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Inclusive Growth Vision and Strategy

INTRODUCTION

1.1. India has entered the Eleventh Plan period with an impressive record of economic growth. After a lacklustre performance in the Ninth Plan period (1997–98 to 2001–02), when gross domestic product (GDP) grew at only 5.5% per annum, the economy accelerated in the Tenth Plan period (2002–03 to 2006–07) to record an average growth of 7.7%, the highest in any Plan period so far. Besides, there was acceleration even within the Tenth Plan period and the growth rate in the last four years of the Plan has averaged 8.7%, making India one of the fastest growing economies in the world.

1.2. It can be argued that there is an element of cyclicity in the high growth observed in the past four years since these were also years of a global upswing. However, India's growth performance goes beyond mere cyclicity. It is underpinned by a number of factors which are real sources of strength and will serve us well in the years ahead. Savings and investment rates have increased significantly. The industrial sector has responded well to economic reforms and has shown that it is capable of competing in the global economy. Perceptions about India among global investors are very favourable. These developments suggest that the economy is now at a point when it can achieve sustained economic expansion that has the potential to bring significant improvement in the lives of our people. If this momentum can be accelerated in the years ahead, it will put India on the path to becoming one of the key players in the world economy over the next two decades.

1.3. These positive factors notwithstanding, a major weakness in the economy is that the growth is not perceived as being sufficiently inclusive for many groups, especially

Scheduled Castes (SCs), Scheduled Tribes (STs), and minorities. Gender inequality also remains a pervasive problem and some of the structural changes taking place have an adverse effect on women. The lack of inclusiveness is borne out by data on several dimensions of performance.

1.4. The percentage of the population below the official poverty line has come down from 36% in 1993–94 to 28% in 2004–05. However, not only is this still high, the rate of decline in poverty has not accelerated along with the growth in GDP, and the incidence of poverty among certain marginalized groups, for example the STs, has hardly declined at all. Because population has also grown, the absolute number of poor people has declined only marginally from 320 million in 1993–94 to 302 million in 2004–05. This performance is all the more disappointing since the poverty line on which the estimate of the poor is based is the same as it was in 1973–74 when per capita incomes were much lower. Other indicators of deprivation suggest that the proportion of the population deprived of a minimum level of living is much higher. For example, National Family Health Survey-3 (NFHS-3) shows that almost 46% of the children in the 0 to 3 years' age group suffered from malnutrition in 2005–06, and what is even more disturbing is that the estimate shows almost no decline from the level of 47% reported in 1998 by NFHS-2.

1.5. Indicators of human development such as literacy and education, and maternal and infant mortality rates, show steady improvement, but they also suggest that the progress is slow and we continue to lag behind several other Asian countries. While the literacy rate has gone up from 18.3% in 1951 to 64.8% in 2001, the number of illiterate persons still exceeds 304 million, making India the

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country with the highest number of illiterate persons in the world. Life expectancy at birth has increased from approximately 32 years for both males and females in 1951 to 63.9 years for males and 66.9 years for females in 2001–06. Yet this is well below the life expectancy of around 80 years in industrialized countries and 72 years in China. Although Indian women now have higher life expectancy than Indian men, as is the case in industrialized countries, India also has an adverse sex ratio with only 933 women per 1000 men. More disturbing, the child sex ratio (ages 0–6) has declined sharply from 962 in 1981 to 927 in 2001. India's maternal and infant mortality rates are much higher than those of countries in East Asia, showing poor access to essential health care services.

1.6. The composition of growth in recent years has also presented some problems. Agriculture has grown very slowly from the Ninth Plan onwards and this has widened the rural–urban divide and also contributed to the severe distress in rural areas in some regions. Although there is an upturn in agricultural growth after 2004, it is too early to be complacent. Total employment in the economy has improved in recent years, but the labour force has grown even faster, leading to an increase in the unemployment rate. Permanent employment in the organized sector has decreased, although organized sector firms may be increasing their informal employment. Also, economic growth across regions has not been balanced, with some of the most backward areas yet to experience any significant growth. The delivery of essential social services at the grass roots level is also poor and this is a major causative factor in unequal development. Much higher levels of human development can be achieved even with the given structure of the economy, if only the delivery system is improved.

1.7. These features suggest that while there are significant economic achievements that India can celebrate in its 60th year of Independence, it is still far from redeeming the pledge which Pandit Jawaharlal Nehru made on the eve of Independence: '[...] for ending of poverty, ignorance, disease and inequality of opportunity'. The Eleventh Plan provides an opportunity to act decisively to consolidate the gains that have been made in the Tenth Plan and also to correct the deficiencies that have been observed.

VISION FOR THE ELEVENTH PLAN

1.8. The central vision of the Eleventh Plan is to build on our strengths to trigger a development process which

ensures broad-based improvement in the quality of life of the people, especially the poor, SCs/STs, other backward castes (OBCs), minorities and women. The National Development Council (NDC), in approving the Approach to the Eleventh Plan, endorsed a target of 9% GDP growth for the country as a whole. This growth is to be achieved in an environment in which the economy is much more integrated into the global economy, an integration that has yielded many benefits but also poses many challenges. If this is achieved, it would mean that per capita GDP would grow at about 7.6% per year to double in less than ten years. However the target is not just faster growth but also inclusive growth, that is, a growth process which yields broad-based benefits and ensures equality of opportunity for all.

1.9. This broad vision of the Eleventh Plan includes several inter-related components: rapid growth that reduces poverty and creates employment opportunities, access to essential services in health and education especially for the poor, equality of opportunity, empowerment through education and skill development, employment opportunities underpinned by the National Rural Employment Guarantee, environmental sustainability, recognition of women's agency and good governance.

RAPID GROWTH AND POVERTY REDUCTION

1.10. The persistence of poverty on the scale at which it still exists is not acceptable. A decisive reduction in poverty and an expansion in economic opportunities for all sections of the population should therefore be a crucial element of the vision for the Eleventh Plan. Rapid growth of the economy is an essential requirement to achieve this outcome since it is an instrument for achieving a steady increase in employment and incomes for large numbers of our people.

1.11. Growth in the Eleventh Plan should be better balanced to rapidly create jobs in the industrial and services sectors. This is necessary if a significant portion of the labour force is to shift out of agriculture, where it is currently engaged in low productivity employment, into a non-agricultural activity that can provide higher real incomes per head. This must be accompanied by efforts to improve the income-earning opportunities of those who remain in agriculture by raising land productivity. This process would also lead to higher farm incomes and a rise in real wages of agricultural labour whose bargaining power will improve as surplus labour is shifted out of this sector.

1.12. Rapid growth in the economy at large, and especially in the employment generating sectors such as medium and small industry and services, needs to be supplemented by targeted livelihood support programmes aimed at increasing productivity and incomes of the poor in several low income occupations which will continue as important sources of employment for quite some time. Special programmes aimed at target groups such as small and micro enterprises, weavers, artisans, craftsmen, etc. will therefore remain important in the Eleventh Plan period. Considerable experience has been gained over the years in the management of these programmes. This experience must be brought to bear in redesigning the programmes in the Eleventh Plan to make them more effective in achieving their stated objectives.

THE EMPLOYMENT CHALLENGE

1.13. The ability to generate an adequate number of productive employment opportunities will be a major factor on which the inclusiveness of growth will be judged. India is currently at a stage of 'demographic transition' where population growth is slowing down but the population of young people entering the labour force continues to expand. This means that a working person will have fewer dependents, children or parents. The dependency ratio (ratio of dependent to working age population) declined from 0.8 in 1991 to 0.73 in 2001 and is expected to decline further to 0.59 by 2011. If the workforce is gainfully employed, a lower dependency ratio means a higher rate of savings which, in turn, can raise the growth rate. This young demographic profile places India favourably in terms of manpower availability and could be a major advantage in an environment where investment is expanding in India and the industrial world is ageing.

1.14. It is, however, essential to produce a growth process in which employment would be available not only for new entrants to the labour force but also in the non-agricultural sector for workers leaving agriculture. Over 1999–2000 to 2004–05, urban employment has grown at a faster rate than population. However, since more urban women have joined the workforce, the unemployment rate has increased over these years.

1.15. Rapid growth focused on labour-intensive industries and small and middle enterprises will create employment opportunities in the manufacturing and services sectors. The ability to create jobs will be enhanced by greater labour flexibility which may require some changes in labour laws.

This is a controversial issue on which it is difficult to reach a consensus but the weight of evidence suggests that while outright hire and fire approaches may not be desirable, there is room for creating greater flexibility, short of this position.

1.16. The ability to sustain a labour-intensive growth process depends crucially upon the expansion of skill capabilities in the labour force. Specific programmes for development of skills at all levels will be a part of the Eleventh Plan.

ACCESS TO ESSENTIAL SERVICES

1.17. A person is poor because her endowments of capital, land, labour and skills are meagre, and also because her access to public goods and services and natural resources is limited. Often, a poor person is trapped in the prison of illiteracy. Disease and ill-health prevent her from getting the most out of the one asset she has, her labour. Without training and skills she cannot aspire to do a better job. Without an all-weather road that connects her habitation to the nearest market, she cannot get a fair price for her produce. Without electricity and access to credit, her ability to increase productivity of land or of artisan activity is limited. Without the sewers and drains, water works and water mains that service her town; without the policing that should protect her life and limb, property (however meagre), person and dignity as an equal citizen of India; she cannot function effectively. Thus, while in the short run, access to basic facilities such as health, education, clean drinking water, etc. impacts directly on welfare, in the longer run, it determines economic opportunities for the future. Without access to these services one cannot be considered to have equality of opportunity.

1.18. Since access to these services for the majority of the population depends not only upon their income levels but upon the delivery of these services through publicly funded systems, the Eleventh Plan's vision of poverty reduction includes major expansion in the supply of these services. The resources needed to create the infrastructure necessary for delivering these services to the poor are large. Fortunately, the rapid growth being targeted for the Eleventh Plan will facilitate the ability to undertake these programmes, both by way of higher tax revenues resulting from higher growth and a larger borrowing capability even while adhering to fiscal deficit targets expressed as a percentage of GDP. These additional resources can be devoted to Plan expenditure aimed at ensuring effective delivery of essential services.

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SOCIAL JUSTICE AND EMPOWERMENT

1.19. The vision of inclusiveness must go beyond the traditional objective of poverty alleviation to encompass equality of opportunity, as well as economic and social mobility for all sections of society, with affirmative action for SCs, STs, OBCs, minorities and women. There must be equality of opportunity to all with freedom and dignity, and without social or political obstacles. This must be accompanied by an improvement in the opportunities for economic and social advancement. In particular, individuals belonging to disadvantaged groups should be provided special opportunities to develop their skills and participate in the growth process.

1.20. This outcome can only be ensured if there is a degree of empowerment that creates a true feeling of participation so necessary in a democratic polity. Empowerment of disadvantaged and hitherto marginalized groups is therefore an essential part of any vision of inclusive growth. India's democratic polity, with the establishment of the third layer of democracy at the Panchayati Raj Institution (PRI) level, provides opportunities for empowerment and participation of all groups with reservations for SCs, STs, and women. These institutions should be made more effective through greater delegation of power and responsibility to the local level.

ENVIRONMENTAL SUSTAINABILITY

1.21. The vision of the Eleventh Plan must also include a clear commitment to pursue a development process which is environmentally sustainable. Natural resources such as water and land are limited and their per capita availability is actually diminishing because of rising population and also because of irrational exploitation of common pool resources. The Eleventh Plan must be based on a strategy that not only preserves and maintains natural resources, but also provides equitable access to those who do not have such access at present. Unless environment protection is brought to the centre stage of policy formulation, what is perceived as development may actually lead to a deteriorating quality of life. This seems to be happening all around, in the poor and generally worsening quality of air in cities and even villages; in the increasingly polluted waters of our lakes and rivers, which are not fit for even bathing, let alone drinking; in the loss of biodiversity, and in the shrinking habitats of wild animals. This degradation of natural resources reduces the well-being of people, and the poor and women suffer more, as they depend much more on natural common property resources for fuel and water, and also have fewer resources to take defensive actions.

1.22. The danger to environment is caused by activities worldwide. The growing evidence on climate change shows that Green House Gas (GHG) emissions, resulting from the cumulative action of all countries, will, if not effectively contained, produce changes in climate which would have very severe effects in the future. India will be seriously affected by such climate change in the form of receding Himalayan glaciers, a variably different hydrological cycle than at present, greater water scarcity and higher temperatures which would have an adverse impact on agricultural production with the presently known technologies. A rise in the sea level, leading to coastal submergence would cause large-scale displacement of people.

1.23. We must certainly begin to consider what steps we need to take to adapt to these changes and to mitigate the damage to climate. However, an effective strategy requires international co-operation to evolve forms of burden sharing for mitigation as well as adaptation that are fair and equitable across nations. We have to address these challenges in the years ahead.

GENDER EQUITY

1.24. For the first time in the history of Indian planning there is an attempt to move beyond empowerment and recognize women as agents of sustained socio-economic growth and change. The Eleventh Five Year Plan acknowledges women's agencies and tries to ensure that their needs, rights and contribution are reflected in every section of the Plan document. Gender is, therefore, a cross cutting theme; it is not confined to a single chapter on Women and Children. The vision is to develop an integrated approach which would eventually dispense the need for a separate chapter.

1.25. While endeavoring to guarantee the rights and entitlements of all women, the Eleventh Plan recognizes that women are not a homogenous category. Their situations, and consequently requirements, differ based on their locations within various castes, communities, religions, geographic and development zones and the effort during the Eleventh Plan is to cater to all these differential and specific requirements.

GOVERNANCE

1.26. Finally, the vision for the Eleventh Plan must include an improvement in governance. Over the years, the governments at the Centre and the States have launched a large number of initiatives at substantial public expense

to achieve the objectives of growth with poverty alleviation and inclusiveness. Experience suggests that many of these initiatives have floundered because of poor design, insufficient accountability and also corruption at various levels. Increasingly, there is demand for effective implementation without which expanded government intervention will be infructuous.

1.27. The strategy for the Eleventh Plan must therefore aim at bringing about major improvements in governance which would make government-funded programmes in critical areas more effective and efficient. The best possible way of achieving this objective may be by involving communities in both the design and implementation of such programmes, although such involvement may vary from sector to sector. Experience shows that Civil Society Organizations (CSOs) can work with PRIs to improve the effectiveness of these programmes. For achieving the vision of the Eleventh Plan, it is extremely important to experiment with programme design to give more flexibility to decision making at the local level.

1.28. It is especially important to improve evaluation of the effectiveness of how government programmes work and to inject a commitment to change their designs in the light of the experience gained. Evaluation must be based on proper benchmarks and be scientifically designed to generate evidence-based assessment of different aspects of programme design. Along with greater transparency and feedback from community participation, this is particularly important in the case of programmes delivering services directly to the poor.

1.29. Accountability and transparency are critical elements of good governance. The Right to Information Act (RTI) enacted in 2005 empowers people to get information and constitutes a big step towards transparency and accountability.

THE ROLE OF THE STATES

1.30. A notable feature of the Tenth Plan was the increase in the share of outlays for Centrally Sponsored Schemes (CSS) in the Gross Budgetary Support (GBS) for the Central Plan. This was done for two reasons; first, the Centre's own investment in industry was almost entirely funded by the Internal and Extra-Budgetary Resources (IEBR) of Public Sector Enterprises (PSEs); and, second, the enlarged role that the Centre has taken for itself in providing for social infrastructure, especially in the backward States, through programmes such as National

Rural Employment Guarantee Programme (NREGP) Sarva Shiksha Abhiyan, Bharat Nirman, etc. The outlay on CSS, taken together with scheme-wise Central assistance provided to State Plans, amounts to over 55% of the Central GBS in 2007–08, the first year of the Eleventh Plan. This level will not go down during the Eleventh Plan period.

1.31. Many of the major CSS are in areas where the State Governments have traditionally borne the bulk of the expenditure. Even during the Eleventh Plan period, the non-Plan expenditure on these sectors by the State Governments will be considerable. The strategy for ensuring the best use of the available resources, therefore, requires that the Central Government engage more intensively with the States not only with regard to Plan expenditure but also in respect of what have traditionally been non-Plan expenditures. Separately, it is proposed to set up a high-level committee (HLC) to suggest how this planning for resources could be best accomplished. More than ever before, the success of the Eleventh Five Year Plan will depend upon the quality of service delivery by the State Governments.

STRATEGY FOR THE ELEVENTH PLAN: POLICIES FOR INCLUSIVE GROWTH

1.32. The strategy for inclusive growth in the Eleventh Plan is not just a conventional strategy for growth to which some elements aimed at inclusion have been added. On the contrary, it is a strategy which aims at achieving a particular type of growth process which will meet the objectives of inclusiveness and sustainability. This strategy must be based on sound macroeconomic policies which establish the macroeconomic preconditions for rapid growth and support key drivers of this growth. It must also include sector-specific policies which will ensure that the structure of growth that is generated, and the institutional environment in which it occurs, achieves the objective of inclusiveness in all its many dimensions.

1.33. The elements of the strategy proposed in the Eleventh Plan are discussed in detail in the individual chapters. The major components are summarized in the following sub-sections.

MACROECONOMIC FRAMEWORK

1.34. The broad macroeconomic framework of the Plan is discussed in detail in Chapter 2. It envisages a continuation of the uptrend in domestic investment and savings observed in the Tenth Plan taking domestic

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investment from an estimated 35.9% of GDP in 2006–07 to an average of 36.7% of GDP in the Eleventh Plan period. This is expected to be supported by the domestic savings rate of 34.8% of GDP in the Eleventh Plan period. These investment rates are broadly consistent with achieving an average growth rate of 9% per year in the Eleventh Plan period. The Plan also implies a substantial increase in the total resources for the Central and State Plans from 9.46% of GDP in the Tenth Plan to 13.54% of GDP in the Eleventh Plan. This outcome depends upon government non-Plan expenditure, especially subsidies remaining under control and a significant improvement in the IEBR of the public sector in both the Centre and the States.

1.35. The macroeconomic projections involve a rise in the current account deficit from 1.1% of GDP in 2006–07 to an average of 1.9% of GDP in the Eleventh Plan period, based on oil prices at the average level of 2006–07. The recent hardening of oil prices, if it continues, will involve a further increase in the current account deficit by up to 1 percentage point of GDP. Even if this were to happen, it will be feasible to finance the increased deficit given India's export potential and the prospect of continuing inflows of foreign investment. The real challenge in the persistence of high oil prices lies in the need to pass on these prices to consumers which could moderate growth a little in the short run.

1.36. On balance, the Plan target of 9% per year appears achievable with some downside risks if oil prices harden further. The broad sectoral composition of growth associated with this projection involves doubling the growth rate of agriculture to 4% per year compared with a little over 2% per year in the Tenth Plan and raising the industrial growth rate from 9.2% in the Tenth Plan to between 10% and 11% in the Eleventh Plan. Further, manufacturing is targeted to grow at over 12% per year and this is expected to provide high-quality employment.

AGRICULTURE

1.37. The target of doubling the rate of growth of agriculture to 4% in the Eleventh Plan is critical for achieving greater inclusiveness. This calls for initiatives on several fronts.

1.38. The poor performance of agriculture in the past decade or so is partly due to the emergence of technology fatigue in the intensely irrigated crop production regions. This is reflected in the fact that the new varieties released

do not seem to have produced significantly higher yields per hectare. The long-term response to this phenomenon is a comprehensive strengthening and restructuring of the Indian Council of Agricultural Research (ICAR) system to give greater focus to research in strategic areas which would help to evolve cropping systems suited to various agro-climatic zones. It is particularly important to focus research on raising the yield potential in rain-fed areas. There is also a need to increase the accountability of the State agricultural universities and to make their research more directly useful. Public expenditure on agricultural research, taking the Centre and the States together, needs to increase from 0.7% of agricultural GDP at present to at least 1% by the end of the Eleventh Plan.

1.39. In the short run, we must exploit the large scope for yield improvement which is reflected in the large gap that exists in most parts of the country between the yields that are actually being realized on the ground and yields that can be achieved with the existing varieties using best practices in farm conditions. This yield gap varies from 60 to 100%, depending on the crop and the region. The Eleventh Plan must focus on evolving suitable strategies for each agro-climatic zone to reduce the gap. This will require better assessment of location-specific potentials and constraints, and more effective extension. A new central assistance programme, the Rashtriya Krishi Vikas Yojana (RKVY) has been launched to incentivize State Governments to prepare district level agricultural plans that take account of local conditions. The programme will encourage effective convergence among various Central schemes which are currently implemented in districts as stand-alone schemes and will provide Central assistance to meet a part of the additional cost of the agricultural plans, above existing expenditure commitments. The preparation of district-specific agricultural plans is an important innovation and it is expected to sharpen the focus on local crop productivity constraints. Adequate funding will be provided to build capacity for such district planning and, simultaneously, there will be a very substantial increase in Central support to State extension systems.

1.40. Adoption of best practices typically involves additional investment. The most important area for investment in agriculture relates to the provision of water and its efficient use. There is definitely a need for more public investment to develop irrigation where it is feasible, including modernisation of the existing irrigation systems to improve efficiency. It is also necessary to undertake

watershed management programmes in dryland areas. The specific initiatives needed in this regard are discussed later in the chapter.

1.41. Private investment by farmers is also needed in land development, pump sets and drip irrigation, agricultural machinery, etc. On-farm investments are limited by the availability of credit to farmers which needs priority attention. Commercial banks have extended credit to agriculture commendably in the later years of the Tenth Plan period, and this needs to continue. However, whereas overall credit has expanded, the number of loan accounts has declined, suggesting that small farmers are not receiving adequate credit. To correct this, the co-operative banking system must be revived along the lines recommended by the Vaidyanathan Committee. The Committee's recommendations have been accepted by many States, but implementation of follow-up action needs to be expedited.

1.42. Deteriorating soil health is a major constraint limiting productivity in agriculture. The present system of fertilizer subsidy which is based on subsidization of products rather than nutrients, contributes to the problem because there is excessive subsidy on nitrogen compared to potassium and phosphates, and no subsidy at all on micronutrients. The result is excessive use of nitrogenous fertilizer which depletes the soil of other micronutrients (sulphur, zinc, boron), reducing soil productivity over time. Most farmers do not have information on the soil health of their farms and the extent of micronutrient deficiency, which varies across areas. Increased awareness of this problem is extremely important. It is necessary to restructure the fertilizer subsidy to make it nutrient based and to enable production of composite fertilizers, including micronutrients, by giving producers the flexibility to charge higher prices which will cover the cost of adding micronutrients. There is also need to expand the network of soil testing laboratories in most States and also to extend soil testing to measure micronutrients, which are typically not covered at present.

1.43. Seed replacement is another major problem constraining crop productivity. Seed replacement rates in most parts of the country are much below recommended levels, partly because of lack of availability of certified seeds, but also because farmers do not trust the quality or truthfulness of labels of certified seeds available from public sector sources. A major effort is needed to increase the supply of certified seeds and also to achieve credibility

in the quality of the seeds supplied. State governments must take steps to revamp seed production and distribution arrangements as quickly as possible. There may be a case in some States for State agricultural universities to take over management of public sector state seed corporations and the land under their control, to help improve seed production.

1.44. Growth of foodgrain production has fallen short of population growth during the last decade. More recently, foodgrain prices have flared up, reflecting both the rising trend of prices internationally, and more robust domestic demand. A strong effort in expanding foodgrain production is therefore needed. A National Food Security Mission has been launched in the first year of the Eleventh Plan which aims at increasing cereal production by 18 million tonnes and pulses production by 2 million tonnes. Nevertheless, it is unlikely that demand for foodgrains will expand by more than 2.5% per year. The target of 4% growth in agriculture will therefore require much faster growth in horticulture, floriculture, dairying, poultry, and fisheries. Agricultural strategies for each agro-climatic zone should pay attention to the scope for agricultural diversification along lines that are technically appropriate.

1.45. Agricultural diversification will pose special challenges in marketing because the high-value produce of diversified agriculture is much more perishable than foodgrains. Farmers need assured linkages to efficient markets with transparent pricing and also modern logistics and cold chains to ensure transportation with minimum spoilage. Several States have amended the Agricultural Produce Marketing Committee Acts to allow private markets to be set up in competition with the existing *mandis*. Modern markets, whether established by the private sector or by co-operatives, can improve marketing facilities by offering grading opportunities and cold storage facilities as well as more transparent price discovery through open auction. Contract farming, which is being encouraged by many States, also provides a mechanism for improving linkages between farmers and markets through the active involvement of the private sector, which can also serve as a supplier of key inputs and extension advice. An important issue in this context is the need to ensure that small and marginal farmers have adequate bargaining strength. An adequate dispute resolution mechanism is also necessary to encourage formation of farmers' groups, not only for contract farming but also to avail other economies of scale. Ways

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of incentivizing such group formation should be part of the agenda for agricultural policy in the Eleventh Plan.

1.46. There is also need for greater predictability in measures designed for price stability. Efforts to control sudden price rise of agricultural produce, such as bans on exports, have often been at the cost of farmers. Also, while the Minimum Support Price (MSP) policy has not reached most farmers at times when prices were low, inadequate procurement often leads to over-reaction. With international prices much more volatile than what Indian farmers are used to, a comprehensive view is required at the possibility of a predictable response both in terms of trade policy and proper regulation of India's new, but fast developing, futures markets in agricultural commodities so as to allow better transmission of price signals and management of risks.

1.47. More generally, market linkages can be improved by improving rural infrastructure, including especially, rural roads and rural electrification. The Pradhan Mantri Gram Sadak Yojana (PMGSY) has already done commendable work in extending rural connectivity and the programme will continue into the Eleventh Plan. The Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) also has ambitious plans to extend rural electrification to hitherto unserved rural areas. It is essential to ensure that RGGVY aims not only at household electrification but also at energization of pumpsets. This will make a big difference to the ability of farmers in the eastern States to utilize available ground water at more reasonable costs.

IRRIGATION AND WATERSHED DEVELOPMENT

1.48. The Bharat Nirman target is to more than double the pace of addition to the area under irrigation to 2.5 million hectares per year by 2008–09. If this momentum is maintained, we should be able to add 16 million hectares to the irrigated area during the Eleventh Plan.

1.49. There are, however, several problems in the irrigation sector which need to be addressed. A large number of projects have been under construction for a long time as resources have been spread too thin. This has increased costs and also delayed the creation of irrigation capacity. The Accelerated Irrigation Benefit Programme (AIBP) was started to incentivize States to complete projects in a time-bound manner, but progress in the programme has not been satisfactory. Several initiatives relating to irrigation were launched in the last years of the

Tenth Plan, including conversion of loan assistance under AIBP to pure grant. The norms for approving projects under the programme were also relaxed to permit more projects to become eligible. States are being encouraged to change the system of contracting to a fixed cost, time-bound system. A system of monitoring projects through remote sensing has been introduced which will help to identify critical works needing attention and help reduce the large gap between the created and actually utilized irrigation potentials.

1.50. Repair, renovation and restoration of water bodies can expand irrigation capacity in a short period. States will be assisted to take up such projects provided they agree to hand over the water bodies to user groups after renovation so that future maintenance is assured. 25% of the project cost is eligible for grant assistance under AIBP and the rest could come from external assistance. Water-use efficiency in irrigation is quite low in the country. A larger area can be irrigated with the available water if sprinkler or drip irrigation is used to increase efficiency. This calls for additional investment. Assistance will also be extended to extension, renovation and modernization projects subject to the achievement of 'target irrigation efficiency' for water conservation.

1.51. To further reduce the gap between the potential and its utilization, the Command Area Development Programme (CADP) was modified in the Tenth Plan to include water management above the outlet for correcting system deficiencies. Beneficiary contribution of 10% was specified for the execution of Command Area Development works. A model Participatory Irrigation Management (PIM) Act was circulated to States to promote PIM, which is seen in many cases to improve irrigation water distribution to all farmers, including the tail-enders. During the Eleventh Plan, CADP will be made part of major and medium irrigation projects to accelerate utilization and focus on responsibility.

1.52. Groundwater, which is used for irrigating for nearly 60% of the irrigated area, also poses serious problems. Under the Easement Act of 1882, the ownership rights of groundwater rest with the owner of the land. This makes groundwater a common property resource with open access. As a result, groundwater was over exploited in nearly 15% of the blocks in 2004, compared to 4% in 1995 (though the classification scheme was different in the two surveys, they are roughly comparable). When the

water table falls, some wells go dry and others have to spend more energy to lift water. It is therefore important to evolve a system of sustainable use of groundwater.

1.53. Under the Environment (Protection) Act, 1986, the Central Government can intervene where the water table falls. The Eleventh Plan will encourage co-operative management of groundwater by the community, as it is most likely to work. The objective would be to contain average groundwater extraction to average water recharge. For this, the local water user associations will have to be empowered with knowledge and information through monitoring of the water table and recharge by the Central and State Groundwater Boards.

1.54. While groundwater is being depleted in some parts of the country, large parts of eastern India have high water tables, reflecting large unexploited potential for expanding irrigation. This is not done for want of electricity as using diesel pumps is expensive and inconvenient. RGGVY aims at providing power to all villages, and this should facilitate rapid expansion of irrigation in eastern India.

1.55. Groundwater can be recharged through watershed development using check dams, contour bunding, etc. This not only increases availability of water, but also generally leads to its more equitable distribution. The Eleventh Plan will strengthen watershed development programmes and also increase the flow of resources to these programmes by their convergence with other schemes.

1.56. Though irrigation is by far the largest user of groundwater, in specific local situations, industrial use of groundwater can also stress the resource. Industry using water that falls within its land should be required to enhance recharge correspondingly. It is also vital to prevent groundwater contamination by enforcing strict effluent quality standards.

INDUSTRY AND MINERALS

1.57. The pace of industrial growth quickened during the Tenth Plan and manufacturing in particular showed considerable dynamism. It will be necessary to build on this momentum during the Eleventh Plan and, indeed, impart additional impetus to generate 10% growth in industry, and even higher growth in manufacturing. This will not only provide the additional job opportunities needed to absorb some of the surplus labour in the rural workforce but also generate employment for the new

entrants that are expected to join the labour force both in rural and urban areas. For this, industries must not only grow, but grow in a manner that leads to the absorption of large numbers of workers.

1.58. Industries face a number of impediments in the country, which need urgent attention if industrial growth is to be sustained over a long period. Improvement of physical infrastructure must clearly come at the top of the agenda of action for achieving rapid industrialization. Continuous supply of good quality electrical power from the grid is critical for industries, but the situation in this regard is very unsatisfactory. Large-scale units can deal with this problem by setting up captive power plants, but this is not an economical option for small and medium units. Manufacturing also entails movement of large volumes of goods in order to compete in a globalized context and manufacturers need transport infrastructure which can ensure speedy and reliable movement. Deficiencies in the road infrastructure must be addressed urgently to increase the competitiveness of Indian manufacturing. Much the same is true of ports where insufficient port capacity and inadequate navigation aid facilities and cargo handling equipment lead to longer pre-berthing detention and turnaround time for ships. These problems are compounded by the fact that large vessels do not call on many Indian ports because of the lack of depth of the draft and poor connectivity with the hinterland. Without substantial improvement in all these aspects of the transport infrastructure, growth in manufacturing cannot be sustained.

1.59. A skill deficit has also emerged in virtually all areas of manufacturing as one of the major impediments to rapid industrial growth. The shortages are at all levels, from executives and designers at the top to base-level skilled worker such as tailors and machine operators. There is a huge gap in the vocational training capacity, which is less than one-fourth of the entrants to the work force per annum. There is an urgent need to attend to skill development and the Eleventh Plan strategy in this regard is discussed later in this chapter.

1.60. The perceived lack of flexibility in some of our labour laws, such as Chapter V-B of the Industrial Disputes Act, 1947 and the Contract Labour (Regulation and Abolition) Act, which focus on job protection, remains a psychological block for entrepreneurs against establishing new enterprises with a large workforce. Existing industrial units have learnt to live with Chapter V-B of the Industrial

Disputes Act, albeit at some cost, but newcomers are often deterred. The Contract Labour (Regulation and Abolition) Act also results in the industry letting go of the opportunities for seasonal supplies, particularly in international markets. In a globalized world where our manufacturers have to compete with others who enjoy greater flexibility, it is necessary to find practical solutions for the problems created by these laws.

1.61. The Micro and Small Enterprises (MSE) Sector accounts for the bulk of the employment in manufacturing and has been one of the sources of strength for manufacturing in the country. It has largely withstood the test of international competitiveness resulting from external economic liberalization since 1991–92. However, the ceiling on investment in plant and machinery, together with reservation of a large number of items for exclusive manufacture by small-scale industries, has in the past barred these units from undertaking efforts for upgrading technology, adopting modern manufacturing methods and achieving economies of scale. The loss of fiscal benefits by a small-scale unit graduating into a larger unit is an additional disincentive against expansion and leads to horizontal expansion and deliberate fragmentation. During the Tenth Plan period, major steps were taken to alleviate these problems: the number of reserved items was reduced from 675 to 114 and the ceiling on investment in plant and machinery was raised generally from Rs 3 crore to Rs 5 crore by the Micro, Small and Medium Enterprises Act, 2006. The Act also contains a number of provisions aimed at strengthening these enterprises and, in fact, seeks to integrate the three tiers—medium, small, and micro. This process must continue in the Eleventh Plan.

1.62. Small-scale and medium enterprises are the main beneficiaries of the investment incentives for modernization, upgradation, and additional capacity creation given in schemes such as the Technology Upgradation Fund Scheme for the textile sector. The schemes for establishment of industrial parks such as the Scheme for Integrated Textile Park in the same sector are also aimed at obtaining additional investment in small-scale and medium enterprises. These schemes will be continued and replicated in other areas during the Eleventh Plan.

1.63. Small-scale units are handicapped by insufficient flow of credit despite the measures taken to stimulate priority sector lending by Scheduled Commercial Banks and expansion of direct lending operations by the Small

Industries Development Bank of India (SIDBI). During the Eleventh Plan, credit flows to these units will need to be monitored and improved.

1.64. The Central Public Sector Enterprises (CPSEs) on the whole have registered a strong performance during the Tenth Plan. The number of profit-making CPSEs has gone up and the number of loss-making ones has reduced. Granting of full autonomy to CPSEs remains an unfinished agenda before the government. A great deal of progress has been made in the revival of sick CPSEs, but close monitoring would be needed to implement their restructuring plans. Another issue of importance is the development of a mechanism to ensure optimum investment decisions by large profit-making enterprises.

1.65. A package of fiscal and other incentives has been in place since 1997 aimed at facilitating industrial development of the States of the North East Region (NER). During the Tenth Plan, similar schemes were notified for Jammu and Kashmir (J&K), Himachal Pradesh and Uttarakhand. While the response in the NER and the valley in J&K has not been significant, there is evidence that these incentives have stimulated industrial investment in Jammu, Himachal Pradesh, and Uttarakhand. However, there are complaints from other States, particularly the adjoining ones, of flight of capital induced by excise duty exemptions. Because of the distortions induced by excise duty exemptions in particular, consideration needs to be given to replacing the incentives, fully or partly, by an accelerated programme of infrastructure improvement.

INFRASTRUCTURE REQUIREMENTS OF INCLUSIVE GROWTH

1.66. Good quality infrastructure is the most critical physical requirement for attaining faster growth in a competitive world and also for ensuring investment in backward regions. This includes all-weather roads; round-the-clock availability of power at a stable voltage and frequency; water for irrigation; railways that are not overcrowded, which run on time and do not overcharge for freight; ports with low turnaround time to reduce costs of imports and exports; airports to handle the growing traffic; air services that provide connectivity to all parts of the country; and telecommunications and broadband connectivity to provide the benefits of the Internet to people all over the country.

1.67. The Eleventh Plan outlines a comprehensive programme for development of infrastructure, especially

in rural areas, and in the remote and backward parts of the country, consistent with the requirements of inclusive growth at 9% per year. The total investment needed in infrastructure, defined to include electricity (including non-conventional energy), roads, bridges and railways (includes Mass Rapid Transit System, MRTS), ports, airports, telecommunications, irrigation (including watershed development), water supply and sanitation, storage and gas distribution will have to increase from an estimated 5.43% of GDP in 2006–07 to 9.34% by the terminal year of the Eleventh Plan. Though public investment has to be a large part of the solution, an increase of this magnitude cannot be achieved through public investment alone since there will be large demands on public sector resources from the health and education and agriculture sectors, and also from various programmes aimed at livelihood support for the poor. The Eleventh Plan therefore proposes a strategy for infrastructure development which involves a combined response—an increase in public sector investment in infrastructure as a percentage of GDP, and also an increase in private sector investment through some form of public–private partnership (PPP) or directly, where feasible.

1.68. The relative contributions of the public and private sectors in meeting the proposed investment targets are summarized in Table 1.1. It may be noted that the absolute increase in public investment is 2.22 percentage points of GDP, which is about 1.3 times the absolute increase in private investment of 1.69 percentage points. The proportional increase in private investment is much larger because of the initial low base but public investment will still constitute 70% of the total investment in infrastructure.

1.69. Public investment will have to give priority to meeting the infrastructure requirements in those sub-sectors and areas where private participation is unlikely to be forthcoming. These include irrigation and other

general rural infrastructure (mainly rural roads, rural electrification, and water supply and sanitation), and also infrastructure development in the more backward areas and the remote parts of the country. In other areas where there is scope for private investment, the aim will be to attract private investment in a transparent manner in which the responsibilities of the private concessionaire are clearly defined and the choice of the concessionaire is determined by an open, competitive bidding process.

1.70. Attracting private investment on the scale envisaged presents formidable challenges. A good start has been made by the Central Government with PPP in many infrastructure sectors in the Tenth Plan, and many State Governments have also begun exploring this option. However, it must be recognized that it will not be easy to bring in private investment at the scale required. Much will depend on the overall investment climate as also the credibility and legitimacy of the processes, which, in turn, will be influenced by the transparency achieved in setting standards and allocating risks and the robustness of the competitive bidding process for awarding contracts. The major initiatives envisaged in each of the infrastructure sub-sectors are summarized below.

Railways

1.71. The Railways are an important part of our transport infrastructure and they have much higher fuel efficiency than trucks and cars in terms of fuel consumption per tonne kilometre or per passenger kilometre. For movement of bulk commodities, trucks cannot compete with the railways. With containerization, the railways can be competitive even for movement of other goods over long distances.

1.72. The rapid rise in international trade and domestic cargo has placed a great strain on the Delhi–Mumbai and Delhi–Kolkata rail tracks. The government has, therefore, decided to build dedicated freight corridors in the western and eastern high density routes involving construction of 7201 km of new rail tracks. This will help to decongest the two routes for freight movement and also increase the economic potential of the hinterland areas which will benefit from the reduced cost of transport. It will also provide spin-off benefits in terms of location of industrial clusters along the new corridors, thereby attracting potential investment in a number of States.

1.73. With increasing containerization of cargo, the demand for container movement by rail has grown

TABLE 1.1
Investment in Infrastructure

| | (Percentage of GDP) | |
|------------------------------------|---------------------|---------|
| | 2006–07 | 2011–12 |
| Public Sector (Centre + States) | 4.23 | 6.45 |
| Private Sector | 1.20 | 2.89 |
| Total | 5.43 | 9.34 |

Source: Central Statistical Organization for 2006–07 and computations by the Planning Commission for 2011–12.

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rapidly. This was hitherto a monopoly of the Container Corporation of India, a public sector entity. In a major initiative in PPP, container movement has been thrown open to competition and 15 private sector entities have been licensed for running container trains on tracks owned by the Indian Railways. Private sector container trains have commenced operations and the operators would also be expanding investment into container handling facilities, such as Inland Container Depots, etc.

1.74. The Indian Railways also proposes to take the following steps in an effort to create world-class transport infrastructure:

- Strengthening of infrastructure and improvement in the design of wagons to facilitate movement of heavier freight trains.
- Redevelopment and modernization of important railway stations through PPP.
- A paradigm shift in the delivery of services to include quality passenger services at terminals, introduction of modern rolling stock and improvement in sanitation.
- On the Delhi-Agra route, a high speed train with a maximum speed of 150 km per hour has been introduced. Similar trains will be introduced in selected city pairs.
- Reduction in accidents per million train km; implementation of measures to reduce chances of passenger fatality as a result of train accidents; focus on development of manpower through major improvements in the working environment and training to reduce the accidents attributable to human failure.
- Introduction of a new accounting system in line with internationally accepted accounting principles. This will help to identify the unit cost of different services more accurately.

Roads

1.75. The Eleventh Plan envisages a major programme of road development covering the national highways, based on a combination of public investment and PPP and completion of rural road connectivity through the PMGSY.

1.76. PMGSY is a massive programme of expanding rural road connectivity and was begun in the Tenth Plan. This will continue into the Eleventh Plan to provide reliable road connectivity to all habitations with

1000+ population (500+ population in hilly regions) by 2009.

1.77. An expanded National Highways Development Programme (NHDP) is currently under way, involving a total investment of Rs 227258 crore. It includes four-laning of the Golden Quadrilateral and the North–South, East–West Corridors (NHDP I and II) covering 14488 km; four/six laning of 10000 km of national highways (the total length approved subsequently has gone up to 12109 km) connecting State capitals and places of tourist importance with the national network under NHDP III; widening of 20000 km of national highways to two lanes with paved shoulders under NHDP IV; six laning of 6500 km of selected national highways under NHDP V; development of 1000 km of expressways under NHDP VI and construction of ring roads around major towns and bypasses, flyovers, etc. on national highways under NHDP VII.

1.78. During the Eleventh Plan, a comprehensive Master Plan is proposed to be formulated for construction of 15600 km of Access Controlled Expressways. Action will also be taken for determining the alignments and acquiring land for about 6000 km of the total length. Establishment of an Expressways Authority of India for implementation of the Expressways Programme should be considered by the Ministry.

1.79. A balanced development of the highway network requires that apart from expeditious completion of the expanded NHDP involving augmentation of riding quality and capacity of 46000 km of national highways, out of the total present length of 66590 km, the non-NHDP section is also kept in reasonably good shape. In addition, the following qualitative improvements will be implemented:

- The NHAI, which is the implementing agency for NHDP, will be restructured and strengthened.
- High priority will be accorded to ensure integrated development of the entire road network, that is, national highways, State highways, major district roads, other district roads and village roads.
- Higher maintenance standards will be employed in order to reduce the frequency of reconstruction of capacity and to preserve road assets already created. The strategy will focus on optimum utilization of existing capacity rather than creating new capacities.

- Based on the lessons learnt, conditions conducive for private sector participation will be created in the States.
- In order to ensure safety along with free flow of traffic, various steps will be taken in the coming years, including strengthening the institutional mechanism by setting up of the National Road Safety and Traffic Management Board as an apex body. Appropriate design of roads with interchanges, segregation of slow moving traffic and adequate provision of underpasses and overpasses and, in some cases, service lanes, will be focused on.

1.80. A Special Accelerated Road Development Programme for the North East Region (SARDP-NE) is presently under implementation for providing road connectivity to all the State capitals and district headquarters in the NER.

Ports

1.81. Indian ports suffer from inefficiency and congestion as reflected in the high turnaround time of ships. New berths and better handling facilities are needed at the existing ports and new ports also need to be developed. The draft at some ports needs deepening to permit larger ships to berth. Rail connectivity to move goods from the ports is also inadequate. The Eleventh Plan envisages a major programme of expansion in port capacity based on PPP. Many State Governments are also taking initiatives to develop their ports through such partnerships and these initiatives will be encouraged.

Airports

1.82. Growth of air traffic in recent years has been very high—an average of 30% per year between 2003–04 and 2006–07. Increased competition in air services has lowered fares and contributed to this growth. However, development of airports and related facilities has not kept pace. The Eleventh Plan will accelerate the programme launched in the last two years of the Tenth Plan to upgrade airports and related facilities. Four major airports (Delhi, Mumbai, Hyderabad, and Bangalore) are being developed by private sector entities. Modernization of Kolkata and Chennai airports and 35 non-metro and 13 other airports is underway. Some new greenfield airports will also be constructed during the Eleventh Plan.

1.83. Civil aviation provides crucial transport infrastructure in hilly and inaccessible areas. It is therefore

proposed to augment airport infrastructure in these areas during the Eleventh Plan. This will include: development of three greenfield airports and expansion/modification of six existing airports in the NER; and modernization and upgradation of Jammu, Dehradun, Agatti, and Port Blair airports under the scheme for modernization of 35 non-metro airports.

Telecommunications

1.84. The Eleventh Plan envisages continued progress towards developing a world-class telecommunications infrastructure with an emphasis on broadening access. It is an irony that the phenomenal growth in the telecom sector has also created a digital divide in terms of mobile and land line connections and Internet and broadband connections between urban and rural India. The Eleventh Plan will address this as an important issue. The targets for the Eleventh Plan period are to reach a telecom subscriber base of 600 million and a rural tele-density of 25%. Expanding rural telephony should be a priority area of the Plan.

1.85. Broadband connectivity plays an important role not only as a medium but also as a means of bringing knowledge and data through networking to the less fortunate institutions. To empower the nation, and to create a world-class ambience for education, science, technology and governance, the country should create a dynamically configurable national multi-gigabit backbone core network.

1.86. It should be our objective to connect 5000 institutions of education, science and technology to this core to enable collaborative research and development nationally and internationally. Campuses should be empowered technologically through campus-wide networks and by providing entry devices to the knowledge network in order to derive the full benefits of this effort.

1.87. India's prowess in software is world-renowned with an estimated share of 65% of global off-shore information technology (IT) and 46% of global business process outsourcing (BPO). The Indian IT and IT-enabled services (ITES)/BPO industry stands at US\$ 31.3 billion in 2006–07. The addressable market for offshore BPO globally stands at US\$ 300 billion, leaving enough headroom for further growth. The IT sector at present is estimated to employ over 3.08 million people and is expected to provide employment opportunity to over

8.73 million by 2012. The above mentioned figure indicate the direct employment in IT sector (both software and hardware). The indirect employment generated by the sector, is approximately three times of the direct employment. This throws up a great challenge for human resources (HR) development. There is an urgent need to augment the existing educational system by introducing special IT courses and establishing finishing schools to impart soft and other important skills.

1.88. With the weakening of the dollar against the Indian rupee, the ITES/BPO industry has come under pressure and it needs to be nurtured. Necessary policy interventions need to be put in place on a fast track mode. Extending the 10A and 10B benefits for the BPO industries beyond 2009 could be one such encouragement. Otherwise, this segment of the sector, which is a huge employment generator, could move to other countries which are more cost effective. The industry also needs to shift from Dollar to Rupee denominated contracts to combat the falling dollar.

Electric Power

1.89. Rapid economic growth cannot be realized if energy is not available at reasonable costs. Electricity is a crucial energy input in this context. Substantial progress was made in the Tenth Plan in certain dimensions. The Electricity Act, 2003 provides an excellent framework for restructuring of the power sector, and allows full scope for competition within a reasonable regulatory framework. However, while a good start has been made in setting up the regulatory framework and the institutional structure necessary for an efficient market for electricity generation and distribution, much more remains to be done. The performance in the Tenth Plan in adding capacity was disappointing. Against a target addition of 41110 MW, only 21080 MW were commissioned, out of which only 18000 MW were actually made fully operational. Investment in distribution has also been inadequate.

1.90. The most important problem in the power sector is the continued unviability of the distribution segment reflected in very high transmission and distribution losses, including pilferage and also uneconomic tariff for some categories of consumers. As a result, the financial position of the distribution companies, which are in the State sector, is severely strained and this is the cause of inadequate investment by the State sector, both in

generation and in distribution. It also limits the appetite of private investors to invest in generation owing to problems anticipated about the capacity of the unviable public sector distribution companies to pay for power.

1.91. The Eleventh Plan must aim at making a radical break from past practice in the electricity sector. The main thrust should be on the following:

- The position at the start of the Eleventh Plan is better than at the start of the Tenth Plan because the volume of generation capacity under construction or ordered in the middle of the first year (September 2007) was 52000 MW compared with only 20500 MW at the start of the Tenth Plan. Further orders amounting to 23600 MW could be placed by the end of the first year of the Eleventh Plan. In view of the shorter pipeline, concerted attention on implementation and project management could ensure higher actual additions to capacity in the Eleventh Plan than in the Tenth Plan.
- While the regulatory structure consisting of the Central Electricity Regulatory Commission and State Electricity Regulatory Commissions have been established and have begun to operate, they have yet to stabilize and achieve credibility as independent regulators. Many of them suffer from serious staffing problems arising from an inability to attract the necessary technical expertise. Efforts must be made to strengthen the regulatory system by overcoming these constraints.
- Improvement in the efficiency of the distribution system is the most important factor for the health of the system. The Accelerated Power Development and Reform Programme (APDRP), initiated in the Tenth Plan, aimed at reducing aggregate technical and commercial losses from over 40% in 2002–03 to 15% by the end of the Plan. This target proved unachievable and excepting in a couple of States, the Aggregate, Technical and Commercial (ATC) losses were reduced by only 2 to 3 percentage points and are presently estimated at about 40%. The Eleventh Plan must aim to bring about at least a 15 percentage point reduction in these losses during the Plan period. For this purpose, the APDRP programme must be completely restructured and also expanded in scope.
- Rural electrification is an important instrument to bring about inclusive growth by making electricity available to farmers and in rural areas. The RGGVY

is an important initiative aimed at electrifying all un-electrified villages and providing access to 7.8 crore rural households. Efforts should be made to ensure that the rural electrification infrastructure thus created does not focus on households alone but is also capable of providing three phase supply which can be used to energize pump sets for agriculture.

- An important innovation of the Electricity Act, 2003 is the statutory provision for open access which allows generating stations to enter the market and sell directly to high tension consumers. They can do so through assured access to the grid to reach such consumers while paying the distribution company a reasonable wheeling charge and a surcharge in lieu of the cross subsidy element. Unfortunately, most regulators have fixed the surcharge at a very high level. It needs to be clarified that the surcharge is meant only to cover the legitimate loss of cross subsidy from high tariff paying consumers who may migrate to competing suppliers. It should not be set so high as to kill competition nor so low as to leave any uncovered cross subsidy burden on the distribution utilities. Credible steps to implement open access, with reasonable surcharge, will incentivize private investors to set up additional generation capacity while allowing the distribution system to collect the cross subsidy element.
- A major, new initiative for promoting competition and attracting private investment in the power sector launched in the last year of the Tenth Plan was the Ultra Mega Power Projects programme. Under this programme, the government would invite proposals on a competitive basis from the public and the private sector to set up nine large power projects of 4000 MW each. Three such projects have been successfully bid for and the remaining six are expected to be bid out in the first few years of the Eleventh Plan. Successful completion of this programme has the potential to add significantly to the total private sector generation capacity although the benefits would accrue mostly in the Twelfth Plan period.

Other Energy Sectors

1.92. Transport infrastructure is not of much use unless the fuel—petrol, diesel, and electricity—is available to run scooters, cars, trucks, and the railways. Thus, availability of energy at competitive prices is as important as infrastructure. One also wants clean and convenient cooking fuels to avoid indoor air pollution and the un-

necessary burden of gathering and carrying head loads of wood. All households should be provided clean cooking fuel at reasonable prices. For those who cannot afford them, or need to supplement them, fuel-wood plantations within 1 km of habitations should be developed.

1.93. We are short of most energy resources. Even coal, which is our most abundant resource, may run out in 40–50 years. An integrated energy policy to stimulate efficient use and allocation of fuels is, therefore, important. A key requirement of such a policy is that relative prices of different fuels, their transportation charges, and taxes and subsidies have to be consistent so that they reflect true social costs. Such a pricing system should be established in the Eleventh Plan.

COAL

1.94. The bulk of electricity generated in the country is based on coal which is our main energy resource and will remain so in the foreseeable future. The coal industry was nationalized in 1973 and Coal India Ltd dominates in production of coal. Under the nationalization Act, only public sector units, and designated users are permitted to mine coal for their own use. There is need to bring in competition in the sector to increase efficiency and to inject new technology. The Eleventh Plan will carry forward the process initiated in the last year of the Tenth Plan of encouraging other public sector units and captive users in coal mining. At the same time, coal must be competitively priced. Sale of at least 20% of coal through e-auction, rail freight rationalization, imports without duty, and pricing of coal based on its gross calorific value will be promoted. Washing of coal to reduce its ash content and save on transport charges will also be encouraged.

OIL AND GAS

1.95. We are short on oil and gas resources and this is certain to continue. More than 70% of our oil needs are met by imports. The New Exploration Licensing Policy has met with some success in finding gas in the country and in offshore areas. The Eleventh Plan must continue to encourage national and international oil companies to come and explore for oil and gas in the country. New technology to extract more oil from known or depleted reserves will also be encouraged.

1.96. Oil and gas prices offered to producers have to be internationally competitive if we are to attract private

firms and encourage efficient use of oil and gas products. Since the bulk of the oil is imported, crude oil should be priced at import parity price. And, since we have large refining capacities and export a large number of products, petroleum products should be priced at trade parity price, that is, products which are significantly exported should be priced at Free on Board (FOB) prices and products which are significantly imported, at CIF prices. This will be best accomplished by competitive pricing of oil products at the refinery gate and at the retail level. These prices, in turn, must be passed on to the consumer though there is some scope for cross subsidy.

1.97. The pricing policy for petroleum products will pose a major challenge in the Eleventh Plan, given the sharp increase in international oil prices which is yet to be passed on to the consumers. With the present domestic petroleum prices, the extent of under recovery in the petroleum sector is estimated at Rs 100000 crore. This situation is simply not sustainable. Consumer prices of petroleum products involve a significant burden of taxes. Either the taxes have to be reduced or consumer prices have to increase. Also, the subsidies on kerosene and LPG, which lead to substantial diversion, need to be reduced and also rationalized. The scope for disbursing subsidy through a smart card system while shifting to market prices needs to be explored.

1.98. Gas pricing is more complex as gas is not easily tradable. While the cost of imported Liquefied Natural Gas provides a ceiling on the domestic price of gas, the FOB price of gas less the cost of liquefaction and less the risk premium associated with exports constitutes long-term opportunity cost for producers. The price itself has to reflect its opportunity cost in its marginal use. Once we have adequate gas to meet the requirement of existing stranded assets, it will be possible to move to competitively determined gas pricing. In order that there is competition in the oil and gas sector, the distribution infrastructure of pipeline networks and associated facilities would have to be under open access regulated by regulators. While the oil and gas regulator has been put in place, there is no such regulator for coal. There is need to consider whether a coal regulator should also be established.

RENEWABLES

1.99. The importance of renewable energy in the country arises from a number of factors—it increases energy

security, it provides energy at local levels, improving energy security at these levels and it involves little or no Green House Gas emissions. Appropriate policies will be pursued to encourage renewables by linking subsidies, wherever required, to outcomes rather than to outlays. The Eleventh Plan will follow an integrated energy policy to incentivize appropriate choice of fuels and technologies.

1.100. Most of the programmes for renewable energy development would continue to be promoted but with a maxim of providing subsidies or incentives which are linked to outcomes rather than capital expenditure. This is important to preserve incentives for not just setting up capacities, but also operating them and encouraging cost reduction and technology development.

1.101. Some of areas which would be pushed strongly are wind power, solar applications, biomass gasification, bio-fuels development and other clean technologies. The distributed generation based on wood gasification in rural areas, coupled with biogas plants, could provide village energy security, particularly in remote areas. Such plants can provide clean cooking energy and also electricity before the grid power reaches them and later can also feed into the grid. The programme for biodiesel and ethanol from feed-stocks that do not compete with food production will be encouraged by a well-designed policy to take care of the interests of all the stakeholders in the value chain.

ENERGY EFFICIENCY AND R&D

1.102. There is large scope for improving energy efficiency in the country and this must be pushed vigorously through a variety of measures. These include energy auditing of large energy consumers, benchmarking with more efficient units, labelling and rating energy consuming equipment, forcing higher efficiency standards in major energy consuming sectors such as automobiles, and promoting energy efficient buildings. While labelling can help consumers buy energy efficient products, changes will be made in procurement policies so that government departments buy equipment based on life cycle costs.

1.103. We need R&D in a number of areas to augment our energy resources and provide cleaner energy. Considering the threat of climate change and the need

to find clean sources of energy, missions in the following areas should be mounted:

- Clean coal technologies of carbon capture and sequestration
- In-situ coal gasification
- Solar photo-voltaics and solar thermal electricity
- Cellulosic extraction of ethanol and butanol from agricultural waste and crop residues
- Improvement in the yield of *Jatropha* and other oilseeds for biodiesel.

1.104. Apart from these, a rigorous R&D programme will encourage development of new sources, more efficient utilization, and improvement in efficiency applications.

EDUCATION AND SKILL DEVELOPMENT

1.105. Education and skill development will receive high priority in the Eleventh Plan, both to meet the needs of a growing economy and to promote social equality by empowering those currently excluded because of unequal access to education and skills to participate fully in the growth process. Public expenditure (Centre and States) on education is only around 3.6% of GDP. The National Common Minimum Programme (NCMP) had set a target of raising it to 6%.

1.106. Several steps were taken in the Tenth Plan to expand access to primary education, especially the expansion in the Sarva Shiksha Abhiyan (SSA) and the Mid-Day Meal Scheme. As a result, the number of out-of-school children declined from 32 to 7 million, indicating that SSA brought an additional 25 million children into the education system during the Tenth Plan period. The Gross Enrolment Ratio (GER) for elementary schools (Classes I–VIII) increased from 81.6% in 2001–02 to 94.9% in 2004–05. However, the drop out rate has remained high. It was as high as 48.71% at the elementary level at the end of the Tenth Plan, a decline of only 5.94 percentage points from 2001–02.

1.107. The quality of teaching in our elementary schools is also not what it should be. Teacher absenteeism is widespread, teachers are not adequately trained and the quality of pedagogy is poor. The Eleventh Plan aims to correct these deficiencies and focuses on improving the quality of education at the elementary level, especially in

rural areas. It also begins the process of universalizing secondary education. The massive expansion required in secondary education calls for an expansion in both public schools as well as private aided and unaided schools. While private schools must be allowed to expand and even encouraged, it should be noted that a much larger proportion of the expansion in enrolment would come from the public schools.

1.108. The action proposed in the Eleventh Plan for secondary education includes the following:

- Rapid upgradation of 15000 Upper Primary Schools to Secondary Schools, and expansion of intake capacity in 44000 existing Secondary Schools;
- Establishment of 6000 high quality model schools at the block level to serve as benchmarks for excellence in secondary schooling. About 3500 of these will be public-funded schools while 2500 would be through PPP;
- Provision for laboratories/libraries and also strengthening of the existing facilities available;
- Continuous teacher training;
- Provision for hostels and residential schools for girls; and
- A more liberal approach on the part of State Governments on allowing private schools to be set up to meet the large unmet demand for quality education.

1.109. The Eleventh Plan must also focus on the pressing need to expand capacity in our institutions of higher education and technical and professional education (engineering, medicine, law, etc.). The GER for higher education (percentage of the 18–23 age group enrolled in a higher education institution) currently is around 11% whereas it is 25% for many other developing countries. China has increased its GER in higher education from 10% in 1998 to 21% in 2005. We must aim at increasing the GER to 15% by the end of the Plan and reach 21% by the end of the Twelfth Plan. This is necessary not only to meet the needs of a growing economy, but also to meet the aspirations of younger people who see education as an essential requirement for advancement. Along with expansion, it is also necessary to aim at improvement in quality. While the best of our institutions of higher education compare well internationally, a large number suffer from serious quality problems. A general improvement in the quality of existing universities is

necessary, including upgrading of facilities and improved methods of teaching. There is also need for a special effort to set up world class higher educational institutions. The expansion should aim at a much larger provision for science teaching.

1.110. The following initiatives will be taken in the Eleventh Plan to attain these objectives in higher education.

- Establishment of 30 new Central universities, one in each of the 16 States which do not have a Central university at present, and 14 other Central universities in different parts of the country. Some of these universities will be targeted ab initio to achieve world class standards, which will involve coverage of a wider range of subjects, including, especially engineering and medicine.
- Establishment of eight IITs, seven IIMs and five Indian Institutes of Science Education and Research.
- Since the establishment of world class institutions involves considerable expenditure on creating facilities, the scope for public–private participation in setting up these universities will be carefully explored. The location of these institutions should take advantage of the co-location of other scientific and research institutions in certain places.
- The scope for setting up institutions of higher education in the private sector must also be explored. State governments would be well advised to adopt a supportive stance on this issue, including flexibility in charging higher fees.
- At present, fees vary across universities, but generally these have been kept very low, in many cases not even covering 5% of the operating cost. The Centre and State Governments must either be able to subsidize university education massively or try to mobilize a reasonable amount from those who can afford it by way of fees that cover a reasonable part of the running cost. Since most university students come from the top 10% of the population by income levels, they would be able to pay fees amounting to 20% of the operating cost of general university education. The fees for professional courses could be much higher. The fee levels should, therefore, be increased gradually in existing institutions but the new norms could be implemented in new institutions from the start.

Skill Development

1.111. In an economy growing at the rate of 9% plus, skill development poses major challenges and also opens

up unprecedented doors of opportunity. The magnitude of the skill development challenge can be estimated by the fact that the NSS 61st Round results show that among persons of age 15–29 years, only about 2% are reported to have received formal vocational training and another 8% reported to have received non-formal vocational training, indicating that very few young persons actually enter the world of work with any kind of formal vocational training. This proportion of trained youth is one of the lowest in the world. Our Vocational Education and Training (VET) system needs to cover more trades. Qualitatively it suffers from disabilities such as poor infrastructure, ill-equipped classrooms/laboratories/workshops, below par faculty, absence of measurement of performance and outcomes, etc. Placements are not tracked, training institutions are not rated, and accreditation systems are archaic. End-of-the-training examinations and certification systems are either non-existent or flawed.

1.112. In addition to the existing basic problem with the skill development system in the country, the urgency of skill development is underscored by the demographic changes taking place. It is estimated that the ageing phenomenon globally will create a skilled manpower shortage of approximately 46 million by 2020 and if we can take effective action on skill development, we could have a skilled manpower surplus of approximately 47 million. In an increasingly connected world, where national frontiers are yielding to cross-border outsourcing, it is not inconceivable that within a decade we can become a global reservoir of skilled persons.

1.113. Taking cognizance of this challenge, the consequential endeavour to launch effective measures will require a paradigm change in our VET system and in other forms of skill development. It is, therefore, proposed to launch coordinated action for skill development which will be a major initiative for inclusive growth and development and will consist of an agglomeration of programmes and appropriate structures. The coordinated action would aim at creating a pool skilled personnel in appropriate numbers with adequate skills in line with the employment requirements across the entire economy with particular emphasis on the twenty-one high growth high employment sectors (10 in manufacturing and 11 in services).

1.114. The coordinated action will aim to initiate and guide policy dialogue to energize, re-orient, and sustain

the development of skills through private and the public initiatives towards both self employment and wage employment at various levels. As a part of coordinated action, a National Skill Development Coordination Board will be set up which will act as an instrument of implementation and make appropriate and practical solutions and strategies to address regional imbalances in skill development infrastructure, the socio-economic (SC/ST/OBC, Minorities, BPL, etc.), rural–urban, gender divides and ensure that each sectoral plan have built-in long terms measures with a self-corrective mechanism.

1.115. Furthermore, it is proposed to create a ‘Virtual Skill Development Resource Network’, which can be accessed by trainees at 50000 Skill Development Centres, to provide web-based learning. It is also proposed to create a ‘National Skills Inventory’ and another database for ‘Skills Deficiency Mapping’ for facilitating tracking of careers and placement and for exchange of information between employers and employment seekers. The Eleventh Plan will also see repositioning of Employment Exchanges as outreach points for storing and providing information on employment and skill development, and to encourage them to function as career counselling centres.

HEALTH AND NUTRITION

1.116. Good health is both an end in itself and also contributes to economic growth. Meeting the health needs of the population requires a comprehensive and sustained approach. Our health services should be affordable and of reasonable quality. The Eleventh Plan will try to strengthen all aspects of the health care system—preventive, promotive, curative, palliative and rehabilitative. This will be accompanied by emphasis on access to clean drinking water, sanitation, diet, hygiene and feeding practices, which will significantly affect the health status of the people. Public health spending will be raised to at least 2% of GDP during the Eleventh Plan period.

1.117. Both the Central and State Governments will have to augment resources devoted to health. This will be accompanied by building absorptive capacity for enhanced allocations and innovative health financing mechanisms, including health insurance for the poor, in which the premium for basic coverage will be borne by the Centre and the States. There is a strong case for experimenting with different systems of PPP and risk pooling. The Eleventh Plan aims to establish 60 medical colleges and

225 new nursing and other colleges in deficit States through PPP. Incentives linking payment to performance will also be introduced in the public health system.

1.118. The following targets have been set during the Eleventh Plan to ensure an efficient public health delivery system under the National Rural Health Mission (NRHM), which was launched in 2005.

- Over 5 lakh Accredited Social Health Activists (ASHAs), one for every 1000 population in 18 Special Focus States and in tribal pockets of all States by 2008.
- All sub-centres (nearly 1.75 lakh) functional with two Auxiliary Nurse Midwives by 2010.
- Primary Health Centres (PHCs) (nearly 30000) with three staff nurses to provide round the clock services by 2010.
- 6500 Community Health Centres (CHCs) strengthened or established with seven specialists and nine staff nurses by 2012.
- 1800 Taluka or Sub-Divisional Hospitals (SDHs) and 600 District Hospitals (DHs) to be strengthened to provide quality health services by 2012.
- Mobile Medical Units for each District by 2009.
- Functional Hospital Development Committees in all CHCs, SDHs, and District Hospitals by 2009.
- Untied grants and annual maintenance grants to every Sub-centre, PHC and CHC released regularly and utilized for local health action by 2008.
- All District Health Action Plans completed by 2008.

1.119. During the Eleventh Plan, special attention will be paid to various aspects of women’s health, including maternal morbidity and mortality, and child sex ratio. Besides encouraging institutional deliveries under NRHM, Traditional Birth Attendants (TBAs) will be trained to upgrade them as Skilled Birth Attendants. Reducing travel time to two hours for emergency obstetric care will be a key social intervention.

1.120. For reducing infant mortality, focus will be on Home Based Newborn Care (HBNC) complemented by Integrated Management of Neonatal and Childhood Illnesses. HBNC will be provided by a trained Community Health Worker (such as ASHA) who will guide and support the mother, family and TBA in the care of the newborn, and attend to the newborn at home if she is sick. The strategy during the Plan is to introduce and make available high quality HBNC in all districts/areas with an infant mortality rate of more than 45 per 1000 live births.

1.121. Improving all district hospitals will be a key intermediate step in the health strategy, till health care through PHCs and CHCs is fully realized. During the Plan period, six AIIMS-like institutions will be set up and 13 medical institutes upgraded to that level.

1.122. For meeting the health needs of the urban poor, particularly slum dwellers, a health insurance based National Urban Health Mission will be launched.

1.123. The Eleventh Plan also focuses on developing human resources to not just meet the needs of the health care system, but also to increase employment opportunities and make India a hub for health tourism. This will involve reintroducing licentiate courses in medicine, and establishing medical, nursing, dental and paramedical colleges in the under-served areas.

1.124. Good governance, transparency and accountability in the delivery of health nutrition and related services will be ensured through involvement of local self governments, community and civil society groups. The Eleventh Plan aims to establish 60 medical colleges.

1.125. High levels of malnutrition continue to influence morbidity and mortality rates in the country. According to the NFHS-3 (2005–06), 38.4% of children under 3 years are stunted, 19.1% wasted and 45.9% underweight. These figures have not improved much since 1998–99 (NFHS-2); in fact the proportion of wasted children has increased. The Body Mass Index (BMI) of 33% of women and 28.1% of men is below normal. Prevalence of anaemia is very high among young children (6–35 months), ever married women (15–49 years) and pregnant women and has increased since 1998–99 in all the three groups.

1.126. A variety of interventions consisting of dietary diversification, nutrient supplementation and public health measures involving better hygiene, sanitation and deworming will be undertaken to tackle the problem of malnutrition. The Integrated Child Development Services (ICDS) scheme, the government's main programme for addressing the problem of malnutrition, will be universalized on a fully decentralized on-demand basis and restructured in the Eleventh Plan as described below. The implementation of ICDS will be improved by giving responsibility of execution to the community and PRIs. Besides, there will be wider coverage of hot cooked meals and extensive promotion of infant and young child feeding practices.

WOMEN'S AGENCY AND CHILD RIGHTS

1.127. Inclusive growth in the Eleventh Plan envisages respecting the differential needs of all women and children and providing them with equal access to opportunities. This can only happen when women are recognized as agents of socio-economic growth with autonomy of decision-making and the rights of children are respected.

1.128. The Eleventh Plan proposes a five-fold agenda for gender equity. This includes economic empowerment; social empowerment; political empowerment; strengthening mechanisms for effective implementation of women-related legislations; and augmenting delivery mechanisms for mainstreaming gender. For children, it adopts a rights framework based on the principles of protection, well-being, development and participation. Recognizing that women and children are not homogenous categories, the Eleventh Plan aims to have not just general programmes, but also special targeted interventions, catering to the differential needs of different groups. Thus during the plan period, specific pilots for girl children and Muslim women, will be taken up.

1.129. To ensure a gender responsive health care system, maternal health services will be improved and emergency and compulsory obstetrics care will be made available within a travel time of two hours. Targets for halving prevalence of anaemia and malnutrition among women and children have been set and the ICDS scheme is being restructured and reoriented towards this end. A new component of conditional maternity benefits is proposed to target foetal malnutrition, ensure better care for pregnant women and encourage breastfeeding. Universalization of Anganwadis will be carried out, and Panchayats and mothers' groups will be given resources to ensure effective implementation of the scheme. Need based, community-run crèches will also be introduced to tackle child malnutrition.

1.130. Departing from previous Plans, the Eleventh Plan views violence as a public health issue and calls for training of medical personnel at all levels of the health care system to recognize and report violence against women and children. The Eleventh Plan also introduces the Integrated Child Protection scheme and the Scheme for Relief and Rehabilitation of Victims of Sexual Assault. New and empowering bills like the Sexual Harassment at Workplace Bill and the Compulsory Registration of Marriages Bill are expected to become law during the Plan period.

POVERTY, LIVELIHOOD SECURITY, AND RURAL DEVELOPMENT

1.131. Accelerating agriculture development with emphasis on watershed development in dryland areas and a special focus on small farmers will increase employment and help reduce poverty in rural areas. The Eleventh Plan also places emphasis on several other initiatives which will increase economic well-being and opportunities in rural areas. The NREGP provides income support for those in need of employment while also helping to create assets that will increase land productivity. The Bharat Nirman programme will provide electricity and drinking water to all habitations before the end of the Plan period. PMGSY will provide all-weather connectivity to all villages with a population of over 1000 or with a population of over 500 in hilly areas. SSA will provide eight years of education to all children. The other measures taken for improving education will help give opportunities to all children to fully develop their capabilities. The Rural Health Mission is directed to reach health services to all. The total sanitation campaign (TSC) should provide clean environment in villages.

1.132. When these programmes are effectively implemented, the benefits of growth would spread widely, especially in rural areas and backward regions. An important element of the Eleventh Plan strategy is to empower PRIs through special training as well as funds, supplemented by the Backward Regions Grants Fund (BRGF), to implement and oversee these programmes.

URBAN INFRASTRUCTURE AND URBAN POVERTY ALLEVIATION

1.133. India is relatively less urbanized (29.2% as on 1 October 2007 as per the projections made by the office of Registrar General of India) than other countries at the same level of development. However, since the scope for employment opportunities in rural areas is somewhat limited, accelerated growth as envisaged in the Eleventh Plan is expected to result in more rapid migration of rural populations to urban centres. To deal with the situation, a two-pronged action plan is necessary. First, the quality of infrastructure in existing cities will have to be upgraded to provide improved municipal services to larger numbers of people and, second, new suburban townships will have to be developed in the vicinity of existing cities as satellites/counter magnets to reduce/redistribute the influx of population.

1.134. Not only is India less urbanized, the state of urban infrastructure, especially the availability of water and

sewage treatment facilities, is much lower than what it should be. Urban transport infrastructure also leaves much to be desired. The Jawaharlal Nehru National Urban Renewal Mission (JNNURM), which commenced in the Tenth Plan, will continue to be the main vehicle for raising the level of infrastructure and utilities in the existing cities. The aim of the Mission is to create economically productive, efficient, equitable and responsive cities and the focus is on: (i) improving and augmenting the economic and social infrastructure of cities; (ii) ensuring basic services to the urban poor, including security of tenure at affordable prices; (iii) initiating wide-ranging urban sector reforms whose primary aim will be to eliminate legal, institutional and financial constraints that have impeded investment in urban infrastructure and services; (iv) strengthening municipal governments and their functioning in accordance with the provisions of the Constitutional (Seventy-Fourth) Amendment Act, 1992.

1.135. The development of satellite townships can be left largely to the private sector. However, in order to facilitate and induce such development the State Governments will need to undertake provision of trunk level infrastructure. The National Capital Region Planning Board is tasked with planning the process of infrastructure development for the areas around Delhi. Similar boards can be set up to undertake coordinated development of townships around other large cities, learning from the Delhi experience to make the planning process more effective.

1.136. Urban poverty alleviation and slum development will continue to be an important component of the Eleventh Plan. Tenth Plan schemes under JNNURM for providing affordable shelter and decent living and working conditions to the poor and for helping them to develop self-employment enterprises will be continued. The Swarna Jayanti Shahri Rozgar Yojana (SJSRY), a CSS to provide gainful employment to the urban unemployed (below the poverty line) will be implemented in a revamped form during the Eleventh Plan period.

SCIENCE AND TECHNOLOGY AS A DRIVER OF GROWTH

1.137. Science and Technology are important drivers of economic growth and development in the contemporary world. The present juncture is critical for Indian science and major positive steps in this area will help the country to achieve sustained and rapid growth in the future.

1.138. In order to enlarge the pool of scientific manpower in the country and to attract and foster talent in scientific

research a programme for ‘Innovations in Science Pursuit for Inspired Research’ (INSPIRE) will be launched. This will involve innovation funding in schools, summer camp with Science Icons (for high performers), assured career opportunity scheme for proven talent, and retention of talent in publicly-funded research. In addition, the Oversight Committee recommendation regarding Scholarships for Higher Education (SHE) providing 10000 scholarships per year for attracting talented science students of BSc and MSc courses will also be effectively implemented. Further, discipline-specific education programmes would be launched particularly in strategic sectors like, Space Sciences and Nuclear Sciences to capture talent at ‘plus two’ level with a view to developing quality human resources in the country for these sectors.

1.139. Universities are the cradle for basic research. To promote basic research in the country, a two pronged strategy will be adopted, aiming at: (i) Expansion and strengthening of the S&T base in the universities, and (ii) providing support to established centres of advanced research on the basis of competitive research funding for undertaking major and internationally competitive research programmes.

1.140. An effort would also be made to ensure that the wide pool of excellence available in the publically funded research institutions also participate actively as adjunct faculty in the universities and newly created academic and research institutions.

1.141. Effective mechanisms for promoting scientific research in the country need to be established in the Eleventh Five Year Plan. The peer review system will be upgraded to make it more stringent. All matters relating to Science and Technology including scientific audit as well as performance measurement of scientists and scientific institutions would need to be dealt with holistically.

ENVIRONMENT AND SUSTAINABILITY

1.142. Translating the vision of environmental sustainability will require that environment concerns are given a very high priority in development planning at all levels in the Eleventh Plan. The responsibility of enforcing environmental laws will be defined and shared with the States to broad base the enforcement effort. Enforcement mechanisms for dealing with industrial and vehicular pollution will be strengthened on the principle of polluter pays concept.

1.143. Environmental management (including municipal solid waste and sewage management) is a crucial component of urban planning and has been sadly neglected. Sewage treatment must be given focused attention. Recycling of the treated water for appropriate purposes must be incentivized. Efforts will be made to integrate sewage treatment with water conservation. Local bodies will be provided with adequate financial support for the purpose.

1.144. The River Conservation Programme will be strengthened to ensure that river flows are adequate to provide water of at least bathing quality standards. A Comprehensive Action Plan for Yamuna and a manageable number of important rivers will be implemented urgently with a stiff penalty system for violators.

1.145. Participating systems will be strengthened for sustainable use of forests in keeping with the global consensus on the need for community involvement for management of natural resources. The livelihood potential of forests will be improved for enhancing the stake of the community in conservation. The scope of wildlife management principles will be extended beyond sanctuaries and national parks. Conservation efforts will include compatible human interface with forests. Scientific aspects of ecology and biodiversity will be the basis of conservation planning.

1.146. The prospect of climate change presents a serious threat to our development over the longer term horizon. Available scientific evidence suggests that India will be one of the countries that will be severely affected by climate change. The Himalayan glaciers are already receding and the trend could intensify. There is likely to be an increase in the mean temperatures which would have adverse effects on foodgrain production with the present level of technology. The monsoon would be affected with a greater frequency of extreme events. We have to evolve a positive stance toward adaptation and also engage constructively with the international community to reach a consensus on mitigation based on fair principles of burden sharing. Development and promotion of low carbon and high energy-efficient technologies with reasonable costs will be a priority. The Clean Development Mechanism (CDM) will be used as an incentive. A National Action plan on Climate Change is being prepared. The government’s effort will be towards creating an enabling environment for encouraging energy and carbon efficiency

in public and private sectors and towards internalizing climate change concerns in development planning.

PANCHAYATI RAJ INSTITUTIONS (PRIS) AS DELIVERY MECHANISMS

1.147. The Eleventh Plan seeks to substantially empower and use PRIs as the primary means of delivery of the essential services that are critical to inclusive growth. The 73rd and 74th Amendments to the Constitution have led to the establishment of about 2.5 lakh elected institutions of local self-government. (about 2.38 lakh in rural areas and the rests in urban areas). As against about 540 directly elected Members of Parliament and about 4500 directly elected members of our State assemblies, we have about 3.2 million elected representatives in the PRIs of which as many as 1.2 million are women. There are more elected women in India alone than in the rest of the world put together. It is absolutely critical for the inclusiveness of our growth process that these large numbers of elected representatives in our PRIs are fully involved in planning, implementing and supervising the delivery of the essential public services.

1.148. The Eleventh Plan recognizes that there is a need to build in incentives that will encourage the States to devolve functions, funds and functionaries to the PRIs. In order to capture the extent to which this process and empowerment of PRIs has actually progressed in each State, a suitable Devolution Index will be developed and will be called PRI-Empowerment Index.

MONITORABLE TARGETS

1.149. A key feature of the inclusive growth strategy in the Eleventh Plan is that growth of GDP should not be treated as an end in itself, but only as a means to an end. This is best done by adopting monitorable targets which would reflect the multi-dimensional economic and social objectives of inclusive growth. Furthermore, to ensure efficient and timely implementation of the accompanying projects and programmes, these targets need to be disaggregated at the level of the States which implement many of the programmes.

1.150. Following this approach, 27 monitorable targets have been identified at the national level of which 13 can be disaggregated at the level of individual States. These targets are ambitious, but it is better to aim high and fail than to aim low. The Eleventh Plan lays great stress on attaining them.

THE 27 NATIONAL TARGETS

1.151. Twenty-seven targets at the national level fall in six major categories. The six categories are: (i) Income and Poverty; (ii) Education; (iii) Health; (iv) Women and Children; (v) Infrastructure; and (vi) Environment. The targets in each of these categories are given below.

(i) Income and Poverty

- Average GDP growth rate of 9% per year in the Eleventh Plan period.
- Agricultural GDP growth rate at 4% per year on the average.
- Generation of 58 million new work opportunities.
- Reduction of unemployment among the educated to less than 5%.
- 20% rise in the real wage rate of unskilled workers.
- Reduction in the head-count ratio of consumption poverty by 10 percentage points.

(ii) Education

- Reduction in the dropout rates of children at the elementary level from 52.2% in 2003–04 to 20% by 2011–12.
- Developing minimum standards of educational attainment in elementary schools, to ensure quality education.
- Increasing the literacy rate for persons of age 7 years or more to 85% by 2011–12.
- Reducing the gender gap in literacy to 10 percentage points by 2011–12.
- Increasing the percentage of each cohort going to higher education from the present 10% to 15% by 2011–12.

(iii) Health

- Infant mortality rate (IMR) to be reduced to 28 and maternal mortality ratio (MMR) to 1 per 1000 live births by the end of the Eleventh Plan.
- Total Fertility Rate to be reduced to 2.1 by the end of the Eleventh Plan.
- Clean drinking water to be available for all by 2009, ensuring that there are no slip-backs by the end of the Eleventh Plan.
- Malnutrition among children of age group 0–3 to be reduced to half its present level by the end of the Eleventh Plan.
- Anaemia among women and girls to be reduced to half its present level by the end of the Eleventh Plan.

(iv) Women and Children

- Sex ratio for age group 0–6 to be raised to 935 by 2011–12 and to 950 by 2016–17.
- Ensuring that at least 33% of the direct and indirect beneficiaries of all government schemes are women and girl children.
- Ensuring that all children enjoy a safe childhood, without any compulsion to work.

(v) Infrastructure

- To ensure electricity connection to all villages and BPL households by 2009 and reliable power by the end of the Plan.
- To ensure all-weather road connection to all habitations with population 1000 and above (500 and above in hilly and tribal areas) by 2009, and all significant habitations by 2015.
- To connect every village by telephone and provide broadband connectivity to all villages by 2012.
- To provide homestead sites to all by 2012 and step up the pace of house construction for rural poor to cover all the poor by 2016–17.

(iv) Environment

- To increase forest and tree cover by 5 percentage points.
- To attain WHO standards of air quality in all major cities by 2011–12.
- To treat all urban waste water by 2011–12 to clean river waters.
- To increase energy efficiency by 20% by 2016–17.

THE 13 STATE-SPECIFIC TARGETS

1.152. The Eleventh Plan has been formulated in a manner whereby 13 of the 27 monitorable national targets have been disaggregated into appropriate targets for individual States. These are

- (i) GDP growth rate
- (ii) Agricultural growth rate
- (iii) New work opportunities
- (iv) Poverty ratio
- (v) Drop out rate in elementary schools

- (vi) Literacy rate
- (vii) Gender gap in literacy rate
- (viii) Infant mortality rate (IMR)
- (ix) Maternal mortality ratio (MMR)
- (x) Total Fertility Rate (TFR)
- (xi) Child malnutrition
- (xii) Anaemia among women and girls
- (xiii) Sex-ratio

1.153. Appropriate policies and programmes have to be identified both at the Central and State levels so as to ensure realization of these targets in the Eleventh Plan period.

SIZE OF THE ELEVENTH PLAN

1.154. The total public sector outlay in the Eleventh Plan (both Centre and States and including their PSEs) is estimated at Rs 3644718 crore. Of this total, the share of the Centre (including the plans of PSEs) will amount to Rs 2156571 crore, while that of the States and union territories (UTs) will be Rs 1488147 crore.

1.155. The proposed size of the Eleventh Plan is much larger than the projected outlay, as well as the actual realization, in the Tenth Plan. At comparable prices, the Eleventh Plan outlay will be 120% higher than the Tenth Plan realization. In relation to GDP, the projected Eleventh Plan public sector outlay will be an average of 13.54% compared to the average of 9.46% that was achieved in the Tenth Plan. It must be emphasized, however, that Plan expenditure is not the same as public investment. It includes revenue expenditure on items such as salaries, which is high precisely because the focus of the Plan has shifted to supporting the social sectors, especially health and education.

1.156. Mobilizing resources in the public sector to finance the proposed Eleventh Plan will call for a major effort at generating tax revenues and controlling non-Plan expenditure and also improving the resource generation capacity of the PSEs. These issues are examined in detail in Chapter 3.