

# 1

## An Overview

### INTRODUCTION

**1.1** The Eleventh Plan (2007–08 to 2011–12) sought to build on the gains achieved in the Tenth Plan and shift the economy to a path of faster and more inclusive growth. Inclusiveness, a critical element in the strategy, was to be achieved by ensuring that growth was broad-based and was combined with programmes aimed at overcoming deficiencies in critical areas, which affect large numbers of the vulnerable sections of our population, particularly the Scheduled Castes (SCs), Scheduled Tribes (STs), the Other Backward Classes (OBCs), women, and the minorities. The Plan sought to deal with these deficiencies through programmes aimed at providing access to health, education, and other essential services and programmes of livelihood support.

**1.2** The Mid-Term Appraisal (MTA) reviews the experience in the first three years of the Plan and seeks to identify areas where corrective steps may be needed. This chapter presents a broad overview of the findings of the MTA.

### AGGREGATE AND SECTORAL GROWTH

**1.3** The Eleventh Plan aimed at an average growth rate of 9 per cent per annum, beginning with 8.5 per cent growth in the first year and accelerating this to reach 10 per cent in the last year. The economy exceeded expectations in the first year of the Eleventh Plan (2007–08) with a growth rate of over 9 per cent but

the momentum was interrupted in 2008–09 because of the global financial crisis.

**1.4** As in other countries, the government responded to the global recession by introducing fiscal stimulus and monetary accommodation which continued into 2009–10 when the economy was further hit by a severe drought. The growth rate in 2008–09 declined to 6.7 per cent but rebounded to 7.4 per cent in 2009–10, despite the fact that agriculture showed negligible growth at 0.2 per cent. The drought also led to an increase in inflationary pressure, especially in food prices, which were also affected by high international commodity prices, as well as some of the food prices that were high. Bringing inflation under control has thus become a priority.

### RESILIENCE OF THE ECONOMY

**1.5** The relatively modest slowdown in the face of an exceptionally sharp contraction in output in the industrialized world has established the resilience of the Indian economy in terms of its ability to manage a downturn despite greater openness. While the advanced economies saw their growth decline from a trend rate of 2.0 to 2.5 per cent to (–) 2.0 to (–) 3.0 per cent, growth in India declined by only about 2 percentage points. Since this reduction applied to an underlying growth rate that was much higher, the outcome was a GDP growth rate that remained relatively robust. China and other East and

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South-East Asian countries have also had a similar experience.

**1.6** There are several reasons for the superior performance on the growth front. First, India's financial system was not exposed to the 'toxic' assets which affected the financial system in most industrialized countries. This was the result of a traditionally conservative approach to bank regulations and of a conscious government decision to adopt a cautious approach in liberalizing capital flows, especially short-term debt, combined with building up ample foreign exchange reserves. If the financial system had suffered a severe shock, the disruptive effects of the crisis on the real economy would have been much greater.

**1.7** Second, although the economy is much more open now than it was in the past, it still is much less dependent on exports as a demand side driver of growth than some other countries. The growth in demand which supported rapid growth in GDP was predominantly domestic demand, particularly domestic investment, which increased rapidly in the pre-crisis years.

**1.8** Third, the underlying macro-fundamentals were strong. The level of private savings has been high and fiscal consolidation in previous years had improved public savings performance. As a result, the domestic savings rate had increased to 36.4 per cent of GDP in 2007–08 and then declined to 32.5 per cent in 2008–09 because of the adverse effect of the crisis on tax revenues coupled with the fiscal stimulus. However, the private savings rate was more or less unchanged. Gross investment declined from 37.7 per cent in 2007–08 to 34.9 per cent in 2008–09 and is expected to recover to 36.2 per cent in 2009–10. Gross fixed capital formation remained at about 33 per cent through these years.

### PROSPECTS FOR THE ELEVENTH PLAN

**1.9** Growth prospects in the remaining two years of the Eleventh Plan period depend to some extent on the global economic prospects which remain uncertain at present. However, if the industrialized countries show positive annual growth of 2.3 per cent in 2010, and 2.4 per cent in 2011, as is currently thought likely,

it is possible to envisage India's growth rate increasing to around 8.5 per cent in 2010–11, with a further increase to 9 per cent in 2011–12.

**1.10** Projecting a return to 9 per cent growth may appear optimistic since growth at this rate in the past has only been achieved in years when the industrialized countries grew at close to 3 per cent per year. However, India's macroeconomic fundamentals suggest that 9 per cent growth can be achieved despite slower growth in industrialized countries provided supportive policies are put in place.

### MACROECONOMIC FUNDAMENTALS

**1.11** The high rates of domestic savings and investment are important strengths of the economy that will help ensure an early return to high growth. Equally important is the considerable entrepreneurial and managerial capacity in the private sector. Private corporate investment was particularly buoyant in the years before the crisis and confidence levels remain high. This should help ensure an early return to higher growth.

**1.12** Slower growth in world trade will, however, be a problem area in the coming years. Exports, which grew at an annual rate of 25 per cent (in US\$) from 2003–04 to 2007–08, are likely to grow at a much slower rate. Export growth decelerated to 13.7 per cent in 2008–09 and (–) 4.7 per cent in 2009–10, and an early return to very rapid growth is unlikely. Weaker export demand will have to be offset by some other source of domestic demand to sustain high rates of GDP growth. This should ideally be through increased investment in infrastructure, using a combination of public and private investment and Public–Private Partnerships (PPPs). Enhanced investment in infrastructure will not only provide the demand needed to replace export demand in the short term, it will also ease a critical supply constraint on growth over the medium term.

**1.13** A strategy of raising investment in the face of lower export growth implies a somewhat larger balance of payments deficit, especially since oil prices are unlikely to drift downwards. However, as pointed out in Chapter 2, the increase in the current account deficit in the next two years is likely to be modest, at

approximately 2.5 per cent or at most 3 per cent of GDP. A deficit of this order could be financed relatively easily through long-term capital flows including foreign direct investment (FDI).

**1.14** Despite the crisis, FDI flows (which exclude FII inflows) have held up well and the estimated FDI inflow in 2009–10 was over US\$ 31 billion. India's prospects for attracting FDI in the years ahead are very good if it continues to be seen as a dynamic economy and the overall macroeconomic environment remains positive and economic policies are seen to be investor friendly.

**1.15** An important area of concern in this context is the size of the combined fiscal deficit of the Centre and the states, which increased from 6.3 per cent of GDP in 2006–07, to about 10 per cent in 2008–09, and remained around the same in 2009–10. A higher fiscal deficit was an inevitable consequence of the stimulus strategy, but it is also necessary to signal a return to fiscal prudence. This signal has been given in the Budget for 2010–11, which shows the central fiscal deficit declining from 7.8 per cent of GDP in 2008–09 to 6.9 per cent in 2009–10, and further to 5.5 per cent in 2010–11, with further decline projected in subsequent years. Adherence to this time path will contribute to creating investor confidence and help bring inflationary pressures under control.

**1.16** If the economy achieves 8.5 per cent growth in 2010–11, and accelerates to 9 per cent in the last year of the Eleventh Plan, the average rate of growth in the Plan period could be a little over 8 per cent. Although this is below the original Eleventh Plan target of an average of 9 per cent growth it would be better than the 7.8 per cent attained in the Tenth Plan period. To achieve this outcome in an otherwise highly unfavourable external environment would be a major achievement. More importantly, the economy would be well-positioned for transition to a growth rate higher than 9 per cent in the Twelfth Plan period.

#### GROWTH IN THE STATES

**1.17** The pattern of Gross State Domestic Product (GSDP) growth across states in recent years has

some interesting positive features. Such data as are available (up to 2008–09) suggest that all the states have experienced some acceleration in growth and even the states in the lowest quartile have experienced significant acceleration. This pattern is also reflected in the performance in agriculture across states.

**1.18** The median growth rate of GSDP in the states was 7.6 per cent in the Tenth Plan and 8 per cent in the first year of the Eleventh Plan. In states for which data is available for 2008–09 the median growth rate dropped to 6.4 per cent on account of the slowdown caused by the global crisis.

**1.19** The distribution of growth across states appears to have improved in favour of the slower growing states. The median growth rate for the lowest quartile of the states (ranked by descending order of growth rates) did not exceed 4.9 per cent in the Seventh, Eighth, and Ninth Plans. It rose to 6.3 per cent in the Tenth Plan and remained at that level in 2007–08 suggesting that all states have benefited by the improved growth climate. Although growth rates continue to differ across states, the variation has tended to decline.

#### PROSPECTS FOR AGRICULTURE

**1.20** An important sectoral target of the Eleventh Plan was to raise the rate of growth of GDP in agriculture from about 2.5 per cent in the Tenth Plan to 4 per cent during the Eleventh Plan period. Higher agricultural growth was expected to contribute directly to overall GDP growth and even more so to inclusiveness. Since more than half of the labour force still derives its income from agriculture, faster agricultural growth is perhaps the most effective instrument for reducing rural poverty. It would mean raising farm incomes for landowning farmers and wage income for landless labourers.

**1.21** It is difficult to judge growth performance in agriculture based on short periods because of the volatility to which agriculture is subjected. The average growth rate of agriculture in the first two years of the Eleventh Plan was 3.2 per cent, which was better than that of the Tenth Plan, but the drought in 2009–10 reduced the average for the first three years to a little over 2 per cent. In case of a normal monsoon across the

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country in 2010, a substantial rebound can be expected. As pointed out in Chapter 4, achieving the target of 4 per cent growth in agriculture would require an average growth of 7 per cent per annum in the next two years. This may be difficult but with normal weather conditions there is a good chance of agricultural growth averaging 3.0 to 3.5 per cent over the Eleventh Plan period. If this happens, agriculture would at least have overcome the prolonged deceleration which occurred between 1996 and 2003 and returned to the earlier high growth path from which a transition to 4 per cent could be attempted in the Twelfth Plan.

**1.22** As discussed in detail in Chapter 4, there are several positive developments in agriculture:

- Total public and private investment in agriculture as a percentage of agricultural GDP has improved from 14.1 per cent in 2004–05 to 19.5 per cent in 2008–09 according to the new national accounts series.
- The write-off of farm debts in 2006 gave many farmers the opportunity to start afresh and the flow of agricultural credit has expanded considerably in the Eleventh Plan period with the Kisan Vikas Card experiment proving to be very successful.
- Programmes such as the Rashtriya Krishi Vikas Yojana (RKVY), the National Horticulture Mission, and the National Food Security Mission are doing well.
- Minimum support prices have been raised to give farmers greater incentives to produce food grains.
- Investment in irrigation is being expanded significantly and the Accelerated Irrigation Benefit Programme (AIBP) has stepped up allocations in support of state government efforts.
- The Mahatma Gandhi National Rural Employment Guarantee (MGNREG) programme, which is focussed on schemes that improve water conservation, together with enhanced efforts at watershed management, holds out the hope of greatly improving access to water in rainfed areas.
- Improved rural road connectivity through the implementation of the Pradhan Mantri Gram Sadak Yojana (PMGSY), has given farmers improved access to markets supporting faster growth in farm incomes.

**1.23** None of this should detract from the fact that a great deal more needs to be done in the remaining years of the Eleventh Plan. A detailed agenda for action is spelt out in Chapter 4 covering improved access to water, improving the supply of good quality seeds, replenishing soil nutrients, improving agricultural research and extension, reforms in land tenancy, and improving agricultural marketing, which is particularly important for perishable produce. Most of these lie in the domain of state governments.

### THE MANUFACTURING SECTOR

**1.24** The Eleventh Plan had noted that the high growth of the economy in recent years had not been accompanied by rapid growth in manufacturing as happened in other fast developing economies. The Plan called for double digit growth in manufacturing and emphasized that this was essential if we wanted to shift substantial numbers of the labour force out of agriculture into the formal sector. Performance in this dimension in the first three years of the Eleventh Plan has been below expectations.

**1.25** Manufacturing grew at an average 9.3 per cent during the Tenth Plan, and reached 10.3 per cent during the first year of the Eleventh Plan, but thereafter it was hit by the global slowdown in 2008–09, causing the rate of growth in the sector to decline to 3.2 per cent. It recovered to 10.8 per cent in 2009–10 and our objective should be to maintain the growth of manufacturing at double digit levels in the last two years of the Eleventh Plan.

**1.26** Several institutional and policy reforms are needed to achieve this objective. Improved power supply is particularly important since shortages of power or poor quality of power supply have an adverse effect on the competitiveness of manufacturing. The Micro, Small, and Medium Enterprise (MSME) sector needs special attention because it creates more jobs than large companies do. It is also an important seed bed for entrepreneurship and innovation. Credit is, however, a key constraint for this sector and this calls for continued deepening and strengthening of the financial sector as well as the mechanisms for expanding access to equity financing. ‘Clustering’ is an effective way of providing

small units with infrastructure support and should be encouraged.

**1.27** Manufacturing units in India are also burdened by a plethora of regulations, including many at the state level, resulting in low scores on indices of the ease of doing business. There is an urgent need to review these regulations in individual states. The need for greater flexibility of labour laws also has to be addressed if labour-intensive manufacturing is to be encouraged.

**1.28** The fear that any change in labour laws which increase flexibility would necessarily be anti-labour is misplaced and must be overcome. In fact, more flexibility, broadly in line with what exists in other countries, would help increase the demand for labour and expand the size of the labour force in the organized sector. This would be in the interest of unorganized workers who would be absorbed in the organized sector in larger numbers thereby increasing the worker base and their bargaining power in this sector.

**1.29** Rapid industrialization also requires release of land for industrial projects and infrastructure and this has become more difficult over time. The existing land acquisition laws are widely seen to be inequitable and unfair to those from whom land is acquired, especially since acquisition is sometimes used to benefit projects being developed by the private sector. As pointed out in Chapter 5, the government had introduced bills to modernize land acquisition and rehabilitation laws but the bills lapsed with the dissolution of the Lok Sabha prior to the 2009 elections. They need to be reintroduced at an early date.

### INCLUSIVENESS AND THE ELEVENTH PLAN

**1.30** The Eleventh Plan viewed inclusiveness as a multi-dimensional objective and listed 27 monitorable targets. Of these, two were: (a) growth of GDP and (b) the growth of agricultural GDP. There were also 25 other parameters relating to poverty reduction, employment, education, health services, child nutrition, gender balance, access to basic infrastructural services, and environmental sustainability. The MTA provides

an assessment of progress made in this area, together with suggestions about the corrective steps needed in the major programmes.

### POVERTY REDUCTION

**1.31** The Eleventh Plan target was to reduce the percentage of poverty by 10 percentage points over the Plan period, or 2 percentage points per year, which is more than twice the pace observed in the past. It is not possible to measure progress against this target at this stage because no official estimates of poverty are available after 2004–05. The next estimate of poverty will be for 2009–10, based on the NSS survey currently being conducted in the field, data from which will become available only in 2011.

**1.32** An issue that has attracted considerable attention is whether the poverty lines used in the official estimates, which were fixed in 1973–74 and have been updated for inflation since, need to be revisited in view of the many changes that have taken place in our economy. A High Level Committee under Professor Suresh Tendulkar was appointed in December 2005 to consider this issue.

**1.33** The Report of the Committee has been submitted and is available at [www.planningcommission.gov.in](http://www.planningcommission.gov.in). The Committee has recommended that the urban poverty line need not be changed, but the rural poverty line should be raised to reflect the basket of commodities that can be purchased at the urban poverty line after allowing for the difference in urban and rural prices. The Tendulkar Committee has recomputed poverty lines for individual states for 2004–05 on this basis.

**1.34** The revised poverty lines recommended by the Tendulkar Committee have been accepted by the Planning Commission for 2004–05. They indicate no change in urban poverty estimates, but the rural poverty line has been revised upwards significantly and as a consequence the percentage of the population below the poverty line in rural areas is higher than it was in the earlier estimates. The percentages of the population in poverty in rural and urban areas using official estimates as well as estimates of the Tendulkar Committee are given in the Table 1.1.



**TABLE 1.1**  
**Estimates of Population in Poverty**  
**(Percentage below the Poverty Line)**

	Official Estimates			Tendulkar Committee		
	Urban	Rural	Total	Urban	Rural	Total
1993–94	32.4	37.3	36.0	31.8	50.1	45.3
2004–05	25.7	28.3	27.5	25.7	41.8	37.2

**1.35** The Tendulkar Committee has specifically pointed out that the upward revision in the percentage of rural poverty in 2004–05, resulting from the application of a new rural poverty line should not be interpreted as implying that the extent of poverty has increased over time. To assess the underlying time trend using the new method of computing poverty lines, we should compare poverty estimates in 2004–05 with those for 1993–94, using the new methodology for both years. These estimates, as reported by the Committee, are presented in Table 1.1. They clearly show that whether we use the old method or the new, the percentage of the population below the poverty line has declined by about the same magnitude.

**1.36** The findings of the Tendulkar Committee, therefore, endorse the earlier Planning Commission assessment that the growth process witnessed in India led to a reduction in poverty between 1993–94 and 2004–05, though the reduction was less than what might have been expected. However, this change tells us nothing about what has happened to poverty after 2004–05. With GDP growth having accelerated after 2004–05 and its distribution across states being somewhat better, with some improvement in performance in agriculture, and with the introduction of programmes, such as the MGNREG and Bharat Nirman, there is reason to expect that there will be a significant reduction in poverty over the Eleventh Plan period as a whole. However, this can only be verified much later when the data for the Eleventh Plan period become available.

**1.37** An important programme contributing to poverty reduction in rural areas is MGNREG, which began in the first year of the Eleventh Plan and was quickly expanded to cover the entire country. This programme is expected to generate about three times the volume of employment generated by the rural

wage employment programmes that were in place before it was introduced in 2009–10. There is evidence that implementation of the MGNREG programme has reduced distress migration and improved the bargaining power of agriculture labour leading to higher wages.

**1.38** However, it must be emphasized that while the MGNREG programme provides much-needed minimal employment security, it is not a substitute for a long-term solution to rural poverty. That requires shifting significant numbers of the labour force out of low productivity employment in the agricultural sector to higher productivity employment in the non-agricultural sector, such as in labour-intensive manufacturing and the organized sector in general.

#### ACCESS TO EDUCATION

**1.39** The Eleventh Plan recognized that higher growth rates would require a large expansion in both the quantity and quality of formal education and skill development. It also recognized that for growth to be inclusive, access to quality education must be broadened so that all sections of the population could benefit from the new and more productive employment opportunities generated by faster growth. There is substantial progress in these areas.

#### Elementary Schooling

**1.40** The Sarva Shiksha Abhiyan (SSA), in combination with the Mid-Day Meal (MDM) scheme, has succeeded in achieving near universal enrolment in primary schools. The number of rural habitations with at least one primary school increased from 87 per cent in 2002 to 99 per cent in 2008 and those with upper primary schools within a radius of 3 km from 78 per cent to 92 per cent in the same period. Enrolment has increased for both boys and girls with a welcome narrowing of the gender gap. Similarly, the disparity between SCs/STs and the general population in this area has narrowed, though it has not been entirely eliminated.

**1.41** While enrolments are impressive, dropout rates remain high with as many as 43 per cent of the children dropping out before completing elementary school. The quality of schooling is also a matter of concern.

The Annual Status of Education Report (ASER) 2010, which reports learning achievements based on a survey conducted in 2009, shows that as many as 38 per cent of the children in Class V could not read a text meant for Class II and 37 per cent could not do a simple division. In this regard, the percentages have not changed significantly from the past.

1.42 Several steps are necessary to improve the quality of teaching and a number of initiatives have been taken:

- The Pupil–Teacher Ratio in primary schools has improved from 45:1 in 2006–07 to 33:1 in 2008–09.
- The Right of Children to Free and Compulsory Education Act, which became effective from 1 April 2010, provides a framework for universalizing elementary education and also lays down standards which all schools must meet.
- The Thirteenth Finance Commission has provided additional grants to the states to meet their share of the expenditure on education and the Central Government has increased its allocation.
- Efforts are being made to improve teacher training.

1.43 The responsibility for improving the quality of education lies with the state governments. Lacunae in systems of governance make it difficult to enforce teacher accountability. This problem is sought to be tackled by making schools responsible to the elected Panchayati Raj Institutions (PRIs) and some steps have been taken in this direction. However, the effectiveness of these oversight mechanisms is often limited in practice because PRIs do not have effective administrative control over teachers in most states, in large part because teachers belong to state cadres and appointments are highly politicized. More effective devolution and empowerment of PRIs, combined with better system of school inspections, is needed if the quality of teaching is to be improved.

### Secondary Education

1.44 As the flow of children completing elementary school increases, attention will have to be focussed on the development of adequate infrastructure to absorb

them into secondary and higher secondary schools. The primary responsibility for developing schools lies with the state governments, but the Eleventh Plan recognizes that the Centre has to play a supporting role as it does in the case of SSA.

1.45 A number of steps have been taken to assist the states to fulfil their responsibilities in this area. These include expanding and increasing the number of Jawaharlal Nehru Navodaya Vidyalayas and Kendriya Vidyalayas, and launching the Rashtriya Madhyamik Shiksha Abhiyan. The Plan also envisaged a new initiative in the form of a scheme for establishing 6,000 model schools through central assistance. Of these, 2,500 schools will be established through the PPP mode. Implementation of these programmes needs to be accelerated to ensure that the last two years of the Eleventh Plan give us a good start.

### Higher and Technical Education

1.46 The Eleventh Plan set a target of raising the Gross Enrolment Ratio (GER) for higher education from around 10 per cent at the start of the Plan to 15 cent by 2015. The importance of these targets is underscored by the fact that countries in East Asia that were behind India in higher education have now moved ahead.

1.47 Several new initiatives have been launched to meet the set targets. Capacity in the existing Central Government institutes of higher education, such as central universities, the Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs), the All India Institute of Medical Sciences (AIIMS), and the Postgraduate Institute of Medical Education and Research, Chandigarh, were expanded by 54 per cent to accommodate reservation for OBCs. The Central Government has also taken steps to establish 8 new IITs, 8 new IIMs, 10 NITs, 20 IIITs, and 3 IISERs. The Central Government has also set up 16 new central universities. In addition, it is also proposed to set up 14 ‘innovation’ universities, the legislative framework for which is being worked out. These initiatives represent a massive expansion of Central Government institutions of higher education.

1.48 The Central Government has also decided to undertake a comprehensive reform of the regulatory

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structure governing higher education along the lines recommended by the National Knowledge Commission and the Yashpal Committee. The objective is to give universities greater freedom and flexibility, while also enforcing standards. It is expected that there will be an expansion of properly regulated private universities in parallel with the expansion of public universities set up by the Centre and the states. It is also proposed to permit reputed foreign education providers to enter the higher education sector. Availability of quality human resources for teaching and research to meet the demands of proposed expansion in higher education is a major constraint and calls for advance planning. These initiatives, including the new regulatory framework, should be in place by the end of the Eleventh Plan, so that the stage is set for a transformation in higher education in the remaining years of the Eleventh Plan and it continues to take effect during the Twelfth Plan period.

### SKILL DEVELOPMENT

1.49 The formulation of a National Policy on Skill Development and the setting up of the PM's National Council on Skill Development reflect the importance the government attaches to skill development. A number of initiatives have been taken to strengthen skill development. As on 1 January 2007 there were 5,114 ITIs/ITES in the country with a seating capacity of 7.42 lakh. Three years later, there was an impressive increase in the number of such institutions to 7,984 ITIs/ITES—an increase of 56 per cent; the seating capacity had increased to 11.07 lakh. In the Union Budget of 2007–08, a scheme for upgrading 1,396 government ITIs into Centres of Excellence (CoEs) through PPP was announced. About 900 ITIs have been taken up under this programme. Of these, 815 have already been approved and are in various stages of implementation. Another 500 ITIs are to be upgraded with the help of the World Bank. Under the Modular Employable Skills Scheme, 1,103 specially designed short-term modules have been introduced to train school dropouts and informal sector workers.

1.50 The Skill Development Corporation, which was set up as a vehicle to provide financial support to skill development initiatives emanating from the private sector has become operational and has sanctioned assistance to several projects.

### HEALTH SERVICES

1.51 Access to good quality health services is another critical element of the inclusiveness strategy. The deficiencies in this area are well known. The Eleventh Plan had noted that while total expenditure on health in India as a percentage of GDP was comparable to that in the other developing countries, there was disproportionate reliance on private medical services which many can ill-afford. Total public expenditure on health in India (Centre and states combined), was below 1 per cent of GDP at the start of the Eleventh Plan. It is felt that this needs to be increased to about 2 to 3 per cent of GDP.

1.52 The greatest deficiency of medical services is in the rural areas, where a large part of the population simply does not have access to functioning health centres with minimum medical facilities and essential drugs. The Eleventh Plan sought to address this problem through the National Rural Health Mission (NRHM), which aimed at creating the necessary physical infrastructure of sub-centres, Primary Health Centres (PHCs), and Community Health Centres (CHCs) linked by district hospitals. An innovation in this programme was the reliance on locally recruited young women as Accredited Social Health Activists (ASHAs), who could serve as a link between the community and the public health service delivery system.<sup>1</sup>

1.53 The NRHM has now been in operation for five years, which is not a long enough time to judge the impact on health outcomes. The Mission has made progress in expanding the physical infrastructure for health, and also making flexible resources available at PHCs and sub-centres. It has also successfully appointed 7.5 lakh ASHAs though their training is behind schedule. Availability of doctors and

<sup>1</sup> ASHAs receive basic training and are also allowed to administer some basic drugs for common maladies. An important function of ASHAs is to encourage pregnant women to go in for institutional deliveries for which both the women and the ASHA receive an incentive payment under the Janani Suraksha Yojana.



technicians, in particular specialists, to support the health infrastructure in rural areas also remains a major challenge. Some states have successfully recruited health personnel on contracts, but a satisfactory solution can only come from a large expansion in trained human resources in the health sector. This calls for a substantial expansion of capacity in medical and nursing colleges.

**1.54** An important new initiative in the area of curative healthcare was the launch of the Rashtriya Swasthya Bima Yojana (RSBY) under which state governments provide health insurance for the below poverty line (BPL) population for in-patient treatment in approved public or private sector hospitals. The Central Government pays 75 per cent of the premium and the state governments pay the rest. A key element of the RSBY is that the patient can choose from alternative providers of health services and there is no cash transaction. As many as 1.25 crore smart cards have already been issued covering a population of more than 6 crore. When fully operational, the scheme will provide hospitalization cover to over 30 crore people.

**1.55** The primary healthcare needs of the urban poor also need to be addressed. Both rural and urban health initiatives may need to be combined under an integrated National Health Mission. Public health specialists need to be integrated with the health system at all levels. It is also important to consider a paradigm shift from viewing the government as a 'provider of health services' to one of 'financing healthcare while providing choice in health services' through innovative public-private health insurance schemes which enable the poor to choose among alternative health service providers.

**1.56** The effort to expand the government's role in healthcare has thus far raised the total public expenditure on health only marginally from 0.96 per cent of GDP in 2005-06 to 1.09 per cent in 2009-10. This increase has occurred primarily because of an increase in the Central Government health expenditure, with state government expenditure increasing very little. The target of increasing public sector expenditure on health to between 2 and 3

per cent of GDP obviously calls for much stronger efforts by the Central Government and even more so by the state governments in the years ahead.

#### OTHER INCLUSIVENESS PROGRAMMES

**1.57** The Eleventh Plan contains a number of other programmes aimed at promoting inclusiveness. Some such critical programmes are:

- The Integrated Child Development Services (ICDS) focusing on pre-school education and supplementary feeding;
- The Accelerated Rural Drinking Water Supply Programme, which aims at covering all unserved villages with a safe source of drinking water;
- The Total Sanitation Programme, which aims at providing individual household latrines to combat the widespread practice of open defecation;
- The Indira Awas Yojana (IAY), which provides assistance for construction of houses to those among the BPL population who do not have housing;
- The Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY), which aims at electrifying all unelectrified villages and providing free connections to BPL households; and
- The National Social Old Age Pension, which provides pensions to the BPL population above the age of 65 years.

**1.58** The total allocation to these programmes, which essentially aim at inclusiveness is budgeted at Rs 40,490 crore for 2010-11.

**1.59** The performance of each of these programmes is discussed in detail in the relevant chapter of the MTA. The overall picture shows progress in many areas, but it also reveals deficiencies in the implementation of individual programmes which need to be addressed. Progress in reducing malnutrition among children has been particularly slow despite long years of effort. It is now recognized that malnutrition cannot be dealt with by a single instrument such as the ICDS. It needs action on multiple fronts, including raising the income levels of families, age at the first pregnancy and the nutritional status of pregnant women, availability of clean drinking water, state of sanitation, and

knowledge of feeding practices especially promoting exclusive breastfeeding for the first six months. There are programmes that are directed to each of these ends, but their effectiveness needs to be improved.

### SOCIAL JUSTICE

**1.60** Inclusive growth implies delivering social justice to all, particularly disadvantaged groups such as SCs, STs, OBCs, minorities, persons with disabilities, senior citizens, and other marginalized groups. One aspect of social justice is that all programmes that provide generalized access to essential services, such as health, education, clean drinking water, and sanitation, should be implemented in a way that ensures that disadvantaged groups get full access to these services. Another aspect of social justice is the promotion of schemes specifically targeted at these groups. The Eleventh Plan contains several such programmes.

**1.61** Scholarships for SCs and STs have been greatly expanded. Schemes of post-matric scholarships for SCs, STs, and OBCs are implemented with the aim of promoting higher education among these disadvantaged groups. The Rajiv Gandhi National Fellowships scheme for SCs and STs is being implemented through the University Grants Commission (UGC) to encourage these groups to take up university education. Students from these groups are also encouraged to pursue higher studies, including those that lead to award of MPhil and PhD degrees.

**1.62** The scheme of pre-matric scholarships for children of those engaged in unclean occupations was revised in terms of the norms, value of scholarships, and by enhancing central assistance from 50 per cent to 100 per cent. This will improve the state of education among those children thereby giving them better livelihood opportunities.

**1.63** A comprehensive and focused development programme was implemented for the development of 75 Particularly Vulnerable Tribal Groups (PVTGs). The government also enacted the Scheduled Tribes and the Other Forest Dwellers (Recognition of Forest Rights) Act in 2006 and framed the rules in 2007 with the objective of recognizing and vesting forest rights

of forest land to persons who have been inhabiting these places for generations.

**1.64** In pursuance of the Prime Minister's New 15-Point Programme for the minorities, the government introduced three new scholarship schemes: pre, post, and merit-cum-means based to promote education among minorities. A Multi-Sectoral Development Programme has also been launched in 90 districts identified on the basis of the minority population percentage above the age of 25 years, combined with backwardness criteria of the particular district.

**1.65** The concept of a District Scheduled Castes Sub-Plan and Scheduled Tribes Sub-Plan was introduced to ensure that an adequate share of the Plan expenditure went to the benefit of SCs. The MTA reveals that the manner in which these sub-plans have been implemented, both in central ministries and the states, has not been satisfactory. The Planning Commission is reviewing experience in this area to see how the SC/ST sub-plan implementation can be improved. New guidelines will be developed taking into account the practical difficulties in the existing guidelines, so that the sub-plans can be implemented more effectively in the future.

### BACKWARD REGIONS

**1.66** An aspect of inclusive development that has received growing attention in recent years is the problem of backward districts, or of backward regions within states. The relative levels of development of a state as a whole are taken into account in determining the state's share in tax revenues. This aspect is also reflected in the Gadgil-Mukherjee formula, which determines the share of normal central assistance. It is, however, felt that these mechanisms do not take care of the special problems of backward regions within states.

**1.67** The Backward Regions Grant Fund (BRGF), covering 250 districts in the country, was introduced in August 2006 to address this problem. Each district receives an amount depending upon its total population size and area. The allocation is untied, but its availability is conditioned upon the preparation of a District Development Plan which is expected to take

a comprehensive view of the development constraints affecting the district. The BRGF funds can be used to fill gaps after taking account of resources available through other schemes. As in other local area programmes, it has taken time to prepare District Development Plans but these have since been prepared for most of the districts. The BRGF also includes a special additional allocation for the eight districts constituting the original Kalahandi, Bolangir, Koraput (KBK) group in Orissa and a special allocation for Bihar.

**1.68** A Special Bundelkhand Drought Mitigation Package of Rs 7,266 crore comprising Rs 3,506 crore for six districts of Uttar Pradesh and Rs 3,760 crore for seven districts of Madhya Pradesh, has also been approved recently to be implemented over three years. Additional Central Plan Assistance of Rs 3,450 crore will be provided to the governments of Uttar Pradesh and Madhya Pradesh over a period of three years—from 2009–10 to 2011–12. This is over and above the resources pooled from various ongoing schemes of different departments.

**1.69** Neglect of balanced regional development, including the development of tribal areas, can lead to serious consequences, such as the growth of left wing extremism, which is evident in many districts in the country. Successful development in these areas is the only viable solution to the underlying discontent which extremism can feed upon. This calls for an innovative approach, especially efforts to improve governance and people's participation. Implementation of Panchayat Extension to Scheduled Areas (PESA) Act is absolutely essential but progress has been slow. States and the Central Government will have to pay special attention to the challenges that this poses in terms of evolving an effective development strategy and creating credible systems of governance in those areas.

## INFRASTRUCTURE DEVELOPMENT

**1.70** Weaknesses in infrastructure, particularly in the energy and transport sectors, are perhaps the most important constraints in the growth of the economy in the medium term. Recognizing the importance of infrastructure development, the Eleventh Plan had estimated that the investment needed over the Plan

period was about US\$ 500 billion, compared to a likely 'business as usual' projection of US\$ 300 billion. This investment was to be achieved through a combination of public investment and private initiative, including through PPP. Public investment was to be directed at areas which were not expected to attract private investment, whereas the scope for PPP was to be exploited wherever feasible.

**1.71** Experience over the first three years shows that there has been a commendable increase in the total investment in infrastructure. As elaborated in Chapter 14, the total level of investment in infrastructure is likely to come close to the Eleventh Plan target. The experience has been varied across sectors with some performing much better than expected and some sectors experiencing short falls. In general, private investment in infrastructure has done better than expected while public investment has fallen short. The government should give top priority to continuing the infrastructure investment thrust in the remaining years of the Plan.

## TELECOMMUNICATIONS

**1.72** The Plan target for 600 million telephone connections by the end of the Plan period is likely to be reached by the end of the third year itself and the target for doubling rural connections from 100 million to 200 million is also likely to be met by the end of the fourth year. This expansion is being led by a very dynamic private sector in the mobile telephone segment. It is taking place in an environment of strong competition which ensures that telecommunication charges in India are among the lowest in the world.

**1.73** The introduction of 3G services, which promise further expansion of capacity in this sector, was delayed because of difficulty in getting the spectrum vacated. These problems have now been overcome. Auction of the 3G spectrum has been largely completed in the first quarter of 2010–11. Broadband connectivity, an area that needs special attention has also been expanding but progress has been modest.

## ELECTRIC POWER

**1.74** Power shortages and its unreliable quality have been major weaknesses of our economy and supply

continues to lag behind demand. However, compared with the Tenth Plan, there has been an improvement in the pace of addition of new generation capacity.

**1.75** The capacity added in the first three years will be only about 20,000 MW, but a large number of projects are currently under construction and are expected to be completed in the remaining two years. As a result, the expected addition of capacity in the Eleventh Plan period will range between 62,000 and 64,000 MW. This is short of the Plan target of 78,000 MW, but it is three times the capacity added during the entire Tenth Plan period.

**1.76** The capacity added by the private sector is actually running ahead of the target, whereas both the central and state sector performance will be below target. There is obviously considerable room for improving project management in the public sector.

**1.77** Availability of coal for thermal plants will be an important constraint in electricity generation in the years ahead. Import requirements for coal by the end of the Eleventh Plan will be higher than originally targeted, but the scale is manageable. The real problem is likely to arise in the Twelfth Plan as coal imports are likely to increase from 81 million tonnes at the end of the Eleventh Plan to 230 million tonnes at the end of the Twelfth Plan. Advance action is necessary to develop the capacity for handling coal imports of this scale.

**1.78** The distribution segment of the electricity sector is clearly a weak link. Transmission and Distribution (T&D) losses are falling, but much more slowly than targeted. The system continues to suffer huge losses which are estimated to be over Rs 40,000 crore for 2009–10. The scale of losses in the distribution segment is simply unsustainable and determined action is needed to reverse this trend. However, performance in this area depends entirely on the states. It is important to redouble efforts to contain losses in the last two years of the Eleventh Plan to improve the financial viability of the distribution segment. The recently restructured Accelerated Power Development Programme (APDRP), which provides central assistance to the states to support efforts to

improve distribution efficiency, needs to be closely monitored.

**1.79** Private sector involvement in distribution could help improve efficiencies, but very few states have taken initiatives in this area. The experience of privatization in Delhi is that it has resulted in significant reduction in losses. The recent experiment in Bhiwandi (Maharashtra), franchising part of the distribution system to a private company, has been highly successful in reducing T&D losses. A similar franchise has been awarded to a private sector company for distribution in Agra. The franchisee route is a viable option where states are reluctant to privatize. Experiments along these lines should be encouraged through appropriately structured concession agreements.

#### HIGHWAYS AND ROAD DEVELOPMENT

**1.80** The Eleventh Plan envisaged an ambitious National Highway Development Programme (NHDP) aimed at upgrading and expanding the national highways in phases. It also envisaged accelerated development of rural roads through the Pradhan Mantri Gram Sadak Yojana (PMGSY).

**1.81** Implementation of NHDP is behind schedule but it has improved more recently. In the first two years of the Plan, road construction contracts on the build–operate–transfer (BOT) basis were awarded for only 1,800 km. This was partly due to the financial crisis that adversely affected the appetite of private investors. However, the situation improved in the third year and BOT contracts are expected to increase to 5,000 km in 2009–10. The pace is expected to pick up further in the remaining years of the Eleventh Plan. The Ministry of Road Transport and Highways (MoRTH) has set a target of completing 7,000 km per year and is building up a project portfolio to achieve this.

**1.82** Construction of rural roads under PMGSY is satisfactory. The programme was re-phased to achieve time bound targets of rural connectivity under the overall umbrella of Bharat Nirman initiated in 2005–06. It aimed at providing all-weather road connectivity to all habitations of more than 1,000 population in the plains and more than 500 in hilly

or tribal areas by 2009. Although there has been some slippage, about 84 per cent of the target has been met and the remaining 16 per cent will be completed by the end of 2010–11. The resulting improvement in rural road connectivity is a major achievement, which has already contributed to improved market linkages for farmers as well as improved access to health and educational services for the rural population.

### RAILWAYS

**1.83** The Railways has steadily expanded its freight and passengers business, but steady expansion is no longer enough. A radically new and more ambitious approach is needed. A long-term vision for modernizing and restructuring the Railways has been spelt out in the Indian Railways' Vision Document presented to Parliament. The vision involves substantial expansion in line capacity and rolling stock and technological modernization, including the introduction of high speed trains and upgrading locomotive production.

**1.84** Realizing this vision will require a large investment programme and financing it will present a major challenge. The Railways has thus far mobilized much less by way of internal resource generation than was projected in the Eleventh Plan. Rather, the Railways has relied on budgetary resources more than originally envisaged. Given the other demands on budgetary resources, financing for the modernization and expansion of the Railways cannot come from the budget. It has to be mobilized through greater internal resource generation and through PPP. Improved internal resource generation in turn requires a rebalancing of fares to reduce the extent of present subsidy on passenger fares which has now reached approximately Rs 19,000 crore.

**1.85** The Railways has steadily lost freight to road transport and a reversal of this decline in share must be an important element of any transition to a more fuel efficient and lower carbon development strategy. Two Dedicated Freight Corridors, one from Kolkata to Ludhiana and the other from Delhi to Mumbai, are being implemented. Special efforts will be needed to monitor their implementation to ensure that these projects are completed on target by 2016.

**1.86** The changes required in Railway planning and management to realize the long-term vision are far-reaching and can only be implemented over two Plan periods. Nevertheless, substantive progress must be made in the remaining period of the Eleventh Plan.

### AIRPORTS

**1.87** Faster GDP growth in recent years had brought about a rapid growth in air traffic. This was built into the Eleventh Plan projections for the requirement of airport infrastructure. This was temporarily interrupted because of the global slowdown in 2008–09, but it can be expected to recover as GDP growth accelerates. Airport development and modernization must therefore remain a critical part of the infrastructure agenda.

**1.88** The Eleventh Plan has seen substantial initiatives in this area, including the commissioning of two new private airports in Hyderabad and Bangalore, expansion of Delhi and Mumbai airports by private investors on a PPP basis, development of Chennai and Kolkata airports through the Airports Authority of India (AAI), and expansion and modernization of 35 non-metro airports by the AAI. In addition, new airports are being constructed in the North-East to ensure that each state capital has a functioning civil airport.

**1.89** Work on the Delhi and Mumbai airports is expected to be completed on schedule. Work on 9 of the 35 non-metro airports plus 13 other airports has been completed and work on the remaining non-metro airports is expected to be completed within the Eleventh Plan period. Restructuring of AAI, including separation of Air Traffic Control into a separate corporate entity to be wholly owned by the AAI, should be expedited.

### PORTS

**1.90** Efficient ports are critical for the global competitiveness of an open economy but progress in capacity building of ports has lagged significantly behind target. Against an expected addition of 858 million tonnes to port handling capacity in the Eleventh Plan for major and minor ports put together,



the actual achievement is likely to be only about 55 per cent of the target.

**1.91** Capacity expansion has been much faster in the non-major ports, where many state governments have adopted a strategy of developing new ports entirely through the private sector. The Central Government policy does not encourage privatization of entire ports, but it does envisage private sector participation in the development of individual berths/terminals. Unfortunately, progress in inviting bids for such capacity expansion projects in the first three years of the Plan was disappointing. A determined effort must be made in the last two years, with well-defined annual targets, to achieve the best outcomes possible.

#### URBAN INFRASTRUCTURE

**1.92** Urbanization in India has been relatively slow in the past, but is now expected to accelerate. The urban population share may reach 50 per cent in 25 years adding 300 to 400 million people to the existing population of about 350 million in urban areas. Since the present urban population is seriously underserved in terms of infrastructure, such as water supply, sewerage, solid waste disposal, and urban transport, the task of making up existing deficiencies and providing for the required expansion presents a huge challenge for the future.

**1.93** A start in addressing these challenges was made in the form of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) that was launched in 2005 to cover the period through to the end of the Eleventh Plan. Central assistance under this scheme is linked to the preparation of a Comprehensive Development Plan (CDP) for cities and to the implementation of reforms, some of which are mandatory, such as reforms in municipal accounting, rent control laws, and e-governance for transparency. Some others, such as repeal of the Urban Land Ceiling Act, introduction of property title certification system, and encouraging PPPs are optional.

**1.94** The MTA reveals that after a slow start, the programme has gathered pace. As of September 2009, 2,523 projects had been approved with Rs 52,687

crore of central assistance already committed, with a matching commitment of Rs 44,334 crore from the states. The total investment in essential urban services triggered by JNNURM is therefore close to Rs 1,00,000 crore to be implemented over the remaining two years of the Eleventh Plan. This is clearly an impressive beginning for the first major national initiative aimed at developing urban infrastructure.

#### FINANCING THE ELEVENTH PLAN

**1.95** The Eleventh Plan programmes for creating social and economic infrastructure to meet the requirements of rapid and inclusive growth implied a significant increase in Plan expenditure. Total plan expenditure of the Centre and the states combined was expected to increase from an average of 9.5 per cent of GDP in the Tenth Plan to 13.5 per cent of GDP in the Eleventh Plan. This increase was to be financed primarily through an increase in the balance from current revenues in the budgets of the Centre and the states and from improved internal resource generation in the public sector.

**1.96** Three years of the Plan have been completed and the central budget estimates for 2010–11 are known. Based on available data, and making some assumptions about 2011–12, it is possible to say that in the case of the Centre, the realization of Plan expenditure is likely to be between 95 and 100 per cent of the Eleventh Plan target. In the case of the states it will be lower, but much better than in the Tenth Plan.

**1.97** The main weakness in performance is that the financing of Plan expenditure departs significantly from the pattern originally envisaged. The increase of 4 percentage points of GDP in the Eleventh Plan compared with the Tenth Plan was to be achieved primarily through higher balance of current revenues and greater internal resource mobilization. This objective could not be met partly because the economic slowdown meant a lower growth in revenues, some of which was itself due to tax reduction measures introduced as part of the stimulus.

**1.98** The result has been a much larger volume of borrowing than was envisaged in the Eleventh Plan to support desired levels of Plan expenditure. This

is reflected in the fact that the combined deficit of the Centre and the states, which was to have been contained at 6 per cent of GDP by 2009–10 was actually around 10 per cent of GDP and only a gradual reduction will be possible over the next few years. The slippage in containing the fiscal deficit can be defended as a temporary response to the global slowdown, and is in line with what has been done by most other countries. However, with the global economy stabilizing and hopefully resuming growth, there is concern everywhere on the need to get back to a fiscally prudent position.

**1.99** The pattern of fiscal consolidation envisaged in the Centre for the remainder of the Eleventh Plan has been outlined in the 2010–11 Budget, which projects a fiscal deficit of 5.5 per cent of GDP for 2010–11 falling to 4.8 per cent in 2011–12. The projected compression in the fiscal deficit will pose financing challenge to find the resources needed for Plan expenditure.

**1.100** Three factors are critical in this context. First, it is essential to keep control over non-plan expenditure, most notably subsidies. The major Central Government subsidies in the system at present are on food, petroleum products, and fertilizers. The main subsidies at the state level are due to power sector losses and losses on irrigation. While there is a role for targeted subsidies to help the poor meet their essential requirements, the present system of subsidies has evolved in an ad hoc manner and the extent of the total subsidy is much larger than any benefit that reaches the genuinely deserving. Several of the subsidies are also dysfunctional leading to wasteful use of scarce resources. It is necessary to review the system comprehensively to ensure that subsidies are efficiently designed to reach the target group and the resources saved from this restructuring could be devoted to meet essential plan requirements in health and education.

**1.101** Second, it will be necessary to adopt an aggressive programme of disinvestment in Public Sector Undertakings (PSUs). Even if the government share of equity must not go below 51 per cent, there is very substantial scope for disinvestment to mobilize resources for Plan expenditure through the budget.

**1.102** Third, the scope for PPP needs to be vigorously explored wherever possible in a manner consistent with the overall development objectives. The past few years have shown that investments through PPP are possible and both the Centre and the states have taken a number of initiatives in this area. These initiatives need to be expanded keeping in mind the need for transparency and competition in awarding concessions.

## GOVERNANCE

**1.103** Poor governance is often at the heart of poor outcomes from government policies and programmes. Poor governance includes a wide range of failings like: (i) inability to ensure law and order, which is an essential requirement for investment and economic expansion, (ii) lack of efficiency in executing government programmes to achieve end results, and (iii) lack of an environment in which business—both in the private and public sector—can be conducted efficiently with minimum transaction costs. Inevitably, each of these weaknesses is linked to corruption in the sense of being caused by corruption and giving rise to it.

## SIMPLIFYING PROCEDURES AND TRANSPARENCY

**1.104** There is no magic wand to resolve these problems. Each one has to be taken up at the relevant level and addressed on a sustained basis. The easiest steps are those aimed at making procedures less cumbersome and more transparent. There is considerable scope for such simplification of procedures at both the central and state government levels. Implementation of the recommendations of the Second Administrative Reforms Commission should receive priority. The states should be encouraged to take similar action.

**1.105** The Right to Information Act is a critical building block to increase transparency and shed light on the functioning of the government.

## EMPOWERING PRIS AND URBAN LOCAL BODIES

**1.106** A more difficult governance challenge relates to creating a system which can efficiently deliver critical services like health services, education and skill development services, anganwadi centres, and sanitation

and drinking water, which are the focus of a great deal of the government's efforts today. These services are all delivered at the local level and hence the importance of effective governance at that level. Empowerment of PRIs and Urban Local Bodies (ULBs) combined with an effective participation of the people can create points of monitoring and intervention. Progress in empowering PRIs to perform the functions entrusted to them has been far below expectations. While most states have transferred the necessary functions, there has been very limited transfer of functionaries who in most cases remain departmental employees sent to PRIs on deputation. Progress in transferring finances has been even less. The situation varies across states, but except for a few cases, empowerment of PRIs is much below what is needed.

**1.107** Along with empowerment there is need to build capacity of the people's representatives to perform the monitoring and oversight functions they are supposed to perform.

**1.108** In the absence of effective participation and in situations where empowerment is weak, the effectiveness of programmes in the field will be low and the scope for leakages and corruption will be correspondingly high. This is especially true in the case of tribal districts many of which are affected by left wing extremism.

#### MONITORING AND EVALUATION

**1.109** We also need much better systems of monitoring and evaluation of programmes with a view to generating MIS feedback and creating a base for auditing. At present, many programmes in the social sectors as well as other programmes aimed at inclusiveness are funded as Centrally Sponsored Schemes (CSSs). These schemes involve substantial disbursements by the Centre to the states or to state-level implementing agencies. However, reliable information within an acceptable time on whether the money transferred from the Centre has actually been spent by the implementing agency at the state level is difficult to obtain. This problem is being addressed by an improved expenditure tracking system which is being developed by the Controller General of Accounts in consultation with the Planning

Commission. Once operationalized, this would help monitor actual expenditure on Plan schemes and also strengthen audit.

**1.110** There is also need for much stronger *ex-post* evaluation to ascertain whether the expenditure on a programme is delivering the outcomes intended. CSSs today account for more than half of the Central Plan budget. While there are approximately 150 such schemes, the largest 25 account for 93 per cent of the total CSS expenditure. These large schemes must be subjected to systematic and scientific *ex-post* evaluation to determine whether expenditures incurred have actually had the impact intended on outcomes. To undertake such evaluation, it has been decided to establish an independent evaluation organization linked to but distinct from the Planning Commission.

#### SOME FUTURE CHALLENGES

**1.111** The MTA has also thrown up some issues, the importance of which was not fully recognized at the time that the Eleventh Plan was drafted. Addressing these issues goes beyond making mid-course corrections. It calls for an in-depth review of our policies in these areas and may require restructuring of policies which can be fully achieved only in the Twelfth Plan.

#### INTEGRATED ENERGY POLICY

**1.112** At the time that the Eleventh Plan was finalized, the Planning Commission had received the report of an Expert Group on Integrated Energy Policy but the report was still under consideration. Since then, the recommendations of the group have been considered inter-ministerially and an Integrated Energy Policy, based on the recommendations of the Group was approved by the Cabinet in 2009.

**1.113** The policy draws attention to a number of issues in the energy sector relating to energy pricing, regulatory structures, and issues related to energy production and energy security. Since the responsibility for energy policy is fragmented among several different ministries dealing with individual energy sub-sectors (for example, electric power, coal, petroleum and natural gas, and renewable energy),

the policy in different sectors has not been based on common principles. For example, the pricing policy differs across different sources of energy, with no clear relationship with world prices. Policies related to energy production also differ, for example, between coal which is nationalized, and petroleum and natural gas which are not. The tax subsidy structure also varies across different energy sources.

**1.114** The Integrated Energy Policy outlines a large number of policy changes needed for rationalizing energy policies across different energy groups. Many of these changes though approved by the Cabinet, have yet to be implemented. A determined effort should be made to complete implementation of this agenda in the remaining two years of the Eleventh Plan so that the economy enters the Twelfth Plan period in a much stronger position on the energy front.

#### MANAGEMENT OF WATER

**1.115** Management of scarce water resources poses a major challenge. The total annually usable water resources available in the country is fixed and depends upon total precipitation after allowing for the minimum flow in the rivers which must be maintained. Calculations suggest that the total demand given the present population and production structure is already close to the available usable water resources. Since demand is bound to rise as population expands and growth of GDP generates higher demand from agriculture and industry, we could face a water crisis if the problem is not addressed holistically, recognizing the limited options for expanding supply and the consequent need for managing demand and increasing water use efficiency.

**1.116** Unfortunately, the problem is currently handled by different departments operating in silos. The traditional approach on the supply side has been building dams to store water, with very little focus on ensuring optimal use to maximize productivity of this scarce resource. As a result, head-end canal users adopt far more water-intensive cropping patterns than are optimal, leaving very little water for tail-end farmers. The tendency to grow water-intensive crops is unavoidable as long as canal water

is severely underpriced. In this situation, there is need for a statutory mechanism to enforce equitable distribution over the entire command area as has been done in Maharashtra, where the Water Regulatory Authority is empowered to enforce equitable distribution with active involvement of stakeholders through water users associations which collect water charges and are also responsible for its maintenance.

**1.117** Management of groundwater resources also poses serious problems. Groundwater is a common property resource, but the law as it stands allows a farmer to extract any amount of water from a bore well dug on his own land, even though such withdrawal affects the water table. Free or very cheap power for agriculture compounds the problem leading to overdrawal of water beyond the annual recharge of the aquifer. This is evident in states, such as Punjab and Haryana and in the hard rock regions in southern India. This 'water mining' has resulted in steadily falling water tables and a serious increase in water pollution.

**1.118** The usual response of limiting the boring of new wells is ineffective since it only confers a monopoly on existing well owners, allowing them to sell water to others at premium prices. Efforts must be made to obtain collective agreements to limit the use of groundwater to sustainable levels through participatory processes. A cess on the use of power for agriculture in all areas where groundwater is under stress, with the proceeds earmarked for water conservation in the same watershed, is well worth considering.

**1.119** The problem of pollution of rivers and water bodies has reached alarming proportions. The 'polluter pays' principle is widely asserted in our policies but is not enforced in practice. Our cities and industries dump large quantities of untreated sewage and untreated industrial effluent in the rivers. We need much stricter monitoring and enforcement to ensure that untreated waste is not dumped into the rivers, with strict penalties for violation. In principle, these penalties would have to be applied to government agencies also, such as those responsible

for sewage disposal. There is also need for much stronger regulation to ensure recycling of industrial water.

**1.120** Since the total supply of water is limited, a large part of the solution to water scarcity problems lies in the management of demand. The greatest scope is clearly in agriculture, which uses 80 per cent of the water. More scientific cultivation practices (for example, the SRI system of rice cultivation) and the use of sprinkler and drip irrigation can cut water use to less than half. However, with canal water and electric power seriously underpriced, farmers have little incentive to use alternative technologies which involve an extra cost.

**1.121** Managing the water crisis clearly requires action on multiple fronts. We have to increase usable supply through means, such as construction of large storages, harvesting of rainwater wherever possible, recharging groundwater through afforestation, and watershed management programmes. We also have to act on the demand side, encouraging less water-intensive production patterns and managing demand by encouraging recycling. These objectives have to be pursued through a combination of regulatory control, rational pricing, and increased people's awareness and participation. These different instruments have different costs associated with them and an optimal strategy for bridging the water gap must identify least cost solutions for doing so. These vary according to hydro-geological conditions, which are area specific. The optimal mix may therefore vary from place to place.

**1.122** Tackling all these problems requires co-ordinated action by different ministries and also intensive consultation with state governments. The Planning Commission is working on preparing an Integrated Water Management Policy which can identify key policy issues. This must be done before the Twelfth Plan begins.

#### CLIMATE CHANGE

**1.123** Climate change has emerged as an area of concern worldwide. Changes in rainfall and temperature, which may occur, have the potential of

generating serious adverse consequences in most parts of the world including India.

**1.124** An ideal response to climate change has to be anchored in a globally agreed cooperative framework which ensures a fair distribution of the burden of mitigation and adaptation between different groups of countries. India is actively engaged in the ongoing international negotiations to achieve a satisfactory and fair outcome. However, pending the evolution of a global consensus it is also necessary to take national steps to combat climate change. Accordingly, a National Action Plan for Climate Change has been announced which lays down initiatives that the government will take in both mitigation and adaptation.

**1.125** As far as mitigation is concerned our objective must be to increase energy efficiency and reduce the intensity of emissions consistent with our basic goal of increasing our per capita income to improve the living standards of our people. India has one of the lowest levels of per capita use of energy among large developing countries and we will certainly need an increase in total energy use to sustain rapid growth. However, it should be our endeavour to increase energy efficiency as much as possible, and also shift to non-fossil fuel energy.

**1.126** The government has indicated that emissions intensity per unit of GDP could fall by 20 per cent by 2020. Several steps have been taken to achieve this outcome. We are committed to expanding the base of nuclear power generation with the National Solar Mission, which has an ambitious programme of adding 20,000 MW of solar power over the next two decades. State electricity regulators have laid down that distributing companies must purchase 5 per cent of the electricity from renewable sources thus introducing an implicit cross subsidy to support green energy. The introduction of a cess on coal to fund green technology development in the Budget for 2010–11 is an important initiative for financing clean energy technologies.

**1.127** Much of the agenda in the Integrated Energy Policy serves the basic objective of improving energy efficiency and reducing dependence on fossil fuel



energy. Similarly, our programmes of forest conservation help reduce net CO<sub>2</sub> emissions. Programmes of watershed management and water conservation are precisely the programmes we need to strengthen in order to deal with the challenges of adaptation.

**1.128** All these initiatives will have to be strengthened in the remaining period of the Eleventh Plan and more thoroughly mainstreamed in the Twelfth Plan to constitute a credible national response to climate change. The Planning Commission has set up an Expert Group on Low Carbon Development under the Chairmanship of Dr Kirit Parikh to outline the scope of action we can consider to pursue a low carbon development strategy without compromising our basic development goals. The report of the group will be an important input into the Twelfth Plan.

#### SCIENCE AND TECHNOLOGY

**1.129** Science and Technology (S&T) has a critical role to play as the economy moves to a higher and sustainable growth path. We must be open to absorbing technology from wherever it is available; economic maturity and industrial depth also require the building up of high quality indigenous capability which is globally competitive. The MTA indicates that the S&T effort in the various scientific departments and laboratories is proceeding broadly as envisaged in the Eleventh Plan, though there are cases where implementation has been slow, notably in meteorology. The government laboratories and scientific institutions have a major role to play in developing our technological capability and deserve full support.

**1.130** Research and development cannot however be left only to government efforts. Much greater investment in this area is needed by the corporate sector, including both public sector and private sector corporations. There is need for a much larger S&T input in a wide range of fields, including agriculture, water management, medicine, clean energy, and transport, and looking ahead, to bringing about a more environmentally sustainable development strategy. Technological capacity in all these areas needs to be accelerated based on our own efforts as well as through global partnerships between Indian and foreign research institutions.

#### INNOVATION

**1.131** To achieve growth that is both inclusive and sustainable within the constraint of limited resources it is necessary to promote innovations on a wide scale. Innovations are needed in products and services which reduce costs, economize on energy, and serve the needs of the common man in an affordable manner. Innovations are also needed in processes and delivery mechanisms, especially in government delivery mechanisms which need to be redesigned so that they can deliver outcomes commensurate with the considerable resources they now absorb.

**1.132** To some extent, openness and competition combined with a strong technical scientific base spurs innovation and these aspects of policy must be maintained. However, the government can also play a proactive role in creating an environment that supports innovation. India needs to stimulate its entire innovation eco-system—the formal scientific-industrial system, as well as its large informal eco-system—to develop solutions for the country's agenda of inclusive and sustainable growth. These issues are examined in detail in Chapter 20. Government purchase policies in certain areas are an instrument that can promote innovation consistent with efficiency and cost minimization. Financial institutions are another important element promoting innovations by providing capital through various stages of product development.

#### A SUMMARY ASSESSMENT

**1.133** To summarize, the Mid-Term Appraisal reveals that the economy has weathered an exceptionally difficult global environment very well and is now well poised to return to 9 per cent growth by the terminal year of the Eleventh Plan. For this, macroeconomic policies have to ensure that fiscal consolidation takes place as planned, the investment environment remains supportive, and in particular, that investment in infrastructure is given renewed thrust, especially through PPP.

**1.134** Rapid growth will also promote the inclusiveness agenda if the growth is associated with faster growth in agriculture and greater absorption of labour in manufacturing. The latter requires a special thrust in

the MSME area. Inclusiveness will also be promoted by the large number of programmes aimed specifically at the weaker sections, notably the MGNREG, PMGSY, NRHM, SSA, MDM, ICDS, IAY RGGVY, and RSBY. These programmes are having an impact though weaknesses are being identified in the course of monitoring and evaluation and these need to be addressed through mid-course corrections. An area of special concern is malnutrition among children where progress is far too slow. This calls for a multi-pronged approach relying not just on supplementary feeding practices but on multiple socio-economic determinants of nutritional status.

**1.135** Finally, a much greater effort is needed to improve the implementation of social sector programmes in the field. These programmes receive assistance from the Central Government but they are implemented by state agencies. Much greater devolution of power to PRIs and ULBs, together with effective participation by the local community is needed to achieve better oversight and accountability. Progress in the governance agenda is critical for achieving the goal of inclusiveness and should be given high priority by state governments.