mechanisms for easing the land constraint faced by the landless and land-poor:

1. *Land Transfers by Government to Disadvantaged and Women (D&W) Farmers:* There should be a comprehensive assessment of all land available with the government, including ceiling surplus land, uncultivated wasteland, and so on. Unofficial estimates by organisations such as Ekta Parishad suggest much more land is available for distribution than reflected in official estimates.

All such available land should be distributed to groups of D&W farmers rather than to individual families. The land so distributed could either be registered in the group's name, or it could be given to them under a very long-term lease arrangement. The recommendation of the Eleventh

Plan that all rural families without homesteads be allotted land in the woman's name, needs to be implemented in all States, to be used for shelter and supplementary livelihoods, although the amount allotted could be subject to availability. Some States have taken important initiatives in this direction. Kerala has had a longstanding programme of giving ownership rights on land on which a homestead stands, in its land reform programme. Some 4.46 lakh agricultural labour households benefited from this: the percent- age of landless families declined from 15.7 per cent in 1971–72 to 4.8 per cent in 2002–03. These schemes provided land for shelter and also for supplementary livelihoods (for example kitchen gardens, goat and poultry rearing). The West Bengal and Orissa governments have also allotted homestead plots to land- less families. Orissa has been allotting 4 to 10 cents and West Bengal has allotted up to 16 cents.

2> ***Facilitating Land Purchase***

Apart from distributing all surplus land available with the government to D&W farmers, schemes could be instituted to enable the landless and land- poor to themselves purchase land. The Twelfth Plan Working Group on Disadvantaged Farmers, including Women recommends a loan-cum-grant scheme with 50 per cent being given as a low inter- est loan and 50 per cent being given as a grant, to help groups of landless or near landless women and men purchase land collectively. The land purchased can be registered in equal parts in each group member's name, but support is needed to help the group improve the land, and even cultivate it as a group.

A case in point is a scheme started in the 1980s by the Government of Andhra Pradesh, under which poor dalit women formed small groups to buy land collectively for joint farming, with support from the NGO Deccan Development Society. Many women's groups in Medak District took advantage of the scheme. The land was equally divided and registered in the names of individual women. But they are cultivating jointly by pooling it.

Facilitating Land Leasing

Land leasing is a significant mechanism for bringing in fallow or little used land under cultivation, and providing land access to the land-poor. This will need both legal changes and institutional innovation.

Legal changes: Tenancy should be legalised and regulated to provide security to the tenant while also protecting the landowner's rights. The contractual period should be long enough to encourage investment in land. Legalisation should also protect the landowner's rights so that s/he has an incentive to lease out the land which might otherwise remain underutilised. A group approach to leasing in and use of the land should be built into the system, as also financial and institutional support for such cultivation. In other words, leasing by women's Self Help Groups (SHGs), or groups constituted of male or female headed disadvantaged farmer families, or production cooperatives, or other forms of group farms should be permitted. Sub-leasing within the group to individual members should be banned. Financial and institutional support should also be provided for group cultivation.

Public Land Banks: Even legal guarantee may be insufficient to mitigate the landowner's fear of losing his/her title, especially since many of the lessors are themselves small and marginal farmers. Enacting a law to recognise tenancies could freeze the informal land lease market in the short run. To guard against this, the Twelfth Plan Working Group on Disadvantaged Farmers, including Women pro- poses the creation of a *Public Land Bank* (PLB) at the panchayat level. This would regulate and rationalise land demand and supply. The PLB would take 'deposits' of land from landowners wanting to lease out their land, with the surety that they could with- draw their deposit when they wanted. The deposit could be for one season, one year, or three years and more. The PLB would lease out the land under its command to specially designated categories of disadvantaged farmers, such as marginal farmers, women, dalits, and tribals, whether leasing as individuals or in groups. These lessees would get a guaranteed lease, fixed after assessing land quality, and in a consolidated plot where possible. Institutional finance and other support could also be provided.

6> **There can be several incentives for farmers to deposit their land in the PLB:** (*i*) a minimum rent from the PLB even for fallow land; (*ii*) an additional 'topping up' rent for land that gets leased out; (*iii*) development of the land in terms of soil conservation and so on, via MGNREGA or other means. (*iv*) government guarantee to protect the owner, with owners being free to withdraw their land from the Bank with due notice. For the lessees, it would provide D&W farmers access to land for which they cannot always compete in the open market. The PLB should provide a guaranteed lease and, where possible, a consolidated plot of reasonable size. This would, in itself, improve their ability to move up the value chain and taking advantage of new opportunities.

7> ***Group Farming:*** *An Integrated Approach to Ease Multiple Constraints T*o ease the constraints D&W farmers face in access to land and other inputs, and to enable them to take advantage of new market opportunities, we need an integrated approach to problem resolution. The most comprehensive solution would be group farming with individual land ownership. There are several successful examples of group cultivation in India from which lessons can be learnt and the programme expanded to other states. The best known example is of the Kudumbashree project launched in 2007 by the Kerala Government; but initiatives in Andhra Pradesh are also of note.

The Kudumbashree project initially facilitated land leasing by small groups of women, typically women's SHGs. In March 2010, an additional step was taken under which SHGs undertaking group farming can be registered as Joint Liability Groups (JLGs) a National Bank for Agriculture and Rural Development (NABARD) scheme and given financial and technical support. The state government also provides support for land preparation and reclamation (linking it with MGNREGS in some districts). There are some 38,000 JLGs in Kerala today, covering 2.5 lakh women. Such collective/group farming is carried out in all 14 districts of Kerala, covering around 24,000 ha in 2010–11. Of this, 30 per cent is fallow land which is about 9 per cent of the total current fallow land in the state. Each JLG has 4–10 women members from poor families, who lease in land, and also pool small plots owned by members. Leases range between 1 and 3 years. Rent on fallow land is low. The main crops cultivated are paddy (almost one-third the acreage), tapioca, vegetables, banana and pineapple. Group farming through joint leasing has brought substantial uncultivated land under farming, revived agriculture and created employment.

The *Andhra Pradesh Mahila Samatha Society (APMSS)* is another significant case of successful group farming by women. In 2001, APMSS begun implementing a five-year GoI–UNDP supported Dry Land Agriculture Project by mahila sanghams in five districts. The project covered 500 villages, with women farming in groups on jointly leased in or pooled personal land. In 2005, United Nations Development Programme (UNDP) involvement ended but the programme continued under APMSS. Many of these groups survive today. There are about 175 women's groups in five districts, involving 4,376 women farmers, belonging to small and marginal farmers and landless labourers. The groups mainly cultivate paddy with little irrigation and use non- chemical farming practices. All farm operations are shared and the output is distributed among the women.

Group farming has greatly increased food security among the participating households, which would not have been possible on an individual basis. However, the groups need sustained technical sup- port at the field level which had been provided dur- ing the project period with UNDP funding.

The Kudumbshree and APMSS models could be tried on a pilot basis in other States, adapted to local contexts. The group enterprise model should also be replicated for other agricultural sectors, such as fisheries (for example, group pisciculture), poultry or livestock management. Group farming could also be integrated with MGNREGS for improving agricultural land. For instance, MGNREGS has been used productively for land preparation or reclamation to support group farming in Kerala (under the Kudumbshree project). Such efforts to integrate group farming with MGNREGS need to be encouraged to leverage such schemes better for improving land resources for agriculture.

Land acquisition for non-agricultural use

Faster industrialisation is both desirable and inevitable; so is faster urbanisation. Land is an essential requirement for these structural changes to proceed unimpeded. Government also needs to acquire land for a variety of public purposes, including human development and infrastructure projects. Recognising that all the land needed for development cannot be obtained in a purely voluntary manner, there is need for a fair land acquisition law which resorts to compulsory acquisition only where it is unavoidable and in a manner that seeks assessment of social impact as participatory as possible, while also ensuring that both fair compensation and Resettlement and Rehabilitation of the dislocated persons.

Independent estimates place the number of people displaced following development projects in India over the last sixty years at 60 million, and only a third of these are estimated to have been resettled in a planned manner. Most of these people are the assetless rural poor, marginal farmers, poor fisher- folk and quarry workers. Around 40 per cent of those displaced belonged to Adivasis and 20 per cent to Dalits. Given that 90 per cent of our coal, more than 50 per cent of most minerals and most prospective dam sites are in Adivasi regions, there is likely to be continuing tension over issues of land acquisition in these areas.

These problems have arisen in large part because the legal framework under which land has been acquired is outdated. It is based on the principle of 'eminent domain'[1] under which the State can forcibly acquire land for a public purpose at prices which do not reflect the market price nor provide any premium to reflect the fact that the acquisition is forcible.

The way forward is to move away from the colonial perspective of treating people as 'subjects', which is inherent in the doctrine of eminent domain, towards a vision of citizens, whose rights are guaran- teed under the Constitution. Ultimately, we have to go beyond narrow legality to seek broader legitimacy.

Supreme Court verdict 2013 April

In a landmark judgment, the Supreme Court directed the smallest units of local governance to use their powers and take a decision on whether the Vedanta group's $1.7 billion bauxite mining project in Odisha's Niyamgiri Hills can go forward or not.
Affirming the decision-making power of the village councils of Rayagada and Kalahandi under the Forest Rights Act (FRA), the court directed these gram sabhas to "take a decision...within three months" on any claims of cultural, religious, community and individual rights that the forest dwellers of the region may have.
"We are, therefore, of the view that the question whether STs [Scheduled Tribes] and other TFDs [traditional forest dwellers], like Dongria Kondh, Kutia Kandha and others, have got any religious rights i.e. rights of worship over the Niyamgiri hills, known as Nimagiri, near Hundaljali, which is the hill top known as Niyam-Raja, have to be considered by the Gram Sabha," said a three-member Bench in its order. "Gram Sabha can also examine whether the proposed mining area Niyama Danger, 10 km away from the peak, would in any way affect the abode of Niyam-Raja. Needless to say, if the BMP [bauxite mining project], in any way, affects their religious rights...that right has to be preserved and protected."

Once the gram sabhas have made their decision, the court gave the Ministry of Environment and Forests (MoEF) a further two months to take a final decision on granting a forest clearance for the bauxite mining project being run as a joint venture between a State-owned mining corporation and the U.K.-based Vedanta's Indian arm.

R&R

Resettlement & Rehabilitation (R&R) provisions must be made mandatory
Not addressing these issues has meant that even when the purposes for which land is to be acquired are in the legitimate national interest and/or sub- serve a vital public purpose, there have been fractious and irresolvable conflicts over land acquisition.
On the other hand, given the huge asymmetries of information and power in the land market, there are innumerable instances of distress sales by farmers to more powerful entities at throwaway prices. In many instances, these sales have been followed by use of the land in ways that run completely contrary to the original stated purpose and have yielded wind- fall profits to land and real estate mafias. That is why there has to be a role for the government to put in place, a transparent and flexible set of rules and regulations, and to ensure its enforcement.

Government is in the final stages of formulating *The Right to Fair Compensation, Resettlement, Rehabilitation and Transparency in Land Acquisition Bill.* The Bill seeks to balance the need for facilitating land acquisition for various public purposes, including infrastructure development, industrialisation and urbanisation, while at the same time meaningfully addressing the concerns of farmers, and those whose livelihoods depend on the land being acquired.

The reason for combining the two into a single legislation is that land acquisition and R&R are two sides of the same coin. R&R must always, in each instance, necessarily follow upon significant acquisition of land. Not combining the two within one law, risks neglect of R&R which has been the experience so far.

Even as it protects the interests of the land and livelihood losers by ensuring them fair compensation and adequate R&R, the Bill also seeks to ensure that land acquisition for vital public purposes happens in a manner that is judicious, transparent and time-bound, so that public purposes can be served in an expeditious and efficient manner.

The Bill is a milestone in legislation that should lead to a reduction in instances of perceived injustices that have played a major role in fuelling Maoism. On the other hand, by improving the functioning of the land market, it should lead to an upgrading of the overall investment climate in the country.

The Bill lists eight categories of public purpose for which government can acquire land:

1. Land for strategic purposes relating to armed forces of the Union, national security or defence, police, safety of the people;
2. Land for railways, highways, ports, power and irrigation purposes for use by Government and public sector companies or corporations;
3. Land for the project affected people;
4. Land for Planned development or improvement of village or urban sites or for residential purpose to weaker sections in rural or urban areas;
5. Land for Government administered educational, agricultural, health and research schemes or institutions;
6. Land for persons residing in areas affected by natural calamities;
7. Land acquired by the Government for use by government itself for purposes other than those above public sector companies; or

   PPP projects for the production of public goods or the provision of public services for physical infrastructure, social infrastructure and human development projects including those involving the production of intermediate goods and services for these purposes.
8. Land for private companies for the production of public goods or provision of public services for physical infrastructure, social infrastructure and human development projects including those involving the production of intermediate goods and services for these purposes.

Under categories (7) and (8), consent of at least 80 per cent of the landowning Project Affected Families (PAFs) is sought to be obtained through an informed process as outlined in the Bill. Under PPP projects, ownership of land will continue to vest with Government so that the PPP framework can apply.

In each case of land acquisition, fair compensation and R&R provisions as laid out in the Bill will apply. The compensation will be two times the market rate (including solatium) in urban areas and 2–4 times the market rate (including solatium) in rural areas (based on a sliding scale reflecting the distance of project from urban area). The sliding scale will be determined by State government or State Land Pricing Commission/Authority. The land compensation calculated will not be taken as the base to determine the circle rate for subsequent acquisitions, in order to ensure there is no speculative price spiral.

In the interests of food security, reasonable restrictions have been placed on acquisition of multi cropped agricultural land, with the limits of these being in each case left to the States to decide. These restrictions shall not apply in the case of linear projects (such as railways, highways, major district roads, power and telegraph lines and irrigation canals)

The comprehensive R&R package for land- owners and livelihood losers includes:

1. Subsistence allowance at `3,000 per month per family for 12 months
2. The affected families shall be entitled to:(*i*) Where jobs are created through the proj- ect, mandatory employment for one member per affected family or (*ii*) `5 lakhs per family or (*iii*) `2,000 per month per family as annuity for 20 years, with appropriate index for inflation. The option of availing (*i*) or (*ii*) or (*iii*) shall be that of the affected family
3. If a house is lost in rural areas, a constructed house shall be provided as per the Indira Awas Yojana specifications. If a house is lost in urban areas, a constructed house shall be provided, which will be not less than 50 sq mts in plinth area. In either case the equivalent cost of the house may also be provided in lieu of the house as per the preference of the project affected family
4. *One acre of land* to each family in the command area, if land is acquired for an irrigation project
5. `50,000 for transportation
6. A one-time 'Resettlement Allowance' of `50,000

Additional benefits have been provided for SC/ ST families. The Bill also seeks to provide the same R&R package to affected families on sale/purchase of land where sale/purchase exceeds certain thresh old. This threshold shall be fixed by respective States keeping in view the availability of the land and den- sity of the population.

25 infrastructural amenities are to be provided in the resettlement area, including schools and play- grounds, health centres, roads and electric connections, assured sources of safe drinking water for each family, panchayat ghars, Anganwadis, places of worship and burial and/or cremation ground, village level post offices, as appropriate, with facilities for opening saving accounts, Fair Price shops and seed- cum-fertiliser storage facilities and so on.

In order to avoid delays, stringent time-lines have been set. Compensation will be given within a period of three months from the date of the award. Monetary R&R entitlements will be provided within a period of six months from the date of the award. Infrastructure R&R entitlements will be provided within a period of eighteen months from the date of the award. No involuntary displacement will take place without completion of R&R. In irrigation or hydel projects, R&R shall be completed six months prior to submergence.

Innovations in land for urbanisation

Work on issues related to urbanisation during the preparation of the Twelfth Plan has thrown up a number of innovative ideas to ease the land constraint in this sector:

Land Readjustment (LR) is gaining acceptance as an alternative to land acquisition as it has many advantages for land assembly. Under this process, a compact area is selected in consultation with the land owners for urban expansion/renewal. The municipal authorities provide infrastructure which is funded by exploiting a part of land. The remaining land, whose value has increased due to provision of infrastruc- ture, is reallocated back to participating private land- owners. In essence a participatory tool, LR avoids public discontent and protests to a great extent. It also reduces the need for raising large amounts of money for acquiring land.

India has already been experimenting with a variant of LR in Gujarat's Town Planning Schemes (TPSs). Successful LR is grounded in three main enablers:

• Fairly well-defined property rights • Streamlined, independent, and transparent evalu-ation processes • Strong judicial system to address public concerns

The government of Tamil Nadu is considering the Gujarat model of Town Planning scheme to address some of the issues of land acquisition and planned development. Land readjustment and pooling are successfully implemented in Gujarat. When a development plan or a new road alignment is proposed, the Town Planning scheme does not acquire the land from the private owners. Instead, it temporarily pools the required land and the area for laying roads, amenities and other public purposes are delineated and allocated. Normally about 20 per cent of land is required for roads and another 20 per cent for common amenities. The remaining area is then reconstituted into plots as envisaged in the development plan and given back to the original owners. The land re-allotted would be proportionate to the size of the original plot and the location would be as close as possible to its original location. The cost to develop the roads and other infrastructure would be raised through the collection of the development charges from the owners or through selling the land pooled for the common purpose.

This does not involve any forceful acquisition of land. More importantly, the benefit of the development is shared with the land owners who would have otherwise forfeited them for a onetime compensation which is usually lower than the market value.

No compensation is paid in this scheme. Whatever land lost is compensated through the increase in post development land price. They are free to sell the developed plot or use it. This particularly works well in the urban and adjoining areas where the cost of the developed plot is higher than the undeveloped one. Many of the development projects can be amicably implemented through this.

Simplification of procedures for conversion of land-use and change in building bye laws have been mandated under JNNURM. These reforms should be completed urgently.

Rights of Slum Dwellers: Phase-II of the Rajiv Awas Yojana (RAY) is to be launched during the Twelfth Plan. RAY mandates giving 'property rights' to slum dwellers by suitable enactment within a year of the project being sanctioned.

RAY 2011

With an aim of creating a slum-free India, government approved the launch of the phase-1 of Rajiv Awas Yojana (RAY) to facilitate affordable housing for slum dwellers.

The Centre would provide financial assistance to States willing to assign property rights to slum dwellers for provision of shelter and basic civic and social services for slum re-development and for creation of affordable housing stock under the RAY scheme.

The scheme is expected to cover about 250 cities, mostly with population of more than one lakh across the country by the end of 12th Plan (2017). The scheme will progress at the pace set by the States.

As per the Cabinet Committee on Economic Affairs decision, the Centre will bear 50 per cent of the cost of slum redevelopment. To encourage creation of affordable housing stock, the existing schemes of Affordable Housing in Partnership and Interest Subsidy Scheme for Housing the

Urban Poor have been dovetailed into RAY.

In order to encourage private sector participation in slum re-development, Central assistance can be used by the States and cities towards viability gap funding.
Credit enablement of the urban poor and the flow of institutional finance for affordable housing is an important component of the scheme. The government has agreed to establish a mortgage risk guarantee fund to facilitate lending the urban poor for housing purposes with an initial corpus of Rs. 1000 crore.

The scheme has been designed on the basis of experience of the Jawaharlal National Urban Renewal Mission (JNNURM) sub-mission of Basic Services to the Urban Poor (BSUP) and the Integrated Housing and Urban Development Programme (HSDP).

Under these schemes, government had sought to take action for inclusive urban growth by enabling redevelopment of slums with basic amenities and decent housing with security of tenure.

The foundation laid by the JNNURM is now being built upon by aiming at creation of a slum free India through assignment of property rights to slum dwellers with greater inflow of additional Central assistance for slum re-development and creation of new affordable housing stock.

As in JNNURM, the Central assistance is conditional to reforms by the States. The reforms required here are directly linked to the objectives of the scheme and necessary for the scheme to be successful.

These reforms include the enactment of law and the assigning of property rights as also reforms in the policy to ease the land and affordable housing shortages.

The scheme is expected to begin in 250 cities which have an estimated 32.10 million people living in slums. They will benefit by way of property rights and access to decent shelter, basic amenities and a dignified life.

The inclusive city growth process will lead to enactment of productivity at the bottom of the pyramid and will sustain the contribution of cities to the Gross Domestic Product.

Updating and modernization of land records
The deteriorating quality of land records administration over the last four decades has been a major cause for concern. Accurate and updated land records are a veritable lifeline for millions of small and marginal farmers in India. They secure them against a range of vulnerabilities and allow them to access credit and agricultural inputs, as also the benefits of various anti-poverty programmes. Unambiguously recorded land rights, firm in law, are the foundation for investments in higher farm productivity. On the other hand, chaotic land man- agement results in sporadic encroachments and fratricidal litigation, at great cost to the poor. It also creates a governance regime within which rent-seek- ing and exploitation of the weak flourish unchecked.

Rational Use of Land

Land is a fixed resource and its availability in India on a per capita basis is relatively low compared with most countries. Furthermore, the country's population is likely to continue to grow till at least 2040 whereas the land mass may actually shrink with increased coastal erosion and flooding due to climate change. In these circumstances, the rational and planned use of land must be an issue that needs the highest priority, and should be made a central focus of our resource planning. Land is a state subject, but the issues are so critical that there is need for better coordination at the national level.

There are three main areas of conflict that need to be addressed. The first relates to the allocation of available land between agriculture, industry and urban use. The second potential conflict arises from the fact that allocation across different uses means some land acquisition is therefore necessary, but the terms on which this had been done in the past are no longer acceptable. The third potential conflict arises because most of our mineral resources are in areas, which are forested and the effective exploitation of these resources calls for acquisition, which may disrupt some tribal communities.

As far as the allocation to alternative sectors is concerned, it is important to recognise that diversion of land from agricultural to non-agricultural uses is inevitable in any development process since Industry must expand and cities must also expand and in both cases land needed for this expansion can only come from agriculture. Concern is often raised in this context about the impact on food security. This problem is greatly exaggerated because the produc- tivity of land in agriculture at present is very low and the shift of some land from agriculture to non-agricultural use can easily be offset by productivity increases, which are feasible and have been seen in many other developing countries. We need a clearer articulation of a strategy for dealing with such shifts while ensuring the continuing increase in the sup- ply of agricultural products of the appropriate mix of grains, horticulture products and cash crops.

Compulsory acquisition is unavoidable where there is a genuine public purpose such as acquiring land for infrastructure development. There may be a case for using acquisition for certain lands of privately owned facilities which serve a public purpose but this needs to be carefully defined. To remedy the deficiencies in the existing legislation for land acquisition which dates back to colonial times, the government has introduced the Land Acquisition Relief and Rehabilitation Bill in Parliament which is expected to create a much more balanced framework protecting the rights of those whose land is being acquired, as well as those whose livelihood will be disrupted.

Land Reform and Environmental Sustainability

The land within a forest area relates to issues of land reform. It is important to have an ecological balance among the proportions of land designated for forestry, agriculture, and nonagricultural purposes, and land reform can help to maintain and sustain this balance. Land reform that can ensure more equitable landownership can go a long way in relieving pressure on forests, even more than dedicated forest development programs that look on forests as a narrow environmental issue, devoid of a human dimension. The human element in forests, however, is very important, especially in several states of India where groups of populations have depended on forests for their livelihood for generations.

The concept of social forestry, later Joint Forest Management and in 2006, the Forests Rights law were the steps taken by the government to settle the issue.

Importance of Land Reform to India's Future

From an economic perspective, the question of land is linked to critical issues of agricultural productivity, agrarian relations, industrial uses, infrastructure development, employment opportunities, housing, and other related issues. Each one of these aspects is crucial for enhancing national security by ensuring consistent economic growth, food security, goods for export, and so on, which reinforce the country's economic strength, and therefore, its bargaining power in the international community.

The case has been made above for an ecological balance between the proportion of land designated for forestry, agriculture, and nonagricultural purposes. There is a need to explore the linkages among rural poverty, landlessness, and skewed land tenure systems with particular attention to the problems of deforestation.

Traditionally, impoverished farmers moving into forests have been identified as the principal, direct agents of forest loss. Hence, land reform that can ensure more equitable landownership may well do more to relieve pressure on forests rather than any other policy of forest resource development. In this context, and as suggested above it would be helpful to explore the efficacy of social forestry programs already undertaken in states such as Andhra Pradesh.

Patterns of land use also have an impact on soil erosion and land degradation. For instance, agricultural practices designed to suit market conditions presuppose a permissive use of agrochemicals to maximize productivity. Land is rigorously exploited to generate immediate, short-term profit, often at the expense of a long-term impact in the form of severe land degradation. In arid and semiarid regions, the introduction of perennial irrigation in order to increase yield causes salinization of the land. Irrigation on poorly drained land has waterlogged the soil, causing salts in the groundwater to rise and accumulate on the surface, turning farmland into a salt-encrusted desert. Artificial fertilizers and chemical sprays under- mine the natural fertility of soils and increase its vulnerability to erosion. Of a total land expanse in India of 329 million hectares, nearly 141 million hectares (43 percent) of the land is subject to water and soil erosion. Other types of land degradation such as water logging, alkaline and arid soils, salinity, ravines, and gullies affect another 34 million hectares.

Given the fragile nature of the ecosystem and land quality that has resulted from such a dependency on chemical inputs, care must be exercised in deter- mining land-use patterns in the future. Agriculture is expanding to wastelands that are not suited for cultivation, hence pushing India's small farmers into a less fertile land base. Additionally, the rising demand for irrigated agriculture has led to massive overexploitation of groundwater. And, with the demand for more water, local wells often dry up, leaving small and marginal farmers to either pay for expensive state-provided water or abandon the unproductive farm. In response to the same crisis in water access, wealthier farmers, corporations, and the state resort to expensive technology-dependent extraction of groundwater, which exacerbates the overall problem of groundwater depletion. The ecological consequences of the current dominant model of development are serious and need to be addressed.

Tribal Displacement and Deprivation. The concept of land as a commodity comes into conflict with traditional concepts of common property and with societies, such as those of many tribal peoples throughout India, who gener- ally do not have a documented system of land rights. The issue of land use arises in this context because many tribal groups, 7 percent of the total Indian population, live in resource-rich regions. Consequently, both the gov- ernment and the private sector have a keen interest in gaining access and control over the land or its mineral wealth. In the process, depriving tribal groups of land has become the norm, as they are routinely displaced, and, in most cases, not even able to claim compensation since they have no legal proof of ownership.

It is estimated that over 20 million people have been displaced by large proj- ects (e.g., dams, railroads) since independence, and a majority of these peo- ple have been tribal groups. This has happened despite the fact that special legal provisions exist to protect the land and other assets of tribal people. Driven away from their homes and with little or no resettlement assistance, they join the ranks of the landless. One attempt at correcting this ongoing mar- ginalization was the official endorsement of five principles that valued the preservation of tribal land use patterns and land distribution practices.

The *Panchsheela*, or five principles of tribal development, state the following:

1. Tribal people have the right to develop according to their own culture and join the mainstream as equals, while maintaining their identity. Tribal rights on tribal lands and forest will be safeguarded.
2. A team built from among tribals will develop their land.
3. State administration in tribal areas will work through traditional tribal structures.
4. Achievements in tribal areas will be judged according to human growth rather than productivity.

The resource-rich regions of the tribal peoples in India have been drawn into the plans for national development, with its emphasis on industrialization and ever-higher produc- tivity. Already, industries and irrigation schemes built on large dams have dis- placed many tribal people and transformed them into landless migrant labor. The government has presented tribal development schemes as a prin- cipal tool for poverty alleviation. However, these schemes have not taken into account the total dependence of the tribal population on land and their lack of other productive assets. It is critical that the unique existence and subsistence patterns of tribal people be empathetically understood so that economic devel- opment can be harmonized with social change.

From the 12th FYP Document

India has had a long history of social discrimi- nation, closely linked with denial of access to land. Specific land tenure systems prevailing at the time of independence also created their own set of problems. The deteriorating quality of land records administration over the last four decades has compounded the hardships of the poor. And in the recent past, the drive to acquire land for development has posed fresh challenges, most especially for the scheduled tribes. The last few years have witnessed a number of new government initiatives, including the Hindu Succession (Amendment) Act, 2005 and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, which are a response to both historical injustices and recent challenges. In January 2008, the Prime Minister approved the constitution of two High Level bodies—the National Council for Land Reforms under the Chairmanship of the Prime Minister and a Committee on State Agrarian Relations and the Unfinished Tasks in Land Reforms under the Chairmanship of the Union Minister for Rural Development. The Union Government has drafted *The Right to Fair Compensation, Resettlement,*

Rehabilitation and Transparency in Land Acquisition Bill.

The constraint posed by land is emerging as a key challenge in ensuring both inclusiveness and sustainability of the growth process. There is a constraint faced by the landless, small and marginal farmers within agriculture, as also the constraint faced by the growing need for land for the processes of urbanisation and industrialisation.

Contract farming

Farming is an age-old means of livelihood for millions of Indians. However, there have been few systems/models in which farmers are assured of a market for their produce, leave alone a remunerative price. Farmers have on occasion had to throw their produce away for want of buyers. This is one side of the coin. On the other is the agri-based and foo industry, which requires timely and adequate inputs of good quality agricultural produce. This underlying paradox of the Indian agricultural scenario has given birth to the concept of Contract Farming, which promises to provide a proper linkage between the 'farm and market.'

Recognising the need for and merits of such a linkage with the farming/producing community, several corporates involved in agrocommodity trading, processing, exports, etc. have attempted to establish convenient systems/models that ensure timely and consistent supply of raw material of the desired quality and low cost. This article discusses a few successful cases of contract farming and a brief note on the bottlenecks and criticisms levelled against this emerging alternative farm business model.

Contract farming is defined as a system for the production and supply of agricultural/horticultural produce under forward contracts between producers/suppliers and buyers. The essence of such an arrangement is the commitment of the producer/ seller to provide an agricultural commodity of a certain type, at a time and a price, and in the quantity required by a known and committed buyer. Contract farming usually involves the following basic elements - pre-agreed price, quality, quantity or acreage (minimum/maximum) and time.

According to the contract, the farmer is required to plant the contractor's crop on his land, and to harvest and deliver to the contractor a quantum of produce, based upon anticipated yield and contracted acreage. This could be at a pre-agreed price. Towards these ends, the contractor supplies the farmer with selected inputs, including the required technical advice. Thus, the contractor supplies all the inputs required for cultivation, while the farmer supplies land and labour. However, the terms and nature of the contract differ according to variations in the nature of crops to be grown, agencies, farmers, and technologies and the context in which they are practised. For example, contract farming in wheat is being practised in Madhya Pradesh by Hindustan Lever Ltd (HLL), Rallis and ICICI.

Under the system, Rallis supplies agri-inputs and know-how, and ICICI finances (farm credit) the farmers. HLL, the processing company, which requires the farm produce as raw material for its food processing industry, provides the buyback arrangement for the farm output. In this arrangement, farmers benefit through the assured market for their produce in addition to timely, adequate and quality input supply including free technical know-how; HLL benefits through supply-chain efficiency; while Rallis and ICICI benefit through assured clientele for their products and services. The consortium is also planning to rope in other specialist partners including insurance, equipment and storage companies.

Small farms and contract farming

In production agriculture, the trend in India is towards fragmentation rather than consolidation. The average size of landholdings declined from 2.2 hectares in 1970-71 to 1.06 hectares in 2003. Nearly 88 percent of the farmers have less than 2 hectares of land, and account for about 44 percent of the operated area (NSSO, 2006). Although these farms are small, indications are that they are more efficient than larger farmers in terms of land productivity, presumably due to a high share of family labor on small farms. The share of marginal and small farmers (of less than 2 hectares) in the total value of agricultural output is about 51 percent,substantially higher than their 44 percent share of area operated.

While smallholders, by virtue of available family labor and intensive cultivation practices, can be highly productive, they typically have a small marketable surplus and face high transaction costs in marketing their produce. Diversifying out of traditional crops towards high value agriculture poses two key challenges. First, higher production risk (susceptibility to pest attack and climatic adversities) and price risk associated with high value agriculture compared to grains often deters diversification. Second, lack of resources (financial assets as well as access to credit) coupled with inadequate market and crop knowledge often restricts shifts to new enterprises and investments in variable and fixed inputs. Small farmers often find themselves locked in a situation of income uncertainty and low risk bearing capacity, thus constraining shifts towards higher value and income generating activities. Again, contract farming models that can share risk and overcome resource constraints emerge as a possible approach to facilitate the transformation of small holders to high value agriculture.

Right to Homestead Bill July 2013

After legislating the Right to Information and Education and the Right to Work and Food through the Mahatma Gandhi National Rural Employment Guarantee Act and the Food Security Ordinance (July 2013) the government's next step seems to be aimed at legally upholding the right to a home. A task force set up by the Rural Development Ministry including government officials and civil society members is ready with a draft of the National Right to Homestead Bill 2013. The Bill aims to ensure that "every shelterless poor family has a right to hold homestead of not less than 10 per cents. Within a period of 10 years commencing from the date of notification". According to the National Land Reforms Policy draft , more than 31 per cent of households in the country are landless. Almost 30 per cent own less than 0.4 hectares, meaning 60 per cent of the population owns only five per cent of the country's land. The draft Bill calls for State governments to notify an implementation plan within one year to identify beneficiaries, make an inventory of available lands and acquire more, and develop and allot plots. It mandates that the Central government will bear 75 per cent of the cost through a National Homestead Guarantee Fund.