



THE APPROACH
TO
THE SEVENTH FIVE YEAR PLAN
1985- -90

GOVERNMENT OF INDIA
PLANNING COMMISSION
NEW DELHI

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PART I : OVERVIEW

CONTENTS

PAGE No.

I.	Setting	1
II.	The Objectives of the Seventh Plan	1
III.	Growth Rate, Plan Size and Resources	2
IV.	Balance of Payments	3
V.	Population	3
VI.	Agricultural Development and Irrigation	3
VII.	Poverty Alleviation, Employment and Social Justice	4
VIII.	Regional Disparities	5
IX.	Social Services and Human Resource Development	5
X.	Industry, Infrastructure and Capacity Utilisation	6
XI.	Efficiency and Productivity	7
XII.	The Environment	7
XIII.	Science and Technology	8
XIV.	Administration	8
XV.	Decentralisation of Planning	8
XVI.	Conclusions	8

PART II
SUMMARIES OF SECTORAL ISSUES
CONTENTS

	PAGE No.
1. Agriculture	10
2. Rural Development and Poverty Alleviation	12
3. Irrigation, Command Area Development and Flood Control	13
4. Village and Small Industries	14
5. Employment, Manpower Planning and Labour Policy	15
6. Energy	16
7. Industry and Minerals	18
8. Transport	19
9. Communications, Information and Broadcasting	20
10. Education	21
11. Health and Family Planning	22
12. Housing, Urban Development, Water Supply and Sanitation	23
13. Social Welfare and Nutrition	25
14. Women and Development	27
15. Development of Scheduled Castes and Scheduled Tribes	27
16. Hill Areas Development	28
17. Science and Technology	29
18. The Environment	31

THE APPROACH TO THE SEVENTH PLAN

PART I : OVERVIEW

I. Setting

The Sixth Plan started in very difficult circumstances with the drought of 1979-80, the deterioration in the functioning of the infrastructure, a 17% drop in foodgrains production, a sharp rise in prices and an unfavourable international economic environment. It was beset further, after the initial two years of recovery, by unfavourable weather in 1982-83. Despite these problems, the basic strategy and the programmes implemented in the Sixth Plan have yielded good results and the growth rate over the first four years of the Plan has been around 5% per annum. The Sixth Plan growth target of 5.2% is well within sight. The growth of employment has generally been in consonance with the assumptions made in the Plan and the rate of inflation has been brought down significantly and is under control. The functioning of the infrastructure has shown considerable improvement and, especially in the field of energy, significant gains have been made. There has been a record mobilisation of resources and public sector investment has grown at 9.9% per annum, a major improvement on the 7% trend in the past. About 94% of the cost of investment programmes has been met from domestic savings which is a measure of increasing self-reliance in the economy. In many areas of science and technology, significant capability has been built up, as demonstrated by the achievements where specific goals were set well in advance. The new 20-Point Programme has given much-needed emphasis and impetus to crucial sectors of the economy.

II. The Objectives of the Seventh Plan

2. The guiding principles of the Seventh Five Year Plan should continue to be growth, equity and social justice, self-reliance, improved efficiency and productivity. Within this framework, the movement towards social justice has to be faster and there must be a sharper focus on employment and poverty alleviation. Hence the Seventh Plan must emphasise policies and programmes which will accelerate the growth in foodgrains production, increase employment opportunities and, what is equally important, raise productivity.

3. The provision of productive employment will help people to stand on their own feet and work with self-confidence and self-respect, which is the first essential for ensuring their participation in developmental tasks. Instead of relying on general economic growth for raising employment opportunities without any special effort to give employment orientation to this growth, it is necessary to treat employment as a direct focal point of policy. However, employment can be sustained only if it is productive

and adds to output and incomes on a continuing basis. Hence the strategy of the Seventh Plan will be to generate productive employment through increases in cropping intensity and the extension of new agricultural technologies to low productivity regions and to small farmers, through measures to make the rural development programmes more effective in the creation of productive assets, through the expansion of labour-intensive construction activities for providing housing, urban amenities, roads and social infrastructure, and through changes in the level and pattern of industrial growth. Programmes and policies have to be oriented to the objective of providing productive employment to everyone seeking it and, in every sector, priority has to be given to activities which contribute most effectively to this purpose. The implications of such restructuring of growth for employment and income-generation for the poor need to be worked out.

4. The emphasis on rural employment through NREP, RLEGP and IRDP will continue with better planning, closer monitoring and tighter organisation for effective implementation. Backward and forward linkages will be fully provided so that beneficiaries are able to make full use of the assistance. The Integrated Rural Development Programmes, which are now largely individual oriented will, wherever necessary, be given a wider base through the organisation of the beneficiaries into clusters or groups in order to improve the viability of the programmes. These programmes will be integrated with agricultural and rural development as far as possible by using them to create infrastructure such as drainage and field channels, roads and social infrastructure required for growth of small scale industries. In rural areas, employment has to be promoted through agriculture and through the expansion of off-farm employment in agro-based rural industries and services. In order to improve the effectiveness of employment programmes, a determined effort must be made to raise the level of literacy significantly to improve the functional relevance of education and to expand opportunities for acquiring new skills.

5. The growth in employment will be non-inflationary only if agricultural production, particularly food production, is augmented significantly. Improvement in agricultural production will in itself result in increase in rural employment. In recent years, agriculture has done well and this must be built upon to raise the annual rate of growth of agricultural production to 4 per cent and of food production to 5 per cent. Looking at long-term trends and the composition of agricultural growth crop-wise and region-wise, there are major gaps. The difference between potential and actual

achievement is far too wide, particularly in areas where poverty is most endemic. Hence the obvious thrust has to be towards rapid increase in productivity in low productivity areas and in crops such as rice, coarse grains, oilseeds and pulses. Apart from the re-orientation of investment, this will also require wide-ranging reorganisation of agricultural research and extension, infrastructure, input supply, credit and finance. As water is the most critical input for agriculture, full utilisation of the irrigation potential already created and the maximum possible addition of irrigation facilities will be the key element of this strategy. At the same time, a special effort will be required to raise agricultural productivity in dry-land and rainfed areas.

6. Though the impetus for a large expansion in employment has to come from agriculture, the potential of the industrial sector cannot be minimised. The tendency has been to see industrialisation as a means for building economic strength and promoting self-reliance, which it is; but in the ultimate analysis it is indispensably linked with the removal of poverty. At present, a major constraint on industrial growth is the unsatisfactory rate of agricultural growth, which limits the possibilities of non-inflationary industrial expansion in a variety of ways. Shortfalls in food availability lead to price rises which erode investible surpluses; the slow growth in agricultural inputs used in industry limits the pace of advance in certain key sectors; most important, the slow rise in agricultural productivity can lead to a deficiency in demand for industrial goods.

7. As the agricultural constraint is loosened in the Seventh Plan, it should be possible to plan for higher rates of industrial growth. However, in order to economise on resources, the next phase of industrialisation has to be based on better utilisation and low-cost expansion of existing capacity. The emphasis will have to be on the modernisation and upgradation of our industrial technology and the induction of new technologies to raise output manifold. The lack of competition has also done much harm and the time has come for a new policy framework that emphasises efficiency, competition and modernisation.

8. Agricultural and industrial growth will not be feasible without a sound and functioning infrastructure, such as power, coal, transport and communications. Huge investments have been made in this field but the returns are well below expectations. Therefore, the most important task is to ensure that all investments yield the expected results in terms of the quantity and quality of service provided and the return earned.

9. India cannot afford to stay behind in crucial areas of high technology where fast growth is taking place. Moreover, the scientific and technical capabilities that have been built up have to be used more effectively to promote efficiency, productivity and technological advance in all sectors. Hence crucial, goal-oriented, technology missions must be identified and achieved by forging effective linkages between users, producers, research institutions and engineering organisations. Such comprehensive technology development plans, which take an integrated view of domestic development and imports of technology, will have to be pre-

pared and implemented in a few critical sectors in the Seventh Plan.

10. There is need to improve greatly the physical well-being of the people and the environment in which they live. This will require an improvement in nutritional support for vulnerable groups, an expansion and improvement in health care, fertility control, the provision of clean drinking water and sanitation and housing.

11. Control of inflation is essential for protecting gains in real incomes of the poor, and for preventing the erosion of the savings of the Government. Therefore, the Plan should ensure relative price stability through judicious macro-economic policies and through adequate availability of food and raw materials.

12. Success in achieving all the objectives described above would depend on the extent to which the Plan reflects popular aspirations. It can only do so effectively if the processes of plan formulation and implementation are decentralised. The integration of local interests with a national plan through an effective process of decentralised planning will facilitate public participation and allow people to see their concerns in a national context.

13. The success of the Plan depends very much on the human factor. Administrative and management cadres have to be sensitive to the social objectives which the Plan subserves. There must be greater efficiency and integrity in the implementation of all projects. Hence the Plan must identify precise and concrete measures to change our management and administrative systems for the better.

14. Thus the basic priorities for the Seventh Plan should be food, work and productivity. This will require a strategy built around higher agricultural growth and creation of employment, improvement in efficiency and in quality of production and technological upgradation in industry and infrastructure, the use of less capital-intensive and more labour-intensive techniques and shift in investment priorities towards items of mass consumption and measures to improve the quality of life. With this, India can move to the next stage where the economic strength which has been built up at the national level is reflected in the strength of each region and each household.

III. Growth Rate, Plan Size and Resources

15. The fulfilment of the Seventh Plan objectives requires a growth rate of a little over 5 per cent. This growth rate should contain inflationary pressures and lead to import substitution in sectors like crude oil, foodgrains and edible oils besides generating employment and income for the poor, especially in the less developed regions.

16. The Plan can be based on the assumption of a 26 per cent savings rate which has already been achieved. Over the five years, aggregate investment at 1984-85 prices may be of the order of Rs. 320,000 crores of which public investment would be about Rs. 150,000 crores. The public sector outlay in the Seventh Plan would be of the order of Rs. 180,000 crores at 1984-85 prices.

17. The required resources have to be mobilised in a manner which minimises dependence on external sources or on deficit financing which has a high inflationary potential. In order to do this, the public sector will have to generate more internal resources through improvements in efficiency and productivity. A rational pricing policy can help but the benefits of such a policy must take into account the extent to which the output concerned is used directly within the public sector. Tax collections can be raised, even without raising rates, by widening the tax net and toning up administration. Strict controls on Government consumption expenditure, restraints on elitist consumption, mobilisation of resources from the rural sector and incentives for savings are some of the other measures which need to be used. The raising of financial resources would have to be backed by the mobilisation of unemployed human and material resources for capital construction.

18. The strategy outlined in the section on 'Objectives of the Seventh Plan' would result in lowering of the capital-output ratio. This is of great importance if, as is likely, there is a constraint of resources in real terms. The likely increase in debt servicing obligations in the next few years, the possible reduction in the scope for additional resource mobilisation from the oil sector, and balance of payments considerations in general would necessitate a concentration on areas of low import requirements. It is also necessary that the Plan size should be such as can be fulfilled in real terms in order that underfunding of projects leading to delays in implementation and resultant increases in cost might be avoided. It is necessary to resist the temptation to spread the resources thinly on a large number of projects with adverse implications for all of them, and to ensure continuous, adequate funding of all projects that are undertaken. The allocation of resources should at all times accord priority to programmes that subserve the basic objectives indicated earlier in this paper, namely, production of food, creation of employment and improvement of productivity.

IV. Balance of Payments

19. The Seventh Plan has to take into account the prospect of considerably diminished inflow of concessional financial assistance from abroad, sizeable debt service obligation, and a global environment where interest rates are expected to remain high with only limited possibilities of any sharp acceleration in the volume of export growth.

20. The country's net earnings from invisible items in the balance of payments have declined substantially from the peak level touched in 1980-81. It would therefore be necessary to depend largely on faster growth in exports, and on import substitution. In the field of exports, the potential for export of engineering goods and non-traditional items should be fully exploited. The exports of engineering goods will also help the industry to become internationally competitive and to improve the quality of production. The question of incentives necessary in this regard should be examined. While making every effort to increase exports, it will still be necessary to rely substantially on import substitution to contain the balance of payments pressures.

It is in this context that the policy of import liberalisation needs to be kept under constant vigilance. The establishment of linkages between the user and the supplier sectors should be an important step in increasing import substitution.

21. While internal generation of know-how, technology, and production have to play the dominant role and exports must be increased, the need for imports would always remain. It would be necessary however, to lay down strict priorities in the matter of imports. These should ensure that the need for essential imports is taken care of, as for example, inescapable imports required to complete ongoing projects and to enable full utilisation of capacities, import of critical items required to avoid bottlenecks, import of essential technologies to complement internal technological development and all imports that are necessary for achieving the principal objectives of the Plan.

22. Greater priority will be given to attaining self-sufficiency and self-reliance in areas such as oilseeds, petroleum products and a whole range of items which account for large imports or where the content of skilled labour is high. Domestically, investments with smaller import content have to be preferred to those with larger import content and the pattern of production itself has, as already indicated, to move in favour of less import intensive production.

V. Population

23. A rate of growth of population of 1.8 per cent per annum is being assumed for the Seventh Plan period, and the estimated population in the terminal year of the Seventh Plan is 803 million. This rate of growth itself is of the same order that was adopted in the exercises preceding the formulation of the Sixth Plan. There can be no scaling down of the importance of the objective of population stabilisation in the overall strategy. Improvement in literacy and awareness, extensive programmes of information, education and communication, an appropriate mix of incentives, reduction of infant mortality through improvement of mother and child health services and satisfaction of minimum needs will all help towards this end.

VI. Agricultural Development and Irrigation

24. The Seventh Plan must aim at an accelerated rate of agricultural development and self-sufficiency in foodgrains and edible oils at higher levels of consumption. The programmes for agricultural development will have to be integrated with programmes for alleviation of rural poverty and concentrate on the less developed regions. A massive programme of irrigation development will have to be undertaken and particular attention will have to be paid to covering small and marginal farms by tapping the ground water potential. This will be accompanied by consolidating the fragmented holdings of small and marginal farmers into viable contiguous blocks of land wherever necessary. Greater emphasis will be placed on extension work to ensure that the average yields per hectare are raised to levels close to the maximum already achieved in some parts

of the country. Provision of credit and extension services, supply of inputs at stabilised prices, and appropriate price policies for the different competing crops will also be part of the strategy. Fertilizer availability, which will be critical for accelerated food production, will need to be carefully monitored so as to ensure that indigenous capacity comes on stream in time, supplemented by timely imports as required. The development of farmers' cooperatives for processing and marketing of edible oils and other agricultural products can contribute significantly to the accrual of distributive margins to the farmers, thereby providing incentives for greater investment in their production.

25. Special programmes need to be formulated and implemented during the Seventh Plan for effecting a breakthrough in rice output, especially in the eastern region and in some of the southern States. Similar programmes are necessary to raise the output of oilseeds, millets and pulses, with particular attention to the problems of transmission of known techniques for raising productivity in the semi-arid and dry regions of the country. In fact, the problems of dryland cultivation will have to be tackled on a special basis. In this context, the entire organisational structure of agricultural research and extension needs closer examination and very special attention, for on their effective functioning depends, to a large extent, the realisation of much of the potential for rapid growth that exists in agriculture.

26. The number of unfinished irrigation projects at different stages of completion is large. Priority will be given to the completion of these schemes, particularly those at an advanced stage of implementation, and those benefiting poorer regions and regions characterised by low and uncertain rainfall. New starts will be restricted as far as possible to minor irrigation projects and to irrigation projects in drought-prone and tribal and backward areas. The utilisation of the existing irrigation potential will receive the highest priority through the construction of field channels and quick completion of ongoing Command Area Development Projects. Modernisation of old irrigation systems should also receive immediate attention, and for this purpose, mobilisation of resources from the beneficiaries, to the extent possible, will have to be undertaken. Considerations of productivity, stability and equity require that, in regions where irrigation is scarce, attempts should be made, through appropriate policies, to maximise output per unit of water by discouraging highly water intensive crops and by ensuring equitable distribution of water to farmers of different sized holdings.

27. The problems of salinity and water-logging in irrigated areas will have to be addressed on a priority basis. The provision of drainage channels, and arrangements for the use of a mix of ground-water and canal water will be among the steps to be taken.

28. The programme of accelerated growth in agricultural production, through methods that would absorb more labour and with an emphasis on the less developed regions and small and marginal farmers, along with the effective enforcement of the minimum prescribed agricultural wages, will generate additional

incomes for the rural poor. The increase in availability of food will be ahead of the rate of population growth and will keep pace with the increase in the portion of incomes spent on food, thus ensuring stability of food prices. Such a policy will also lead to import savings directly through increased production of edible oils and foodgrains and indirectly through the evolution of a consumption pattern linked to goods the production of which would involve a lower import content. The success of this strategy of agricultural and food production will also depend upon the forceful implementation of both existing, and any additional necessary, legislation for land and tenurial reform and consolidation of holdings.

VII. Poverty Alleviation, Employment and Social Justice

29. The package of poverty alleviation programmes will continue at an accelerated pace in the Seventh Plan. The Sixth Plan envisaged the reduction of the percentage of people below the poverty line to less than 10 by 1994-95. This will continue to be the goal. The attainment of this goal will require a large investment in the programmes aimed at giving self-employment and wage employment to the poorer sections of the community. Since the incidence of poverty varies among and within the States, there has to be a degree of selectivity in terms of approach, outlays and programmes for different areas. The defects and drawbacks that have come to light in the implementation of the programme have to be remedied. The tendency to view poverty alleviation activities in isolation has to be given up, and effective linkages have to be forged with other developmental activities in the rural areas to ensure that the flow of benefits from all these schemes converge on the poverty-stricken group as a package. They have to be implemented in an integrated manner with the simultaneous involvement of various disciplines or departments in a decentralised framework and the participation of people at the grass roots level through village panchayats, panchayat samitis, Zila parishads, etc. Such an approach will help in the selection of projects suited to local conditions, in the timely provision of services in their appropriate sequence and in ensuring that the benefits of such programmes really reach those for whom they are intended.

30. The core of the anti-poverty programmes lies in the endowment of income-generating assets on those who have little or none of these. Hence, redistributive land reforms and security of tenure to the informal tenants have to be directly integrated with the anti-poverty package of programmes. Although substantial progress has been achieved in the implementation of land reforms, a good deal of potential for redistribution of surplus land still needs to be realised. The remaining work should be taken up with vigour so as to complete the acquisition and distribution of surplus land during the Seventh Plan period. Immediate steps should be taken to identify the surplus land in the newly irrigated areas and to acquire such land for distribution among the landless. The present individual approach to the poverty alleviation activities needs to be substituted by group ventures and collective action to protect the beneficiaries from

the adverse operation of market forces whether on supply of inputs or on the sale of their produce. In the ultimate analysis, the objective of removal of poverty can be fulfilled in the measure in which the poor themselves become conscious, improve their education and capabilities and become organised and assert themselves. Women, who constitute half of the work force in rural areas, have to be given much greater recognition than hitherto, and equipped with and trained for appropriate skills to operate such productive assets which would contribute to raising their own and household incomes. The flow of credit through the banking infrastructure will have to be more effective and easy so as to reach the beneficiaries and the target groups.

31. The generation of gainful employment through integration of the sectoral production plans with employment plans and enlargement of on-going employment programmes under a National Employment Programme to cover specific target groups will be emphasized in the Seventh Plan. Employment schemes will aim at the creation of durable assets, skill formation and generation of permanent and continuing employment with progressively increasing income levels. In addition, the schemes will continue to promote self-employment in economically viable activities backed up by the requisite training, credit, marketing and organisational linkages. The administrative machinery at the local level for implementing minimum wages for agricultural labourer will have to be streamlined, and measures taken to strengthen the organisation and bargaining power of agricultural labour. Besides maximising employment generation, utmost attention should be directed to the improvement of labour productivity in all sectors of the economy.

32. The poverty alleviation and rural employment-oriented programmes should ensure the kind of development that would shift a sizeable part of the rural population from agriculture to the secondary and tertiary sectors. In this context, the further development on an extensive basis, of agro-based industries is of great importance. A logical corollary of the implementation of programmes that will increase rural incomes and rural employment will be the production of consumer items in rural areas with guaranteed marketing arrangements. This would also revive a number of handicrafts and hand-made items. This situation should be utilised to give considerable fillip to the handloom industry and increase its production.

33. Measures for the protection of Scheduled Castes and Scheduled Tribes and other weaker sections from inequitable practices leading to the alienation of their land will have to be strengthened. The strategy of the Special Component Plan for development of Scheduled Castes aiming at economic and educational development and bringing about improvement in their working and living conditions launched in the Sixth Plan period has given a clear direction to the economic and social advancement of Scheduled Castes. The pace and quality of its implementation need to be considerably geared up, and intensified through (a) beneficiary-oriented programmes to raise

the incomes of those below the poverty-line, (b) basti-oriented schemes; (c) elimination of scavenging, (d) educational development, and (e) administrative and personnel reforms.

34. The planning strategy for tribal development will continue to be a mix of beneficiary-oriented and infrastructure and human resource development programmes. Special emphasis will be placed on minor irrigation soil and water conservation, cooperation, rural roads and land reforms in the infrastructure sector; drinking water supply, general education, technical education and health in the social services sector, and agriculture, animal husbandry, dairy development, fisheries, forests and small village and cottage industries in the production sector.

35. Special attention will have to be paid to rehabilitation of tribal families displaced as a result of developmental projects and programmes and the plans for such schemes should include physical and financial components for rehabilitation of displaced families.

36. Public distribution of essential commodities like foodgrains and cloth to the vulnerable sections, especially in rural areas where productivity and wages are low, should serve as an essential complement to the programmes for employment and income generation. Otherwise, the rise in the cash income of the poor can easily be neutralised by the rise in the prices of essential commodities. Public distribution of essential commodities to such sections needs to be expanded on a much larger scale than has been done so far.

VIII. Regional Disparities

37. The problem of regional disparities in development has to be tackled at different levels. Part of the solution lies in the development of agriculture in the less-developed regions. However, it is a much wider problem and its resolution requires a close re-examination of the mechanisms for channelling the flow of finance, policies on industrial location, the distribution of investments in irrigation and infrastructure and a host of other matters. It is essential that the regional dimension of development is dealt with as an integral part of the Seventh Plan.

38. Special programmes like DPAP and DDP for disadvantaged areas have been found to overlap with other programmes considerably. These might have to be re-oriented, and special programmes may have to be formulated for the development of other kinds of disadvantaged areas such as water-logged or flood-prone areas, alkalinity affected areas and saline coastal areas. In the case of the Desert Development Programme, the need to give greater thrust to it, if necessary, by remodelling it on the lines of other special area programmes like the Hill Area and Tribal Programmes will have to be examined.

IX. Social Services and Human Resource Development

39. One of the primary tasks of the Seventh Plan must be the harnessing of the country's abundant

human resources and improving their capabilities for development with equity. This is how the programmes for alleviation of poverty, reduction of economic and social inequalities and improving productivity can be integrated with development. The strategies and programmes for education, communication, training and organisation should be such as to release the latent power of women and youth as also economically weaker population groups, so that they can make an increasing contribution to the socio-economic development of the country.

40. An important aspect of human resource development is to match manpower planning with educational planning to avoid imbalances between the supply and demand in regard to trained and educated manpower. Existing training programmes would thus need to be reviewed. The traditional skills of rural artisans require upgradation in tune with the changing village culture and to improve their competitiveness. Training facilities will have to be organised for categories of manpower where critical shortages have been identified and in the formation of new skills which are emerging. Policies to attract and develop the required manpower for the hill and tribal areas will have to be pursued with vigour.

41. In the field of social services some major advances are needed in the expansion of elementary and secondary education with a vocational bias. A more flexible design of education should be evolved to make it relevant to local culture and environment and to the problems of community health. In the field of higher education, there should be the utmost restraint on any unplanned expansion. The emphasis should be on the improvement of quality, keeping in view the specialised needs arising from modernisation and the demands of new technology. The minimum qualification for jobs which do not require a university degree should be down-graded to avoid influx of students into purposeless higher university education. Training in intermediate skills needs to be undertaken on a large scale for the provision of various services, including primary health services. Provision of clean drinking water and clearance of slums and provision of housing for the poor, both in the rural and urban areas, have to be given greater priority in the interests of general welfare as well as productivity. Such extension of education, training in skills and health facilities to the rural and urban poor offers now the most important avenue for reducing social and economic inequalities. A significant increase in the level of literacy and the provision of clean drinking water all over the country without exception must be among programmes of the top most importance.

42. In the Seventh Plan, the considerable and fast developing communication infrastructure will have to be viewed, and harnessed as an important instrument and an integral part of the country's efforts for achieving universal education, economic development and social justice.

X. Industry, Infrastructure and Capacity Utilisation

43. To meet the objectives of the Plan, industrial output will have to grow at about 7 per cent. The

emphasis on agricultural production will require adequate growth of sectors like fertiliser, pesticides, and essential agricultural machinery like pumpsets, power tillers, etc. Facilities for production of basic wage goods and essentials of mass consumption like sugar, vegetable oils, drugs, textiles, paper and consumer durables will need to be modernised and expanded. It needs to be recognised that the industrial sector has played an important role in the structural transformation of some regions of the national economy and a suitably designed strategy for a faster rate of industrial growth will be one of the elements of the poverty alleviation and employment generation strategies.

44. One of the factors responsible for investment in real terms lagging behind target is the multiplicity of bottlenecks and shortages within the sectors producing infrastructural goods. Since these are extensively inter-linked, the bottlenecks and shortages have affected the economy's performance substantially and have had a compounding effect in almost all sectors. In the Seventh Plan, it will be necessary to ensure that lags in production of the key infrastructural or intermediate goods like steel, cement, coal, railway transport, communication, irrigation and fertilizers do not become mutual bottlenecks. Nor should there be any idle capacity in any sector. Careful planning and timely implementation must ensure that capacities in basic infrastructures (and supply) are available in time to match rising demand.

45. The Seventh Plan has to lay emphasis on improved utilisation of capacity by pinpointing the factors responsible for the existence of idle capacities. Continued, regular and intensive monitoring of all major public sector enterprises and especially of capacity utilisation, should be used effectively for this purpose. Projects adding to infrastructure capacity have to adhere to time-schedules laid down, and accountability has to be insisted on.

46. Along with capacity utilisation and expansion, it must be ensured that existing capacity is effectively maintained, that such maintenance is provided for and that the provisions so made are in fact used for the purpose.

47. Management of the energy sector is a key task for the Seventh Plan and beyond. The major need is to reduce the rate of growth of energy consumption in relation to GDP growth; to substitute coal and electricity for oil through appropriate technologies, and to manage supply and demand by suitable price and tax policies. Inter-fuel substitution possibilities should be recognised and the measures required for realising them adopted. Systematic attention should be paid to energy conservation by identifying specific measures, quantifying the gains expected, and building those expected gains into the energy demand forecasts. Rural energy needs will have to be built into plans for the rural sector so that these are provided for in an optimal manner. The worsening thermal-hydel mix makes it difficult to raise the plant load factor of thermal plants, and a determined effort at restructuring the load-curve and setting up peaking hydel capacity is imperative if utilisation of thermal capacity is to improve. Investments in transmission for evening out regional surpluses

and deficits which can lead to improvements in utilisation must be given priority. The establishment of a competent National Power Grid by 1990 and a modern and efficient communication system in the power sector must be provided for.

48. In the field of transport, the crucial task ahead is to reverse the inability of the system to cope with the overall demand. This should be managed through stepped up investment effort, a shift in priorities, technology upgradation and optimisation of capacity at the operational level. The completion of essential on-going projects which either improve the efficiency, or add to the capacity, of the system should be given top priority. The choice between alternative modes of transport should be based on comparative resource-cost advantage with appropriate weightage given to energy. The capacity in the transport sector should be created marginally ahead of demand to avoid any bottlenecks in economic development and to provide a cushion in the system to meet spurts of traffic and changes in the pattern of movement.

49. While improving the basic amenities in the metropolitan centres and other cities, especially for the benefit of slum dwellers, the Seventh Plan should pay greater attention to the provision of urban amenities in rural areas and for shifting the infrastructures, to the extent possible, to where the people are instead of shifting people to where the infrastructures are. A national housing plan for rural and urban areas especially focused on the needs of the weaker sections is absolutely necessary, especially because investment in housing is highly labour-intensive and induces people to save more.

50. The possibility of providing high quality instant communication to remote locations through the use of Insat and other modern means of communication should be utilised to remove isolation, encourage dispersal of industry, and increase the efficiency of projects located far from the urban concentrations of infrastructure.

XI. Efficiency and Productivity

51. Without greater efficiency in the management of the existing resources and assets created at a huge cost in the course of the last three decades of planning, it would be difficult to generate adequate resources for stepping up investment.

52. Efficiency is essentially a question of management and of allocation of resources. It needs to be worked out as to what extent decisions regarding investments, product-mix, pricing and wages are best left to the managements of public enterprises, within the framework of overall accountability. Professionalised management has to be promoted through training at different levels.

53. By planning to give the work-force a share in the fortunes of enterprises through a share in management and by improving industrial relations, the Seventh Plan should aim at improved work-ethics, greater pride in work and reduced absenteeism; it should minimise

the loss of working days and increase the man-hour productivity substantially.

54. Through these measures, the Seventh Plan should aim at the conversion of the losses of public undertakings, especially in the power, coal, transport, heavy engineering, textiles, pharmaceuticals and the irrigation sectors into surpluses and at a delinking of the deficits of these enterprises from the budgets of the Central and State Governments by making these enterprises self-reliant and responsible for generating adequate internal resources.

55. One of the major causes for inefficiency in the utilisation of existing capacity is inadequate balancing investments in sectors which make for fuller utilisation of capacities created, e.g., the construction of field channels and Command Area Development Programmes, improvement of coal quality and its effective transportation, outlays for transmission and distribution of power, etc. A better balance between investment in the creation of capacities and investment in complementary sectors making for fuller utilisation of capacities created is called for.

56. Since the need to improve the efficiency of investment and to raise the rate of productivity growth is now urgent, an attempt should be made in the Seventh Plan to lay down productivity targets in as disaggregated a manner as possible, and at the same time set out appropriate norms for economies in material and energy use in all key sectors and industries, to be achieved in a given time-frame. It is also essential to identify the specific measures that need to be adopted for realising targets and norms, and for monitoring progress.

57. Productivity improvements are sometimes sought to be realised through increases in the unit sizes of plant and equipment. However, in many cases, these productivity gains and economies in capital cost have not been realised to the anticipated extent because of the non-availability of the infrastructure required for the optimum utilisation of these large plants or because of management constraints. Hence, even from the point of view of productivity improvement, increases in unit sizes (and, for that matter, other new technologies) must be in keeping with the infrastructure available. No new investment should be made for expansion of a project unless the original project has been completed.

58. A nation-wide programme should be launched to achieve excellence in the quality of manufactures, goods and services.

XII. The Environment

59. The need to conserve natural resources and environmental quality, particularly to prevent damage to fragile and irreplaceable eco-systems, has been increasingly reflected in national policies for over a decade. All future development programmes must take environmental considerations fully into account. Towards this end, environmental factors and ecological imperatives will have to be incorporated into the design of all developmental projects from the very commencement of their planning. All activities which might cause loss

of environmental quality or unacceptable damage to eco-systems will have to be carefully regulated. Planning and implementation of projects should minimise environmental degradation, such as the loss of genetic diversity, air and water pollution and other environmental hazards which might threaten health and well-being. Environmental planning must now be projected to achieve both a sustainable development as well as ensure a quality of life.

60. Afforestation programmes, both in plains and hills, need to be stepped up to outpace the rate of denudation and to contribute to soil conservation. Such programmes would be a major source of employment and income for the poor, apart from providing fuel and fodder for meeting local needs. Integrated management of resources on a watershed basis with the participation of people would be given high priority. Studies on population dynamics as an integral part of environmental planning will need to be taken up.

XIII. Science and Technology

61. The potential of Indian Science and Technology for contributing to the objectives of modernisation and development is far greater than has been realised in the recent past. Substantial capabilities have been built, but these have not been brought to bear in full measure on the national tasks. In the formulation of the Seventh Plan, this weakness will be addressed during the initial formulation of plans and projects by identifying the scientific and technological inputs required and then initiating the necessary development work as part of the Plan. The attempt will be to give up the practice of considering science and technology as a sector in its own right and to ensure that the bulk of science and technology effort is an integral part of all economic and strategic sectors.

62. The achievements of various mission-oriented science and technology agencies have been substantial. The human expertise and know-how in basic technologies achieved in this process is applicable in many other areas of industry, agriculture and rural development. There is a whole host of problems in these areas, the solution of which can be simplified by the application of technological knowledge so available. This effort should, therefore, be part of the planning process, particularly in the area of rural development.

XIV. Administration

63. The regions of fastest growth in India highlight the crucial role played by the administration in development, in terms of managing the infrastructure and the speedy disposal of matters that come up to government as well as of general responsiveness to developmental needs. Greater attention should be paid to the imperative need for utilising this important resource as an instrument for speedy development. This would require reforms in the administration of public enterprises involving questions of autonomy, accountability, etc., and coordination between different sectors of government including simplification of laws, rules and procedures for ensuring speedy disposal of cases. Planning should increasingly be concerned with the appropriate administrative arrangements and personnel

policies, especially in the less developed and remote areas and in the implementation of programmes for the weaker sections. There is need to emphasise motivation & values in accomplishing goals of economic and social development. The example and outlook of the administrative and managerial cadres affect the beneficiaries of all programmes. Our management and administrative systems have to be improved to eliminate inefficiency, cynicism and lack of integrity. There is also need for elimination of the numerous points of unnecessary and petty restrictions which have increased partly because of inertia-dominated adherence to past procedures and rules.

XV. Decentralisation of Planning

64. To achieve the twin objectives of effective implementation of the anti-poverty programmes and ensuring a balanced regional development at least in respect of the minimum needs, it is essential that the planning process is also decentralised. As the district is a well-known and accepted administrative unit, the decentralisation of planning from the State level should be taken to the district in the first phase. Eventually, the decentralisation of planning should be extended further to the block level, particularly for the more effective implementation of anti-poverty programmes. The State Governments could set apart plan outlays for the schemes and programmes to be planned and implemented at the district level and encourage planning with public participation at the district level for such schemes and programmes. In this context, the need for, and the possibility of, introducing a larger unit than the district at the intermediate level of planning might also be examined, since a District might be too small a unit for planning some of the infrastructural facilities required for decentralised development.

XVI. Conclusions

65. The Seventh Plan has to consolidate the gains of past investment spread over three and a half decades of planning and to launch the country on the path to further development, geared to equity, removal of deprivation and a tangible rise in levels of social welfare and social consumption, especially of the disadvantaged sections of the population. The strategy for this purpose will be built on the basis of an emphasis on food, work and productivity.

66. The important features of the Seventh Five Year Plan would be

- (1) Decentralisation of planning and full public participation in development.
- (2) The maximum possible generation of productive employment.
- (3) Alleviation of poverty and a reduction in inter-class, inter-regional and rural-urban disparities.
- (4) Attainment of self-sufficiency in food, at higher levels of consumption.
- (5) A higher level of social consumption, particularly in education, health, nutrition, sanitation and housing.

- (6) An enhancement in the degree of self-reliance through export promotion and import substitution.
- (7) The acceleration of the voluntary adoption of a small family norm and a positive role for women in economic and social activity.
- (8) A reduction in infrastructural bottlenecks and shortages and improved capacity utilisation and productivity throughout the economy.
- (9) Efficiency, modernisation and competition in industry.
- (10) Conservation of energy and promotion of non-conventional energy sources.
- (11) The integration of science and technology into the mainstream of development planning.
- (12) Ecological and environmental conservation.

All these will be sought to be achieved through a result-oriented approach in which a number of well-defined major missions will be identified, broken down into their programme elements and implemented through coordinated inter-agency projects.

PART II

SUMMARIES OF SECTORAL ISSUES

1. Agriculture

Agricultural Production

A rapid advance in agricultural production is central to the strategy of the Seventh Plan. It is necessary to aim at self-sufficiency in foodgrains, with an overall growth rate of around 4% per annum in agricultural production and greater stability of production to smoothen out annual fluctuations. Cropwise targets would be worked out consistent with demand/supply projections of the individual crops. The pattern of growth and development must be such as to reduce inequality by concentrating on selected target groups, e.g., small and marginal farmers, and on agriculturally backward areas. In particular, a rapid increase must be achieved in the production of rice, especially in the eastern areas (eastern U.P., Bihar, West Bengal, Orissa, eastern M.P. and Assam) and some of the southern states. Pulses and oilseeds must be given high priority and a special effort must be made to secure a varietal breakthrough, which is also concurrently essential for increasing production substantially. Accelerating the growth rate of production of coarse cereals should also be emphasised in areas where demand for these is predominant.

2. Besides food crops, the agricultural development strategy must also accelerate the production of milk, eggs, meat, fish and marine products and fruits and vegetables for improving the nutritional status of the people. The increased production of commercial cash crops or export-oriented crops like cotton, tea, coffee, tobacco, cashewnuts, spices, jute and processed food should also receive attention.

3. Agricultural production targets should be fixed separately at State and district levels for irrigated areas, assured rainfall areas, dry-land farming areas and drought-prone areas. Optimum utilisation of irrigated land and irrigation potential, particularly in Command Areas, should be provided for. Proper water management practices and increased cropping intensities combined with rational cropping patterns to optimise water use where its availability is scarce should be carefully planned.

4. Dryland farming for raising productivity in the semi-arid and dry regions of the country should receive high priority. The aim would be to minimise risk to farmers in those areas. R&D efforts should be intensified to evolve suitable technologies. Creation of micro-watersheds, effective water management, optimum use of fertiliser, better seeds and improved implements, and the adoption of carefully worked out crop patterns should all be parts of a strategy to raise the income levels of small and marginal farmers on dryland

farms. The concentration should be on crops with non-intensive water requirements, e.g., oilseeds, chillies, pulses and other such crops and greater farm management efficiency through attention to cash and non-cash inputs.

5. Adequate and timely availability of inputs of assured quality at stable prices has to be ensured. These would cover fertilizers, pesticides, HYV seeds, agricultural implements, as well as agricultural extension and pest control services. Special attention should be devoted to economically vulnerable groups like small farmers, marginal farmers and SCs/STs engaged in agricultural production. Where input use is lagging, it should be intensified.

6. Every effort should be made to repair environmental damage and to restore ecological balance through afforestation and Social Forestry programmes, together with planned land utilisation and soil conservation measures. Active community participation should be sought for "social fencing".

7. The country's land stock can be increased by bringing 17 million hectares of culturable waste and 20 million hectares of old and current fallows back under cultivation. Land reclamation measures should also cover alkaline/saline lands.

8. Production technologies for export crops would have to satisfy both cost effectiveness and social cost considerations so as not to increase the draft on scarce inputs like irrigation water, fertilizers, special chemicals, equipment and implements, as well as credit. Where feasible, small holders will be preferentially encouraged to grow export crops.

9. In hilly areas or tribal land and in other areas where horticulture is feasible for diversifying agricultural production and income, efforts will be made to integrate horticulture with agriculture. This will require R&D efforts as well as service and infrastructure support for improving the quality of output, post-harvest technologies and marketing strategies.

10. For stabilising the incomes of small farmers, and especially farmers in areas where access is difficult, e.g., the North-Eastern Region and the hilly areas, land-use planning and development of post-harvest technology across the entire range of agriculture and related fields, warehousing and storage, marketing and credit should be given priority in the Seventh Plan, both for sustaining a better distribution system and for meeting the input needs of farmers and the agencies supplying them. Proper storage facilities for agricultural outputs and inputs, particularly for perishable items like fruits, mushrooms and vegetables, milk, meat, poultry and fish

should be organised for use by as wide a cross section of agricultural producers, especially small producers, as possible.

11. Scientific studies will have to be undertaken to improve the understanding and range of the prediction of the weather, especially of the monsoon and of cyclonic storms and other weather shocks which affect agricultural production. Agro-meteorological services will have to be given priority coupled with the necessary forewarning arrangements. Contingency crop practices should be made operational to reduce the impact of weather shocks.

Animal Husbandry, Dairying and Fishery Development

12. Low cost livestock production should form part of low-technology mixed farming for sustaining and improving the income of small/marginal farmers. The emphasis should be widened from cattle and poultry to other species, e.g., goats, sheep and pigs. Cross-breeding should be intensified to increase milk production in general with emphasis given to the preservation of local breeds in their home-tracts. R & D efforts to upgrade and produce adequate number of draught animals should be stepped up.

13. Under the IRDP projects of animal husbandry, the entire range of services should be provided on a "cluster basis" with supply of healthy animals, arrangements for their proper health and veterinary cover, and marketing and credit facilities at the farmers' door-steps. These, together with easy availability of inputs, should form part of the package deal for raising IRDP beneficiaries' income permanently. Landless agricultural labourers engaged in animal husbandry should be provided extensive training facilities. Fodder development should be concurrently undertaken with priority to development of pastures and community land.

14. A planned meat export strategy should be built around modern State-owned slaughter houses. Sheep production programme should be intensified as also the development of poultry cooperatives with supporting services, pricing, marketing and trading facilities at national and state levels. The development of the national milk grid through the implementation of the Operation Flood II Programme should be continued and consolidated. Constraints should be identified and remedial measures taken to accelerate its implementation.

15. Fishery development in the Exclusive Economic Zone, fisheries in coastal aquaculture and inland fisheries should be taken up and a deep sea fishing policy should be evolved with policy measures for sustaining the country's fishing-craft sector, combined with cooperatives and establishment of State Fisheries Corporations. In the maritime States, together with accelerated development of brackish water fish, attention would have to be paid to the development of marine fisheries for export, as also the development of fishing harbours and landing and berthing facilities, especially along the eastern coast. For increased pro-

duction of inland fish the States should have to give priority to hatchery development. For the fishermen's community, welfare measures should be built in to tide over the lean season.

Forestry

16. The highest priority should be given to restore the forest cover with 33% of the geographical area of the country being brought under forests from the present level of 23%. Measures should be intensified to restore forest cover to the full where it is at present degraded though the area is nominally shown as under forests. Reduced top-soil erosion, reclamation of marginal lands, reduced wind velocities, and increase in the organic matter content of soils and waterholding capacity (thereby reducing runoff water) are some of the benefits that will result, besides a significant improvement in the rural economy. Increasing forest cover would create additional rural employment opportunities and help to fulfil the essential needs of the rural community such as fuel, timber, fodder, fruits and other products traditionally derived from forests, as also organic manure. The preservation of the country's flora and fauna should be stepped up as part of the forestry programme.

17. In tribal areas, where the tribal economy revolves around forests and forest-based produce, the forestry-based programmes have to be so devised as to be in consonance with the socio-economic fabric of tribal culture and ethos, and to strengthen the linkages between tribal development and the tribal and/or forested lands with which they so closely identify themselves.

18. Existing fragile eco-systems will have to be maintained, and research in preserving our extraordinarily diverse and rich heritage of forests will be undertaken. Among the aims of such research would be how to increase the productivity of forest areas, reducing costs and, generally, improving the rural economy.

19. Forestry development to meet industrial raw material requirements should also be undertaken with appropriate policies for licensing, royalty payment and regeneration costs, so that such industries do not operate, as hitherto, at the cost of permanent damage to the ecology of large areas with neither compensation nor reparation.

20. Grazing land should also be developed with priority given to identification, development and conservation of such lands and R&D directed towards evaluation of good quality grass and tree species based on regionwise suitability, so that destructive grazing encroachment on various lands is minimised. Systematic development and spread of cultivation of medicinal plants which play a significant role in the Indian system of medicine should also be planned.

Agricultural Research and Education

21. Agricultural Research and Education will, in the Seventh Plan, have to aim specifically at reducing the gap between potential and actual experimental yields through relevant basic and applied research in

all major farming systems and development of suitable area—specific or crop-specific packages of practices, particularly in dry-land and rainfed farming areas. Stabilising the yield potential of improved varieties/strains through an integrated approach; exploitation of genetic resources and conservation of the final produce; efficient energy and input management and ensuring the renewable nature of agricultural wealth through appropriate steps for ecological security are further areas for intensified R&D and education.

22. The research programmes of ICAR and agricultural universities will have to emphasise greatly the need for consolidation, coordination and selectivity. Thus, greater research priority and attention is required for dryland farming, scientific land and water management, maximising and recycling of organic matter, efficient energy management on farms of various sizes, varietal improvement for increased production of pulses and oilseeds and coarse cereals, development of technology against pests and diseases, risk distribution agronomy, post harvest technology and agro-forestry and agro-meteorology.

23. The large number of demonstration farms as well as supporting programmes of demonstration throughout the country, such as lab-to-land and operational research projects, have a crucial role to play in imparting credibility to the technology which is sought to be transferred. How to make these farms effective instruments for transfer of technology is a problem which needs closer attention. Practical training given to extension workers and field orientation of the training programmes, particularly those relating to the rainfed agriculture and dryland farming also assume critical importance. The Training and Visit System (T&V) of a reorganised extension machinery will be extended to cover more States and areas under the Seventh Plan.

Cooperation and Credit

24. Systematic efforts are needed to accelerate the progress of the cooperative movement in the States, particularly the eastern States, hilly areas and tribal areas where the cooperative movement is weak. Further, effective steps should be taken to bring about the integration of short-term and long-term credit so that the farmer is able to get all types of credit and agricultural inputs and services at one place. The credit requirements of the small and marginal farmers, and landless labourers and rural artisans covered by anti-poverty programmes, will have to be met in an increasing measure and on a priority basis. For maintaining the tempo of rural development programmes, and for helping the weaker sections, the mounting overdue of cooperatives will have to be checked through strict supervision over the utilisation of credit, undertaking recovery campaigns and adopting coercive measures against wilful defaulters.

25. While introduction of crop insurance on an extensive scale in a large country like India will take time; it would be appropriate to introduce a scheme of credit insurance by which the payment of interest/

loan instalments by the borrowers to the financing institutions is ensured by payments from a Fund specially set up for the purpose by contributions from the Central Government, State Governments, and Reserve Bank of India, Commercial Banks, Cooperatives and borrowers. This step would ensure an uninterrupted flow of credit to the farmers.

26. The consumer cooperative movement in rural and urban areas should be strengthened so that it plays its vital role in the public distribution system. The programme of cooperative training and education deserves further attention to meet the growing requirements of cooperative personnel in the rapidly expanding cooperative movement.

2. Rural Development and Poverty Alleviation

Poverty alleviation programmes will have to be given the required degree of priority in investment and integrated with the relevant sectoral development programmes, especially those taken up in the rural areas. This will have to go hand-in-hand with providing economically viable programmes which are within the management capabilities of households and based on maximum recourse to local resources and skills. Programmes such as IRDP and NREP will have to be widened and their focus sharpened for taking the benefits to the target groups and households. Poverty alleviation programmes and rural development will be implemented simultaneously with agricultural and rural development programmes concerned with achieving a higher rate of agricultural growth in backward regions; increasing crop intensity of small and marginal holdings and enhancing productivity of dry-land areas; together with the supply of essential inputs like irrigation water (especially, minor irrigation), fertilizers, HYV seeds, pesticides and agricultural and other extension services essential for improving income levels of small and marginal farmers.

2. Simultaneously, linkages in the form of planned rural economic infrastructure will have to be provided so that where productive assets are made available to the target groups, all constraints on supply are removed and the range of services needed for ensuring the viability and the life of the assets at normative income-generating level is ensured. This will be necessary in order that such beneficiaries do not lose the assets or derive only inadequate incomes. For example, in the case of milch cattle, veterinary support for breed upgradation, animal health care, large-scale fodder development and supply, and institutionalised arrangements for breeding, stocking and supply of milch cattle will have to be ensured.

3. Redistributive land reforms that provide a minimum level of land-holding to the landless and a measure of security of tenancy are essential for securing the rural agricultural poor against income fluctuations. Where required, consolidation of holdings of marginal farmers and land assignees, as also their organisation into groups and societies backed by financial assistance and administrative and policy support from government, should be attempted so that the inputs can be directed towards the target beneficiary groups. Group ventures and collective action will have to be promoted

in order to protect the rural poor from the adverse operation of market forces whether on the supply of inputs or on the sale of their produce.

4. The flow of credit through the banking infrastructure will have to be made more effective so as to reach the beneficiaries and target groups of the rural and assetless poor. The regional rural banks and NABARD will have to reorient their working to overcome the observed gaps and rigidities in their lending and financing programmes, so that economic activity at the household, family or individual level is not needlessly restricted by procedural difficulties. Where necessary, the rates of interest, and the criteria for giving loans and subsidies meant for rural development and/or poverty alleviation programme may have to be modified and the limits of subsidies raised to the extent necessary.

5. Women, who constitute about half the work-force in rural areas, will have to be given special recognition, equipped with and trained for appropriate skills and given assets so that they can contribute to economic activity and raise their own, and their household, income levels. Appropriate technologies, equipment and practices for reducing their drudgery and increasing their productivity will be encouraged so that they are brought into the economic mainstream as useful and productive human beings.

6. Since the incidence of poverty can vary widely between different States and regions of the country, the pattern of allocation of resources for poverty-alleviation programmes will have to take into account all such variations. For geographically or climatically disadvantaged areas like drought-prone areas or desert areas, wherever an overlap occurs between specific programmes for these areas and the general run of agricultural development programmes or rural development or poverty alleviation programmes, the overlap will be removed while retaining the thrust of the specially oriented programmes tailored to such areas.

7. A shift in income distribution in favour of the poor would require increased production of goods of mass consumption and wage goods. These should preferably be produced in the village tiny units or small industries sector, rather than in the large and medium industries or the organised small scale sector. The Industrial Policy will have to take due note of such an approach, as also the accompanying need for strengthening the public distribution system for taking goods of mass consumption to the poor, especially in the rural areas.

8. The productive use of resources and assets by those covered under programmes meant for the poorest of the poor or under the anti-poverty alleviation programmes is often (sometimes severely) affected by the inadequacy of the delivery system which covers the administrative apparatus from the village to the district level on the one hand, and the systematic provision of backward and forward linkages on the other. These lacunae will have to be removed through strengthening, proper training and orientation of the local level administrative machinery with integrated administrative organisation for rural development, particularly at block and district levels. The earlier

models existing on the Community Development pattern are relevant here.

9. The traditional skills in the villages and the rural areas and a not inconsiderable part of the services and goods in demand at that level—the village blacksmith, the silversmith, the tanner, the cobbler, the potter, the carpenter, the weaver, the 'Dai' and the 'Vaid' had been omitted in the sweep of development at the grassroots level. The rural occupational structure is thereby adversely affected and leads to widening of the rural-urban gap. The skills existing at these base-levels will need to be fully developed. Measures will have to be taken for reorienting and strengthening of institutions such as the ITIs, polytechnics, and where necessary for setting up new training institutions, for upgrading the skills and technology which directly improve the scope and availability of goods and services at the village-levels. Where necessary, schemes like TRYSEM should also be expanded.

10. Poverty eradication, whether in the rural or in the urban areas, would be incomplete without specific programmes for provision of minimum needs and minimum levels of satisfaction in the areas of health, nutrition, education, safe drinking water, housing and shelter. The Minimum Needs Programme will be strengthened and reoriented so as to subserve the overall anti-poverty package in the Seventh Plan.

11. A monitoring machinery will have to be created and strengthened to establish that target groups have in fact received the benefits, assets and items of social consumption that are being provided for them as part of the national effort for significantly reducing poverty levels. Voluntary organisations will have to be associated more closely and actively than hitherto with the programmes for reduction of poverty and with the efforts to make the minimum needs available to the population for improving their quality of life. This will be incorporated as part of the overall strategy for augmenting such programmes meant for the poor, as also as an alternative feedback mechanism for ascertaining whether the target groups have received the benefits meant for them. Lastly, the mass media will have to gear itself for increasing awareness among the rural poor and for disseminating information, non-formal education and functional skills and knowledge required by the poor.

3: Irrigation, Command Area Development and Flood Control

- Rapid expansion of irrigation is a central element in the agricultural strategy for the Seventh Plan and also the strategy for the alleviation of poverty. Irrigation development in the Seventh Plan will have to be based on quick completion of on-going schemes, rapid utilisation of potential and better water management.

2. Unfinished irrigation projects—major, medium and even minor—which are in an advanced stage of completion and are capable of yielding full or partial benefits in the Seventh Plan should be taken up for completion and adequately funded on a

priority basis. New starts should be restricted to medium irrigation projects in drought-prone areas and in tribal and backward areas, and to minor irrigation schemes. These should be funded adequately in the Seventh Plan so as to yield benefits either within the Seventh Plan or in the early years of the next Plan period.

3. In order to expedite the utilisation of the potential created, the highest investment priority will have to be given to construction of field channels and introduction of warabandi. On-going Command Area Projects Programmes should be completed within the Seventh Plan Period. Modernisation of existing but old or inefficient irrigation systems should be next in priority for investment. For this purpose resources should be mobilised from beneficiaries to the extent possible having regard to the benefits already received or to be received after such modernisation is effected.

4. In all major and medium irrigation projects, and specially where these are in water scarcity areas, highly water-intensive crops should be discouraged, and agricultural output maximized per unit of water by ensuring equitable distribution of water to farmers with holdings of different sizes, with the object of stabilising agricultural output and ensuring equity in access to water which is a scarce input in such areas. In existing irrigated areas where salinity and water-logging have resulted in good agricultural land going out of use, adequate drainage facilities should be provided on a priority basis, and proper usage of surface and ground water encouraged as also reclamation and revised cropping pattern for preventing recurrence or water-logging and salinity. Intensification of R&D for Irrigation and Flood Control, and control of water-logging and salinity and evolution of region-specific water management and water utilisation practices would have to be stressed.

5. With regard to flood control, long range comprehensive master plans for irrigation as well as flood control works should be prepared.

6. Basin-wise master plans should be drawn up to decide priorities for the projects to be taken up.

4. Village and Small Industries

The Village and Small Industries sector constitutes an important segment of the economy in terms of employment, output and exports. The policies and programmes for this sector should emphasise rationalisation of the fiscal and taxation regime, provision of appropriate infrastructure, the introduction of modern management techniques, upgradation of skills of artisans and propagation of appropriate technology and the adoption of a coherent marketing strategy both for internal and export marketing. The policies should not, on the other hand, be such as would discourage the natural growth in size of tiny and small industries. The organisational set-up will have to be revamped to meet the changing higher technological needs in terms of a well-programmed human resource development. Adequate and well-organised programmes of extension,

training and entrepreneurial motivation will have to be undertaken. R&D efforts will have to be stepped up and commercial production and distribution of improved tools and equipment undertaken. Special programmes should be developed for the tiny sector having investment below Rs. 2 lakhs. The financing of the dispersed sector will have to be modified in relation to the economic status of the beneficiaries. New initiatives are required for increased production of ancillaries, as adjuncts to parent plants both in the private and the public sector. Effective implementation of all programmes will also require strengthening of the data base and monitoring arrangements.

2. Industrial development strategy has to be based on adequate infrastructural development, incorporating the growth centre concept and nucleus plant approach together with initiatives for increased ancillarisation. The policy framework must also disperse industry away from urban concentrations. In the north eastern region, particularly, industrial growth will have to be promoted keeping in view the totality of facilities and incentives and infrastructure that is made available, and not merely in terms of financial concessions like investment and transport subsidies. However, the ecological and environmental aspects will equally have to be kept in mind so that industries set up both there and in other ecologically and environmentally sensitive areas which are in need of protection and reservation, do no damage.

3. The credit flow to tiny units, with investment in plant and machinery upto Rs. 2 lakhs, which account for 94% of the small scale units and provide 72% of the employment in this sector is disproportionately low. Such units have obtained only 48% of the credit flow to the small scale sector and 52% of the credit flow has gone to the larger and well-organised small scale units which comprise only 6% of this sector. It is necessary to rationalise and augment the credit flow to the tiny units.

4. To protect, encourage and develop small industries, legislative support would be necessary. Suitable measures will also have to be introduced to enable SSI units to have access to equity capital. Ancillarisation should be given special emphasis and the necessary push and at the licensing stage itself, a careful examination will have to be made to encourage the maximum number of ancillary units so that with each industrial licence, the application form would spell out the number of ancillary units which can be promoted for various components, parts, other inputs, etc. A suitable monitoring mechanism will also have to be evolved.

5. The District Industries Centre Scheme should be considerably strengthened at its servicing levels, both technical and administrative, for achieving its original objectives of being a 'single window extension organisation'. The functioning of the Small Industries Development Organisation (SIDO) also needs examining and restructuring as necessary in the wake of the establishment of District Industries Centres, Technical Consultancy Organisation and extension wings of State Directorates.

6. Processing facilities for upgrading the quality of Khadi and a marketing strategy for diversification of its use will be pursued and organic linkages established between KVIC and the State Level Khadi & Village Industries Boards. Commercial borrowings, where necessary, assisted by differential interest rates subsidised by KVIC, will be increasingly utilised instead of direct KVIC financing. Village industries and handicrafts development will be pursued, through appropriate policies. To ensure faster growth of village industries and handicrafts, the need for establishment of separate Commissions will be examined.

7. The coir industry should direct research and development efforts; towards diversification into new products and uses, and the Coir Board will have to be revamped for rapid development of the coir industry.

8. An expanding role is envisaged for the handloom sector including the production of the entire requirement of Janata cloth. However, the handloom sector continues to retreat before the growth of the powerloom sector. The position of the powerloom sector needs to be clearly defined in satisfying the textile demand and given its rapid (and unlicensed) proliferation, it will have to be assigned some specific role co-extensive with handloom sector, so that both can develop optimally.

9. Sericulture has been experiencing a slow rate of growth primarily on account of the non-availability of basic seed and insufficient attention to genetic upgradation. Considerable attention should be focused on basic research, propagation of multivoltine hybrids, seed preparation and maintenance.

5. Employment, Manpower Planning and Labour Policy

The generation of gainful and productive employment will be a major objective of the Seventh Plan. A coordinated and composite approach to employment policies and programmes needs to be pursued. The decentralised strategy for employment promotion advocated in the current Plan has to be operationalised further and the District Manpower Planning and the Employment Generation Councils activated to achieve the desired results. Integration of the sector-wise production plans with the employment plans and poverty-alleviation programmes will be the main strategy to be pursued.

2. The Seventh Plan will have a National Employment Programme. This will cover target groups such as landless labour, seasonally unemployed labour, educated unemployed, and women by bringing together and integrating the various on-going employment programmes. Employment schemes formulated have to be either of an asset-generating nature or of skill-formation nature and must help to generate permanent and continuing employment with progressively increasing income levels. The present emphasis on self-employment programmes will be continued, taking care to include only economically viable activities and to provide the requisite training, credit, marketing and organisational linkages. Monitoring and concurrent evaluation of the employment programmes and

strengthening of the data base at the sectoral and the district levels for the purpose are essential for the successful implementation of these programmes.

3. Manpower planning requires matching with educational planning so as to avoid imbalances between supply of, and demand for, trained and educated manpower. Educational institutions turning out 'unemployables' are a waste of resources which must be stopped. Existing training programmes would need to be reviewed in order to re-orient them to the felt needs or demand for manpower of different categories and link them to the target groups. The development of intermediate level technical skills among matriculates and secondary school leavers needs emphasis.

4. Training facilities for identified critical shortage categories of manpower and emerging types of new skills will have to be organised. All vocational and technical courses in the I.T.I.s. and Engineering Colleges would have to be diversified and restructured and their capabilities made more relevant to the overall requirements of technical personnel in the economy.

5. The traditional skills of rural artisans require upgradation to higher technical levels for improving their competitiveness. Areas requiring skill formation in rural areas would be low energy intensive systems for agricultural production and post-harvest technology, improved rural sanitation through cheap water-sealed privies replacing service privies in households and communities, and associated production of organic manure, production of energy efficient chulhas which will reduce the drudgery and health hazards for women and use less fuel-wood, thereby having beneficial impact upon the time available for other income generating activity as well as on the environment, agricultural implements of improved design and variety, and simple parts and components of decentralised energy systems.

6. Policies will have to be geared to attract and develop the required trainers for equipping the hill and tribal population with the skills appropriate for raising their living standards, based on local raw materials, energy, skills and resources.

7. The formulation of a National Wage Policy is essential. Such a policy must stress linkage of wages to productivity and the correction of wage disparities which reflect labour market distortions. While maximising employment generation, the utmost attention has to be directed to the improvement of labour productivity via the adoption of upto-date technology in production processes in all sectors, speedy modernisation of industry and corrective measures for industrial sickness. Labour policy must contain specific provisions to deal with the problems of organised as well as unorganised labour. Comprehensive legislation in respect of labour relations in the organised sector is required to replace the different enactments now in force. The possibilities of organising Labour Welfare Funds, especially for the un-organised sector require consideration.

8. The administrative machinery at the local level for implementing minimum wages for agricultural labourers should be streamlined and measures taken to

strengthen the organisation and bargaining power of agricultural labour. Efforts for rehabilitation of the physically handicapped should be strengthened and speeded up. The constraints affecting implementation of the legal provisions for protection of the weaker sections like bonded labour, landless agricultural labour, migrant labour, construction labour and women labour need to be identified and tackled as a time-bound programme.

6. Energy

Overall Energy Strategy

The Working Group on Energy Policy had forecast that the proportion of oil, electricity and coal in total consumption in 1982-83 should be 42.1%, 33.0% and 24.9% respectively. In practice, the proportions were 48.0%, 30.6% and 21.4% respectively. Vigorous efforts will be required to correct this imbalance. It is necessary to plan for a gradual transition from the present dependence on oil to coal and electricity in the medium term and renewable sources of energy in the long term. Even though the current contribution of renewable energy sources to energy supply is insignificant and many of them are not commercially competitive at the moment, these technologies have to be developed now so that the transition in future will be smooth.

2. There are reports of growing scarcity of fuel wood in the rural areas. This is a matter of concern. While intensified efforts should be continued in the field of social forestry and biogas to meet the energy requirements of rural communities, it will be necessary to take up a minimum needs programme in the seriously affected areas covering social forestry, biogas, solar energy and other forms of energy to meet the requirements of the rural community. Efforts have to be made to develop and popularise efficient chulahs to reduce consumption of energy for domestic cooking. All these additional rural energy programmes will need to be implemented in an integrated manner. Help of local bodies, voluntary organisations, women's organisations, schools and other decentralised grass roots agencies will also be taken.

3. With the growth in the economy, energy supply will have to be increased. Nevertheless there is considerable room for demand management which means that the overall energy intensity of the economy should be reduced, the efficiency with which energy is utilised should be increased and the desirable patterns of fuel substitution should be prompted.

4. Energy consumption has to be an important parameter while deciding on new investments and every effort for introducing energy saving technologies has to be explored systematically. Studies have revealed that there is considerable scope for conservation of energy by implementation of good house-keeping measures, better maintenance and avoidance of wastages as short-term measures and installation of waste heat-recovery systems, replacement of old inefficient equipment and introduction of co-generation systems etc., as long-term measures. Statutory as well as promotional measures including energy-audits of energy-

intensive industries need to be taken during the Plan period and financing of energy-conservation investments should be given preferential treatment.

5. Increasing the capacity utilisation and increasing the productive efficiency of capacity already created in the energy sector has to be the main thrust of our future energy strategy.

6. So far management and investment concerns have been concentrated only on centralised energy systems. This has now to be complemented by a commitment of equal magnitude and seriousness to the development of decentralised energy systems.

7. Indigenous research and technological activity in the energy sector is unsatisfactory. Organisations and institutions charged with this responsibility will have to be reinforced and strengthened. This is particularly important in regard to agencies in charge of new sources of energy and social forestry.

Oil

8. Tentative projections for 1999-2000 indicate that the demand for petroleum products may be of the order of about 91 million tonnes. In the context of the oil situation that may emerge by that period, (according to several experts) it may be difficult to meet demand of this order in case large imports are to be resorted to. Renewed efforts are, therefore, called for to effectively control the growth rate. Different approaches will be required for the various consumption sectors.

9. The demand for middle distillates in 1982-83 was about 56%. This may be about 64% by the end of the century. To meet a demand of this order from a barrel of crude oil is difficult. Most of the use is in the transport and household sectors. It is, therefore, necessary to restrict strictly the use of diesel oil to such transport purposes for which it is most efficient.

Increase in diesel irrigation pump sets should be stopped and the existing diesel pump sets should be replaced by electric irrigation pump sets on a time bound programme. In the railway system, dieselisation should be phased out and replaced by electrification. Adoption of techniques for conservation of diesel oil in trucks and buses should be made compulsory.

Demand for kerosene should be checked by supply of alternative fuels. Conservation of kerosene should be effected by mass scale introduction of improved kerosene stoves and lanterns.

10. In regard to other petroleum products, detailed examination will have to be carried out for inter-fuel substitution. Technical and financial assistance should be arranged. Appropriate institutional arrangements to achieve the targets so identified should be created.

11. Our prognosticated reserves indicate that it should be possible to achieve self-sufficiency given a reasonable demand for petroleum products. Exploration efforts will, therefore, have to be considerably stepped

up. If necessary, suitable changes in the existing organisations will have to be made. Participation of private parties in exploration on a selective basis will have to be considered.

12. In the light of the recent discovery of gas in different parts of the country and keeping in view our experience in the utilisation of associated gas in the past, a large percentage of which had to be flared, it will be necessary to identify on a continuing basis possible users of gas, techniques of gas production, transportation and distribution and substitution of gas for petroleum products. A review of the existing policy on gas utilisation should be undertaken.

Power

13. The additional generating capacity likely to be commissioned by the end of the Sixth Plan will be about 14,500 MW. A big step up is required in the Seventh Plan to meet satisfactorily the energy requirement. Though the achievement can be stated to be significant, nevertheless, the country had the capacity and the capability of fulfilling a higher target. In order to ensure that we profit from the past experience in this regard, it will be necessary to restructure and strengthen the State Electricity Boards so that they function in a business-like manner. Organisational defects in each electricity board will be identified and remedial measures on a time-bound basis insisted upon at the time of clearance of the new projects.

14. Super thermal powerstations in the Central Sector should continue to receive special emphasis. Regional grids should be strengthened and further steps taken in the direction of a national grid with a view to establishing one by 1990. HVDC transmission system will have to be introduced where desirable.

15. Though there has been some improvement in the capacity utilisation of the thermal power plants, it is still much below the highest level reached in the past. Efforts should continue to improve their performance. Greater attention should be paid to ensure supply of proper quality coal to the power stations.

16. Greater emphasis needs to be put on hydel projects to correct the trend towards adverse thermal-hydel mix. This will necessitate utilisation of techniques for speedier construction of hydel projects. In case it is required, special funding of hydel projects will have to be made. As against an estimated potential of 5000 MW, the aggregate installed capacity of small hydro projects is to-day only about 160 MW. The pace of exploitation of this resource needs to be accelerated by special measures. Suitable technology for quick manufacture and installation of these plants should be arranged. Local community participation in the planning execution and operation of such projects should be encouraged.

17. Serious deficiencies in the development of transmission and distribution have been noticed. This will hamper proper evacuation of power and its distribution. Steps should, therefore, be taken to correct this imbalance. Difficulties have been experienced

in ensuring smooth transfer of power from one State to another within a region and from one region to another. These include the problem of determination of tariff. Institutional arrangements would require to be made for speedy solution of such difficulties.

18. Though rural electrification of villages has made substantial progress, the electrification of households is very tardy. This has also implications for oil consumption in the household sector. Special programmes are, therefore, needed to expedite household electrification.

19. The spread of diesel pump sets has not been arrested. This is not in line with the energy strategy. The programme for irrigation pump sets energisation will have to ensure not only greater coverage but also substitution of diesel pump sets within a specified period. This will only be possible if the targets for electricity generation are fulfilled and there are proper arrangements for transmission of power and its distribution. Hence the importance of the steps outlined in this regard earlier.

20. Measures to achieve conservation in electricity have not so far been significant. Immediate attention is required to rectify the defects in the electric pump sets and the layout of the pumping systems which can result in appreciable savings in power consumption. Special programmes in this regard will need to be formulated.

21. Institutional and legal arrangements will be set up to implement the measures for energy conservation in industry identified by expert bodies and the Central Electricity Authority.

22. Greater attention will be paid to the training of personnel as also refresher programmes right upto the top levels on modern lines. Trained manpower leads to efficient functioning of power stations. Where desirable, new institutions of training in the power sector will be set up.

Coal

23. Coal is the most important primary energy of our country. Though there is a significant step up in production during the Sixth Plan, much greater effort will be required in the subsequent plans not only to meet the demand but also to bring about shift from oil to coal.

24. A step up in production from 152 million tonnes in 1984-85 to about 230 million tonnes in 1989-90 will only be possible with greater application of modern technologies. This will call for a long-term technology plan adapted to our conditions, and creation of appropriate manufacturing facilities for plant and equipment. The progress so far in this regard has been slow.

25. The entire approach towards exploration would have to undergo a radical change, and methodologies which will ensure speedier operations will promote more accurate analysis of data will have to be intro-

duced. Greater emphasis will have to be put on finding and providing coal near the main consumption centres.

26. Production of soft coke, which has been declining, should be considerably stepped up and its price adequately subsidised. Soft coke is required to replace fuel wood and also to meet fuel requirement which cannot otherwise be met.

27. Techniques of demand forecasting need to be refined. Production of coal both in quantity and quality should conform to the requirements of the different sectors. In the past, such mismatching has resulted in unnecessary accumulation of stocks at the pithead.

28. Detailed advance planning in movement of coal is called for. Movement of coal by coastal shipping and inland water-ways will have to be encouraged. Transport of coal by road, which has shown a tendency to increase, will have to be reduced drastically over the next Plan period.

29. With the discovery of large deposits of coal at greater depths, concerted efforts will need to be made in the development of technologies for institute gasification.

30. R&D efforts should be undertaken in the transportation of coal by slurry pipe lines.

31. Exploration and exploitation of lignite deposits in States like Tamil Nadu, Gujarat and Rajasthan should receive priority.

New Sources of Energy

32. The progress in the implementation of biogas plants has been slow. There is need to have a closer look at the institutional arrangements made for planning and establishment of biogas plants and their evaluation and maintenance. A more ambitious programme of implementation is called for. R & D efforts need to be intensified, particularly in achieving reductions in construction costs, improvements in process efficiency of biogas-generation and use of alternative feed stocks. Municipal and industrial wastes processing schemes should receive emphasis. Since woody biomass will continue to be the major source of energy, R&D in regard to this would require proper direction to enhance the production per unit area and time. There are many areas and applications where solar technology is already competitive and for which indigenous technology is available. A vigorous marketing effort should be made to realise this potential and promote such applications systematically. The range of applications of wind energy should be expanded. R&D on Geothermal and Ocean energy should be systematised. There is special need to promote development of draught animals through animal husbandry and appropriate technologies for using animal draught in mechanical systems like ploughs and carts, and design and development of better yokes harnesses and the like for animal drawn devices.

Integrated Rural Energy Systems

33. As indicated in the Sixth Plan, the possibility of decentralised energy production and distribution

for meeting the energy needs of the dispersed rural populations was seriously considered and twelve pilot projects were taken up in different parts of the country. In the light of the experience gained, it is now proposed to take up a regular full-fledged programme.

7. Industry and Minerals

The general approach relating to industrial development strategy outlined in para 2 of the section on Village and Small Industries will be equally applicable to the programmes in the industry and minerals sector. The focus of industrial development in the Seventh Plan will be on upgradation of technology, modernisation, better utilisation of assets and the promotion of efficiency. Besides this, infrastructural constraints affecting the sector will have to be tackled effectively and given investment priority, where necessary. Firm availability of power must be ensured for maintaining industrial growth. The efficiency of public sector units requires substantial improvement. The factors which are affecting efficiency in operations should be identified and corrected.

2. With a large spillover of expenditure on projects currently under implementation, extreme selectivity would have to be exercised in venturing upon new starts even in areas where the public sector has been active so far. Consistent with the resources constraint, the public sector will have to concentrate its efforts in the Seventh Plan increasingly in those areas and industries where it alone can undertake projects requiring high investment and sophisticated or frontier areas of technology. In existing areas of operation, the first priority should be to achieve the maximum possible utilisation of capacity. The investment necessary for this purpose should be the first charge on the Plan. No new investment should be made in the expansion of a project unless the original project has been completed.

3. Project implementation delays resulting in substantial cost and time overruns will have to be reduced through better project management. To the extent required, properly equipped civil construction agencies and plant erection specialist agencies should be promoted.

4. There has to be identification of industries which can be termed as "sunrise industries" where it is necessary either for the public sector to enter direct or to encourage growth. They will be part of the efforts required in this sector for ensuring that this country is not left behind in new and emerging areas of industry which will give it a modern and forward-looking industrial profile in future decades. A major thrust needs to be given to the electronic industry to achieve a manifold increase in output measured in real terms. This should cover both professional and consumer lines of equipment. There is need for technology upgradation and the achievement of economies of scale in the manufacture of components.

5. Some important industries like Textiles, Cement, Jute and Paper, as well as some of the industries set up in the early years of planned development like

the Iron & Steel Industry, etc., require a major programme of modernisation and technology upgradation for continued viability and for introducing energy savings, cost effective and modern production techniques. This is true also of many of the sick units which have been taken over from the private sector in the public interest and are in need of modernisation and diversification. In the Steel sector, new and economic technologies will have to be firm up side by side with modernisation of the older steel plants. Where necessary, foreign collaboration should be sought for improving efficiency and economy in cost of production. The measures necessary for all this will be undertaken consistent with the Technology Policy Statement and the requirements of the economy. These will call for sizeable resources in the Seventh Plan and beyond. Investments on modernisation will have to be considered as an integral part of the investment programmes in the Seventh Plan and later Plans. Simultaneously, measures will have to be introduced, in association with the financial institutions, to prevent sickness in industry.

6. For achieving a breakthrough in the quality of products and services of Indian industry, industry will have to be geared up to attain internationally accepted standards of quality, finish and reliability. A national programme for raising quality standards combined with measures for energy conservation and reduction of pollution should be a part of all industry programmes in the Seventh Plan. It will be necessary to undertake programmes of cost reduction, especially of items of mass consumption and of items which will help to raise productivity in the rural sector (pumpsets, agricultural implements, transportation equipment etc.). To encourage industry to step up its effort to develop new processes and products, suitable incentives would be necessary.

7. In every industrial sector, technology induction will have to be undertaken in line with the Technology Policy Statement in order to streamline and modernise production and reduce costs of the products. This should go along with training of managerial and technical personnel in all spheres of operations of industry.

8. The public sector has to be set a definite role in the development and transference of technology required for programmes of poverty alleviation, and for the transference of skills and technologies to the rural and small scale, village and cottage industries sector as a conscious policy of promoting rural industry and upgrading the capability and quality of products turned out by these sectors of industry. This should be done both through the setting up of ancillaries and training institutions where necessary, and through R&D for supplying technology gaps in the rural areas.

9. Consistent with the overall objectives of economic development outlined earlier and the specific issues relevant to the industry sector highlighted above, the need for adjustment in our industrial policies will have to be examined. The question of shift of emphasis from administrative controls to financial controls in achieving the objectives of industrialisation will have to be

considered, consistent with the Industrial Policy Resolution. Many sectors of the industrial economy are now at a stage where increased competition can enhance productivity, quality and growth, reduce costs and provide a basis for faster industrial growth. A policy framework to this end will need to be designed. Medium and Small scale units engaged in the production of consumer wage goods may need to be freed from all constraints and restrictions.

8. Transport

The major objective of transport planning is to meet the transport needs of urban and rural areas and to provide transport infrastructure necessary for the growth of the economy and accessibility to remote and backward areas. This requires the integrated development of all modes of transport to enable each mode to carry traffic for which it provides service at the least cost to the economy. Investments in the sector have to be made to match investments in the transport-generating sectors like industry, power, agriculture etc. to meet their requirements. In fact, because of the generally long gestation period of transport investments, capacity in the transport sector has to be created marginally ahead of demand to avoid any bottlenecks in economic development.

2. The transport sector is a major user of energy and so it is necessary to emphasise the development of energy efficient modes of transport improving energy efficiency in different modes, using alternative sources of energy to conserve use of liquid fuel. The use of diesel oil for transportation has to be reduced to the minimum by the optimum use of railways for long distance transportation.

3. With regard to investments, priority should be given for completion of essential ongoing schemes which add to the transport capacity and provision should be made first for completing these schemes before new schemes are taken up. In addition, emphasis has to be given to investments required for replacements and maintenance and to improving productivity of the existing assets through technology upgradation and modernisation. Improvements in project planning and execution are very necessary. Detailed project reports must be prepared before clearance and acquisition of assets programmed according to long range requirements. The modernisation of construction and maintenance methods has to be promoted.

4. In the Railways, priority areas should be electrification of high density routes, introduction of heavier trains (4500 tonnes), development of rapid handling terminals, improved maintenance facilities and practices and adoption of computer based information systems. In dealing with the question of accessibility and opening of areas for development, alternative modes of transport which could be more-economic for development should be considered.

5. Provision of public transport in the metropolitan cities and development of metropolitan transport using electricity based systems so as to conserve liquid fuels and also to reduce pollution have to be

emphasised. The transport needs of towns approaching the category of metropolitan cities and the role of transport in development and land use planning have to be examined and taken into account.

6. There will have to be continued emphasis on the provision of rural roads through the Minimum Needs Programme to provide accessibility to the villages. The present methods used for construction of roads and bridges should be modernised to ensure quick completion of these works and also to improve the quality of construction. Maintenance of roads and bridges should receive a high priority as the condition of roads and surface play a dominant role in energy conservation. Proper maintenance of roads will also prevent the need for massive investments to upgrade the system at a later date. The development of National Highways should be pursued including through a system of toll roads. The existing national highway network should be strengthened in order to optimise its serviceability. Controlled and coordinated licensing of heavy vehicles for better maintenance of roads is necessary. The viability of state road transport undertakings to ensure adequate resources to cover at least replacement requirements has to be ensured. In this context, a review and rationalisation of taxation of passenger vehicles including passenger tax is necessary.

7. In the development of ports the emphasis will be on modernisation of handling systems and provision for handling fast developing container traffic. Mismatching between port infrastructure and shipping technology will have to be avoided. Intermediate and minor ports should be developed as an integral part of the overall port system in order to increase the port capacity in the country and to help in the acceleration of regional development. The resources of all ports should be pooled for the optimum development of the Port Sector. Facilities required for development of Inland Water Transport, particularly in the national waterways will have to be identified.

8. In Shipping, the focus will have to be on replacements and new acquisitions consistent with facilities in ports which will help to raise the national share in bulk cargo to at least 50 per cent. Coastal shipping has to be promoted by acquisition of modern vessels and the removal of port constraints. The technology and management of ship repair facilities should be improved to reduce the cost and turn-round time in the ports.

9. There is a vast potential for development of tourism in the country. Tourism should be accorded the status of an industry. Private sector investment will have to be encouraged in developing tourism and public sector investments should be focused only on development of support infrastructure.

10. In the field of civil aviation, the focus will be on development of infrastructural facilities at international airports so as to meet the growing needs of traffic consistent with the priority attached to expansion of tourism. As regards domestic airports, necessary provision will be made for essential facilities on a selective basis.

9. Communications, Information and Broadcasting

The country is in the midst of a communication revolution. The rapid expansion of the television network, the accelerating growth of telecommunications, the steady spread of radio receivers and the recent boom in video equipment have already made electronic communication an important sector of the national economy. INSAT-IB, which is now in operation, provides a step-function increase in communication capability, theoretically making possible communication from any part of the country to any other, while simultaneously providing TV coverage of the full country.

2. In the Seventh Plan, this considerable, and fast developing, communication infrastructure has to be viewed as an important instrument and an integral part of the country's efforts towards universal education, economic development, and social justice. To meet the growing needs of various sectors of development like Agriculture and Rural Development, Education, Health and Family Planning, Industry, Transport etc., there is need to provide information, impart skills and develop capabilities to the mass of our people. For all these and many other developmental objectives, the new communication media provide an opportune amplification factor, and must be configured appropriately to fulfil this function.

3. The economy is growing steadily, and is expected to expand significantly in the Seventh Plan period. Important projects in various sectors are under implementation in various part of the country, and many more projects will be taken up in the 5-year period 1985-90. The attempts to disperse industrial development and to integrate remote areas into the national mainstream call for an excellent, reliable and well tuned communication system reaching out to all parts of the country.

4. The developing countries, including India, are societies in a hurry, anxious to catch up with the standards of living in the advanced countries. The modern communication system is an integral part of the development process, and can certainly aid in the acceleration of the growth of the economy by providing the necessary motivation and information. Therefore, in the Seventh Plan, all existing communication capabilities—both hardware and software—must be harnessed and also augmented to the extent required. The electronic means—radio, TV, and telecommunications—will have to play a major role in this effort. While the communication system must serve all segments of society, it should be developed to accord special priority to the rural people and to the deprived sections.

5. Keeping the above in view, it will be essential to modernise and expand the telecommunication system. It would be necessary to pay special attention to installing electronic switching, digitalised networks, ducting and pressurisation of cables etc.

6. High priority would be accorded to a programme of providing at least some guaranteed efficient communication channels between all villages and towns of the country. For this purpose, the short cut available through INSAT-IB, would be utilised to provide tele-

communication including telegraph and electronic mail services between all habitations in the country. Such a facility would be used by individuals, for economic development programmes, for administrative and relief operations, for generating news from all over the country irrespective of distance from urban centres and would lead to increase of efficiency and national integration.

7. The needs of the banking, industry, airlines, hotels, tourism, education, administration and many other sectors demand the setting up of Public Service Data Networks, including those based on a multiple-access satellite system.

8. As regards postal services it would be necessary to take effective steps in selected areas to minimise the operational losses while simultaneously recognising the public service aspects of this service. Due consideration would be given to the hidden income generated by the postal system through agency functions such as banking services. Some of these functions might be enlarged because of the deep reach of the postal system.

9. It is recognised that, in modern communication systems, different elements have to work in concert. The role of broadcasting, telecommunication, computers, printing and education are merging. The exchange equipment peripherals, terminal equipment, all are getting diverse and have to be supplied by a variety of producers, large and small. It is virtually impossible for a single agency along with its own industrial undertakings to take on the total responsibility for appropriate development in this field. Because of these and similar reasons, steps should be taken to ensure that the production agencies currently under the Ministry of Communication and other production organisations, public and private, have equal status in competing for the supply of all equipment to P&T. The users should be able to procure terminal equipment, including ground stations, telex and teleprinter machines, telephone instruments etc., provided they meet the specifications certified by an independent agency. The question of major user sectors like Power, O.N.G.C., Irrigation, Railways etc., being free to set up independent communication networks will have to be decided quickly. This will have to be considered in the light of the multiplicity of services envisaged in the future and the convergence of various technologies. The need to separate the postal department from the telecommunication department should also be examined quickly.

10. Radio services need to be given special importance in the Seventh Plan. Besides, the Sixth Plan projects spilling into the Seventh Plan would have to be completed on a priority basis.

In recent years there has been a resurgence in the use of radio. Attention will have to be given to setting up of large number of additional local radio stations beyond those envisaged in the Sixth Plan. Various user sectors, such as education, health, agriculture, rural development, would have to be involved much more centrally in software production.

11. Under Television, in connection with the optimum utilisation of INSAT-B, a number of measures are required to be taken, viz.

- (i) VHF sets around lower power and high power transmitters and direct reception sets should be provided in large numbers, particularly in remote areas of the country, so that T.V. programmes via satellite are effectively utilised for rural development. Proper maintenance of these sets has to be ensured.
- (ii) Programme production facilities would have to be provided at the local level with opportunities for community participation in the preparation of soft-ware as also for regular feed back from telecasts.
- (iii) Uplinks to the Satellite System would need to be provided at several other stations besides Delhi.
- (iv) Preparation of software for development would be a challenging task and would require the support of not merely the concerned Ministries, but also other agencies including the private sector. Investments would have to be provided as part of agriculture, health, education etc., programmes.

The various mass communication media will have to give greater attention to the dissemination of knowledge about the field of science and technology. They should help in promoting a scientific temper among the people. Besides broadcast media and field film units, the increasing availability of VCRs will be used for this purpose.

10. Education

The existing education system is widely felt in its contents and processes to be dysfunctional to the requirements of the country, and in need of radical changes. Mere expansion of existing structures, models, methodologies and institutions will not best serve the country's needs. Educational reforms and renovation aimed at introducing and reinforcing new patterns and designs of education that are flexible and varying, relevant and linked to widely diverse local culture and social environments, will have to be taken in hand. The emphasis should be on innovation, on low cost alternatives and societal involvement, all aimed towards linking education effectively to the needs of the people, to employment, and to development. The reforms should aim at continuous improvement of standards at all levels, and even more importantly, at greater equity.

2. Over-riding priority will be given to universal elementary education for children in the age group 6-14 years by 1990. This will call for the additional enrolment of 60 million children during the Seventh Plan period. Both full and part-time systems and formal and non-formal methods have to be adopted with the emphasis shifting from more enrolment to retention of children after enrolment, and to ensuring that children attain the basic learning objectives. The education of

girls and education of children belonging to SC/ST would be specially promoted. The drop-out rate among girls enrolled for primary education will have to be drastically brought down through suitable measures. The content, method and timing of education will have to be related to local needs, and detailed block and school level planning introduced, with specific targets.

3. New administrative training and supervising structures and practices will have to be developed to ensure that teachers are adequately trained, fully motivated and feel accountable for the results. Value orientation in education should constitute a special thrust in the Seventh Plan, teacher-education in particular being re-oriented for this purpose.

4. Low cost programmes would need to be evolved, with innovative approach where necessary for covering the large numbers involved, many of whom cannot attend on a full-time basis for social and economic reasons. Community contribution to clear the massive backlog of school buildings and other facilities and their proper maintenance will be necessary.

5. At secondary and higher education levels, many of the courses lack purpose and relevance and require re-structuring, linking them to the economy's need for skilled manpower and vocational skills. Such courses will need to be evolved and introduced in close collaboration with industry and other users; technical education courses specially need to be renovated and updated. Recruitment to jobs needs to be delinked from a degree qualification wherever possible. Excessive pressures or expansion of higher and of general education need to be eased by making vocational and technical training courses far more relevant and attractive through strong links with industry and other users. This would generate ready employment opportunities and ensure vertical mobility for trained personnel. The linkages within the system between secondary and higher education will have to be strengthened and research capability within the university will need considerable enhancement.

6. Recent advances in information and communication technology will need to be used to reach out to cover large numbers at minimum costs. These capabilities can be used fully for upgrading the quality of education and for giving it a much wider reach. Open learning systems, correspondence courses and part-time courses should be encouraged at all levels, as also promotion of the 'non-formal education' approach. Measures will need to be adopted to impart some formal respectability to all types of learning, especially of informal learning, and learning by doing; the resources of mechanics, artisans and craftsmen of all kinds, will have to be utilised for the purpose by involving them in the educational process.

7. An attempt will be made to cover all adult illiterates in the age group 15-35 years by 1991. However, this can be sustained only on the basis of a mass movement, involving many agencies, including students and voluntary organisations. All developmental programmes, especially those affecting the rural and the urban poor will be required to include a component of adult education and literacy aimed at the needs of

the beneficiaries of those development programmes. To promote motivation among adult learners, appropriate and effective programmes of post-literacy would be built up with adequate linkages to work and to further education.

8. The new approach to education will require substantial outlays which must be protected in real terms over the Plan period. In addition, mobilisation of community resources, and community participation are essential together with accountability at the local level. The optimum use of existing resources will also be called for. The level of subsidies for secondary and higher education courses will need to be considerably reduced and low cost innovative approaches adopted at all levels. For raising the level of literacy, facilities with developmental agencies, industrial units, and others will need to be fully utilised through appropriate collaborative and supportive arrangements. This community wide participation in all sectors and at all levels can yield substantial results.

11. Health and Family Planning

Health

India is committed to attain the goal of health for All by 2000 A.D. for developing the country's vast human resource and for accelerating and speeding up total socio-economic development and attaining an improved quality of life. For this, primary health care has been accepted as the main instrument of action. In the Seventh Plan this should continue and, in addition, emphasis should be laid on the preventive and promotive aspects, and on organising effective and efficient health services which are comprehensive in nature, easily and widely available, and accessible to and affordable by the people.

2. The Minimum Needs Programme should be the sheet anchor for promotion of the primary health measures, with greater emphasis on improvement of the quality of services rendered, backed by adequately strengthened infrastructural facilities and establishing these where they are not available. Effective coordination and coupling of health and health related services and activities, e.g., nutrition, safe drinking water supply and sanitation, housing, education, information and communication, and social welfare will have to be built in as, without such inter-sectoral coordination and cooperation, the implementation of the health programmes suffers considerably.

3. Qualitative improvements are required in health and in family planning services, the supplies needed for such services, as well as in education and in training and management. Adequate provision of essential drugs, vaccines and sera needs special attention in terms of production, pricing and distribution to ensure universal accessibility, availability and affordability. Urban health services, school health services and mental and dental health services also need special efforts to ensure comprehensive coverage.

4. Achieving active community participation and involvement in health and health related programmes should also be part of the strategy. In particular, active

community participation and involvement of non-governmental organisations in a massive health education effort is urgently needed.

5. For control and eradication of communicable diseases, programme implementation at all levels needs strengthening, with strict adherence to sharing of the costs of the programmes by State Governments. The National Goitre Control Programme is in a poor state and needs to be implemented with great care and caution as it has the potential of quick and complete success.

6. Cancer, coronary heart disease, hypertension, diabetes, accident, etc., are emerging as major health problems in the non-communicable diseases area. There is need to initiate appropriate action for their control and containment. Development of specialities and super-specialities will need to be built up with proper attention to regional distribution. Referrals and linkages in the health care delivery system need careful planning and programming.

7. Training and education of doctors and para-medical personnel needs thorough overhaul. Teaching and training must be related and relevant to the health problems of the people. Training must be need-based, problem-centred and community-based. Health manpower development has been a neglected field which needs urgent attention and action. Continuing education should be an essential part of teaching and training programmes. Health management support and supervision is an area that needs considerable strengthening by proper selection, training, placement, promotion and posting policy. Health management experience, training and expertise for all categories of health managerial jobs will have to be ensured.

8. Medical research related to the common health problems of the people which is helpful in evolving cost-effective intervention technologies will require greater emphasis and priority. The research findings need to be utilised fully for constantly modifying the health care delivery system in the country. Research efforts in the areas of immunological approach to fertility control, bio-medical and social research, operational research, development of bio-technology and effective utilisation of electronics and computers in the health programmes will need to be pursued. There is an urgent need for evolving an effective and efficient Management Information System for proper planning, implementation and evaluation of health services.

9. The Indian system of medicine lends itself to better standardisation, integration and wider application, particularly in the national health programmes. Teaching, training and research and service activities in the development of the Indian system of medicine would need to be pursued vigorously. Extension planning in this sector is essential.

Family Welfare and M.C.H.

10. For attaining the long-term goal of reaching a net reproduction rate of 1 by 2000—with a target group of 120 million couples in the reproductive age group—both imaginative and innovative strategies will

have to be adopted. A larger allocation of resources will be required, as also effective implementation.

11. Targets for family planning, particularly sterilisation, are being achieved by special drives and camps. There is a need to develop the programme on a sustained and continued basis. Laparoscopic sterilisation has become very popular and availability of laparoscopes and trained personnel should be stepped up. Much greater effort will have to be mobilized for implementation of the programme of IUDS, oral pills and conventional contraceptive uses. Imaginative and innovative measures will have to be adopted for making conventional contraceptives and oral pills freely and widely available, through an effective social marketing mechanism.

12. To achieve the long-term demographic goals, educating and enlightening people on the benefits of late marriage and its social enforcement will have to be greatly emphasised. Special programmes and incentives oriented towards target couples, particularly the younger age group, are needed. Continued incentives for attracting couples with two children and younger age-groups are also necessary.

13. Inter-sectoral coordination and cooperation and the involvement of voluntary agencies in the programme will be necessary in this programme to an even greater extent than in Health. Community participation is essential for the voluntary acceptance of the family planning programme. Identification and active involvement of non-governmental organisations, of informal leaders in the community and the imparting to them of the necessary training to motivate them to participate in the programme will need attention and effort.

14. For the achievement of the 'two-child' norm it is essential that child survival rate in our country is enhanced and assured. The infant mortality rate of 114 per thousand is staggering and unacceptable. As more than half of these are in the neo-natal period, the Mother and Child Health Programme will have to be considerably strengthened. The MCH component of training of medical and para-medical personnel needs to be carefully planned and implemented. The associated areas of child immunisation, nutrition and control of communicable diseases in infancy will need special attention and strengthening. For immunisation, the cold chain still poses a big problem which needs to be solved. Diarrhoeas are still among the major causes of infant mortality and, therefore, ORS therapy needs to be universalised in a more effective manner.

15. Vigorous steps will have to be taken to reduce material mortality. More than two-thirds of the women in the rural areas are still being attended to by untrained Dais and there is, therefore, need to augment the Dais training programme.

12. Housing, Urban Development, Water Supply and Sanitation

Housing and Urban Development

An astonishing housing shortage has developed in the country. Housing has emerged as one of the

most important felt needs of the country, perhaps next only to food. If further deterioration in housing shortage is to be prevented and shelter is to be provided to the net addition to the population, the number of additional houses required would be at least 17 million during the Seventh Plan period. This is a colossal figure and nothing short of a major national programme of housing development can hope to tackle it.

2. A national plan of urban development and housing will simultaneously fulfil several of our plan objectives :

- (a) Besides providing shelter, it will raise the quality of life and meet the most important felt need, especially of the poorer sections of our population;
- (b) Housing creates a favourable climate for such crucial objectives as health, family planning, sanitation and education;
- (c) Housing promotes saving. If the Indian people would willingly save more today, it would be for investment in their own housing;
- (d) Housing turns out to be a highly labour-intensive venture and eminently fulfills the objectives of increased employment; and
- (e) Housing provides equity in terms of minimising urban-rural differences, inter-personal differences and inter-regional differences.

3. Housing cannot develop significantly without infrastructure, primarily consisting of electrification, water-supply, local roads, sewerage and garbage collection, etc. These facilities would have to be spread out judiciously and equitably among (i) the 12 metropolitan cities of million plus population, (ii) more than 200 cities of population between 1 lakh and 1 million, (iii) the numerous towns with population between 1 lakh and 5000, where haphazard development has been taking place, and (iv) in several small rural centres which would have to be selected in a regional planning approach or where economic growth is already showing itself. The objective of locating infrastructures in the third and fourth category of towns and new centres would be to partly slow down the population increase in metropolitan cities and large cities, to prevent the growth of additional slums there and, indeed, to make life worth living in smaller places. New concepts of town and country planning would have to be used in the small towns and the new centres.

4. Policies concerned with location of industry require to be coordinated with the provision and funding of urban services and the associated communication and transport facilities. Once infrastructure is located in small towns and the new centres, industry is bound to be attracted. This would be followed by housing development. These three steps of infrastructural build-up, industrial construction and housing development are all employment intensive in character.

5. In the small towns and the new centres, the

strategy could be to purchasing lands in concentric circles, at short notice, before land values begin to rise, quickly providing the infrastructures of electric power, water supply, sewerage, local roads and garbage collection facilities and setting up the municipalities promptly—all within a period of 2 to 3 years—and then reselling the land to the public and private sector—industry and people. On the difference between the initial purchase price and the subsequent sale price, the public authority could make two major gains :

- (i) The profits of site development; and
- (ii) The gains through passage of time.

6. These gains could be used for various purposes, such as strengthening the municipalities, providing social and civic amenities—clinics, schools, training centres, etc.—and for multiplying the self-same ventures in other places. If the public authority makes non-speculative purchases continuously, withdraws lands for short periods and continuously puts these back into the land market, there need not be an inflation of real estate prices. In that case, the costs and rents of houses would be small. Land acquisition and development should not be undertaken indiscriminately. Care should be taken to ensure that valuable fertile agricultural lands are not acquired to meet the growing demands for land by the urban population.

7. The Slum Improvement Programme has to be expanded manifold and has to address itself to providing security of tenure to the dwellers so that they develop a stake in maintaining and improving their habitat. Provision of infrastructural services of reasonable quality and adequate civic amenities coupled with widespread green belts would ensure safe and healthy environment. However, the provision of healthy environment is a more complex socio-economic, political, cultural and human problem to be solved through a range of responses : education and awareness to motivate the individual, and community organisation to promote collective and cooperative group action.

8. The most crucial need in housing development is a quantum multiplication of institutions for housing finance and construction. The strengthening of the existing institutions like HUDCO and HDFC and the creation of new institutions like Housing Cooperatives and Building Societies would be necessary. There would have to be enlarged financial provision for all those institutions by enabling them to raise deposits from the market as well as to borrow from it through government guaranteed housing bonds etc. It is essential that an individual or an organisation should be able to put in a limited saving with a building society, a cooperative housing society or some other institution, obtain the house and continue to save and make payment for the next few (say, 15 or 20) years.

9. All sectors of the economy—the government sector, the public corporate sector, the private corporate sector, the cooperative sector and the household sector—would have to coordinate their efforts in fulfilling the housing needs. Large housing programmes should be encouraged to be launched by the government sector, both Central and State, the corporate public sector and the corporate private sector.

10. In a country with housing shortage, rent control and land price control legislation is necessary. But inequitous legislation which prevents the house-owners from maintaining and expanding the housing stock and does not encourage the tenants to build their own houses, actually perpetuates the housing shortage. It would be necessary to adjust the laws so as to protect the tenants for specified periods, encourage them to build a house for themselves, give incentives to house-owners for maintenance and expansion of housing and simultaneously enhance the receipts of property taxes (for the municipalities) and of taxes on income and wealth. Similarly, urban ceiling legislation would have to act as a force for balanced housing expansion and for intensive use of land rather than as a restrictive force and an instrument of fear and corruption.

11. It is not necessary that all housing should extensively use the inputs in short supply like steel, cement, aluminium, glass etc. Housing investment could be planned to be based on local material. But whatever material is to be used in housing would have to be provided adequately and abundantly in the National Housing Development Plan. New technologies including prefabricated structures would have to be considered extensively and the inputs required for these provided in the national plan. It is not necessary at this stage of India's development that all houses should have a long life of 200 years or so. Very durable structures can be considered at a later stage, when urban life emerges as a settled phenomenon.

12. Even when the government acquires land for laying down infrastructures, the cost of land should be eventually recovered in a phased manner. To the poorer sections of the community, land could be allotted by the government at its own cost or with a substantial subsidy, putting a relatively small burden on the low income allottee of the house site. In general, the rules should be that the government recovers the full cost of land and the full cost of the infrastructure except in the lowest income brackets—both rural and urban. As we go up the income ladder, the proportion of subsidy should decline and finally vanish.

13. As an essential feature of the National Housing Development Plan, it would be necessary to divide the country into appropriate housing zones based on (a) local climatic conditions, (b) local culture, and (c) local availability of materials. Such a plan could be prepared by the National Buildings Organisation (NBO) or some other agencies. For each housing zone and within each zone for different income levels, typical house plans would have to be prepared as guidelines. These house plans will be optimised plans, featuring the lowest cost of production under the circumstances prevailing in each zone. These optimised housing plans would only be indicative in character and intended to serve as guidelines.

Water Supply and Sanitation

Rural Water Supply and Sanitation

14. During the Sixth Plan period, a massive programme for providing drinking water facilities in the rural areas was undertaken under the MNP and, with the help of grants from the Central Government, under

ARP. More than 80 per cent of the 2.31 lakh villages identified as "problem villages" at the beginning of the Sixth Plan are expected to be covered by the end of the Sixth Plan period. The remaining "problem villages" would be covered in the first instance during the Seventh Plan period. Further every effort would be made to provide adequate and safe drinking water facilities to every habitation so as to cover 100 per cent of the rural population during the Seventh Plan period in keeping with the objective of the International Decade for Water Supply and Sanitation (1981-91).

15. Where necessary, special sources for enabling Scheduled Castes and Scheduled Tribes to obtain access to safe drinking water should be separately provided, if access to community sources provided under the general scheme for drinking water supply to villages is difficult for them.

16. As far as rural sanitation is concerned, at least 25 per cent of the population should be covered by low cost sanitary methods of disposal. Accordingly, low cost sanitation technology will have to be evolved and developed through appropriate R&D.

Urban Water Supply and Sanitation

17. It is proposed to cover 100 per cent of the urban population with piped water supply. Rehabilitation of existing urban water supply systems, wherever necessary, should receive special attention. As regards urban sanitation, 80 per cent of the urban population in all cities and towns is proposed to be covered, including 100 per cent coverage for Class I cities, with sewerage and sewage treatment facilities and low cost sanitation methods in other towns.

Operation and Maintenance

18. Existing arrangements for the operation and maintenance of water supply systems are far from satisfactory. Special attention would, therefore, have to be paid to the operation and maintenance of water supply facilities, especially in the rural areas.

13. Social Welfare and Nutrition

Social Welfare

1. The emphasis in the formulation of social welfare programmes in the Seventh Plan should be on the promotion of preventive and developmental services, as these have proved to be effective and economical in the long run. Institutional services may have to be developed only as a last resort as they are costly and lack the family-like atmosphere. While developing these services, machinery would be geared to enforce the minimum standards of services in the institutions.

2. A sharper focus and selectivity in the programme preparation will have to be adopted in the Seventh Plan in order to put to best use the available limited resources.

3. Child development is the key to human resources development. As a large number of children belong to economically and socially backward population, and are in need of State support, child welfare will have to be given the highest priority. Schemes like public assistance to the destitute and handicapped, elderly persons

and also institutional services will have to be expanded.

4. The surveys of health and nutritional status of children and mothers indicate the enormous potential of the existing programme of 'Integrated Child Development Services' (ICDS) to secure the convergence of basic services for overall early childhood development as a basis for the development of the national human resources. In view of this, the ICDS scheme should be consolidated and expanded on a moderate scale. Distribution of Vitamin 'A', expanded programme of immunisation, and measures for the control of diarrhoeal and respiratory diseases would be introduced as they account for considerable mortality and morbidity rates. Besides, steps would be initiated for reducing the incidence of blindness and orthopaedic handicaps through education and proper intervention. State Governments should gradually take over the responsibility of the programme.

5. The institutional programmes for destitute women and children will have to be linked with vocational training.

6. The Sixth Plan included programmes of education, employment and health for women. Emphasis would therefore be placed on other programmes such as vocational training, personnel policies for women, legislative aspects, mass education to bring attitudinal changes, appropriate technology to reduce drudgery and involvement of women in developmental programmes etc.

7. The four National Institutes, each one for the visually handicapped, hearing handicapped, orthopaedically handicapped and the mentally retarded, which are at different stages of development will have to be made fully operational so as to bring them to a level where they would be able to fulfil the tasks assigned to them at the national level.

8. For reducing the problem of juvenile delinquency and vagrancy, in addition to the effective enforcement of Children Acts, the State Governments would be requested to initiate special steps to organise preventive services such as juvenile guidance units, contact clubs, play centres, parental counselling. Crime and atrocities against women are showing an upward trend. To tackle this problem, the enforcement and institutional machinery would be strengthened throughout the country.

9. Voluntary organisations will have to be encouraged and fully utilised in taking the programmes to the masses. The grants-in-aid rules would be simplified so as to enable deserving voluntary agencies to obtain help from the Central Social Welfare Board and the Ministry.

10. The administrative machinery both at the Centre and State levels, will need to be geared up for efficient planning and execution of welfare programmes. Better coordination between the governmental and non-governmental agencies concerned, namely, the Ministry of Health and Family Welfare, the Ministry of Social Welfare, the Ministry of Education, the Central Social Welfare Board, the State Govern-

ments, the Department of Science & Technology, CART (Council for Advancement of Rural Technology), etc., would be achieved by the creation of suitable machinery at the Centre and State levels. Community involvement/participation would have to be ensured to make the programmes successful. The Government can initiate, catalyse and promote programmes but communities must be prepared to share the responsibility for ensuring support and cooperation.

Nutrition

11. The problems in the field of nutrition are protein-energy malnutrition, particularly among pre-school children, Vitamin 'A' deficiency among pre-school and school children and iron and iodine deficiency. Endemic diseases such as goitre due to iodine deficiency causing mental retardation/cretinism; flourism due to excessive intakes of flourides and lathyrism due to excessive consumption of the pulse *Lathyrus sativus* have to be tackled.

12. Protein-energy malnutrition has been identified as not a mere dietary deficiency disorder, but a result of a number of factors like inadequate and unbalanced food intake, poor living conditions, unsatisfactory hygienic, sanitation and environmental conditions, lack of protected drinking water and lack of primary health care. Therefore, projects with the objectives of raising the standards of living through linkages of welfare services with economic activities will have to be stimulated.

13. The supplementary feeding programmes which aim to combat malnutrition among children need to be integrated with health cover, immunisation and provision of potable water. Persons suffering from severe forms of malnutrition as well as those who are at high risk, need nutritional intervention on a priority basis along with referral services.

14. The delivery of coordinated nutrition and health education, as envisaged in the previous plans, has not been satisfactory and effective. A strategy for imparting nutrition, health and welfare education through mass media and other informed channels of communication would be evolved.

15. Periodic oral administration of Vitamin 'A' to combat blindness due to Vitamin deficiency has been introduced as a prophylactic measure. This programme will have to be stepped up considerably. For this purpose, simple and reliable techniques for determination of the deficiency at the field level will have to be developed and tested.

16. Iron deficiency anaemia is widespread. Iron fortified salt would have to be produced and will have to be distributed through the public distribution system. Supplementation of iron through tablets would have to be taken up, particularly for girls through the ICDS blocks and primary and secondary schools until the fortification of salt is taken up on a wider scale.

17. It is estimated that about 120 million people are at risk from endemic goitre. Distribution of iodised salt and oil would have to be stepped up to extend the present coverage to all endemic areas.

18. New cropping patterns which would make it possible to eliminate Lathyrus pulse have to be introduced in Madhya Pradesh. Banning or phasing out its production by giving incentives for alternative cropping and prevention of adulteration of other pulses with Lathyrus would need to be taken up.

19. Studies would be taken up to determine the impact on the community of de-fluoridation of water in endemic fluorosis areas. Studies are needed on the effect of exposure to high levels of fluoride on the growth and development of children.

20. Consumption of toxins through raw and processed foods is on the increase. There is a need for surveillance on the nature and extent of consumption of these toxins and their harmful effects. Studies would be necessary to determine their physiological role, safe limits of consumption and methods of detoxification.

21. Detailed studies would be necessary to determine the relationship between nutrient intake and work output among heavy manual labourers especially in the agricultural and industrial sector.

22. Extensive research would also have to be undertaken to determine the role of trace elements in the aetiology and pathogenesis of various nutritional disorders.

23. Coordination between the institutions of the Indian Council of Medical Research (ICMR), the Indian Council of Agricultural Research (ICAR), Agricultural Universities and Laboratories, the Council of Scientific and Industrial Research (CSIR) and DST would have to be established to collect data for nutrition monitoring and surveillance.

14. Women and Development

1. In the Seventh Plan, it will be necessary to give an added impetus to the ideas and efforts initiated during the Sixth Five Year Plan for the development of women. An integrated, multi-disciplinary, developmental approach will have to be adopted covering employment, health, family planning, education, nutrition, application of science and technology, economic and social development of women. This would require an effective coordination of the sectoral programmes at the block, district, state and central levels.

2. The basic approach would be to enable women to acquire confidence in themselves and their capabilities and develop a sense of responsibility towards the overall betterment of the society and their individual personalities. An awareness of these aspects has to be created amongst women as well as men. In order to achieve this, efforts have to be directed at economic advancement, granting rights to economic resources, co-sharing of assets, social emancipation and development of a sense of advancement as a group. For propagating these concepts and creating the right type of awareness, important instruments that may be used are : the radio, television, educational institutions, Mahila Mandals, and voluntary agencies. The educational programmes will have to be restructured to remove the stereotyped images of women. Spread of knowledge about social legislation will have to be

given high priority. New areas for providing suitable employment to women have to be identified.

3. Measures for increasing the enrolment of girls in primary education and for reducing drop-outs would have to be expanded and strengthened. Special efforts will have to be made to reduce maternal mortality rates and lowering the incidence of anaemia.

4. It would be advantageous to associate home science colleges and other institutions for girls with the implementation of these programmes. Agencies such as ICAR, ICMR, DST, CSIR and other departments who are implementing Science & Technology programmes for women should also be closely associated with these programmes.

5. Collation and analysis of information and relevant data on the developmental programmes for women will have to be undertaken for making them effective.

15. Development of Scheduled Castes and Scheduled Tribes

Development of Scheduled Tribes

1. The strategy of the Tribal sub-Plan comprising identification of Integrated Tribal Development Projects, earmarking of funds, formulation of appropriate policies and programmes will have to be consolidated and intensified for 75 per cent of the scheduled tribe population already covered by it during the Sixth Plan period. The remaining ST population, being widely dispersed and scattered, can best be taken care of by general development programmes including IRDP. Programmes for tribal concentration pockets already identified and for primitive tribal groups should be carefully formulated and executed. Anti-exploitation measures and legislation should be enforced strictly.

2. The planning process in tribal areas will have to be a mix of beneficiary-oriented, infrastructure and human resource development programmes. The orientation of planning towards beneficiary-oriented programmes should be accentuated, with stress on such infrastructure development schemes as support beneficiary-oriented programmes. Families should be clearly identified and entered in the Vikas Patrika, Human resource development should figure in the Tribal sub-Plan. The overall objective would be assisting 50% of ST families to cross the poverty-line including those that spill over from the Sixth Plan target. Special schemes for ST women will need to be taken up.

3. Capital-intensive sectors like large and medium industries, roads and bridges, mining, power, road transport will have to be given lower priority than hitherto. The emphasis should be on drinking water supply, general education, technical education and health among social service sectors. Sectors like minor irrigation, soil and water conservation, cooperation and land reforms which support beneficiary-oriented programmes should receive attention. Productivity in production sectors like agriculture, animal husbandry, fisheries, forest and small village and cottage industries should be promoted.

4. Tribal families displaced as a result of establishment of projects and schemes in tribal lands and areas should be rehabilitated, and equipped with skills and/or assets.

5. The quality of implementation, supervision, monitoring and evaluation of the programmes should be improved with appropriate administrative structure and personnel policies for tribal areas. Measures and legislation will need to be strictly enforced. The representation of the beneficiary-participants in both the formulation and implementation stages of plans involving development of tribals should be ensured, with due representation given to the weakest groups among them. Wide publicity should be given in the local language so that tribals become aware of policies and programmes meant for them.

6. The mechanism for earmarking of funds from Central and State Plans for tribal development needs review for ensuring adequacy as well as purposeful utilisation and to see that the quantified benefits are in fact actually delivered to the target groups and families.

Development of Scheduled Castes

7. The strategy of Special Component Plan for development of scheduled castes aiming at their economic and educational development and bringing about improvement in their working and living conditions should be geared up and intensified. The thrust of the programmes should be on (a) economic development through beneficiary-oriented programmes for raising their income, (b) Basti-oriented schemes, (c) elimination of scavenging, (d) educational development and (e) administrative and personnel reforms. 50% of SC families living below the poverty-line should be enabled to cross the poverty-line through anti-poverty programmes.

8. Adequate per family investment and strong back-up services, linkages, training and skill formation coupled with asset management, and subsidies where necessary, should be part of the programmes for meeting this objective. The village cluster approach will continue. Irrigation projects should be so located as to serve lands of scheduled castes in compact blocks. While continuing to improve the existing scheme of educational development, a scheme for payment of compensation for opportunity cost or loss of earnings of a child on account of school going should be introduced.

9. Essential facilities for scheduled caste Bastis like drinking water, drainage, street-lighting, link roads, health institutions, primary and adult education institutions, where lacking, will have to be provided, including in those Bastis forming a separate quarter of a village and lacking such essential facilities. New housing colonies, wherever they are put up as part of general construction, should not permit such segregation, and wherever the facilities are created in villages generally, these should be located ab initio in the scheduled caste part of the village itself.

10. The degrading practice of scavenging should be eliminated through an accelerated drive for conversion

of dry-latrines into water-borne latrines. Rehabilitation of those displaced on this account should be effected through provision of employment, imparting of skills etc.

11. For scheduled caste families in urban areas, self-employment schemes and schemes for endowing them with assets where they are assetless, should be given importance and institutional finance should take cognisance of the requirements of those wishing to benefit from such self-employment schemes.

12. Involvement of representatives of beneficiary-participants will need to be ensured both in the formulative and implementational phases, giving due representation particularly to the weakest groups, e.g., the landless and the indigent. Appropriate administrative structure and personnel policies will need to be evolved to speed up development of scheduled castes. The quality of implementation, supervision, monitoring and evaluation will require improvement. A mechanism for ensuring that adequate outlays from the Central and State Plans are earmarked for development of scheduled castes should be evolved.

13. In the matter of reservations, particularly in educational institutions and public services, the question of building in an economic criterion should be examined.

16. Hill Areas Development

1. The basic needs of the hill communities will have to be kept in the forefront in the formulation of programmes in this sector. These will include energy, fodder, water supply, education and health. Alternative forms of energy should obviate the big draft on forests for fuelwood. Particular attention will have to be paid to relieving women and children of the interminable drudgery in the hills.

2. Beneficiary-oriented programmes on community and individual basis should be emphasised.

3. In all the hill area programmes, particularly in water-shed management, active involvement of people will be crucial for success. Local manpower will have to be trained in new scientific and technological skills.

4. Hill area development programme should emphasise harmonisation of socio-economic growth with eco-restoration, eco-preservation and eco-development. This implies consideration of ecological aspects while formulating policies, programmes and schemes. The basic life-support system should be strengthened for furtherance of optimal and long-term human activities, recognising the complementarity of the hills and plains.

5. For this purpose, water would be the principal catalyst and so the watershed management approach should be adopted. Micro-watershed management will need to be integrated into the larger macro-watershed management. Hydrological functions of catchments will need to be strengthened.

6. Catchment and watershed management should concentrate on harnessing of the natural resource endowment like water, soil, forest, minerals and biological resources, alongwith development of human resour-

ces. Action programme for development of these resources should be expressly formulated in the form of well-knit, integrated and well-proportioned sectoral programmes preferably on a decentralised basis.

7. Large human settlements and large projects (particularly capital intensive projects) which have adverse and often irreversible impact on the ecology and environment of hill areas, should be appraised with extreme care before being permitted.

8. The required infrastructure for maintenance of human communities in hills needs to be appropriately scaled, e.g., micro-hydel energy and other decentralised forms of energy reaching communities through short transmission lines on cluster basis, a network of feeder roads, bridle paths, foot bridges, etc. Where roads are inescapable, road building technology should take adequate note of the environmental aspects.

9. In order to reduce the demand for soft wood obtained from forests for packing material, use of substitute materials through appropriate pricing and fiscal measures should be promoted. Similarly, substitutability of other products derived from forests should be explored through R&D.

10. Evolution of appropriate technology, R&D and scientific inputs would be necessary for harnessing of natural resources and land-use on decentralised basis. Since there is paucity of knowledge and data-base of geo-physical, biological and human aspects of hill areas, special surveys and studies should be conducted on a multi-disciplinary basis.

11. For purposes of planning, hill areas have come to be recognised as separate physio-geographic entities, falling broadly into two categories (a) those which form part of a State like U.P., Assam, West Bengal, Tamil Nadu and (b) those that are co-extensive with boundaries of the States and Union Territories like Himachal Pradesh, J&K, Sikkim, Arunachal Pradesh, Mizoram, etc. For the former category, a sub-Plan approach has been followed. But for the latter, it is necessary to devise a suitable mechanism to ensure that the strategy and approach evolved for development of hill areas is followed. Well-conceived criteria to demarcate hill areas will have to be evolved.

17. Science and Technology

1. As a result of emphasis given to the S&T sector, and investments made in it, a fairly large infrastructure has been built since independence. In many areas, Indian scientists have demonstrated that they can accomplish end-objectives on a self-reliant, highly endogenous basis, provided these are clearly defined.

2. There should be a definition of national goals in the major socio-economic sectors and a corresponding derivation of S&T needs to meet those, from which S&T missions, tasks, areas of thrust, building up of infrastructure and competence would emerge. All large investments on the S&T in the Seventh Plan would be related to these. Since the S&T efforts should by and large be integrated with the socio-economic development, appropriate linkages would have

to be established between research laboratories, research in educational institutions, public sector undertakings, industry and other user organisations.

3. The main emphasis in the approach would include :—

- (i) Identification and accomplishment of technological missions based on the national priorities defined for the S&T sector;
- (ii) Creation of new institutions and centres of excellence in carefully identified areas and around individual scientists or groups of out-standing merit; growing and nurturing excellence in science and technology activities;
- (iii) Identification of an illustrative list of thrust areas in which indigenous capability will have to be developed for basic self-reliance and also indicative list of thrust areas in which the science and technology agencies will carry out both basic and applied research;
- (iv) Special programmes on science & technology for rural development reducing regional imbalances through science and technology;
- (v) Special S&T programmes for weaker sections as well as for women, young scientists, retired scientists etc.
- (vi) Involvement of voluntary agencies in several field level S&T programmes and providing adequate support to them for carrying out the application oriented S&T tasks;
- (vii) Popularisation of science and development of scientific temper to make sure that S&T will reach the grass root levels;
- (viii) Development of science and technology in the States, especially related to the programmes of relevance to the States;
- (ix) International collaboration in science and technology and optimal and meaningful utilisation of foreign technical assistance; and
- (x) The introduction of the concept of Zero-based budgeting in the S&T sector.

4. Maximum effort would be made to ensure that Science & Technology appear as an essential and integral part of major socio-economic sectors, such as agriculture, irrigation, coal, petroleum, power, renewable sources of energy, transportation, chemicals, fertilizers, engineering industries, electronics etc. Science and Technology is equally relevant in areas such as village industries, rural development, employment generation etc. These sectors in which the major plan investments are made and on which the GNP, growth rate, per capita national income all depend, are dealt with in various Ministries/Agencies of the Central Government and by the State Governments. They have invariably concentrated on immediate short-term implementation aspects and corresponding investments, production, returns etc; certainly a great deal of effort should go into the efficient

implementation of these operational aspects. The point that needs to be made is that if the S&T aspects are also adequately covered then, as stated in the Scientific Policy Resolution, we can make up for deficiencies in natural resources, reduce the demands on capital, increase efficiency, productivity and quality etc. For this it is essential that in each one of these sectors the existing S&T component, the needed S&T component (for generation of know-how) absorption of imported know-how and its adaptation and improvement etc., investments needed for this purpose, technology forecasting and assessment in the area and various other such factors contained in the Technology Policy Statement are clearly defined.

5. As far as investment in S&T is concerned, it has gone up steadily from the first Plan period from Rs. 20 crores to Rs. 3367 crores in the 6th Plan. Of the total amount under the head "S&T" in the country, about 80% is spent by the Central Government and the remainder 20% by the State Governments and industry. Of the expenditure by the Central Government, 80% is taken up by Agriculture, Atomic Energy, Space, CSIR, DST and Ocean Development. Roughly, only 20% of the Central allocation or about 15% of the national expenditure on S&T is used for S&T in all of the earlier cited important socio-economic sectors. If S&T is to play a role in national development it cannot do so by being a fringe element, but only if it is an essential component in all these major socio-economic sectors and appropriate investments for this are made.

6. There is already a certain infrastructure existing for S&T in the country, in various scientific agencies/institutions, various Ministries/Departments, educational institutions etc. It is important to consolidate and modernise the existing capabilities to the extent they are relevant to the future. Funds have to be provided in the Seventh Plan for the purpose of utilizing fully already created capabilities. Modernization would include replacement of old equipment by contemporary items, provision of appropriate amenities and facilities for scientists which are lacking, providing for modern infrastructure facilities (such as stabilized power, low temperature equipment, etc.). In turn, it would be incumbent on S&T institutions and agencies etc. to discard activities and investments which are unproductive or likely to be so in the future and ensure that resources such as financial, manpower facilities etc., are diverted to relevant programmes in the Plan. Immediate reviews need to be conducted for this purpose.

7. There are areas like information systems development, national natural resources management systems (through application of remote sensing techniques), development of integrated energy systems using conventional and non-conventional sources, etc., which have to be implemented expeditiously in the Seventh Plan. With the fast changing pace of developments in S&T the world over, several new areas have emerged. In such areas there is an imperative need to grow the necessary competence and skills. Such areas include micro-electronics, biotechnologies, oceanography, etc. Apart from investments on

modernization and accomplishment of national S&T tasks, the emerging areas in S&T have to be nurtured and a certain level of competence built up early, in the Seventh Plan itself. However, the manner of developing such areas, administrative and other responsibilities for these, extent of funding etc., have to be decided on a national basis. This would represent another change in approach from the past practice, whereby individual organisations undertook such initiatives and decisions on their own through internal decision making processes. This often led to fragmented sub-critical capabilities.

8. Nucleating and supporting Centres of Excellence, developed around individual/groups of scientists of calibre in selected areas, should receive considerable attention in the next Plan. The creation of such Centres would go a long way towards retaining some of the cream of the scientists produced by our educational institutions within the country; this would have a tremendous impact on confidence, capability and morale of the scientific community as a whole.

9. About half of the total national plan outlay is in the State sector. On the other hand, only about 8% of the total S&T outlay comes from the State sector. Even this has been largely for agricultural universities' extension work and education. It is clear that at present there is very little support for S&T in the State sector. The expectation presumably is that the Centre will carry out all that is necessary for S&T (which may regard as compartmentalized like defence) and the States can derive benefits from this. This is so in certain sectors where major work on a centralized basis finds appropriate application throughout the length and breadth of the country. But in many sectors the States have a major responsibility to play, since they have State Plans which they have to implement. S&T must constitute an integral part of these plans. In these, the S&T tasks should be clearly defined. Also, in order to be able to interact with S&T at the Centre, there is need for capabilities within the State. Through State Councils on S&T, State Departments of S&T etc., the States should utilise to the maximum extent existing resources in the educational, scientific engineering and other system in the States including that of various Central agencies.

10. In a similar fashion, there has to be commitment of industries with regard to the area of R&D. An allocation of about 10% of the sales turnover could be considered as appropriate expenditure on R&D. This will involve not only R&D done within the industry, but sponsored outside. It must be made compulsory to have statement on S&T efforts by industry in every Annual Report.

11. The Technology Policy Statement would be one of the cardinal points around which the S&T plan would be built and implemented in the 7th Plan as well as the Perspective Plan. In every sector, an attempt would be made to take up technology development, transfer, adaptation, adoption, utilisation etc. as enunciated in the policy guidelines of the Technology Policy Statement.

18. The Environment

1. The need to sustain and accelerate our national development in a dynamic, rational and equitable manner in harmony with environment has brought into sharp focus the integrative aspects of planning processes and strategies. India is fortunate in the richness of its natural resources, hospitable climatic conditions and abundant sunlight, fertile soils, plentiful fresh water, minerals, fuels and—not least—the abundance and diversity of its living resources. Adequately managed these and other resources can meet high levels of material needs, now and for all times to come. The degree to which a nation can prosper depends on its productivity, which is the efficiency with which it is able to utilise the resources of the environment to satisfy human needs and expectations. If the gains in productivity are to be sustained, resources must also continue to be available over time. This requires that, while providing for current needs, the resource base be managed so as to enable sustainable development.

2. The patterns of development and resource utilisation vary from society to society; and within each society, from time to time. Each generation defines and selects the development options most suited to its needs, wants and aspirations; and to be able to do so, it must have these options open to it and be able to exercise them. If development is to be sustainable and is not to foreclose options which might be desired by present and future generations, the methods of socio-economic planning must be expanded to include the conservation of resources through a process aimed at their rational management to maximise their usefulness and availability over time. Rational resource management must, then, be made an integral part of the planning process, and now be placed on par with social and economic considerations. Conservation of resources requires not only the application of knowledge and technology, but also new management techniques, institutional mechanisms and levels of public awareness, all of which are in need of innovative and imaginative approaches. Current prices and costs of resources—or even those estimated with present methods—do not always reflect the actual value that these resources will have over time, particularly in times when their availability is rapidly changing and is subject to exponential depletion, sudden contamination or the unpredictable vagaries of international trade and politics. Planning models based simply on price and quantity relationships, however sophisticated the adjustments for “externalities” have thus to be supplemented by the introduction of probabilistic risk-benefit analysis to ensure that the national economy does not become unacceptably vulnerable to sudden changes in the price or availability of a given resource.

3. The growth of social and technological complexity has resulted in further increasing the linkages between the various sectors of the economy. Many of these linkages are resource based, resulting from the existence of competing or complementary potential uses of each resource. It is no longer sufficient to plan independently for each sector: rational resource management requires a holistic view of the

present and future demand for resources by all sectors of the economy.

4. The continual reordering of societal objectives, and constant innovation of technology make it possible for planners to explore and choose from a far wider array of options than they had perceived as possible in the past. Indeed, the introduction of environmental concerns opens many more new opportunities for human fulfilment than those closed by its apparent constraints. Conservation issues have to be incorporated into the plans for each development activity. This in turn implies the need to establish policy and institutional frameworks capable of introducing the concerns of conservation into the development planning process.

Natural Living Resource Conservation

5. During the Seventh Plan period, a National Conservation Strategy will be formulated to ensure that the goals of sustainable development are met in the future. In this process the ministries and agencies of the Central and State Governments will build up their capacities to incorporate environmental concerns at all levels of their activities. Research, monitoring and enforcement facilities will be strengthened to ensure implementation of the policies and programmes resulting from the Strategy. Biosphere Reserves in different biogeographic regions will be established as they are critical to long-term conservation of our different eco-systems as also of floral, faunal and micro-organism diversity.

6. Non-governmental organisations, voluntary bodies and the private sector will be encouraged to take an active role in this effort. Appropriate corporate fiscal incentives and individual rewards systems will be established to achieve this goal. State Governments will also be fully involved. Mechanisms including administrative structure with the appropriate information flows and allocations of responsibility are being established to facilitate inter-sectoral coordination and to enable the five year Plans to mesh fully with the needs of the longer term.

7. Because of their comparatively recent origin, environmental concerns need a renewed emphasis in the education systems and information media of the country to help inculcate the changes in ideas, attitudes and life styles which will be necessary amongst the public on the one hand, and to motivate administrative personnel on the other. For the same reason the development of manpower to deal with the multi-disciplinary, multi-sectoral issues of resource management will be an important part of the planning process.

8. The main programmes would include: development of instrumentation, equipment and institutional facilities for environmental monitoring, pollution control and waste management; and establishing institutional mechanisms for regulation of import, manufacture and use of hazardous substances. Formulation and follow up of environmental guidelines for siting of industries, mining operations, power generation

and other projects would be taken up as also the setting up of organised systems. On-going schemes for establishing a network of *Environmental Information Systems (ENVIS)* through Distributed Information Centres (DICs) in selected subject areas and bio-geographic regions will need to be identified.

9. Intensification of the Eco-Development Programmes would be taken up through Task Forces and launching large scale projects such as mined area reclamation, environmental improvement in metropolitan settlements, hill resorts and pilgrimage centres, restora-

tion of selected ecosystems, management of inland water bodies, aerial seeding for afforestation, coastal region development and watershed management.

10. The programme of environmental research promotion (ERP) with particular emphasis on action oriented coordinated projects would be further strengthened.

11. In addition to the above mentioned areas, aspects relating to international cooperation and environmental policies and law would also be dealt with.

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