Economic Reforms in India: Pro-poor Dimensions
Health, Agriculture, Services and Infrastructure

Sujata Singh
Aasha Kapur Mehta
R.K. Tiwari
assisted by Vineeta Kanwal and Suparna Das

Series Editors:
Aasha Kapur Mehta, Pradeep Sharma
Sujata Singh, R.K. Tiwari
2006
Acknowledgments

The authors would like to express their gratitude to Indian Institute of Public Administration (IIPA) and United Nations Development Programme in India (UNDP) for all the support provided. Seven institutions were engaged in preparing the reports on which this synthesis paper is based and their contribution and collaboration are very gratefully acknowledged. The seven institutions are Centre for Multi-Disciplinary Development Research (CMDR); The West Bengal National University of Juridical Sciences (WBNUJS); National Institute of Public Finance and Policy (NIPFP); National Council of Applied Economic Research (NCAER); National Institute of Urban Affairs (NIUA); The Energy and Resources Institute (TERI); and National Law School University of India (NLSUI).

Suparna Das and Vineeta Kanwal, Research Officers at IIPA, provided immense support in editing the papers in this series. Valuable research assistance was provided by Shruti Sharma, Ritu Elwadhi and Sudeshna Malik (at the initial stage of the project).

Pradeep Sharma, Assistant Resident Representative and Neeraja Kulkarni, Programme Officer, UNDP contributed significantly to the smooth completion of the project. The authors have benefited immensely from comments on an earlier draft by Dr. Pradeep Sharma. Encouragement and support provided by Dr. P. L. Sanjeev Reddy, Director, IIPA, are gratefully acknowledged.
# Table of Contents

- Foreword
- Executive Summary
- 1 Introduction
- 2 Poverty in India: Key trends
- 3 Health, Poverty and Reforms
- 4 Globalization of Agriculture and its Impact on Poor Farmers
- 5 Infrastructure, Credit, PDS and Governance Related Issues
- 6 Policy Conclusions
- References
## List of Tables, Boxes and Figures

### List of Tables

<table>
<thead>
<tr>
<th>Table Number</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Incidence of Poverty in India – Percentage of Population and Number of People Below the Poverty Line 1973-74 to 1999-2000</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>Incidence and Concentration of Income Poverty in Selected States of India</td>
<td>4</td>
</tr>
<tr>
<td>3.</td>
<td>Income Mobility of the Households across Poverty Status</td>
<td>4</td>
</tr>
<tr>
<td>4.</td>
<td>Plausible ‘Drivers, Maintainers and Interrupters’: an Initial Identification</td>
<td>5</td>
</tr>
<tr>
<td>5.</td>
<td>Time Trends (1951-2000) in Health Care</td>
<td>7</td>
</tr>
<tr>
<td>6.</td>
<td>Selected Health Indicators: India and China</td>
<td>8</td>
</tr>
<tr>
<td>7.</td>
<td>Disease-specific Morbidity Rates for Selected Diseases from NSS 28th and 52nd Rounds</td>
<td>10</td>
</tr>
<tr>
<td>8.</td>
<td>Public Expenditure on Health, Disaggregated</td>
<td>11</td>
</tr>
<tr>
<td>9.</td>
<td>Health Spending in India and Comparator Countries</td>
<td>12</td>
</tr>
<tr>
<td>10.</td>
<td>Pattern of Public Expenditure on Health Care</td>
<td>13</td>
</tr>
<tr>
<td>11.</td>
<td>Facilities and Infrastructure Inputs in the Health Sector: All India Level</td>
<td>14</td>
</tr>
<tr>
<td>12.</td>
<td>Infrastructure for Primary Health Care</td>
<td>14</td>
</tr>
<tr>
<td>13.</td>
<td>Shortages in Primary Health Infrastructure</td>
<td>15</td>
</tr>
<tr>
<td>14.</td>
<td>Physicians and Hospital Beds</td>
<td>15</td>
</tr>
<tr>
<td>15.</td>
<td>Shortages in Manpower in the Primary Health System</td>
<td>15</td>
</tr>
<tr>
<td>16.</td>
<td>Differentials in Health Status among States</td>
<td>18</td>
</tr>
<tr>
<td>17.</td>
<td>Differentials in Health Status among Socio-economic Groups</td>
<td>19</td>
</tr>
<tr>
<td>18.</td>
<td>State Level per Capita Health Expenditure 2003-04</td>
<td>19</td>
</tr>
<tr>
<td>19.</td>
<td>Distribution of Public Health Subsidies in India, 1995-96</td>
<td>19</td>
</tr>
<tr>
<td>20.</td>
<td>States Ranked by Ratio of Shares in Public Health Subsidies, 1995-96</td>
<td>20</td>
</tr>
<tr>
<td>21.</td>
<td>Hospitalized Cases by Social Groups under Different Sources of Treatment (Percent)</td>
<td>22</td>
</tr>
<tr>
<td>22.</td>
<td>Comparative Picture of Indian and Other Developing Country Prices - Before Introducing Product Patenting</td>
<td>27</td>
</tr>
<tr>
<td>23.</td>
<td>Prices of Zantac for the Year 1999</td>
<td>27</td>
</tr>
<tr>
<td>24.</td>
<td>Introduction of New Drugs and Relative Prices of Patentable Drugs in India</td>
<td>28</td>
</tr>
<tr>
<td>25.</td>
<td>Price Increase in Some Selected Drugs Unlisted from DPCO, 1995</td>
<td>29</td>
</tr>
</tbody>
</table>
27. Selected State-wise Distribution of Ceiling Surplus Land in India (31.03.2004)  37
28. Exports of Principal Commodities  47
29. Imports of Principal Commodities  47
30. Present Status of Accessibility of Villages by All-weather Roads  64
31. Annual Damage Due to Natural Disasters for the Period 1985-2001  81
32. Comparison between Sarbanes-Oxley and Indian Corporate Governance Structure  92

**Boxes**

1. Regulatory Levies  67

**Figures**

1. Kinds of Diseases across the States (percent)  9
2. Sources of Finance for Inpatient Treatment in the Selected States (percent)  10
3. Urban and Rural Tele-density  66
UNDP is the UN’s global development network, advocating for change and connecting countries to knowledge, experience and resources to help people build a better life. We are on the ground in 166 countries, working with them on their own solutions to global and national development challenges.

UNDP places people at the centre of development and believes that the basic purpose of development is to enlarge people’s choices. Almost all of UNDP’s work involves “capacity development” – helping programme countries improve their own ability to respond to the challenges they face. UNDP’s work, globally and in India, revolves around the following areas or “practices”: democratic governance; poverty reduction; crisis prevention and recovery; energy and environment; and HIV/AIDS.

The UNDP-supported Economic Reforms Programme was embarked upon in 1999 under the Country Cooperation Framework – I (CCF-I; 1997-2002) in collaboration with the Department of Economic Affairs, Ministry of Finance, Government of India. The CCF-I focused on growth with equity, with poverty alleviation and human development as its central concerns, and programmes were developed under four broad thematic areas: employment and sustainable livelihoods; access to basic services; management of development; and sustainable development.

The Economic Reforms Programme was developed under the thematic area of “management of development” with the intention of supporting policy research and activities to advance the reforms agenda, bearing in mind that institutional reforms to improve efficiency and strategies to significantly accelerate human development progress are needed. These areas/issues included: (i) legal reforms in the context of globalization, (ii) health care in the context of fiscal reforms, (iii) urban infrastructure and municipal financing, (iv) capacity development for management of energy sector in the context of economic reforms, (v) policy analysis and benchmarking of quality standards for the infrastructure sector, and (vi) capacity building of concerned ministries to deal with the reform agenda of the Government.

Action research to examine the above issues was undertaken by seven implementing agencies: National Council for Applied Economic Research (NCAER), The Energy and Resources Institute (TERI), National Institute of Public Finance and Policy (NIPFP), National Institute of Urban Affairs (NIUA), The West Bengal National University of Juridical Sciences (WBNUJS), National Law School of India University (NLSIU) and the Centre for Multi-Disciplinary Development Research (CMDR).

Further, the Indian Institute of Public Administration (IIPA) has carried out the task of editing a series of
documents that capture the essence of the detailed and valuable findings from this project, while also bringing out the pro-poor aspects of the action research conducted.

This paper provides a brief overview and a “synthesis” of the findings of the range of issues the Economic Reforms Programme attempted to explore, and the policy implications of the same. We hope it will be a useful contribution to the ongoing discourse on pro-poor economic reforms.

Dr. Maxine Olson
UN Resident Coordinator & UNDP Resident Representative
The Government of India (GOI) introduced economic reforms in mid-1991. The reforms were triggered by a balance of payments crisis combined with the need to correct an unsustainably high fiscal deficit. The reforms package included the abolition of industrial licensing for most industries, liberalisation of rules pertaining to foreign direct investment and foreign technology agreements, disinvestments, privatisation, financial sector liberalisation, private investment in infrastructure and reduction or removal of restrictions on trade. The purpose was to enable increased economic growth and efficiency through reduction in controls and restrictions and roll back of the state. The assumption was that this would lead to significant economic growth, which in turn would, through the trickle down effect, lead to poverty reduction. While poverty has declined, strategies to significantly accelerate progress on human development and access to infrastructure and basic amenities continue to be a priority.

The GOI-UNDP Economic Reforms project supported policy research in several areas. These included legal reforms in the context of globalisation to render laws and regulations pro-poor, while reducing transactions costs for economic efficiency; macro effects of economic reforms on the health sector and identification of measures to strengthen delivery of health services under the reforms package; reforms of infrastructure sectors with a special focus on designs and practices of regulatory systems, pricing, user charges and benchmarking; and municipal debt, a pricing system for municipal infrastructure provision and creating an enabling environment for private sector investment in infrastructure provision. This paper is based on the findings of over 50 reports that have been prepared as part of this project.

executive summary:

Health Sector

The performance of health care services has remained far from satisfactory as indicated by the unacceptably high mortality and morbidity rates. The health related targets and goals outlined by the Millennium Development Goals (MDGs) and the Tenth Plan are unlikely to be achieved. Diseases like diarrhoea, pneumonia, TB, malaria and HIV/AIDS, which can be prevented, continue to take a heavy toll. Financial allocations to meet these challenges have declined. The survey conducted by CMDR (Centre for Multi-Disciplinary Development Research) in the states of Karnataka, Maharashtra and Orissa, shows that economic reforms in India have led to structural shifts in the fiscal frameworks of states at different stages of development. The severe cuts in public expenditure on the social sector in general and the health sector in particular can be seen as a direct outcome of economic reforms. These studies also indicate disparities in location as well as access to health facilities between rural and urban areas and between better and poorly performing states, as also between better off and more vulnerable sections of society.
For sustainable improvements in health indicators, public expenditure allocations for health need to be significantly increased. At the same time special efforts need to be made to ensure its translation into improved health infrastructure and effective health service delivery. India needs to learn some lessons from countries like China, Sri Lanka and Russia where expenditure on public health did not decline in the post reforms period. Health infrastructure and the provision of safe drinking water and sanitation should receive priority. Though the National Health Policy 1983 hoped to provide “health for all” by the year 2000, financial resources and public health administrative capacity have fallen far short of what was necessary to achieve such an ambitious goal.

The provision of a health insurance plan for the poor has to be seriously examined. Several options could be considered including CMDR’s experiment in Karnataka based upon the partially subsided health insurance scheme covering all the households in the village or the Rogi Kalayan Samiti experiment in Madhya Pradesh.

Problems facing the drug industry have a direct impact on the cost of health care services, especially in view of the TRIPS agreement. Special attention needs to be paid to R&D activity and the Indian systems of medicine. It is equally important to protect the poor from the increase in drug prices as a result of introduction of product patents.

**Agriculture**

In 1995 India became a signatory to the WTO Agreement on Agriculture (AoA). There is a growing concern that agricultural trade liberalisation could have far-reaching consequences on India’s food security. Behind this concern is the fear that trade liberalisation and the greater integration of Indian agriculture into world markets through the lifting of restrictions on imports and exports would lead to cheap imports, thereby threatening food security.

The Agreement on Agriculture, which brings under its purview the entire gamut of agriculture, restricts the member nations from evolving agricultural policies that suit their national interest. These include issues like agricultural support and input subsidies for achieving self-sufficiency in food; restrictions on imports to protect domestic agriculture; and market intervention, where necessary, to ensure supplies to the consumers.

A member has to reduce its total tariff every year over a prescribed period of time. The time frame laid down is 1995-2000 for developed and 1995-2004 for developing countries. The tariff levels on various agricultural products during these years are included in the schedule of the Member and are binding. The guidelines on modalities prescribed an average total reduction of 36 percent (24% for developing countries) over the implementation period, with the condition that there be a minimum reduction of 15 percent (10% for developing countries) in each tariff line.

The impact of globalisation on agriculture needs further examination since it employs 60 percent of our workforce and because 78 percent of the country’s farmers fall in the small and marginal category. Agricultural practices in India have mainly evolved from traditional methods employed by the poor farmers. Hence, the legal implications flowing out of WTO agreements need to be closely scrutinised. This is especially important in the context of corporate control over seeds. The rights of farmers, indigenous people and local communities over plant varieties developed by them will have to be protected. Far from withdrawing, the government will have to play a more proactive role. At the same time it is important to introduce transparency in decision making. The global interface dominated by myriad international treaties and agreements needs to be closely examined. A number of laws need to be consolidated, clarified and simplified as confusion regarding international agreements continues. A team of experts needs to work on arguing our case at the international level.

Agricultural research and extension demands high priority. The focus of research should be on crops and cropping systems in dry, hilly, tribal and other marginal areas. Since the private sector will not be inter-
ested in these areas, it is for the government to take the lead in these areas. Providing technical assistance to small and marginal farmers should be a major concern of the government, as innovations do not seem to reach them.

Five decades of land reforms have produced mixed results. The land allotted in most cases was less than an acre in size and was not accompanied by other essential support and infrastructure facilities. Various options will have to be examined to make small farms viable. Cooperative farming needs to be rediscovered. Organically grown crops, which can capture niche markets in India and abroad, could be another option for making small holdings viable.

Contract farming and sub-contracting are being actively promoted however, the Contract Law of 1872 still remains in operation. This does not address issues relating to sub-contracting. Field studies have indicated that in the absence of enforceable contracts, the poor farmer is left with no option, but to let the crop rot. Lack of infrastructure only aggravates his misery as he can neither transport the produce outside the village nor is he in a position to preserve it. It should be ensured that contracts protect the small farmers. The corporatisation of agriculture threatens to wipe out smallholdings, leading to a sharp rise in unemployment and poverty.

Multi-layered monitoring with the involvement of government and non-governmental organisations as well as the media would go a long way in highlighting the problems farmers face in the field. The findings from such surveys need to be put on the web as this could help in ensuring the accountability of field staff.

Infrastructure

It is widely believed that there is a direct correlation between infrastructure development and poverty reduction. Productivity is generally found to be higher in villages with better infrastructure. Whereas rural poverty can be associated with isolation, lack of roads, poor infrastructure and limited institutional presence, urban poverty is largely associated with poor quality housing, overcrowded, insanitary slum settlements and ill-health related to the spread of infectious diseases. Research shows that superior rural infrastructure accounts for regional differences in poverty among rural casual labourers and promotes the shift from low productivity casual labour in agriculture to more productive casual labour in the non-farm sector. At the same time, it leads to higher wages and is crucial to improvements in literacy and school attendance.

In the infrastructure sector, the Pradhan Mantri Gram Sadak Yojana (PMGSY), if sincerely administered, would go a long way in developing rural areas. There is an urgent need for putting this programme on the fast track, as this would help link industrial areas, commercial centres and agricultural mandis. Better physical infrastructure has been identified as a key factor for escape from poverty. There is a strong case for targeting infrastructure investment in states with relatively poor rural infrastructure endowments, in the interests of the chronically poor in these regions.

The National Rural Employment Guarantee Act, 2005, offers vast potential in this direction. Priority should be given for the construction of rural roads and for works taken up under the National Rural Employment Guarantee Act.

Power

Power supply is viewed by many as a major bottleneck to investment and growth in the non-farm sector of India. Access to reliable power at reasonable rates is a prime concern for most manufacturing firms and is critical to improving business productivity in India. Industry in India receives low-quality power and is forced to pay tariffs above cost to cross-subsidise residential and agricultural consumers. On account of the poor supply of power, firms are often forced to purchase and run their own power generators, an activity which inevitably increases business costs, especially for small and medium-scale firms. At the same time, they face among the highest industrial power tariffs in the world. Again, variable voltage in the power supply can damage tele-
phone equipment or irrigation pumps. In addition, farmers often leave the supply on at night, to get whatever power might be available, leading to occasional flooding, waste of water and energy and soil erosion. The main reasons behind the poor financial and technical performance of power utilities include inadequate tariffs for non-industrial consumers and excessive losses, which is largely due to weaknesses in metering, billing and collection and outright theft. Reforms are urgently required in this sector.

The rural electrification programme is one of the important components in rural development. Out of the estimated 80,000 villages yet to be electrified, the Tenth Plan proposes to electrify 62,000 villages through grid supply. The remaining 18,000 remote villages are to be electrified by 2011-12 through the use of decentralised non-conventional sources of energy. The promise made under the Kutir Jyoti Programme, which envisages a single point electric connection for rural households below the poverty line by 2012, must be kept. Village level organisations like PRIs (Panchayati Raj Institutions), rural cooperatives and NGOs (non-government organisations) are expected to play a crucial role in the rural electrification programme. Community participation is essential for the success of the programme. The concept of barefoot solar engineers may be adopted.

**Water**

Issues in the context of water include lack of universal access; lack of achievement of minimum consumption norms; irregularity of supply, distance from source and quality. The poor quality of water can also have serious health related ramifications. The Tenth Plan targets the provision of potable water to all villages. Clean and potable drinking water should be supplied to all, to ensure better health and higher productivity.

Under-pricing of water for those categories of consumers with the ability to pay results in poor revenue realisation and leads to poor financial health of the utilities. Since this impedes the expansion of water services, it is bound to affect the poor. There is a need to replicate innovative schemes such as the “Swajal” project in Uttar Pradesh and Uttarakhand. Community participation is found to play a key role in promoting such innovative schemes. There is a need for low cost sanitation programmes/schemes. The adoption of differential water rates for poor farmers would provide much needed relief to them.

Universal access to water and sanitation services should be ensured; standards of service should be set and enforced; a participatory approach adopted, water user associations and local bodies should be involved in the operation and maintenance, leading to the eventual transfer of management to the local bodies/user groups. In community participation, a demand driven approach should be adopted for covering the rural and especially remote areas. Exploitation of ground water resources should be regulated so that they do not exceed the recharging possibilities and also to ensure social equity. Private sector participation should be encouraged in the planning, development and management of such resources. Public opinion should be taken into consideration when forming any policy regarding the privatisation of water or sanitation facilities.

**Telecom Sector**

In telecom, there is, at present, negligible rural mobile coverage and growth is driven by Public Sector Undertakings/Universal Service Obligation Fund. The Telecom Regulatory Authority of India (TRAI) has given recommendations on the Unified Licensing Regime (ULR) on January 13, 2005, which have been accepted by DoT, and named ‘Unified Access Services’. Under this regime, the niche operators are permitted to operate all services in rural/remote areas (less than 1% tele-density areas) without any entry fee.

The telecom sector is envisaged as playing a crucial role in providing connectivity to rural areas. However, universal coverage i.e., 6,07,491 villages being targeted in the NTP 1999, has still not been achieved. Policy must enable an increase in rural tele-density. The suc-
cess of the Village Phone Programme, financed by the Grameen Bank in Bangladesh that supports the provision of mobile telecom facilities in rural areas, provides a model of how to connect villages through cellular technology. It has been found that the cellular phone has directly benefited the rural poor in Bangladesh by enhancing labour mobility as well as the marketing of agricultural produce.

**Public Service Delivery and Social Security**

Lack of access to credit, especially in times of emergency, can lead to poverty. Banks need to be rated on the extent to which they provide coverage to the poor. There has been an uneven growth of SHGs (Self Help Groups) across the regions. The southern region of India accounts for 67 percent of SHGs and 78 percent of SHG credit. The poorer regions like the northeastern, eastern and central regions account for only 0.2, 4.1 and 6.9 percent of SHG credit respectively. Currently, it is estimated that only about three percent of the 75 million poor households in India who need access to credit, receive financial services from the formal financial institutions and the micro finance sector put together. Interventions are needed to enable SHGs to move beyond micro-credit to micro-enterprise and to facilitate sustainable income generation. It is generally recognised that “the poor are poor only because they have no assets – no land, no livestock, no houses and often no education. Their only assets are time and labour. The challenge therefore lies in enhancing the economic value of the time and labour of the poor”. This can only be achieved by building the assets of the poor through a transition from unskilled to skilled work.

India is vulnerable to natural disasters like floods, droughts, cyclones, earthquakes and landslides. It has been estimated that 60 percent of the landmass is prone to earthquakes; over 40 million hectares is prone to floods; 68 percent of the area is susceptible to drought and about eight percent of the total area is prone to cyclones. Disasters not only affect the developmental process, but “the poorest and the weakest are the most vulnerable to disasters... Mitigating the impact of disasters must be an integral component of our development planning and of our poverty reduction strategy” (Tenth Five Year Plan, 2002-07). The Government of India (2004), notes that “disasters retard socio-economic development, further impoverish the impoverished and lead to the diversion of scarce resources from development to rehabilitation and reconstruction.” The poor in India are worst hit when disasters such as floods, droughts, cyclones, earthquakes and landslides hit the country. Enacting legislation to protect the rights of the people and allocating responsibilities in legal form is the minimum that the government can do to help the poor face such disasters.

Globalisation has placed the Indian industry in a fiercely competitive environment, marked by retrenchments and closures. The Rajiv Gandhi Shramik Kalyan Yojana, which provides unemployment allowance to workers for a maximum period of six months during involuntary unemployment, covers only about 80 lakh workers who are members of the employees’ state insurance schemes. There is an urgent need to cover the entire work force under social security schemes by: (a) providing safety nets through social security schemes; and b) upgrading workers’ skills in order to meet the requirements of the globally competitive industries.

The Public Distribution System (PDS) can be a crucial component of the social security system. India should take its concerns about food security to the WTO, to ensure that provisions for food security are exempted from the calculation of Aggregate Measure of Support (AMS).

The recently passed “National Rural Employment Guarantee Act 2005”, which covers all rural families, in combination with the “Right to Information Act 2005” will have to be operationalised so as to provide a safety net for the poor. Projects related to infrastructure development and minor irrigation works for poor farmers should receive high priority for works undertaken under this Act.
The Government of India (GOI) introduced economic reforms in mid 1991. The reforms were triggered by a balance of payments crisis combined with the need to correct an unsustainably high fiscal deficit. The reforms package included the abolition of industrial licensing for most industries, liberalisation of rules pertaining to foreign direct investment and foreign technology agreements, disinvestments, privatisation, financial sector liberalisation, private investment in infrastructure and reduction or removal of restrictions on trade. The purpose was to enable increased economic growth and efficiency through a reduction in controls and restrictions and roll back of the state. The assumption was that this would lead to significant economic growth, which in turn would, through the trickle down effect, lead to poverty reduction. While poverty has declined, strategies to significantly accelerate the progress on human development and access to infrastructure and basic amenities continue to be a priority.

The GOI-UNDP Economic Reforms Project supported policy research in several areas. These included legal reforms in the context of globalisation to render laws and regulations pro-poor while reducing transaction costs for economic efficiency; macro effects of economic reforms on the health sector and identification of measures to strengthen delivery of health services under the reforms package; reforms of infrastructure sectors with a special focus on designs and practices of regulatory systems, pricing, user charges and benchmarking; and municipal debt, a pricing system for municipal infrastructure provision and creating an enabling environment for private sector investment in infrastructure provision. This paper is based on the findings of over 50 reports that have been prepared as part of this project. It tries to provide a synthesis of the results of this research. The paper is divided into six sections. Section 1 introduces the paper. Section 2 is an overview of key trends in poverty.
Economic Reforms in India: Pro-poor Dimensions

in India and draws on the work of the Chronic Poverty Research Centre, India, especially in the context of the need to differentiate between factors causing entry into, persistence of and escape from poverty. Section 3 is based on the papers prepared by the Centre for Multi-Disciplinary Development Research (CMDR) on the status of health and impact of reforms on the health sector. Section 4 is based on work conducted at The West Bengal National University of Juridical Sciences (WBNUJS) on issues relating to agriculture in the context of globalisation. Section 5 is based on research conducted at the National Institute of Public Finance and Policy (NIPFP), National Council of Applied Economic Research (NCAER), National Institute of Urban Affairs (NIUA), The Energy and Resources Institute (TERI) and National Law School University of India (NLSUI) in the context of reforms in infrastructure, taxes, municipal services and governance. Section 6 draws together the policy conclusions and concludes the paper.
There has been a declining trend in the incidence of poverty in India from a high level of 54.9 percent in the 1970s. However, in terms of absolute numbers, poverty remains a policy challenge for India. Systematic efforts have been made to alleviate poverty through increasing economic growth, direct attacks on poverty using targeted programmes, land and tenancy reforms, participatory and empowerment based approaches and provision of basic minimum services. During the period between 1973-74 and 1999-2000, the incidence of poverty expressed as a percentage of people below the poverty line declined continuously from 54.9 percent to reportedly 26 percent and in terms of numbers from 321.3 million to reportedly 260.2 million (See Table 1). There is considerable scepticism about the accuracy of the estimates for 1999-2000 as the methodology for data collection was changed.³

Spatial Distribution of Poverty in India

Almost half of India’s poor and one third of India’s population are concentrated in three states. These are Uttar Pradesh (including Uttarakhand), Bihar (including Jharkhand) and Madhya Pradesh (including Chhattisgarh) (Table 2). Three other states - Maharashtra, West Bengal and Orissa - account for 22.5 percent of those in poverty. Almost 72 percent of India’s poor and half of the population are located in these six states. While the share of the poor exceeds the share of the population in all these states, except Maharashtra, in the case of Bihar, Madhya Pradesh and Orissa the relative share of those in poverty is substantially larger than their share of India’s population.

Between 50 to 66 percent of the population of seven states (the six mentioned above and Assam) was living below the poverty line in 1973-74. Twenty years later 35 to 55 percent of their population was still living in poverty. Orissa, with 47 percent of the state’s population living in poverty in 1999-2000, made the least dent

<table>
<thead>
<tr>
<th>Table 1: Incidence of Poverty in India – Percentage of Population and Number of People Below the Poverty Line 1973-74 to 1999-2000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year</strong></td>
</tr>
<tr>
<td>1973-74</td>
</tr>
<tr>
<td>1977-78</td>
</tr>
<tr>
<td>1983</td>
</tr>
<tr>
<td>1987-88</td>
</tr>
<tr>
<td>1993-94</td>
</tr>
<tr>
<td>1999-2000</td>
</tr>
</tbody>
</table>


² This section of the paper is based on the work conducted by the Chronic Poverty Research Centre, India at IIPA.
³ Serious flaws in the methodology adopted for the latest survey have been alleged. A large number of issues have been raised in the literature regarding the correspondence between official poverty lines caloric based nutritional needs; the accuracy of price deflators used; the appropriate recall period used in surveys; and the large differences in the value of consumption expenditure estimated by different national agencies (Palmer-Jones and Sen 2001).
Economic Reforms in India: Pro-poor Dimensions

in poverty during the 1990s. In Bihar, Orissa, Madhya Pradesh, Assam and Uttar Pradesh persistently high levels of poverty, in excess of 30 percent, have occurred for several decades (Mehta and Shah, 2003: 492-493).

Those who are poor at a given point of time may or may not remain in poverty over time. Some may remain in poverty, while others may escape from it. Likewise, some of those who were not poor may become poor or enter into poverty.

Analysis of the NCAER panel data for households in rural India (Bhide and Mehta 2004b) shows that there is both substantial persistence and substantial mobility into and out of poverty. More than half (52.61%) of the households that were poor in 1970-71 remained in poverty over a decade later. A little less than half (47.39%) of the households below the poverty line in 1970-71 escaped from poverty and became non-poor. Conversely one fourth of households who were non-poor in 1970-71 became poor a decade later (Table 3).

If we estimate that about 30 to 50 percent of the poor were poor for significant periods (i.e., several years, or a significant period of each year) of their lives, based on the above studies, and we assume that the picture has not changed since these studies were carried out, this would give us an estimated 78 to 130 million chronically poor in India, if we use the Planning Commission estimate of 260 million poor for 1999-2000. However, much may have changed over time. For example, there was a faster overall rate of economic growth in the 1990s, but there was also increased conflict in parts of India. Jobless growth is an important policy issue as are the reports of suicides by farmers due to a host of factors including the inability to compete with cheap imports.

It is possible to identify factors that act as ‘drivers’ or force people into poverty. These could be related to the sudden onset of a long term and expensive illness, a disaster such as flood or earthquake, a failed crop, or failed investment, or a policy change that leads to loss of livelihood. Similarly, there are factors that explain why people remain in poverty or those that ‘maintain’ people in poverty. These could include illiteracy, living in a remote geographic location that provides few live-

---

### Table 2: Incidence and Concentration of Income Poverty in Selected States of India

<table>
<thead>
<tr>
<th>State</th>
<th>State share of India’s Poor</th>
<th>Percentage of the population of the state that is in poverty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assam</td>
<td>3.63</td>
<td>2.59</td>
</tr>
<tr>
<td>Bihar*</td>
<td>16.36</td>
<td>10.69</td>
</tr>
<tr>
<td>Madhya Pradesh*</td>
<td>11.47</td>
<td>7.91</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>8.76</td>
<td>9.42</td>
</tr>
<tr>
<td>Orissa</td>
<td>6.50</td>
<td>3.57</td>
</tr>
<tr>
<td>Uttar Pradesh*</td>
<td>20.36</td>
<td>17.00</td>
</tr>
<tr>
<td>West Bengal</td>
<td>8.20</td>
<td>7.81</td>
</tr>
<tr>
<td>All India</td>
<td>100.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

* including the districts in the now newly formed states.


---

### Table 3: Income Mobility of the Households Across Poverty Status (percent)

<table>
<thead>
<tr>
<th>Poverty status in 1970-71</th>
<th>Poverty Status in 1981-82</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>P</td>
</tr>
<tr>
<td>P</td>
<td>52.61</td>
</tr>
<tr>
<td>NP</td>
<td>25.74</td>
</tr>
<tr>
<td>Total</td>
<td>38.67</td>
</tr>
</tbody>
</table>

Note: P= poor; NP= non-poor.

Source: Mehta and Bhide 2003a: 310
likelihood opportunities, poor access to health care facilities, forced sale of assets to meet a crisis, indebtedness and bonded labour - any of which could force people to get stuck in poverty. ‘Interrupters’ are factors that can enable escape from poverty, such as access to diversified income sources, linkages with urban areas, improvement in rural infrastructure, accumulation of human, physical and financial assets, access to water for irrigation, increase in wages, etc. (Mehta and Shepherd, 2004). Table 4 provides a preliminary listing of possible ‘drivers’, ‘maintainers’ and ‘interrupters’ of poverty.

Table 4: Plausible ‘Drivers, Maintainers and Interrupters’: An Initial Identification

<table>
<thead>
<tr>
<th>Drivers</th>
<th>Maintainers</th>
<th>Interrupters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health shock (e.g., Tuberculosis, cancer)</td>
<td>Illiteracy/ lack of education/skills</td>
<td>Literacy and Education (Lok Jumbish/Shiksha Karmi. See Planning Commission, 2002)</td>
</tr>
<tr>
<td>Sudden disability</td>
<td>Poverty combined with Disability and/or Old Age</td>
<td>Access to health care (Rogi Kalyan Samiti but need to move from passive to proactive health care systems and clean drinking water. See Planning Commission, 2002)</td>
</tr>
<tr>
<td>Large social expenses</td>
<td>Social exclusion (SCs/ STs)</td>
<td>Social and political action (MKSS Jan Sunwayi, Right to Information. See Roy 1996; Bhatia and Dreze 1998)</td>
</tr>
<tr>
<td>Forced borrowing for consumption loans at high interest</td>
<td>Alcohol/addiction</td>
<td>Skills transfer; value addition and linkages with market (Gum Karaya. See Mehta 1998)</td>
</tr>
<tr>
<td>Investment failure</td>
<td>Remote location (STs in India)</td>
<td>Access to water for irrigation, Watershed Management (Pani Panchayat, Ralegan Siddhi. See Awasthi and Panmand; Rai 2001)</td>
</tr>
<tr>
<td>Crop failure (market related/ adverse climatic conditions/ pest attack)</td>
<td>Poor access to health care facilities</td>
<td>Asset transfer (Operation Barga)</td>
</tr>
<tr>
<td>Drought/flood/earthquake/ Cyclone/disaster</td>
<td>Lack of availability or information about income earning opportunities or health facilities</td>
<td>Access to credit at reasonable rates of interest, IGPs, Non farm employment (Self Help Groups)</td>
</tr>
<tr>
<td>Loss of productive assets (natural disasters, property sub-division, loans)</td>
<td>Forced sale of assets to meet a crisis</td>
<td>Infrastructure development in the village (Ralegan Siddhi)</td>
</tr>
<tr>
<td>Macro policy change (suicides by Sircilla powerloom weavers)</td>
<td>Indebtedness</td>
<td>Social protection – Grain Banks (Ralegan Siddhi, MSSRF. See Swaminathan 2004)</td>
</tr>
<tr>
<td>Loss of employment (macro-economic factors, ill-health, lack of new skills)</td>
<td>Bonded labour</td>
<td>Linkages with urban areas</td>
</tr>
<tr>
<td>Conflict (social, economic classes)</td>
<td>Low employment opportunities</td>
<td>Leadership (Anna Hazare, Sulankhe, Aruna Roy/MKSS. See Awasthi and Panmand; Rai 2001; Bhatia and Dreze 1998)</td>
</tr>
<tr>
<td></td>
<td>Governance failure</td>
<td>Growth, increased productivity and higher wages</td>
</tr>
</tbody>
</table>

Note: Some examples are given in parentheses.
Source: Based on Bhide and Mehta CPRC-IIPA Working Paper 15, 2004
Many of the papers written in the UNDP Pro-poor Economic Reforms Series are concerned with reforms that can be made to prevent entry into poverty (such as in the areas of the health sector and drinking water or through legal regulations in the context of globalisation and agriculture) or those that can enable escape from poverty (such as through reforms in rural infrastructure, telecom, energy etc) or those that maintain or enable persistence of poverty, (such as through poor access to health care or indebtedness). For instance, prevention of entry into poverty seems to be facilitated by policies that help reduce the health care related shocks or costs and high interest debt.

The remaining sections of the paper will therefore address policy issues in many of these sectors.
Improvement in the health and nutritional status of the population has been one of the major thrust areas of India’s development policy even before the First Five Year Plan. In view of the importance of health as a critical input for human development, the Tenth Plan (2002-07: 83 and 84) reaffirms the continued commitment to provide:

- Essential primary health care, emergency life saving services, services under the National Disease Control Programmes and the National Family Welfare Programme totally free of cost to all individuals; and

- Essential health care service to people below the poverty line, based on their need and not on their ability to pay for the services.

The Plan notes that over the last five decades, India has built up a vast health infrastructure and manpower for primary, secondary and tertiary care in government, voluntary and private sectors. Technological advances and improvement in access to health care technologies, which were relatively inexpensive and easy to implement, have resulted in substantial improvement in health indices of the population and a steep decline in mortality since independence (see Table 5 below). However, despite this, the achievement of health related Millenium Development Goals (MDGs) and targets are not on track and the Tenth Plan targets and goals on maternal and infant mortality will be missed (Tenth Plan Mid-Term Appraisal, 19).

### Table 5: Time Trends (1951-2000) in Health Care

<table>
<thead>
<tr>
<th></th>
<th>1951</th>
<th>1981</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC/PHC/CHC</td>
<td>725</td>
<td>57363</td>
<td>163181 (99-RHS)</td>
</tr>
<tr>
<td>Dispensaries and Hospitals (all)</td>
<td>9209</td>
<td>23555</td>
<td>43322 (95-96-CBHI)</td>
</tr>
<tr>
<td>Beds (Private and Public)</td>
<td>117198</td>
<td>569456</td>
<td>870161 (95-96-CBHI)</td>
</tr>
<tr>
<td>Doctors (Modern system)</td>
<td>61800</td>
<td>268700</td>
<td>503900 (98-99-MCI)</td>
</tr>
<tr>
<td>Nursing Personnel</td>
<td>18054</td>
<td>143887</td>
<td>737000 (98-99-INC)</td>
</tr>
<tr>
<td>Malaria (Cases in million)</td>
<td>75</td>
<td>2.7</td>
<td>2.2</td>
</tr>
<tr>
<td>Leprosy (Cases/10,000 population)</td>
<td>38.1</td>
<td>57.3</td>
<td>3.74</td>
</tr>
<tr>
<td>Small Pox (No. of cases)</td>
<td>&gt;44887</td>
<td>Eradicated</td>
<td></td>
</tr>
<tr>
<td>Guinea worm (No. of cases)</td>
<td>&gt;39792</td>
<td>Eradicated</td>
<td></td>
</tr>
<tr>
<td>Guinea worm (No. of cases)</td>
<td>&gt;39792</td>
<td>Eradicated</td>
<td></td>
</tr>
<tr>
<td>Polio (No. of cases)</td>
<td>29709</td>
<td>265</td>
<td></td>
</tr>
<tr>
<td>Life Expectancy (Years)</td>
<td>36.7</td>
<td>54</td>
<td>64.6 (RGI)</td>
</tr>
<tr>
<td>Crude Birth Rate</td>
<td>40.8</td>
<td>33.9 (SRS)</td>
<td>26.1 (99 SRS)</td>
</tr>
<tr>
<td>Crude Death Rate</td>
<td>25</td>
<td>12.5 (SRS)</td>
<td>8.7 (99 SRS)</td>
</tr>
<tr>
<td>IMR</td>
<td>146</td>
<td>110</td>
<td>70 (99 SRS)</td>
</tr>
</tbody>
</table>

Source: Planning Commission, Tenth Plan, 2002-07 p. 81

---

4 This section draws on 17 papers prepared for CMDR on health related issues. Prof P.R. Panchmukhi, Director CMDR directed the project.
Economic Reforms in India: Pro-poor Dimensions

The levels of morbidity and mortality in India are unacceptably high both in relative and absolute terms. The maternal mortality rate (MMR) at 407 for India is more than seven times that for China (see Table 6). Sri Lanka has succeeded in reducing the MMR to 46.

The National Health Policy 2002 notes with concern that the unsatisfactory health indices are, in turn, an indication of the limited success of the public health system in meeting the preventive and curative requirements of the general population. Among the communicable diseases, prevalence levels of malaria are fairly high, with increasing insecticide resistance in the malarial vectors in many parts of the country. The incidence of the more deadly P-Falciparum malaria has risen to about 50 percent in the country as a whole. TB (Tuberculosis) has not shown any significant decline in the pool of infection amongst the community and there is increased drug resistance in the type of infection prevailing in the country. HIV/AIDS has also emerged on the health scene. The common water-borne infections – gastroenteritis, cholera, and some forms of hepatitis – continue to contribute to a high level of morbidity in the population, even though the mortality rate may have been somewhat moderated (GOI, 2002).

The prevalence of ‘life-style’ diseases - diabetes, cancer and cardiovascular diseases - has increased. The increase in life expectancy has increased the requirement for geriatric care. Similarly, the increasing burden of trauma cases is also a significant public health problem. The incidence of macro and micro nutrient deficiencies, especially among women and children persists. In the vulnerable sub-category of women and the girl child, this has a multiplier effect through the birth of low birth weight babies and mental and physical retardation (GOI, 2002).

Table 6: Selected Health Indicators: India and China

<table>
<thead>
<tr>
<th>Indicator</th>
<th>India</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Expectancy at Birth (in years)</td>
<td>63.2</td>
<td>68.9</td>
</tr>
<tr>
<td>LEB (Female)</td>
<td>64.6 (F)</td>
<td>73.3 (F)</td>
</tr>
<tr>
<td>Infant Mortality Rate per 1000 live births</td>
<td>63</td>
<td>37</td>
</tr>
<tr>
<td>Maternal Mortality Rate per 100,000 live births</td>
<td>407</td>
<td>56</td>
</tr>
<tr>
<td>Births per 1000 women (age 15-19)</td>
<td>45</td>
<td>5</td>
</tr>
<tr>
<td>Contraceptive prevalence (in percent)</td>
<td>48</td>
<td>84</td>
</tr>
</tbody>
</table>

Source: State of World Population, 2004, UNFPA cited in Mid-Term Appraisal of the Tenth Plan 2005: 83

2005: 74 and 75). The Mid-Term review of the Tenth Plan admits, “A major concern… is how best to reach the bottom 300-400 million people who perceive the health services to be unavailable and inaccessible.”

The WHO classifies extreme poverty as the world’s most ruthless killer and the greatest cause of suffering on earth (World Health Report, 1995: 5); and emphasises that health concerns must be taken up at the highest political level and given due consideration in all public policies. It notes with concern that “vast numbers of people of all ages are suffering and dying for want of safe water, adequate sanitation and basic medicines” (ibid: v). “Poverty is the main reason why babies are not vaccinated, clean water and sanitation are not provided and curative drugs and other treatments are unavailable and why mothers die in childbirth…It conspires with the most deadly and painful diseases to bring a wretched existence to all those who suffer it (World Health Report, 1995: 1).”

“Investing in health saves money as well as lives. Poverty and ill-health are closely interrelated. While poverty prevents a person from satisfying the most basic human needs (adequate food, safe water and sanitation, and access to social services such as basic health and education), ill-health inhibits an individual’s ability to work, reduces earning capacity and deepens poverty….Poverty should thus be tackled on two fronts: one to ensure the poor have access to primary health care. the other to enhance the health potential of the current workforce and future workforce (school children)” (World Health Report, 1995: 81).
**Morbidity Incidence, Prevalence and Public Provisioning: Results from a CMDR Survey**

CMDR (2005) conducted a health related survey covering 4,500 households in three states - Maharashtra from the high-income states, Karnataka among the middle-income states and Orissa from the low-income states. 1,500 households were surveyed in each of the three states - 1000 from rural and 500 from urban areas. The survey covered a total of 23,973 persons, out of which 8,577 were from Maharashtra, 8,209 from Karnataka and 7,187 from Orissa. The survey was conducted simultaneously in the three selected states during July-August, 2001.

Panchamukhi and Puttaswamaiah (2005) analysed the results of the survey and found that 5,662 out of 23,973 persons surveyed in the three states suffered morbidity during the reference period. Around 27 percent of the 8,577 persons surveyed in Maharashtra, 18.16 percent of the 8,209 persons surveyed in Karnataka and 27 percent of the 7,187 persons surveyed in Orissa reported morbidity or said they had been ill during the previous 30 days. Morbidity was relatively higher for scheduled castes (SCs) in Maharashtra and Karnataka (29% and 20.7% respectively) and minorities in Orissa (32%). These are extremely high levels of morbidity.

On an average, 90 percent of morbid people had been ill for less than 30 days (i.e., they had experienced incidence of morbidity) while 10 percent of them reported prevalence of morbidity or illness for more than 30 days.

Analysis of the data showed that all three states had a high incidence of communicable diseases, possibly due to poverty and malnutrition and environmental factors such as poor sanitation and the lack of safe drinking water (FRCH and ICMR 1984). 80 percent of the patients in Orissa, 73 percent in Maharashtra and 59 percent in Karnataka reportedly suffered from communicable diseases. (Fig.1). Since communicable diseases have high costs for society, measures that can prevent them from spreading need to be strengthened.

In all three states, more than 90 percent of patients have visited a health care facility for treatment of their illness. The estimate is highest (91.03%) for Orissa. However, 15.4 percent of patients in Maharashtra and 18.5 percent in Karnataka were hospitalised compared to only 10.4 percent in Orissa. This needs to be probed further as it is possible that some patients who needed in-patient health care services were not able to get access to them, either because they could not afford them or for other reasons.

Of those who needed outpatient care, 57 percent in Orissa; 43 percent in Maharashtra and 36 percent in Karnataka used public health facilities. The proportion of those who were ill and used public provisioning of OPD facilities was especially high for SCs (68%) and STs (66%) in Orissa, STs in Maharashtra (52%) and STs in Karnataka (57%).

In comparison, in all three states, use of public provi-

---

**Figure 1: Kinds of Diseases across the States (percent)**

![Figure 1: Kinds of Diseases across the States (percent)](source: Panchamukhi and Puttaswamaiah (2005))
sioning of care was higher where hospitalisation was needed. Similarly, 76 percent of those who needed inpatient care in Orissa, 53 percent in Maharashtra and 38 percent in Karnataka used public health facilities. Within each of these states, the proportion of those who were ill and hospitalised in public facilities was highest for STs in Orissa (87%), STs in Maharashtra (72%) and SCs in Karnataka (68%).

The sources of medical care expenditures for inpatient services are shown in Fig. 2. The percentage of people who borrowed money for meeting inpatient medical expenses was over 44 percent in Karnataka and 41 percent in Orissa.

Panchamukhi and Puttaswamaiah (2005) point out that most of the communicable diseases are caused by lack of safe drinking water, sanitation facilities, clean surroundings, etc. Since the results of the survey showed that open wells are the major source of drinking water in the developed states and tube wells in the less developed states, clearly the supply of water through taps (which is considered to be safe), is relatively lower in all the states. They also point out that there is low provision of toilet facilities within the houses in all the states.

Nayantara (2004) presents the prevalence and incidence rate (per 100,000 population) for major chronic and acute diseases for 28th and 52nd rounds of the NSS respectively (Table 7).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic diseases: Prevalence rate (per 100,000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>117</td>
<td>83</td>
<td>137</td>
<td>63</td>
</tr>
<tr>
<td>Leprosy</td>
<td>40</td>
<td>11</td>
<td>25</td>
<td>9</td>
</tr>
<tr>
<td>Epilepsy</td>
<td>28</td>
<td>14</td>
<td>17</td>
<td>24</td>
</tr>
<tr>
<td>Piles</td>
<td>65</td>
<td>13</td>
<td>61</td>
<td>32</td>
</tr>
<tr>
<td>Acute diseases: Incidence rate (per 100,000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles</td>
<td>17</td>
<td>11</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Cholera</td>
<td>3</td>
<td>*</td>
<td>3</td>
<td>*</td>
</tr>
<tr>
<td>Dysentery</td>
<td>12</td>
<td>*</td>
<td>35</td>
<td>*</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>27</td>
<td>*</td>
<td>22</td>
<td>*</td>
</tr>
<tr>
<td>Diarrhoea &amp; dysentery (including cholera)</td>
<td>*</td>
<td>269</td>
<td>*</td>
<td>230</td>
</tr>
<tr>
<td>Injuries due to accidents</td>
<td>39</td>
<td>63</td>
<td>54</td>
<td>83</td>
</tr>
</tbody>
</table>

Between 1973-74 and 1995-96 the incidence of dysentery, diarrhoea and cholera has increased in rural and urban areas. While the prevalence of leprosy cases, epilepsy and piles has declined in both rural and urban areas, TB remains a cause of concern.

The results of the NSS rounds reveal that morbidity among children and the aged is high and increasing. Malnutrition/under-nutrition could be one of the reasons for child morbidity. The National Human Development Report (2001) indicated that over half of the children under the age of five in India are moderately or severely malnourished and 30 percent of newborns are significantly underweight. Postnatal care, nutritional supplements programmes, proper supply of drinking water and the provision of sanitation are the most essential services that are required and continued public provision of these services is necessary (Nayantara, 2004).

The National Population Policy (2000) also stresses that “high mortality and morbidity among infants and children below five years occurs on account of inadequate care, asphyxia during birth, premature birth, low birth weight, acute respiratory infections, diarrhoea, vaccine preventable diseases, malnutrition and deficiencies of nutrients, including Vitamin A.” It also notes that infant mortality rates have not significantly declined in recent years.

### Allocation of resources to the health sector

Public expenditure on health (centre plus states) as a proportion of total government expenditure has declined from 3.12 percent in 1992-93 to 2.99 percent in 2003-04. Public expenditure on health as a percentage of GDP has also declined from 1.01 to 0.99 percent over the same period (Table 8).

While public expenditure on health is 0.9 percent of the GDP in India, comparable estimates are 3.4 percent of GDP for Brazil, 2.1 percent for Thailand and 1.9 percent for China. Combined public and private health expenditure per capita is 267 dollars in Brazil, 101 dollars in Malaysia, 71 dollars in Thailand, 45 dollars in China and 23 dollars in India (Table 9).

Mishra (2004) analyses state level data to conclude that economic reforms in India have definitely led to structural shifts in the fiscal frameworks of all categories of states – HIG (high income group), MIG (middle income group) and LIG (low income group). While the timing of the structural shifts may have varied across the three state groups, content-wise all of them appear to have experienced the same fiscal malaise during the reforms period, characterised by: (i) higher deficits; (ii) reduced revenue receipts; and (iii) greater public spending. Reform measures appear to have failed in inducing state governments to contain and roll back non-Plan and non-developmental

<table>
<thead>
<tr>
<th>Year</th>
<th>As percent of Total Government Expenditure</th>
<th>As percent of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>States</td>
<td>Centre</td>
</tr>
<tr>
<td>1992-93</td>
<td>4.96</td>
<td>1.31</td>
</tr>
<tr>
<td>1993-94</td>
<td>5.16</td>
<td>1.49</td>
</tr>
<tr>
<td>1994-95</td>
<td>4.85</td>
<td>1.62</td>
</tr>
<tr>
<td>1995-96</td>
<td>4.98</td>
<td>1.78</td>
</tr>
<tr>
<td>1996-97</td>
<td>4.85</td>
<td>1.50</td>
</tr>
<tr>
<td>1997-98</td>
<td>4.94</td>
<td>1.55</td>
</tr>
<tr>
<td>1998-99</td>
<td>4.98</td>
<td>1.58</td>
</tr>
<tr>
<td>1999-2000</td>
<td>4.80</td>
<td>1.75</td>
</tr>
<tr>
<td>2000-01</td>
<td>4.65</td>
<td>1.87</td>
</tr>
<tr>
<td>2001-02</td>
<td>4.41</td>
<td>1.99</td>
</tr>
<tr>
<td>2002-03</td>
<td>4.27</td>
<td>1.67</td>
</tr>
<tr>
<td>2003-04</td>
<td>4.12</td>
<td>1.69</td>
</tr>
</tbody>
</table>

Note: (1) Expenditure by state governments extracted from Reserve Bank of India, Handbook of Statistics on State Government Finances, 2004; (2) Total expenditures by central government obtained from Indian Public Finance Statistics, 2002-03 and 2003-04 and (3) Expenditures on Health, obtained from Ministry of Health & FW.

Source: National Accounts Statistics, 2004 cited in Mid-Term Appraisal of the Tenth Plan, page 75
Economic Reforms in India: Pro-poor Dimensions

expenditures. On the contrary, reforms induced pressure to cut back public expenditure is seen to have affected capital outlays in all the three state groups, thereby signalling adverse implications for the longer term economic development of the states. Contributing to the precariousness of state finances is the fact that revenue performances have failed to follow the Laffer growth path.

A major concern in the context of economic reforms, fiscal containment and retrenchment measures is the impact of cuts in public spending on the social sector in general and on the health sector in particular. Analysis is carried out both at the aggregate group level of states (HIG, MIG and LIG) and the level of individual sample states (Maharashtra, Karnataka and Orissa). The period of study is from 1980-81 to 1999-2000.

Kadekodi and Kulkarni (2004) point out “while the central government allocations have adhered to some degree of support to this vital social sector, the state governments have not been able to maintain it at the same rate. Their allocation policies seem to have weakened, which is more pronounced in the period 1988-89 onwards. The shrinkages at the state governmental levels in maintaining the rural and urban health delivery systems through Primary Health Centres (PHCs), Community Health Centres (CHCs), sub-centres etc. are a matter of concern.”

Reddy (1995 cited in Kadekodi and Kulkarni, 2004) states that public expenditure in India, including preventive care, forms a mere two percent or less of

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP Per capita US $ (2001)</th>
<th>GDP Per capita (as percent of GDP growth) 2001-02</th>
<th>Health Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Public exp. as percent of GDP (centre + states) 2000</td>
</tr>
<tr>
<td>India</td>
<td>460</td>
<td>2.8</td>
<td>0.9</td>
</tr>
<tr>
<td>Brazil</td>
<td>3070</td>
<td>0.3</td>
<td>3.4</td>
</tr>
<tr>
<td>Thailand</td>
<td>1940</td>
<td>4.5</td>
<td>2.1</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>840*</td>
<td>1.7</td>
<td>1.8</td>
</tr>
<tr>
<td>China</td>
<td>890</td>
<td>7.2</td>
<td>1.9</td>
</tr>
<tr>
<td>Pakistan</td>
<td>420</td>
<td>1.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Malaysia</td>
<td>3330</td>
<td>2.1</td>
<td>1.5</td>
</tr>
</tbody>
</table>

*Sri Lanka: This is Gross National Income
Source: World Development Report 2004 cited in Mid-Term Appraisal of the Tenth Plan, page 78

Table 9 : Health Spending in India and Comparator Countries
GDP and this is much lower than the rates observed in China and other East Asian countries. Similarly, Berman (1996: 335) shows that in India, public expenditure on health care was just about 1.3 percent of GDP in 1990-91, while private expenditure out of pocket was 4.5 percent of GDP. This amounts to public expenditure being approximately 25 percent and the rest being met through private sources.

Kadekodi and Kulkarni argue that since health care delivery is a state subject in India, it is extremely important that states maintain their budget allocations to this vital sector at least at five to six percent of GDP. They analyse five different health care facilities and infrastructure amenities available in the country in terms of per capita and total availability, viz., the number of hospital and all other beds, number of hospitals, PHCs, CHCs and sub-centres in the rural areas (Table 11). They conclude that, while they are increasing over time, the growth in the 1990s was at a much slower rate as compared to the period before. For instance, the growth in the number of PHCs, sub-centres and CHCs has come down drastically from 16.40 percent, 10.30 percent and 18.10 percent in the period before the 1990s, to 1.71 percent, 5.5 percent and 3.78 percent, respectively, in the post-1990s period.

More recent estimates of primary health care infrastructure and shortfalls are given in Tables 12 and 13. Analysis of the data shows that there was marginal growth in the number of health sub-centres and PHCs over more than a decade since 1992. The high rates of

### Table 10: Pattern of Public Expenditure on Health Care

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue Expenditure</th>
<th>Capital Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Central As percent of Total Expenditure</td>
<td>State As percent of Total Expenditure</td>
</tr>
<tr>
<td></td>
<td>As percent of GDP</td>
<td>As percent of GDP</td>
</tr>
<tr>
<td>1980-81</td>
<td>0.729</td>
<td>0.088</td>
</tr>
<tr>
<td>1981-82</td>
<td>0.788</td>
<td>0.087</td>
</tr>
<tr>
<td>1982-83</td>
<td>0.8</td>
<td>0.097</td>
</tr>
<tr>
<td>1983-84</td>
<td>0.756</td>
<td>0.093</td>
</tr>
<tr>
<td>1984-85</td>
<td>0.718</td>
<td>0.096</td>
</tr>
<tr>
<td>1985-86</td>
<td>0.602</td>
<td>0.09</td>
</tr>
<tr>
<td>1986-87</td>
<td>0.71</td>
<td>0.006</td>
</tr>
<tr>
<td>1987-88</td>
<td>0.582</td>
<td>0.095</td>
</tr>
<tr>
<td>1988-89</td>
<td>0.643</td>
<td>0.103</td>
</tr>
<tr>
<td>1989-90</td>
<td>0.549</td>
<td>0.104</td>
</tr>
<tr>
<td>1990-91</td>
<td>0.643</td>
<td>0.103</td>
</tr>
<tr>
<td>1991-92</td>
<td>0.602</td>
<td>0.093</td>
</tr>
<tr>
<td>1992-93</td>
<td>0.647</td>
<td>0.099</td>
</tr>
<tr>
<td>1993-94</td>
<td>0.651</td>
<td>0.1</td>
</tr>
<tr>
<td>1994-95</td>
<td>0.685</td>
<td>0.1</td>
</tr>
<tr>
<td>1995-96</td>
<td>0.839</td>
<td>0.121</td>
</tr>
<tr>
<td>1996-97</td>
<td>0.834</td>
<td>0.119</td>
</tr>
<tr>
<td>1997-98</td>
<td>1.026</td>
<td>0.14</td>
</tr>
<tr>
<td>1998-99</td>
<td>1.193</td>
<td>0.162</td>
</tr>
</tbody>
</table>

growth in PHCs, CHCs and sub-centres that occurred in the mid 1980s and before the 1990s were not sustained post 1990 (Table 11). The result is the large shortfalls in primary infrastructure presented in Table 13. Kadekodi and Kulkarni (2004) show that while the number of hospitals has grown at a constant rate (around 5.6-6.7%) before the reforms and during the current period, the rate of growth of hospital beds has not been increasing at the same rate. Instead, their growth rate has come down after 1990. This seems to imply that there will be an increased shortage of bed availability in the hospital systems in the current period, as compared to the pre-1990 period.

Their analysis shows that while the emphasis was

<table>
<thead>
<tr>
<th>Year</th>
<th>Beds (All)</th>
<th>PHCs</th>
<th>Sub Centres</th>
<th>CHCs</th>
<th>Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>569495</td>
<td>5740</td>
<td>51405</td>
<td>349</td>
<td>6804</td>
</tr>
<tr>
<td>1982</td>
<td>583773</td>
<td>5851</td>
<td>57975</td>
<td>471</td>
<td>6897</td>
</tr>
<tr>
<td>1983</td>
<td>599074</td>
<td>5959</td>
<td>65643</td>
<td>553</td>
<td>7189</td>
</tr>
<tr>
<td>1984</td>
<td>624769</td>
<td>6375</td>
<td>77236</td>
<td>649</td>
<td>7369</td>
</tr>
<tr>
<td>1985</td>
<td>656850</td>
<td>7284</td>
<td>84590</td>
<td>761</td>
<td>7474</td>
</tr>
<tr>
<td>1986</td>
<td>694121</td>
<td>12934</td>
<td>92483</td>
<td>915</td>
<td>8067</td>
</tr>
<tr>
<td>1987</td>
<td>706471</td>
<td>14281</td>
<td>101549</td>
<td>1100</td>
<td>9803</td>
</tr>
<tr>
<td>1988</td>
<td>751091</td>
<td>16449</td>
<td>109644</td>
<td>1322</td>
<td>10840</td>
</tr>
<tr>
<td>1989</td>
<td>794712</td>
<td>18811</td>
<td>120767</td>
<td>1589</td>
<td>11079</td>
</tr>
<tr>
<td>1990</td>
<td>806409</td>
<td>18981</td>
<td>130336</td>
<td>1910</td>
<td>11571</td>
</tr>
<tr>
<td>1991</td>
<td>810548</td>
<td>20450</td>
<td>130958</td>
<td>2069</td>
<td>11174</td>
</tr>
<tr>
<td>1992</td>
<td>834650</td>
<td>20719</td>
<td>131464</td>
<td>2187</td>
<td>13692</td>
</tr>
<tr>
<td>1993</td>
<td>859640</td>
<td>21030</td>
<td>131384</td>
<td>2273</td>
<td>14867</td>
</tr>
<tr>
<td>1994</td>
<td>863969</td>
<td>21262</td>
<td>131586</td>
<td>2332</td>
<td>15033</td>
</tr>
<tr>
<td>1995</td>
<td>870161</td>
<td>21536</td>
<td>131795</td>
<td>2367</td>
<td>15097</td>
</tr>
<tr>
<td>1996</td>
<td>896875</td>
<td>21853</td>
<td>132778</td>
<td>2420</td>
<td>15982</td>
</tr>
<tr>
<td>1997</td>
<td>924409</td>
<td>22960</td>
<td>136800</td>
<td>2708</td>
<td>16918</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Beds (All)</th>
<th>PHCs</th>
<th>Sub Centres</th>
<th>CHCs</th>
<th>Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>569495</td>
<td>5740</td>
<td>51405</td>
<td>349</td>
<td>6804</td>
</tr>
<tr>
<td>1982</td>
<td>583773</td>
<td>5851</td>
<td>57975</td>
<td>471</td>
<td>6897</td>
</tr>
<tr>
<td>1983</td>
<td>599074</td>
<td>5959</td>
<td>65643</td>
<td>553</td>
<td>7189</td>
</tr>
<tr>
<td>1984</td>
<td>624769</td>
<td>6375</td>
<td>77236</td>
<td>649</td>
<td>7369</td>
</tr>
<tr>
<td>1985</td>
<td>656850</td>
<td>7284</td>
<td>84590</td>
<td>761</td>
<td>7474</td>
</tr>
<tr>
<td>1986</td>
<td>694121</td>
<td>12934</td>
<td>92483</td>
<td>915</td>
<td>8067</td>
</tr>
<tr>
<td>1987</td>
<td>706471</td>
<td>14281</td>
<td>101549</td>
<td>1100</td>
<td>9803</td>
</tr>
<tr>
<td>1988</td>
<td>751091</td>
<td>16449</td>
<td>109644</td>
<td>1322</td>
<td>10840</td>
</tr>
<tr>
<td>1989</td>
<td>794712</td>
<td>18811</td>
<td>120767</td>
<td>1589</td>
<td>11079</td>
</tr>
<tr>
<td>1990</td>
<td>806409</td>
<td>18981</td>
<td>130336</td>
<td>1910</td>
<td>11571</td>
</tr>
<tr>
<td>1991</td>
<td>810548</td>
<td>20450</td>
<td>130958</td>
<td>2069</td>
<td>11174</td>
</tr>
<tr>
<td>1992</td>
<td>834650</td>
<td>20719</td>
<td>131464</td>
<td>2187</td>
<td>13692</td>
</tr>
<tr>
<td>1993</td>
<td>859640</td>
<td>21030</td>
<td>131384</td>
<td>2273</td>
<td>14867</td>
</tr>
<tr>
<td>1994</td>
<td>863969</td>
<td>21262</td>
<td>131586</td>
<td>2332</td>
<td>15033</td>
</tr>
<tr>
<td>1995</td>
<td>870161</td>
<td>21536</td>
<td>131795</td>
<td>2367</td>
<td>15097</td>
</tr>
<tr>
<td>1996</td>
<td>896875</td>
<td>21853</td>
<td>132778</td>
<td>2420</td>
<td>15982</td>
</tr>
<tr>
<td>1997</td>
<td>924409</td>
<td>22960</td>
<td>136800</td>
<td>2708</td>
<td>16918</td>
</tr>
</tbody>
</table>

| Growth rate before ’90s | 4.15 | 16.4 | 10.3 | 18.1 | 6.72 |
| Growth rate after ’90s  | 1.97 | 1.71 | 0.55 | 3.78 | 5.6  |
| Combined growth rate    | 3.12 | 9.94 | 5.88 | 12.7 | 6.34 |

Note: All growth rates are derived from exponential growth functions, expressed in percentages

Table 12: Infrastructure for Primary Health Care

<table>
<thead>
<tr>
<th>Year</th>
<th>Health Sub-Centres*</th>
<th>Primary Health Centres**</th>
<th>Community Health Centres***</th>
<th>Dispensaries (Indian Systems of Medicine)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1967</td>
<td>17521</td>
<td>4793</td>
<td>214</td>
<td>14803 (1980)</td>
</tr>
<tr>
<td>1992</td>
<td>131369</td>
<td>20407</td>
<td>2188</td>
<td>23,611</td>
</tr>
<tr>
<td>2001</td>
<td>137311</td>
<td>22842</td>
<td>3043</td>
<td>23,442</td>
</tr>
<tr>
<td>April 2005</td>
<td>142655</td>
<td>23109</td>
<td>3222</td>
<td>22,735 (reduction in no. of omeopathy dispensaries)</td>
</tr>
</tbody>
</table>

* For every 5000 population in the plains and for every 3000 population in the hills
** For every 30,000 population in the plains and for every 20,000 population in the hills
*** For every 1,20,000 population
Source: Ministry of Health and Family Welfare cited in Mid-Term Appraisal of the Tenth Plan
heavily loaded on infrastructure development during the 1980s, this has shifted to manpower development in the 1990s. This could lead to a situation in which there is a mismatch between infrastructure and medical personnel. Such phasing of development of the two arms of the health sector may not be in the best interests of the people for whom health care delivery is important. If this is due to external funding, the government should be more careful to see that the health care delivery system is not affected by the funding mechanisms.

Table 14 presents estimates of physicians and hospital beds for India and a few other countries and explains why our health indicators are well below those for China. Table 15 provides information regarding the extent of shortage in specific requirements of manpower for the primary health system.

Annigeri (2004a) notes that the budgetary support for health has either stabilised or declined marginally during the reforms period, except for the backward state of Orissa. This trend in the public sector seems to have been made up for by the growth in the private health care system. Thus the burden of expenditure on medical care during the current reforms period seems to have increased for the poorer segments of society.

The analysis of input and output indicators of the health sector in these states reveals that health infrastructure did not show signs of improvement in developed states like Maharashtra and Karnataka. In Orissa, while it has not worsened, it has also not shown considerable improvement. Provision of health manpower has also been declining in Maharashtra and
Karnataka, but interestingly it has improved during the reforms period in a less developed state like Orissa. The effect of these two inputs on the health status shows a declining trend in both Maharashtra and Karnataka, but in the case of Orissa, though the health care inputs did not show any significant decline, the health performance has registered a declining trend. This suggests the need for maintenance, which is as important in the health care system as the creation of health care facilities and infrastructure. In order to bring a turnaround in the declining health performance indicators in these states, Annigeri suggests a re-examination of the budgetary support for health so as to protect the poor. This is considered important in view of the fact that the poor are spending more than the rich on medical care needs.

Analysing the impact of economic reforms on the health sector in four countries, Chile, China, Sri Lanka and the Russian Federation, Puttaswamaiah (2004) finds that all four countries under consideration had huge government expenditure in the pre-reform period. In the process of economic reforms, the financial structure of these countries changed drastically. For instance, China had introduced the “fiscal responsibility system”, which established a fiscal contract between the Centre and provinces for revenue sharing through negotiations. The financial structure in Russia was also altered, which reduced the consolidated budget share of federals. In Chile, President Pinochet was advised to reduce government expenditure to the minimum level in order to restore stability in the economy. However, despite attempting to minimise the role of the government, these countries did not drastically reduce the expenditure on the health sector. Hence, health infrastructure, and performance of health status, were sustained or improved. Although Chile differed from the above paradigm, it adhered to the implementation of specially targeted welfare programmes. Lessons from the experience of these countries show that it is feasible for the government to continue its financial support to the health sector. Additionally, the role of the government is indispensable for protecting the poor sections of society from the effects of economic reforms.

In the context of the poor infrastructure and deteriorating quality of services in the public sector, NHP 2002 states that:

“The existing public health infrastructure is far from satisfactory. For the outdoor medical facilities in existence, funding is generally insufficient; the presence of medical and para-medical personnel is often much less than that required by prescribed norms; the availability of consumables is frequently negligible; the equipment in many public hospitals is often obsolescent and unusable; and, the buildings are in a dilapidated state. In the indoor treatment facilities, again, the equipment is often obsolescent; the availability of essential drugs is minimal; the capacity of the facilities is grossly inadequate, which leads to over-crowding, and consequentially to a steep deterioration in the quality of the services. As a result of such inadequate public health facilities, it has been estimated that less than 20 percent of the population which seek OPD services, and less than 45 percent of that which seek indoor treatment, avail of such services in public hospitals. This is despite the fact that most of these patients do not have the means to make out-of-pocket payments for private health services except at the cost of other essential expenditure for items such as basic nutrition.”

Recognising the importance of investing in health, NHP 2002 plans to increase Central health sector expenditure to six percent of the GDP, with two percent of the GDP being contributed as public health investment, by the year 2010. The state governments would also need to increase the commitment to the health sector. In the first phase, by 2005, they would be expected to increase the commitment of their resources to seven percent of the Budget; and, in the second phase, by 2010, to increase it to eight percent
of the Budget. With the stepping up of public health investment, the Central government’s contribution would rise to 25 percent from the existing 15 percent by 2010. The Tenth Plan also stresses the need for massive scaling up of investment in health if Tenth Plan goals are to be achieved. The National Common Minimum Programme aims at increasing public expenditure on health from 0.99 to 2 to 3 percent of GDP. The Mid-Term Appraisal (p. 80) calls for state governments to assign at least 7 percent of their expenditure to the health sector.

Disparities between Rural and Urban Areas in Health Facilities

In the context of health related shocks it needs to be noted that a large proportion of those who are in persistent poverty are wage dependent and work as casual labourers. They cannot afford to take time off from work in case of ill health as the food that they and their families eat, depends on the money earned each day. Therefore, illness or debilitating morbidity will cause further impoverishment. To allow them to earn the wages they need for subsistence it is important that their health care needs are met (Mehta and Shepherd, 2004; Panchamukhi and Nayantara, 2004).

Gaiha (1989) found that the chronically poor tend to rely on casual agricultural labour for a substantial proportion of their income. Bhalla et al (2004) analysed NSS data for all rural casual workers for 1993-94, to find that those engaged in agriculture were the poorest. There are 132 million casual workers in rural India (1999-2000), a great majority of whom are in agriculture (Mehta and Shepherd, 2004).

Since the majority of agricultural labourers is located in rural areas, the concentration of health facilities in urban areas is likely to deprive them of the necessary benefits from health care facilities. Field studies show that the rural folk have to walk / travel in bullock carts or tractors for miles in search of medical assistance in case of illness. Health care centres located in many villages are mostly non-functional, ill-equipped and inadequately manned (Chauhan et al, 1997; Gumber and Veena, 2000; CESCON, 1998; Chirmumule and Gupta, 1997 cited in Panchamukhi and Nayantara, 2004). Panchamukhi and Nayantara (2004) argue for health facility mapping (based on functionality of the facilities rather than merely their physical existence) in rural and urban areas in different states of the country. This is likely to reveal the inverse relationship between availability of functional facilities and the level of economic development of a region.

NHP 2002 also notes with concern that apart from the lack of physical infrastructure, there is a general shortage of medical personnel in the country. This shortfall is disproportionately high in the less developed and rural areas. No incentive system attempted so far, has induced private medical personnel to go to such areas; and, even in the public health sector, the effort to deploy medical personnel in such under-served areas has usually been a losing battle. One option it considers is the possibility of entrusting some limited public health functions to nurses, paramedics and other personnel from the extended health sector, after imparting adequate training to them. It also seeks to establish new infrastructure in deficient areas, upgrade the infrastructure in the existing institutions and ensure more equitable access to health services across the social and geographical expanse of the country.

The Mid-Term Appraisal of the Tenth Plan states that “by and large the quality of care across the rural public infrastructure is abysmal and marked by high levels of absenteeism, poor availability of skilled medical and paramedical professionals, callous attitudes, unavailable medicines and inadequate supervision and monitoring.”

To increase the low utilisation of PHCs and reduce the rush at the district hospitals, Nayantara (2004) suggests that, as envisaged in NHP-2002, state governments must enforce compulsory rural postings for all the medical students who have completed their internship before awarding degrees/certificates to
them. It should be a resident rural posting so that people get services at night and in emergencies. There is a lack of availability of doctors in the villages, as they do not stay there due to inadequate/dilapidated quarters and lack of other facilities. She suggests that there is a need to shift this responsibility together with the required funds to Gram Panchayats so that they can take necessary steps to provide facilities for the PHC staff. In the existing framework it is the Gram Panchayat, which is accountable to the village community for the functioning of PHCs in the village while the maintenance of PHCs rests with the Zilla Panchayat (district level).

**Disparities between States and Socioeconomic Groups in Access to Health Care**

GOI (2002) draws attention to the large differentials in health status between different states and different socio-economic groups as can be seen from Tables 16 and 17. There is a disproportionately high incidence of disease burden on the poor, on women, and on SCs and STs. “The poor still suffer and die from preventable infections, pregnancy and childbirth-related complications and under-nutrition — the “unfinished agenda” of the health transition….the poorest 20 percent of Indians have more than twice the rates of mortality, malnutrition, and fertility of the richest 20 percent” (World Bank, 2001: 2).

The Tenth Plan (p. 82) also notes that the extent of access to, and utilisation of, health care varies substantially between states, districts and different segments of society and this is responsible for substantial differences between states in health indices of the population.

Public expenditure per capita varies from Rs. 484.9 in Delhi to Rs. 76.7 in Bihar. Punjab, Kerala, Karnataka, Tamil Nadu, Maharashtra, Andhra and West Bengal spend two to three times as much as Uttar Pradesh, Madhya Pradesh and Bihar on health per capita (Table 18).

**Table 16: Differentials in Health Status among States**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Population BPL (percent)</th>
<th>IMR per 1000 live births (1999 SRS)</th>
<th>&lt;5 Mortality per 1000 (NFHS) II</th>
<th>Weight For Age - percent of Children Under 3 years (&lt;2SD)</th>
<th>MMR/Lakh (Annual Report 2000)</th>
<th>Leprosy cases per 10000 Population</th>
<th>Malaria positive cases in Year 2000 (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>26.1</td>
<td>70</td>
<td>94.9</td>
<td>47</td>
<td>408</td>
<td>3.7</td>
<td>2200</td>
</tr>
<tr>
<td>Rural</td>
<td>27.09</td>
<td>75</td>
<td>103.7</td>
<td>49.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Urban</td>
<td>23.62</td>
<td>44</td>
<td>63.1</td>
<td>38.4</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Kerala</td>
<td>12.72</td>
<td>14</td>
<td>18.8</td>
<td>27</td>
<td>87</td>
<td>0.9</td>
<td>5.1</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>25.02</td>
<td>48</td>
<td>58.1</td>
<td>50</td>
<td>135</td>
<td>3.1</td>
<td>138</td>
</tr>
<tr>
<td>TN</td>
<td>21.12</td>
<td>52</td>
<td>63.3</td>
<td>37</td>
<td>97</td>
<td>4.1</td>
<td>56</td>
</tr>
<tr>
<td>Better Performing States</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orissa</td>
<td>47.15</td>
<td>97</td>
<td>104.4</td>
<td>54</td>
<td>498</td>
<td>7.05</td>
<td>483</td>
</tr>
<tr>
<td>Bihar</td>
<td>42.60</td>
<td>63</td>
<td>105.1</td>
<td>54</td>
<td>707</td>
<td>11.83</td>
<td>132</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>15.28</td>
<td>81</td>
<td>114.9</td>
<td>51</td>
<td>607</td>
<td>0.8</td>
<td>53</td>
</tr>
<tr>
<td>UP</td>
<td>31.15</td>
<td>84</td>
<td>122.5</td>
<td>52</td>
<td>707</td>
<td>4.3</td>
<td>99</td>
</tr>
<tr>
<td>MP</td>
<td>37.43</td>
<td>90</td>
<td>137.6</td>
<td>55</td>
<td>498</td>
<td>3.83</td>
<td>528</td>
</tr>
</tbody>
</table>

*The National Health Policy 2002*
State-wise figures on per capita expenditure for 2003-04 have been extrapolated from the state level per capita expenditure, 2001-02 (RBI) read together with the all-India per capita expenditure for 2003-04.

Source: Mid-Term Appraisal of the Tenth Plan, 2005

The Mid-Term Appraisal of the Tenth Plan notes that due to unpredictable availability and low quality of public health services provided by the rural primary public health sector and due to reasons of distance, the poor depend on the costlier private sector health service providers.

Hospital subsidies are distributed more evenly in urban than in rural India (see Table 19). At the all India level, Mahal (2002) shows that while 10 percent of public health subsidies accrue to the poorest 20 percent of the population, over three times as much (31%) accrues to the richest 20 percent. Mahal suggests that this could be due to problems of distance from medical facilities, the opportunity cost of accessing public health facilities in terms of forgone incomes faced by the rural poor if they seek health care and the fact that since private sector facilities are generally absent, lack of options lead to the use of public health facilities by richer groups. Income growth, infrastructure development that improve access to hospital care and improved quality of health care and accountability of providers would help improve the allocation of subsidies (Mahal, 2002: 36-37).

Maharashtra, Kerala, Andhra Pradesh, Punjab, Gujarat and Tamil Nadu have the most egalitarian distribution of public health subsidies. In contrast, in Bihar, Rajasthan, Orissa, Himachal Pradesh, Uttar Pradesh and Madhya Pradesh between 37 percent and 50 percent of health related subsidies accrue to the richest 20 percent of the population (Table 20).

Public hospitals are much more accessible in urban than in rural areas and this explains the more even allocation of subsidies between the richest and poorest 20 percent in urban areas. Since 61 percent of the poorest are found to favour public hospitals for inpatient care, increasing utilisation at rural public hospitals would enable government subsidies to be more pro-poor (Mid-Term Appraisal of the Tenth Plan, 2005: 103).

### Table 17: Differentials in Health Status Among Socio-economic Groups

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Infant mortality/1000</th>
<th>Under 5 mortality/1000</th>
<th>Percent children underweight</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>70</td>
<td>94.9</td>
<td>47</td>
</tr>
<tr>
<td>Scheduled Castes</td>
<td>83</td>
<td>119.3</td>
<td>53.5</td>
</tr>
<tr>
<td>Scheduled Tribes</td>
<td>84.2</td>
<td>126.6</td>
<td>55.9</td>
</tr>
<tr>
<td>Other Disadvantaged</td>
<td>76</td>
<td>103.1</td>
<td>47.3</td>
</tr>
<tr>
<td>Others</td>
<td>61.8</td>
<td>82.6</td>
<td>41.1</td>
</tr>
</tbody>
</table>

Source: The National Health Policy, 2002

### Table 18: State Level per Capita Health Expenditure 2003-04

<table>
<thead>
<tr>
<th>States</th>
<th>Per capita public expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2001-02</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>179.45</td>
</tr>
<tr>
<td>Assam</td>
<td>135.14</td>
</tr>
<tr>
<td>Bihar</td>
<td>66.14</td>
</tr>
<tr>
<td>Delhi</td>
<td>417.98</td>
</tr>
<tr>
<td>Gujarat</td>
<td>143.82</td>
</tr>
<tr>
<td>Haryana</td>
<td>152.25</td>
</tr>
<tr>
<td>Karnataka</td>
<td>205.45</td>
</tr>
<tr>
<td>Kerala</td>
<td>237.45</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>84.77</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>189.39</td>
</tr>
<tr>
<td>Orissa</td>
<td>122.15</td>
</tr>
<tr>
<td>Punjab</td>
<td>253.83</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>176.45</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>195.44</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>78.80</td>
</tr>
<tr>
<td>West Bengal</td>
<td>176.26</td>
</tr>
<tr>
<td>All India</td>
<td>184.97</td>
</tr>
</tbody>
</table>

** State-wise figures on per capita expenditure for 2003-04 have been extrapolated from the state level per capita expenditure, 2001-02 (RBI) read together with the all-India per capita expenditure for 2003-04.**

Source: Mid-Term Appraisal of the Tenth Plan, 2005

### Table 19: Distribution of Public Health Subsidies in India, 1995-96

<table>
<thead>
<tr>
<th>Region</th>
<th>Poorest 20 percent</th>
<th>Richest 20 percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>All India</td>
<td>10.2</td>
<td>31.0</td>
</tr>
<tr>
<td>Rural India</td>
<td>9.6</td>
<td>38.6</td>
</tr>
<tr>
<td>Urban India</td>
<td>16.1</td>
<td>15.7</td>
</tr>
</tbody>
</table>

Source: Ajay Mahal NCAER 2002 Who Benefits from Public Health Spending in India page xviii
As Baru (2005) points out, “despite the rhetoric of primary health care the structure of provisioning was largely curative, biased towards urban areas and in the secondary and tertiary levels of care. The structures of provisioning largely reflected the needs and aspirations of the middle classes from both urban and rural areas.”

**Access to Health Care: Intra-household Disparities**

Intra-household disparities occur in “access to, utilisation of and benefit from health care services, with adverse effects in the case of female members” (Gumber and Veena, 2000 cited in Panchamukhi and Nayantara 2005). While women are the health care providers of the family, they ignore their own health. As a result, female members of the family, whether they are baby girls or elderly women, are likely to be more deprived of health care services than male members, of all ages. This discrimination is more severe in poorer families, rural areas and poorer states.

Case studies of slum women in Delhi (Sudarshan and Bhattacharya 2004) showed women were especially disadvantaged by poor health, with many of them complaining of weakness or giddiness or feeling low. They argue that interventions in the form of provision of health and education facilities that try to reach out to women and girls, who are more disadvantaged within the household, are important and need to be strengthened.

**Privatisation**

Over 68 percent of the 15,393 hospitals and 37 percent of the hospital/clinic-based beds are contributed by the private sector. Private expenditure was estimated at four percent of GDP compared with public expenditure of 0.9 percent (Mid-Term Appraisal of the Tenth Plan, page 78).

Annigeri (2004a) cites Rama Baru (1999) to point out that the 42nd round of NSSO data for 1989 showed that in economically backward states like Bihar, Orissa and Uttar Pradesh, there has been very little growth of hospitals in rural areas. In Kerala, Maharashtra, Gujarat and Andhra Pradesh there is a higher proportion of institutions and beds in the private sector. Baru’s analysis of NSSO data shows that the majority of non-government institutions or private and voluntary services are located in urban areas in the relatively more developed states while in the majority of the states including the backward states, the public sector continues to be the major provider of services especially in inpatient care. Her findings show that poor people utilise public institutions in Karnataka and Maharashtra, while rich people in the state of Orissa utilise public facilities to a greater extent. Thus, she emphasises the need for continued support of public health services without making any financial cuts.

Annigeri (2004a) also cites the analysis of NSSO data by Krishnan (1999) for the years 1986 and 1992, which

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Poorest 20 percent</th>
<th>Richest 20 percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerala</td>
<td>21.9</td>
<td>19.7</td>
</tr>
<tr>
<td>Gujarat</td>
<td>15.9</td>
<td>15.0</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>16.8</td>
<td>18.0</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>14.8</td>
<td>19.9</td>
</tr>
<tr>
<td>Punjab</td>
<td>14.7</td>
<td>22.2</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>16.3</td>
<td>26.7</td>
</tr>
<tr>
<td>Haryana</td>
<td>13.5</td>
<td>32.5</td>
</tr>
<tr>
<td>West Bengal</td>
<td>11.0</td>
<td>28.8</td>
</tr>
<tr>
<td>North-east</td>
<td>11.6</td>
<td>35.3</td>
</tr>
<tr>
<td>Karnataka</td>
<td>9.3</td>
<td>32.0</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>10.2</td>
<td>39.0</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>8.8</td>
<td>37.4</td>
</tr>
<tr>
<td>Orissa</td>
<td>9.4</td>
<td>45.7</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>9.6</td>
<td>47.6</td>
</tr>
<tr>
<td>Himachal Pradesh</td>
<td>7.5</td>
<td>43.8</td>
</tr>
<tr>
<td>Bihar</td>
<td>4.1</td>
<td>50.3</td>
</tr>
<tr>
<td>All India</td>
<td>10.2</td>
<td>31.0</td>
</tr>
</tbody>
</table>

Source: Ajay Mahal NCAER 2002 Who Benefits from Public Health Spending in India page xix
showed that, at the all India level, 60 percent of the inpatients get treated at government health care institutions. Around 80 percent or more of inpatients receive treatment from the public health care system in the less developed states while the corresponding proportion is 40 percent in the more developed states. In the backward states private health care institutions account for a much smaller proportion of illnesses treated. For example the percentage of patients treated in public hospitals in rural areas is 40 percent in Maharashtra, about 50 percent in Karnataka and about 90 percent in Orissa. The corresponding figures for the urban areas are: Maharashtra 42 percent, Karnataka 43 percent, and Orissa 80 percent. He also cautions against the privatisation of health care services in the Indian context.

Baru (2005) draws attention to the growth of the private sector in provisioning of health care facilitated by fiscal constraints on government budgets, leading to cuts in public expenditure in the social sectors and increasing the space for the growth of the private sector. On the other hand, growth of the private sector has also been enabled by the growth of the pharmaceutical and medical equipment industries and their search for markets for their products.

Using data for two districts of Andhra Pradesh, Baru (1994) showed that the number of private institutions at the secondary level of care was skewed in favour of the developed districts as compared to the poorer ones. Private secondary and tertiary levels of care were confined largely to urban areas and rural areas where there was agrarian prosperity. Exploring the evolution of the private sector and its characteristics for India and also across Maharashtra, Karnataka and Orissa, Baru finds that in terms of provisioning, Maharashtra has both a strong public and private presence, followed by Karnataka and then Orissa. The 52nd round of the NSS data shows a tremendous increase in the costs of medical care in both the public and private sectors. For outpatient care all the three states show increased use of the private sector. Of the three states, urban Orissa has shown the highest increase from 42.4 percent in the mid ’80s to 53 percent in the mid ’90s. For inpatient care there has been a greater increase in urban areas as compared to rural areas. Maharashtra and Karnataka show similar trends in the increased use of the private sector whereas Orissa shows only a small increase. She draws attention to the rising costs in the public sector; the quality of care provided and increases in the costs of drugs that act as push factors in the increased utilisation of the private sector.

Baru raises equity issues that need attention such as the low levels of utilisation of health care services by scheduled tribes across states, as this means that those who need care are not seeking care because they cannot afford it and therefore may not be seeking care when they need it the most (Iyer & Sen: 2001). “While the middle and upper middle classes can choose to use either the public or private sectors, the poor may not be in a position to access either of them because of the rising costs of medical care. Where the public sector is weak this will clearly affect utilisation by the poorer sections of the population. At the state level this calls for a rational use of available resources and also for a policy that will strengthen public provisioning and regulate the private sector. In addition, serious thought should be given to the use of other mechanisms like public insurance schemes to address some of these inequities and their consequences” (Baru 2005).

Using NSS data (52nd round) Nayantara (2004) shows that though the overall dependence of all the social groups on public health care institutions has come down, tribal people and the SCs still depend more on public facilities as compared to private services (Table 21).

Lessons learnt from the experiences of other countries with economic reforms, show that while privatisation enlarges health services and improves their quality, it keeps the poor away from the health system. Hence, it is necessary to ensure sustained health services to poor people, by introducing carefully designed programmes. The introduction of user fee increases the cost of medical care and medicines, which
Table 21: Hospitalised Cases by Social Groups under Different Sources of Treatment (Percent)

<table>
<thead>
<tr>
<th>Social Groups</th>
<th>Private hospitals</th>
<th>PHCs</th>
<th>Public hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rural</td>
<td>Urban</td>
<td>Rural</td>
</tr>
<tr>
<td>SC</td>
<td>3.38</td>
<td>1.75</td>
<td>10.17</td>
</tr>
<tr>
<td>ST</td>
<td>12.29</td>
<td>10.18</td>
<td>20.56</td>
</tr>
<tr>
<td>Others</td>
<td>84.12</td>
<td>87.78</td>
<td>69.26</td>
</tr>
</tbody>
</table>

52nd Round (India)

<table>
<thead>
<tr>
<th>Social Groups</th>
<th>Private hospitals</th>
<th>PHCs</th>
<th>Public hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rural</td>
<td>Urban</td>
<td>Rural</td>
</tr>
<tr>
<td>SC</td>
<td>16.0</td>
<td>10.0</td>
<td>25.2</td>
</tr>
<tr>
<td>ST</td>
<td>4.0</td>
<td>2.3</td>
<td>15.0</td>
</tr>
<tr>
<td>Others</td>
<td>80.0</td>
<td>87.7</td>
<td>59.4</td>
</tr>
</tbody>
</table>

Source: Nayantara, 2004

constrains poor people from seeking help for their health needs. This requires regulation of user fee and providing health services at lower costs to poor people. In this case, differential user fee may be an alternative. Further, the participation of the private sector in delivering health needs should not be concentrated in urban areas only, it should also increase the number of rural health institutions (Puttaswamaiah, 2005).

A Possible Option: The Best Practice Case of Management of Public Hospitals through Community Participation - Rogi Kalyan Samiti, Madhya Pradesh (Planning Commission and UNDP)∗

The Rogi Kalyan Samiti (RKS) is an example of the effective delivery of social services through decentralisation and community participation that culminated in hospitals being managed by the user community. As fear of an impending plague epidemic spread across most of north India in 1994, the District Collector of Indore, along with the people of the district, decided to take effective steps to prevent an outbreak of the disease in the district. The immediate objective was to ensure sanitisation and remodelling of the Maharaja Yashwantrao Hospital. Once this objective was achieved the aim was to create a model of the management of public service delivery based on public participation, with minimal recourse to the state exchequer and to ensure a degree of permanency and to prevent a relapse to its old state of dilapidation.

The Process, Impact and Replication

Maharaja Yashwantrao Hospital is a public hospital located in the town of Indore. An innovative plan was devised to overhaul the ailing health care system through an experiment that used no government funds and cost a little over Rs. 45 lakh.

After elaborate discussions with the community, the hospital staff, elected representatives, environmental scientists and the district administration policy was evolved. This unique structure of hospital management came to be known as the Rogi Kalyan Samiti (RKS) or Patient Welfare Committee. The RKS was set up as a registered society with the mandate to take all functional decisions for the hospital.

Through a carefully calculated process of admissions and discharge, the 750-bed hospital, along with five other hospitals in the same campus, were evacuated of patients, who were shifted to 12 other hospitals, situated all over the town. A massive clean-up operation was undertaken in the hospital complex that involved clearing tonnes of rubbish and old furniture. Rodents, pests and insects were got rid of. After the clean up, all physical facilities were restored.

∗This case is based on summarising material in Management of Public Hospitals through Community Participation Rogi Kalyan Samiti, Madhya Pradesh in Successful Governance Initiatives and Best Practices, Planning Commission and UNDP, New Delhi, 2002.
and the hospital was renovated. Throughout the process, the involvement of the people of the town was sought.

The RKS comprises people’s representatives, health officials, district officials, prominent citizens, representatives of the Indian Medical Association (IMA), members of urban local bodies and members of the Panchayat, as well as leading donors. Due to its success, RKSs have been set up in medical colleges, district hospitals and community health centres throughout Madhya Pradesh and Chhattisgarh. The RKS acts as an independent group of trustees for the hospital, while an Executive Committee, constituted for facilitating efficient administration, is expected to manage the affairs of the hospital. RKS is free to use the funds at its disposal to its best judgement and RKS bodies have used the funds for maintenance, repairs and necessary construction of the physical facilities in the hospitals; sanitation, security, hospital waste management and other services in the hospital through private agencies; upgradation of facilities; purchase of equipment through donations and loans; improvement of the hospital environment and facilities for attendants and patients; and free or subsidised medical care to the poor and needy.

Broad guidelines were drawn up for the levy of user charges. However, the poorer sections of society are exempted from the levy. Charges for the general wards are nominal, while higher charges are fixed for private wards. Funds received from user charges are deposited with the RKS and not in the government exchequer.

Specific sources of funds for the RKS include:

- Taking over and managing canteens, rest houses, bus stands, ambulance services and other facilities within the hospital complex owned or managed by the government.

The average daily collections of RKS range from Rs. 500 to Rs. 25,000 in each hospital, depending on its location. A conservative estimate would put the monthly collection at around Rs. 2.5 to three crores in all hospitals across the state. A fallout of the RKS experience is that medical colleges have been made into autonomous bodies and their management handed over to the RKS. Medical colleges fees have also been channelled into the RKS to improve the conditions of the previously decrepit medical college hospitals. The RKS system does not affect the government’s normal budgetary allocation for the hospital.

RKSs have been established in 604 hospitals across Madhya Pradesh, with 65-70 million beneficiaries and over 6000 people involved in its management. After a review of the system in 1999, the government issued instructions that conferred greater powers to the RKS. The RKS system led to:

- Increased staff efficiency in government-owned health institutions.
- Empowerment of the community to contribute towards the strengthening of public institutions.
- Inculcation of a sense of moral responsibility among the medical staff and a feeling of ownership in the minds of the patients through the system of user charges.
- Additional budgetary support for improvement of the health system.
- Social benefits due to the restoration of safe and healthy surroundings in government hospitals.
- Upgradation and expansion of health care centres in rural and semi-rural areas from the internal resources generated by the RKS across the state.
- Improved working conditions for doctors and staff.
- Increased efficiency due to the privatisation of medical services.
- Allocation of funds for improvement of health institutions from discretionary local area development funds by Members of Parliament and Members of Legislative Assemblies.

The RKS initiative signifies a paradigm shift from the ‘top-down’ approach to health delivery systems in the country. It has been successful in bringing together hospital staff and user communities through a process of mutual understanding and problem sharing, for the common goal of improving local health service systems. The Rogi Kalyan Samiti has effectively constructed a sustainable ‘state-society’ synergy.

**Health Insurance: Is this a viable option?**

Krishnan (1996) makes a case for health insurance because illnesses cannot be predicted, costs of hospitalisation are high and cannot be planned and since the proportion of those needing hospitalisation is small, it is possible to pool risk. Since the poor cannot bear the high costs of health and medical care, Panchamukhi and Nayantara (2004) point out that a mechanism, such as health insurance, that can pool the risks of illness of the poor households to provide health care services at reasonably low current costs and convenient cost payment arrangements, should benefit the poor. The mechanism should explicitly note the seasonality and at times irregularity of the income flows to the poor households and adjust the payments towards health care costs to such income flows. However, they raise a large number of issues such as if health insurance supply is opened up to the private sector and also to the international operators then there is allegedly a risk of corrupt practices in health care supply. What countervailing checks and safeguards need to be introduced to regulate their activities? If co-operative elements are integrated with health insurance, then this may be of advantage to the poor. How should clientele beneficiaries’ involvement be ensured in the functioning of the health insurance system so that people themselves become a watchdog for its functioning? Can co-payment, co-insurance, group insurance, etc., serve this purpose?

Analysis of the household level data collected in the NSSO 52nd round survey reveals the limited coverage of health insurance in the country. Only 0.6 percent of the total number of households surveyed in the 14 major states were medically insured. Only 11 percent of all households had life, medical and accident insurance. The number of households that are medically insured out of the total number of insured households (all categories) is an insignificant five percent of insured households (Sarangi and Mishra 2004).

Sarangi and Mishra (2004) reviewed a number of insurance schemes that are currently operational in India, such as the Employees State Insurance Scheme (ESIS), the Central Government Health Scheme (CGHS), vehemently criticised on the grounds of quality and accessibility and the Mediclaim policy of the General Insurance Company (GIC), which suffers from numerous exclusions, coverage limits, restrictions on eligibility and high premiums. They reviewed the recent interest in adopting community based financing to meet the rising health care costs, but point out that the schemes are criticised for lack of techno-managerial expertise and adverse selection.

In view of the importance of providing affordable and effective health care services to the underprivileged sections of society they welcome the recent launching of Universal Health Insurance Scheme by the GOI. This is the first broad-based health security scheme having an element of financial contribution from the state and designed to be self-selected only by the low income people in the stipulated age group. The premium structure is biased towards family enrolment and is one rupee per day per year for an individual, Rs 1.50 per day per year for a family of up to five members, and two rupees per day per year for a family of up to seven members. It envisages the re-
imbursement of hospital expenses up to Rs 30,000 per individual/family. If an earning member falls sick the scheme also provides for the loss of livelihood at the rate of Rs 50 per day up to a maximum of 15 days and in case of the death of the earning head of the family due to personal accident, Rs 25,000 is given to the nominee. The state’s contribution of Rs 100 per family comes by way of a subsidy towards the premium for below poverty line (BPL) beneficiaries. As on March 31, 2004 around 4,17,000 families or 1.16 million individuals were insured under the scheme, out of which about 48 percent of the families are from rural areas. Only around 9,400 BPL families have been covered.

In spite of its pro-poor orientation, the scheme is criticised on different grounds such as the unrealistically low premium structure, confining it to the population living below the poverty line may make it financially unviable, inter state differences in the availability of health care infrastructure and therefore performance of the scheme and underestimation of the resource requirements.

Puttaswamaiah (2004) suggests that better-administrated health care co-operatives or insurance schemes can provide some alternatives. The experiments from Karnataka and also the recent decision of the Karnataka government to invite non-government organisations (NGOs) in a big way to join the government in the management of primary health centres in rural areas are in line with the National Health Policy 2002, and the experience at the global level. Health insurance helps in widening health services and providing financial security. Yet, practices of skimming and concentrating on a few segments of the society deprive a large number of people of access to health care. Therefore, it is essential to design health insurance to cover all sections of people.

Privatisation of the health insurance sector has thrown up a number of critical issues for discussion. It is apprehended that the entry of private players in the health insurance market may adversely affect the equity, quality and cost of health care in India (Mahal, 2002 cited in Sarangi and Mishra, 2004).

Based on the experiences of a large number of countries in implementing health care plans for the poor with people’s involvement, Panchamukhi and Nayantara (2004) develop such a plan for a small region of Karnataka. The main elements of the health care strategy for the poor should be the following:

- This plan should cover all the poor, irrespective of their social status and ability to pay.
- It should provide for curative care in the case of all ailments, starting from the common cough and cold to major diseases (viz. asthma, blood pressure, diabetes, gastro-enteritis, TB, joints pain etc.)
- The plan should assign an added weightage to the medical care requirements of the poor and female members of the family due to intra-household disparities in access.
- The plan should make efforts to provide for cross-subsidisation of the costs of care. This implies that there should be a provision for community contribution according to the ability to pay rather than benefit received. This community contribution should be mandatory and not optional.
- The plan should cover not simply curative care, but also promotive and preventive care services.
- The people themselves should articulate health care needs and medical services set-up should only aid this process of articulation.
- Services should be supplied in accordance with the articulated needs.

CMDR proposes a health insurance scheme based on pre-payment and user charges that cover all the households in the village under health insurance. The health insurance scheme can be managed by a Health Committee consisting of an HCC doctor, PHC doctor, panchayat president, local doctor, mahila mandal / youth centre member, school headmaster and five members from the HCC. A card may be issued to each
household with details of the number of members, category of households and the details about the amount of user charges to be taken for treatment from household members etc. Each card should have the provision to enter the details of illness, treatment and the cost of drugs for each member during a year. The HCC should provide its members curative outpatient and in-patient care, child and maternal care (excluding deliveries), preventive and promotive health care services. Outpatient care may be provided at the HCC clinic in the village. For in-patient care a link needs to be established between the HCC and a private or district hospital, which would provide referral service to members. A differential rate structure for membership may be visualised for households based on the income level.

During the household survey in Chandanmatti village in Dharwad district of Karnataka, for example, respondents from the surveyed households expressed their willingness to pay an average of Rs. 225 per household per year. Membership fee can be fixed keeping in view the willingness of the households to pay. In view of different income levels, willingness to pay by the households would also be different. A differential membership fee can be accordingly determined. The advantages of the proposed health care strategy include:

- Health care facilities at the doorstep for all. Transportation costs, cost of loss of wages for those attending upon the morbid person, additional food and other costs can be avoided under this scheme.
- The provider of health care services would find costs of provision to be lower than before in view of the likely economies of the large scale of operation. Even the insurance agency linked with providers’ co-operative would find a ready clientele for its insurance business ensuring better business.
- The reduced likelihood of any resident member being deprived of health care facilities when needed.
- In the scenario with the HCC, some of the costs of provision are now borne by the community itself through the system of cross-subsidisation, though the government is required to bear the entire responsibility towards health care needs of the poor.

**Drugs Policy**

The Indian pharmaceutical industry produces a complete range of formulations and about 350 bulk drugs. The production of bulk drugs and formulations has risen from Rs. 3,840 crores in 1990-91 to an estimated Rs. 19,737 crores in the year 1999-2000. This was enabled by policies adopted by the GOI in the late 1960s with a view to providing affordable drugs for the masses. India has been practising the process patent system in which one can patent the process, but not the product. The policy helped the Indian pharmaceutical industry develop generic versions of patented drugs. Therefore life saving and other drugs are available in India at a fraction of the prices prevailing internationally (Badiger, Kadekodi and Nayanatara, 2004). As can be seen from Table 22, Indian companies are selling patented drugs at a far lower rate than the world market.

At present, the price differential between patented and generic drugs is huge. For example, Zantac, used to treat gastric ulcers, costs between 15 and 50 times more in the US and Europe respectively, than its generic version made in India. However, now that WTO rules are applicable in India, drug prices could rise significantly as a result of patenting. This is strikingly obvious from Table 23.

Nagesh Kumar and Pradhan point out that during the last few decades the strategic interventions made by the government included incentives for the development of indigenous pharmaceutical industry, incentives for localisation of production, right from bulk drugs and intermediates and not just formulations; encouraging generics over branded products,

---

6 This section of the paper on Drug Policy is based entirely on Kumar and Pradhan (2004) and Badiger, Kadekodi and Nayanatara (2004).
regulation of prices through the Drug Prices Control Order (DPCO), incentives for R&D activity to enterprises, and providing an intellectual property protection (IPR) framework designed to facilitate indigenous process development of known compounds. As a result we have a highly vibrant and self-reliant industry that not only meets the local demand for nearly all critical medicines at affordable prices, but also generates increasing net exports by exporting pharmaceutical products to over 60 countries.

Facilitated by the abolition of product patent regime with the Patents Act of 1970 and the availability of science and technology infrastructure in the country, local enterprises have embarked on a major initiative to develop cost-effective processes for the indigenous manufacture of known chemical compounds and other bulk drugs. The development of process innovation capability of Indian enterprises has enabled them to introduce newer medicines within a short time lag. Table 24 shows that most of the drugs could be introduced within four to five years of their introduction in the world market and the prices of these drugs in India are much lower as compared to the rest of the world. For instance, Ranitidine, Famotidine, Astemizole and Ondansetron sell in the US market at about 50 times the Indian prices. The lower prices of drugs have made them affordable to the masses in the country and thus have served an important social cause by providing poorer people access to modern medicine.

Prices of select drugs unlisted from DPCO 1995 have increased by 77 percent to 457 percent between 1995 and 1998 (see Table 25). The further dilution of the

<table>
<thead>
<tr>
<th>Generic Name of Drug</th>
<th>Originator/Proprietary Name</th>
<th>Retail prices of 100 units in USD</th>
<th>Ratio of Low : High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acyclovir 200 mg</td>
<td>Glaxo-Welcome/Zovirax</td>
<td>Tonga  50</td>
<td>Indonesia 371</td>
</tr>
<tr>
<td>Acyclovir 800 mg</td>
<td>Glaxo-Welcome/Zovirax</td>
<td>India  94</td>
<td>South Africa 790</td>
</tr>
<tr>
<td>Atenolol 25 mg</td>
<td>Zeneca/Tenormin</td>
<td>India  03</td>
<td>Cameroon 53</td>
</tr>
<tr>
<td>Ciprofloxacin 500 mg</td>
<td>Bayer/Ciproxin</td>
<td>India  15</td>
<td>Mozambique 740</td>
</tr>
<tr>
<td>Diclofenac 50 mg</td>
<td>Novartis/Voltarin</td>
<td>India  02</td>
<td>Argentina 118</td>
</tr>
<tr>
<td>Nifedipine 20 mg</td>
<td>Seneca/Adalat</td>
<td>India  03</td>
<td>Peru 96</td>
</tr>
<tr>
<td>Omeprazole 20 mg</td>
<td>Seneca/Adalat</td>
<td>India  03</td>
<td>Brazil 477</td>
</tr>
<tr>
<td>Ranitidine 150 mg</td>
<td>Glaxo-Welcome/Zantac</td>
<td>India  20</td>
<td>South Africa 116</td>
</tr>
<tr>
<td>Zidovudine 100 mg</td>
<td>Glaxo Welcome</td>
<td>Pakistan 81</td>
<td>Argentina 316</td>
</tr>
</tbody>
</table>

Table 23: Prices of Zantac for the Year 1999

<table>
<thead>
<tr>
<th>Countries</th>
<th>Price in USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>2</td>
</tr>
<tr>
<td>Nepal</td>
<td>2</td>
</tr>
<tr>
<td>Pakistan</td>
<td>21</td>
</tr>
<tr>
<td>Korea</td>
<td>61</td>
</tr>
<tr>
<td>Zambia</td>
<td>82</td>
</tr>
<tr>
<td>Bolivia</td>
<td>94</td>
</tr>
<tr>
<td>Senegal</td>
<td>100</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>105</td>
</tr>
<tr>
<td>South Africa</td>
<td>116</td>
</tr>
</tbody>
</table>

Note: The ratio of the lowest to the highest price of a multi-source drug, Zantac in developing countries is 1:58. It is US$2 per 100 units in India and Nepal while it is US$116 in South Africa.

Source: Badiger, Kadekodi and Nayanatara (2004)
Economic Reforms in India: Pro-poor Dimensions

The industry is currently facing problems due to the adoption of product patents by the end of 2004 as a part of the implementation of India’s commitments under the WTO’s TRIPS Agreement. This is likely to adversely affect the price of medicines as also the technological activity of Indian companies and curb exports from India, while the favourable effects of stronger IPR regime that are claimed, namely higher innovative activity and greater inflows of FDI may not materialise (Kumar and Pradhan, 2004).

Among the major concerns in the context of drug policy is firstly whether Indian manufacturing units will be able to produce the medicines at the prevailing low prices with a minimum of expenditure in research? Secondly, what will be the time lag in making these drugs available to the Indian masses, once they are brought under rigorous thrust from liberalisation and WTO regimentation? And thirdly, will we be able to provide affordable drugs for the masses?

Kumar and Pradhan (2004) outline a few strategic policy options for the Indian pharmaceutical industry that need to be implemented:

Table 24: Introduction of New Drugs and Relative Prices of Patentable Drugs in India

<table>
<thead>
<tr>
<th>Brand &amp; Dosage (pack)</th>
<th>Year</th>
<th>Indian Marketing Approval</th>
<th>Introduction lag</th>
<th>European Patent Expiry</th>
<th>India</th>
<th>Pakistan</th>
<th>USA</th>
<th>UK</th>
<th>Pakistan</th>
<th>USA</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antibiotic/ Antibacterial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ofloxacin 200mg (4 tab)</td>
<td>1990</td>
<td>2001</td>
<td>92</td>
<td>117.2</td>
<td>408.1</td>
<td>217.3</td>
<td>1.3</td>
<td>4.4</td>
<td>2.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ciprofloxacin 500 mg (4 tab)</td>
<td>1985</td>
<td>2001</td>
<td>28.4</td>
<td>234.6</td>
<td>438.2</td>
<td>291.5</td>
<td>8.3</td>
<td>15.4</td>
<td>10.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Norfloxacin 400 mg (10 tab)</td>
<td>1984</td>
<td>1998</td>
<td>39</td>
<td>125.5</td>
<td>903.7</td>
<td>254.4</td>
<td>3.2</td>
<td>23.2</td>
<td>6.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pefloxacin 400 mg (4 tab)</td>
<td>1991</td>
<td>1998</td>
<td>15.6</td>
<td>59.4</td>
<td></td>
<td>3.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti-ulcer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ranitidine 300 mg (10 tab)</td>
<td>1981</td>
<td>1997</td>
<td>18.5</td>
<td>260.4</td>
<td>1050.7</td>
<td>484.4</td>
<td>14.1</td>
<td>26.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Famotidine 40 mg (10 tab)</td>
<td>1984</td>
<td>1999</td>
<td>18.6</td>
<td>260.4</td>
<td>1004.2</td>
<td>503.5</td>
<td>14</td>
<td>27.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Omeprazole 20 mg (10 tab)</td>
<td>1991</td>
<td>1999</td>
<td>29</td>
<td>1270.5</td>
<td>671</td>
<td>23.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardiac Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lisinopril 5 mg (10 tab)</td>
<td>1991</td>
<td>1999</td>
<td>35</td>
<td>264.6</td>
<td>181.3</td>
<td>5.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enalapril Maleate 5 mg (10 tab)</td>
<td>1984</td>
<td>1999</td>
<td>15.9</td>
<td>37.2</td>
<td>316.9</td>
<td>148.8</td>
<td>2.3</td>
<td>9.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ketoconazole 200 mg (10 tab)</td>
<td>1981</td>
<td>1997</td>
<td>57.9</td>
<td>222</td>
<td>1082.9</td>
<td>277.2</td>
<td>3.8</td>
<td>4.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti-histamine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Astemizole 10 mg (10 tab)</td>
<td>1986</td>
<td>1999</td>
<td>12</td>
<td>120.9</td>
<td>647.5</td>
<td>142.6</td>
<td>10.1</td>
<td>11.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ondansetron HCl 4 mg (6 tab)</td>
<td>2005</td>
<td>2005</td>
<td>39.5</td>
<td>2247</td>
<td>1287.9</td>
<td>32.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a) **Stronger Focus on R&D Activity and New Product Development**

To survive in the post-TRIPS regime the leading Indian pharmaceutical companies will have to launch their own products to stay in the market. Hence, an increasing thrust on product development is critical.

b) **Exploiting Market Potential of Indian Systems of Medicines**

The growing consciousness of the side-effects of modern medicines and increasing interest in alternative medicines especially herbal/natural remedies in the country as well as internationally, offers Indian companies an opportunity that they could gainfully exploit. With the implementation of standardisation, building of brand names and making them known in the Western countries, Indian companies could increase their exports of these products manifold. China is a case in point which has substantial exports of traditional medicine in the form of Chinese balms, medicinal oils etc.

c) **Consolidation of Market Position in the Off-the-patent/Generics Markets**

Indian companies should consolidate themselves in the markets for off-the-patent drugs and generics by launching their own formulations under their own trade/brand names to strengthen their position in the market and also realise higher value addition. Leading Indian companies could form a consortium to acquire a leading pharmaceutical company with a good marketing network to push their products abroad.

d) **Protecting Leading Indian Pharmaceutical Companies from Threat of Foreign Takeovers**

A few leading Indian companies represent the technological capability of the country in the pharmaceutical industry. They need to be protected from the threat of hostile acquisitions by their foreign rivals.

e) **Exploiting the Flexibility in the TRIPS Agreement**

The TRIPS Agreement provides certain flexibilities to include exceptions for research and marketing and compulsory licensing or anti-trust reasons. These should be fully exploited. The Declaration on Medicines and Public Health at the Doha Ministerial Meeting confirmed the right of member countries to exploit the flexibility available in the TRIPS Agreement. The recent withdrawal of proceedings by the US against

---

Table 25: Price Increase in Some Selected Drugs Unlisted from DPCO, 1995

<table>
<thead>
<tr>
<th>Drug Name</th>
<th>Packing</th>
<th>Price in 1995</th>
<th>Price in 1998</th>
<th>Percentage increase in price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diazepam (Anti depression)</td>
<td>10</td>
<td>3.13</td>
<td>9.5</td>
<td>204</td>
</tr>
<tr>
<td>Ampicillin (Antibiotic)</td>
<td>4</td>
<td>12.85</td>
<td>23.15</td>
<td>80</td>
</tr>
<tr>
<td>Cephalexin (Antibiotic)</td>
<td>10</td>
<td>45.07</td>
<td>113.15</td>
<td>151</td>
</tr>
<tr>
<td>Ethambutol (Anti TB drugs)</td>
<td>10</td>
<td>5.92</td>
<td>33</td>
<td>457</td>
</tr>
<tr>
<td>Rifampicin (Anti TB drugs)</td>
<td>10</td>
<td>24</td>
<td>64</td>
<td>167</td>
</tr>
<tr>
<td>Pirazinamide (Anti TB drugs)</td>
<td>10</td>
<td>17.01</td>
<td>46.95</td>
<td>176</td>
</tr>
<tr>
<td>Lignocaine HCL (Anaesthetic)</td>
<td>30 ml.</td>
<td>4.16</td>
<td>12.4</td>
<td>198</td>
</tr>
<tr>
<td>Promethazine HCL (Anti allergic)</td>
<td>10</td>
<td>1.25</td>
<td>3.23</td>
<td>158</td>
</tr>
<tr>
<td>Antacid liq. (Gastritis)</td>
<td>200 ml.</td>
<td>13</td>
<td>23</td>
<td>77</td>
</tr>
<tr>
<td>Oxefedrine HCL (Angina pectoris)</td>
<td>10</td>
<td>10.44</td>
<td>21.41</td>
<td>105</td>
</tr>
<tr>
<td>Discopyramide Phosphate (Cardiac problems)</td>
<td>10</td>
<td>16.5</td>
<td>50.46</td>
<td>206</td>
</tr>
<tr>
<td>Diprydeamole (Anti angina)</td>
<td>10</td>
<td>2</td>
<td>4.73</td>
<td>137</td>
</tr>
</tbody>
</table>

Source: D.P. Dubey at http://revolutionarydemocracy.org/rdb5n1/pharmacy.html
Brazil's compulsory licensing provisions show that intelligently crafted domestic patent laws can meet national objectives and yet be TRIPS compatible (Raizada and Sayed, 2001). It is also permissible for researchers to use a patented invention for research, in order to fully understand the invention. Experimentation on a patented invention is clearly admissible as an exception to exclusive rights under Article 30 (Correa, 2000b). Yet another exception is called the Early Working Exception or ‘Bolar’ Provision, which allows manufacturers of generic drugs to use the patented invention to obtain marketing approval without the patent owner's permission and before the expiry of the patent. All these exceptions could be fully incorporated in the amended Indian Patents Act.

f) Resisting Attempts to Evolve the TRIPS Plus Regime and Ever-greening of Patents
Developed countries are constantly putting pressure on developing countries to implement a stricter patent legislation than that required under TRIPS, exclude compulsory licensing, parallel imports provisions and include provisions that would result in increasing the life of the patent (ever-greening), as well as grant data exclusivity to them. The TRIPS Agreement however, is clear that a new use for an old formulation does not constitute an inventive step (Art. 27(1)). Therefore, member countries are within their rights not to permit the practice of ever-greening of patents.

Policy Issues
The situation in the context of health is disturbing. Mortality and morbidity rates are unacceptably high even though we can successfully and significantly reduce their incidence. The CMDR survey in Maharashtra, Karnataka and Orissa shows extremely high levels of morbidity at 27 percent in both Maharashtra and Orissa. This reflects the poor state of health in both high and low-income states. There is a shortfall in meeting health related targets and goals both on MDGs and the Tenth Plan. We are currently facing the double burden of disease with a high proportion of the population continuing to die from preventable infections like diarrhoea, pneumonia, TB, malaria and HIV/AIDS combined with the increased incidence of lifestyle diseases such as diabetes and cardiovascular problems. There is high morbidity among children and the aged. The NSS results indicate that health problems are increasing among the aged and more than 50 percent of the aged population is suffering from some illness or the other. Most of the communicable diseases are caused by the lack of safe drinking water, sanitation facilities, clean surrounding, etc. The high incidence of water-borne diseases and poor countries arise not because of IPR regimes, but from the attempt to harmonise them across the countries at different levels of development (Panagariaya, 1999). There is also a discussion whether TRIPS should fundamentally belong to WTO (Mashelkar, 2001). However, the least that could be done is allowing flexibility to developing countries to implement the provisions of the Agreement as and when their level of development has reached a certain stage. This could be achieved if a consensus among the developed countries is built on the differential need of developing countries for IPR regime.

These steps may help in moderating the effect of liberalisation and TRIPS on the Indian pharmaceutical industry.

g) Price Controls for Essential Drugs
Price controls continue to be relevant in the pharmaceutical industry to protect the poor masses from the price increases following the introduction of product patents. The evidence suggests that competition does not lead to lower prices of medicines. Therefore, there is continued relevance of price controls in the industry.

h) Mobilising Support for Review of TRIPS at WTO
Most of the adverse effects concerning TRIPS on
prevalence of communicable diseases calls for urgent public action in providing safe drinking water and sanitation services. The public provision of postnatal care, nutritional supplements programmes, safe drinking water and sanitation is required on a priority basis.

Financial allocations to the health sector have been declining. Economic reforms in India have definitely led to structural shifts in the fiscal frameworks of all categories of states – HIG, MIG and LIG. Reforms induced pressure to cut back public expenditure has led to cuts in public spending on the social sector in general and on the health sector in particular.

The public health investment in the country over the years has been comparatively low, and as a percentage of GDP has declined from 1.3 percent in 1990 to 0.9 percent in 1999. The aggregate expenditure in the health sector is 5.2 percent of the GDP. The central budgetary allocation for health over this period, as a percentage of the total Central Budget, has been stagnant at around 1.3 percent, while that in the states has declined from 7.0 percent to 5.5 percent. The current annual per capita public health expenditure in the country is no more than Rs. 200 (NHP, 2002).

Disparities in the location of health facilities and access to them are high. There are wide disparities in the health sector and in health related indicators between rural and urban areas, between the better and poorly performing states and between the better off and more vulnerable sections of society. Health care centres located in many villages are mostly non-functional, ill equipped and inadequately manned. Functional health facility mapping in rural and urban areas in different states of the country will highlight the inverse relationship between availability of functional facilities and the level of economic development.

Demands for quality health are rising and access to these is based on affordability and thereby limited to the elite. Infrastructure in the health sector especially in rural areas is poor. Applying current norms to the population projected for the year 2000, NHP 2002 estimates that the shortfall in the number of SCs/PHCs/CHCs is of the order of 16 percent. However, this shortage is as high as 58 percent when disaggregated for CHCs only. The shrinkages in maintaining the rural and urban health delivery systems through PHCs, CHCs and sub-centres need urgent correction.

To increase the low utilisation of PHCs and reduce the rush at the district hospitals, state governments must enforce compulsory rural posting for all the medical students, who have completed their internship before awarding the degrees/certificates to them. It should be a resident rural posting so that people can avail medical services at night and in case of an emergency.

Since the Gram Panchayat is accountable to the village community for the functioning of PHCs in the village, they should be provided with the required funds and made responsible for providing facilities for and monitoring availability of the PHC staff.

With private provisioning of health care estimated at four percent of GDP compared with public expenditure at 0.9 percent, disparities in access to health care are widening. Extreme poverty is the world’s most ruthless killer and the greatest cause of suffering on earth (World Health Report, 1995: 5). “Vast numbers of people of all ages are suffering and dying for want of safe water, adequate sanitation and basic medicines” (ibid: v).

The health sector needs urgent attention and significant priority allocation of resources for the reasons identified as early as 1946 by the Bhore Committee. These include (Bhore Committee, v):

1) No individual should fail to secure adequate medical care because of the inability to pay for it.

2) In view of the complexity of modern medical practice, the health services should provide, when fully developed, all the consultant, laboratory and institutional facilities necessary for proper diagnosis and treatment.

3) The health programme must from the beginning lay special emphasis on preventive work. The cre-
Economic Reforms in India: Pro-poor Dimensions

4) There is urgent need for providing as much medical relief and preventive health care as possible to the vast rural population of the country. The debt which India owes to the tiller of the soil is immense... the medical attention he receives is of the most meagre description. The time has therefore come to redress the neglect, which has hitherto been the lot of the rural areas.

5) The health services should be placed as close to the people as possible in order to ensure the maximum benefit to the communities to be served.

6) It is essential to secure the active cooperation of the people in the development of the health programme and the most effective means would seem to be providing health education on the widest possible basis and opportunities for active participation in the local health programme.

7) Apart from a three-tier model with a strong primary health service network as a base and supported by secondary and tertiary levels of care to deliver health services, it suggested the establishment of health committees in every village, access to suitable housing, sanitary surroundings and safe drinking water supply, as prerequisites for a healthy life; and called for a statutory obligation (p. 89) on governments to spend a minimum of 15 percent of their revenues on health activities.

While allocating 15 percent of revenues to health may not be feasible, urgent re-examination of budgetary support for health is crucial if the poor are to be protected in times of ill health. The National Rural Health Mission (NRHM) notes that 25 percent of Indians fall below the poverty line because of hospital expenses. Hospitalised Indians spend on an average 58 percent of their total annual expenditure on medical care. Over 40 percent of hospitalised Indians borrow heavily or sell assets to cover expenses. The importance of access to affordable and reliable health services cannot be overestimated in the context of preventing the non-poor from entering into poverty or in terms of reducing the suffering of those who are already below the poverty line. While the NRHM seeks to articulate the commitment of the government to increase public spending on health from 0.9 to two to three percent of GDP and is a step in the right direction, if health is a core concern, allocations will need to be raised substantially.

In the same vein, the Alma Ata Declaration (International Conference on Primary Health Care held at Alma Ata, now Kazakhstan, 6-12 September 1978) to which India is a signatory, adopted a Declaration that required among other things:

- Strong reaffirmation that health, which is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, is a fundamental human right.
- The existing gross inequality in the health status of the people particularly between developed and developing countries as well as within countries is politically, socially and economically unacceptable and is, therefore, of common concern to all countries.
- Governments have a responsibility for the health of their people, which can be fulfilled only by the provision of adequate health and social measures.
- Primary health care is the key to attaining this target as part of development in the spirit of social justice.
- Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can
afford to maintain at every stage of their development in the spirit of self-reliance and self-determination.

- Primary health care includes at least: education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and proper nutrition; an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunisation against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs.

- All governments should formulate national policies, strategies and plans of action to launch and sustain primary health care as part of a comprehensive national health system and in coordination with other sectors. To this end, it will be necessary to exercise political will, to mobilise the country’s resources and to use available external resources rationally.

The NHP 2002 provides a scathing criticism of the state of the existing public health infrastructure on grounds of insufficient funds, inadequate medical and para-medical personnel, negligible availability of consumables, obsolete and unusable equipment, dilapidated buildings, over-crowding, and steep deterioration in the quality of the services. The experience of countries such as China, Sri Lanka and Russia cited by CMDR shows that while total government expenditure in all these countries declined after the advent of reforms, public health expenditure did not decline. Special measures were taken to improve health infrastructure in China and Sri Lanka. The Mid-Term Review of the Tenth Plan (p. 84) refers to the 50 percent reduction in MMR in Sri Lanka between 1947-50 and a further 50 percent reduction every eight to 13 years through the appointment of public health midwives (after an 18 months training programme) at the health sub centre level, combined with an efficient referral system. Further, support was made available through the provision of an ambulance service to transport the sick from their houses. Similarly, China successfully achieved an IMR of 37 and MMR of 56 and “basic health care for its people through an enormous cadre of health personnel for preventive and curative health services from the village to the district hospital.” In comparison the average or all India estimate of IMR for India is 63 and MMR is 407. “India contributes 2.4 million of the global burden of 10.8 million under-5 child deaths – the highest for any nation in the world” (ibid p. 85 and 86).

The lessons for India are that for sustainable improvements in health indicators, public expenditure allocations for health need to be increased significantly together with special efforts for ensuring its translation into improved health infrastructure and effective health service delivery. Simultaneously, factors that determine health outcomes such as safe drinking water and sanitation need priority attention.

The National Health Policy 1983 had hoped to provide ‘Health for All’ by the year 2000 AD, through the universal provision of comprehensive primary health care services. In retrospect, the financial resources and public health administrative capacity, which it was able to marshal, was far short of that necessary to achieve such an ambitious and holistic goal.

A health insurance scheme that can pool the risks of illness of the poor households to provide health care services at reasonably low current costs and convenient cost payment arrangements, should benefit the poor. However, the entry of private players in the health insurance market may adversely affect the equity, quality and cost of health care in India. One option, which was experimented with in Karnataka by CMDR—that may provide a viable option - would be a partially subsidised health insurance scheme that covers all the households in the village, is managed by a Health Committee with local representation and that provides outpatient care at the clinic in the village and is linked to
a private or district hospital, based on referral for inpatient care. A differential rate structure for membership may be visualised for households based on the income level. Other options could be on lines of the Rogi Kalyan Samiti best practice experience of Madhya Pradesh where the effort is to create a system that is self-sustaining and where the active participation of the hospital administration, motivation of staff and constant monitoring by the public can be ensured to guarantee better all-round performance of hospitals, CHCs and PHCs. The RKS has effectively constructed a sustainable ‘state-society’ synergy. Since no user fee is charged for those who are poor, the system ensures access to vulnerable sections and is pro-poor.

Strategic policy options in the context of the problems facing the drug industry due to the adoption of product patents include stronger focus on R&D activity and new product development, exploiting the potential of the Indian system of medicines; consolidation of market position in the off-the-patent/generics markets by launching our own formulations under their own trade/brand names to strengthen their position in the market and also realise higher value addition; exploiting the flexibilities available in the TRIPS Agreement; resisting the attempts to evolve TRIPS plus regime and ever-greening of patents; mobilising support for the review of TRIPS at WTO; and applying price controls to protect the poor masses from the price increases following the introduction of product patents. The evidence suggests that competition does not lead to lower prices of medicines. Therefore, there is continued relevance of price controls in the industry (Kumar and Pradhan, 2004).

To conclude, if the decentralised public health services in the country are to improve significantly, there is a need for the injection of substantial resources into the health sector and it requires the continued support of the government. Within the expenditure allocated, priority allocations should be towards correcting the existing disparities in access to out patient and inpatient quality treatment in rural areas. The state is committed to providing essential health care service to people below the poverty line based on their need and not on their ability to pay for the services. Privatisation is not a solution. The experience of other countries shows that while privatisation enlarges health services and improves their quality; it keeps the poor away from the health system.
This section traces developments in agriculture, identifies problem areas and suggests inputs for agricultural policy. It tries to assess the impact of economic reforms on poor farmers especially in the context of globalisation. It examines the viability of small farms and considers policy options.

During the last 50 years and more India made immense progress towards security of food and livelihoods. Since 1950, the population almost tripled, but food-grain production more than quadrupled. There was thus substantial increase in food-grain per capita. India is now among the largest producers of rice, wheat, pulses, fruits, vegetables and milk. India at the same time is home to one-fourth (208 million) of the world's total (800 million) of under-nourished people. Since 1950, agriculture's share of GDP declined substantially, but there was minimal decrease in the number of persons dependent on agriculture. Consequently, agriculture contributes only 26 percent of the national GDP, but employs 60 percent of the workforce. Since it has been agricultural-led broad-based economic growth that decreased poverty, particularly rural poverty, recent trends in agricultural growth and its impact on rural development raise serious concerns (Singh, Kumar & Woodhead, 2002).

India has been growing at an annual average rate of above six percent since economic reforms were initiated in 1991. During the same period, the dependence on the farm sector for the overall economic growth has been declining. This was evident in 2004-05, as despite the farm sector growth slowing down to a meagre 1.1 percent, the GDP growth was powered by manufacturing growth of 9.2 percent and services growth of nine percent (TOI, 2005: 11).

Public sector investment has, over the years, played an important role in the development of infrastructure like roads, electricity, irrigation, agricultural research, markets and communications. Investment in agriculture has however declined from 1.6 percent of GDP in 1993-94 to 1.3 percent in 1998-99 (Table 26). The Planning Commission calls for a reversal of the declining trend in public sector investment (Tenth Five Year Plan, 2002-07).

Small and marginal farmers are the worst hit by the poor performance of the farm sector. Three-quarters of all farmers who cultivate a third of the total landmass, remain marginalised. Small farmers produce 41 percent of the total grain and over half of India’s total fruits and vegetables. Small farms are thus important in preventing acute hunger. The small farmers cultivate only 33 percent of the total farmland, but their farms are more productive than medium and large farms and India depends upon these small farmers to sustain the food supply. In 1991, 51 percent of the vegetable and fruit production came from the small farms (Muller and Patel, 2004).
The globalisation of Indian agriculture, as Srijit Mukherjee points out, can be broadly divided into two distinct phases. The earlier phase of globalisation came in the form of international collaboration during the post-independence period. The Rockefeller Foundation began a programme with the GOI in 1957 to improve maize cultivation. International collaboration also came in the form of research institutes such as ICRISAT (The International Crop Research Institute for the Semi-Arid Tropics) located in Hyderabad (Mukherjee, 2004). One can argue that this phase was marked by the so-called benevolence of the developed West towards developing countries like India. This phase was followed by the green revolution, which came with its own technological package consisting of high-yielding crop varieties, chemical fertilizers, modern irrigation systems, etc. However, the current phase of globalisation is quite different from the earlier collaborative phase. This is mainly because the current phase is marked by international competition, with developed countries competing with Third World countries for international markets. In the present scenario small and marginal farmers are the worst hit. Whereas the rich farmers have access to new hybrid seeds, the poor farmers can ill afford them.

We can at the same time observe distinct phases in agricultural reforms so far as marginal farmers and the landless poor in India are concerned. The period after Independence saw the land reforms movement in India, which revolved around the abolition of the zamindari system and the imposition of land ceilings for acquisition and re-distribution of the surplus land to the landless in India. Cooperative farming was one of the vehicles for the development of agriculture in this phase, especially to enhance the viability of small farms. The current reforms, however, propagate contract farming and corporatisation of agriculture.

### Land Reforms

The major objectives of land reforms include the re-ordering of agrarian relations in order to achieve an egalitarian social structure. The annual report of the Ministry of Rural Development (2003-2004) points out that, in order to bring about radical and pro-people changes, the current proposals for the amendment of the Land Acquisition Act is under the active consideration of the central government (Amendment Bill, 2004). Table 27 provides details about land redistribution in India.

#### Table 26 : Gross Capital Formation in Agriculture (at 1993-94 Prices) (Rs. Crore)

<table>
<thead>
<tr>
<th>Year</th>
<th>Agriculture</th>
<th>Total economy</th>
<th>Public sector in agriculture</th>
<th>Private sector in agriculture</th>
<th>Public sector in agriculture</th>
<th>Private sector in agriculture</th>
<th>Agri. to total</th>
<th>Investment in agriculture as percentage of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993-94</td>
<td>13,523</td>
<td>181,133</td>
<td>4,467</td>
<td>9,056</td>
<td>33.0</td>
<td>67.0</td>
<td>7.47</td>
<td>1.6</td>
</tr>
<tr>
<td>1994-95</td>
<td>14,969</td>
<td>229,879</td>
<td>4,947</td>
<td>10,022</td>
<td>33.0</td>
<td>67.0</td>
<td>6.51</td>
<td>1.6</td>
</tr>
<tr>
<td>1995-96</td>
<td>15,690</td>
<td>284,557</td>
<td>4,839</td>
<td>10,841</td>
<td>30.9</td>
<td>69.1</td>
<td>5.51</td>
<td>1.6</td>
</tr>
<tr>
<td>1996-97</td>
<td>16,176</td>
<td>248,631</td>
<td>4,668</td>
<td>11,508</td>
<td>28.9</td>
<td>71.1</td>
<td>6.51</td>
<td>1.5</td>
</tr>
<tr>
<td>1997-98</td>
<td>15,942</td>
<td>256,551</td>
<td>3,979</td>
<td>11,963</td>
<td>25.0</td>
<td>75.0</td>
<td>4.77</td>
<td>1.4</td>
</tr>
<tr>
<td>1998-99</td>
<td>14,895</td>
<td>243,697</td>
<td>3,869</td>
<td>11,026</td>
<td>26.0</td>
<td>74.0</td>
<td>6.11</td>
<td>1.3</td>
</tr>
<tr>
<td>1999-00</td>
<td>16,582</td>
<td>268,374</td>
<td>4,112</td>
<td>12,470</td>
<td>24.8</td>
<td>75.2</td>
<td>6.18</td>
<td>1.3</td>
</tr>
<tr>
<td>2000-01*</td>
<td>16,545</td>
<td>274,917</td>
<td>4,007</td>
<td>12,538</td>
<td>24.2</td>
<td>75.8</td>
<td>6.02</td>
<td>1.3</td>
</tr>
</tbody>
</table>

* Quick Estimates

Source: Tenth Five Year Plan, 2002-07
As the table indicates, from a total of 54,03,277 acres, 57,46,410 beneficiaries were allotted land. This works out to less than an acre per beneficiary.

The land reforms movement in India can be divided into three phases. Phase I spread over 1950-60 saw different states enact land reform legislations. These however, did not take a comprehensive look at land reforms and were restricted to issues relating to the exploitation of the tenants by the Zamindars etc. In Phase II, which covers the period between 1955-71, the emphasis was on the imposition of ceiling limits on agricultural landholdings. Ceiling limits, however, varied from state to state, e.g., Andhra (2.5 to 30 ha), Assam (20 ha), Bihar (8 to 24 ha), Madhya Pradesh (10 standard hectare), Orissa (8 to 32 ha), Rajasthan (8 to 136 ha) and Tamil Nadu (5 to 25 ha). At the same time, the rate of compensation varied widely. As a result of severe food crisis, agrarian unrest and armed movement, the second phase was marked by failure.

The lowering of ceiling limits marked the third phase of land reforms in India. Top priority was to be given to the allotment of land to landless agricultural labourers, especially to those belonging to the Scheduled Castes (SCs) and Scheduled Tribes (STs).
ceiling limit for government-irrigated land was fixed at four to seven hectares, private irrigated land at five to seven hectares, and the ceiling limit for other kinds of agricultural land exceeded 22 hectares. These were to be complied with by the end of December 1972. Despite the 20 Point National Programme, land reforms did not meet with any significant success. One of the main reasons for the failure of land reforms was the poor quality of land allotted (Kumar, 2004).

West Bengal was the most notable exception in the otherwise dismal performance of different states in the implementation of land reforms. The credit for this is given to the Communist Party of India (Marxist). Kumar observes that the land reform legislations existed only on paper before they took over power in West Bengal in the late 1970s. It has contributed towards the empowerment of the rural poor. He calls ‘Operation Barga’ a mass movement and one of the rarest struggles against inequality ever witnessed in India’s administrative history. Whereas only 400,000 bargadars had been recorded before Operation Barga started in 1978, the number had increased to over 1.4 million by 1988. The Panchayati Raj institutions (PRIs) have played a major role in the successful implementation of land reforms (Kumar, 2004).

The impact of land reforms and land distribution has been mixed. Whereas in states like West Bengal, land reforms have been quite successful, in other places, they have not made a major difference to the lives of the poor. Timothy Besley and Robin Burgess hold state legislatures dominated by the landlord class responsible for blocking reforms in these states. However, notable successes in implementation were recorded wherever tenants had substantial political representation, but their numbers were very small (Besley and Burgess, 2000).

Singh (1982) shows that land distribution did not have the desired impact, because it was not accompanied by other wherewithal to make farming a success. The study attempted to analyse the impact of government policies and programmes on the socio-economic conditions of SCs in rural areas. One of the major areas of concern of this study was land distribution and its impact. Two villages were selected from the Agra district of Uttar Pradesh – Dhanoli, eight kilometres away from Agra and Semra, 21 kilometres from Agra. A total of 160 SC households were selected for the survey – 80 from each village.

In 1970-71, 17 respondents in Dhanoli and 33 in Semra were landholders. By 1980-81 the number of landholders had gone up to 19 in Dhanoli and to 56 in Semra. Two of the respondents in Dhanoli and 23 in Semra had been given land under the land distribution scheme.

The land distribution programme has had little impact in Dhanoli, as only two among the 19 landholding respondents had been allotted land. In Semra, however, 28.75 percent benefited from the land reforms scheme. The poor performance in Dhanoli may be attributed to the fact that there is hardly any surplus land in this village, because half the land has been used for the construction of an Air Force station. All the beneficiaries were allotted land during 1976-77. The type of land given to most of them was, however, of very poor quality and undeveloped. Moreover, the size of the plot allotted, was less than a bigha.

Thus, it can be inferred that the land distribution scheme has had little impact on the economic conditions of the SCs mainly on account of the poor quality and insufficient quantity of land allotted. In Semra 16.25 percent of the beneficiaries were raising only one crop in a year. The two beneficiaries in Dhanoli and 10 percent of them in Semra were not using their land, because of the uneconomic size of the holding and unproductive nature of the land. They had not tried to develop the land mainly because they could not afford to pay the high interest rates charged by the banks. Also, the size of the plot was too small to make investment an attractive proposition. Many respondents complained about corruption being rampant in the banking and co-operative sectors. They also complained about the Patwari taking bribes for giving ‘pattas’. Those who got the ‘pattas’ received them only after they had paid the Patwari. Others complained
that the Patwari was not giving them the ‘pattas’ as they could not pay the amount demanded by him.

Most of the respondents stated that their main source of irrigation was private tube wells owned by the rich landlords, the charges for which varied between Rs. 12 and 16 for an hour’s water supply. In Semra 7.5 percent were paying charges as high as Rs. 16 per hour. They strongly felt that the rich farmers were cheating them, but expressed a feeling of despair and helplessness, as there was no alternative source of water supply. The water rates were especially high because the pump sets were run by diesel engines, as there was no electricity supply either in Dhanoli or in Semra. A large number are still dependent on the benevolence of nature. As can be seen from the foregoing analysis, most of the holdings are uneconomical, being less than a bigha and devoid of basic facilities like water supply etc. (Singh, 1982).

Starting with the 1990s, the land reforms movement finds itself increasingly torn between the pro-liberalisation and anti-liberalisation lobbies, with both camps putting forward their dramatically opposite viewpoints. The pro-liberalisation lobby argues in favour of removal of all restrictions on leasing; concessions to the industry for investing in rural infrastructure; upward revision of ceilings on land holdings; unrestricted entry of multinational companies and agro-farm houses to rural areas; letting food and fruit processing industries purchase or lease land directly from the peasants; export led demand driven agriculture; and the removal of all restrictions on conversion of land from farm to non-farm activities. In sharp contrast, the anti-liberalisation lobby advocates rigorous implementation of the existing land reform laws, and demands putting in place institutional safeguards for protecting the poor in view of liberalisation. It calls for an end to absentee landlordism; prohibition on the conversion of agricultural land for non-agricultural purposes; security of tenure for tenants; total ban on alienation of tribal land as well as restoration of already eliminated land; and restoration of common land etc. (Kumar, 2004).

A direct outcome of economic liberalisation in the 1990s is the demand from influential groups who believe that ceilings on land have hampered the development of agro-business. Citing findings from Haque’s study, Patralekha Chatterjee draws attention to ‘concealed tenancy’ being practiced in states like Kerala, Bihar, Himachal Pradesh, Madhya Pradesh, Uttar Pradesh and the Telengana region of Andhra Pradesh, which have imposed a ban on leasing out agricultural land. At the same time in states like Punjab and Haryana the trend is towards reverse tenancy wherein large and medium farm owners lease land from small and marginal land owners (Chatterjee, 2002).

The return of land reforms to the government’s list of priorities in the 1990s raises several questions. The market driven land reforms that are being promoted by the IFIs call for closer examination. While the IFIs stress on increasing access to land for the rural poor, at the same time they encourage micro economic and trade policies, which undercut the economic viability of small and marginal farmers. The high failure rates, mass sell-offs, landlessness and rural-urban migration raise serious questions regarding the efficacy of land reforms in India (available online http://www.landaction.org/display.php?article-57).

Recent developments in West Bengal, which was considered a model for others to follow, indicate that all is not well with the farming sector in the state. Whereas after Operation Barga the right of the sharecropper was considered sacrosanct, bodies like the CPM controlled Pradeshik Srishak Sabha now say that it is time to become flexible. Nirmalya Banerji observes a growing realisation regarding the development of market forces in villages and that with rising farming costs, small and marginal farmers are complaining the most. There is a feeling amongst the Krishak Sabha that the communists should move ahead along with the changing times, rather than being tied to the feudal mode of production. Bargadars are increasingly found moving to other more remunerative work such as small grocery shops or a small business
rather than depending upon a tiny plot of land with falling productivity and increasing cultivation costs. Sharecroppers are selling their right to till the land to the landowner. The Krishak Sabha had earlier proposed that the sale of Barga land be legally allowed. For fear of adverse political ramifications the state government did not accept this. It is now observed that instead of a formal law, mutual consent is the mode of operation. The increased use of fertilizers is the primary cause for the rise in cultivation costs. The repeated use of chemical fertilizers has brought down soil fertility in Bardwan district, which is known as the granary of Bengal. Chemical fertilizers sprinkled on one acre earlier produced 30 maunds of paddy whereas now it requires eight times more fertilizer for the production of 20 maunds. The farmers appear inclined to shift to cash crops such as pulses, vegetables and fruits as they fetch a higher price (Banerji, 2005).

It has also been reported that corporates are entering agri-businesses in a big way, with state-of-the art technology. They find the cultivation of fruits and vegetables at low costs an attractive proposition. Among these corporates are names like the Mittals of Bharti Enterprises, the Essar and Thapar groups, Mahindra & Mahindra and Reliance. Their farms are spread all over the country – Punjab, Rajasthan, Haryana, Maharashtra, Gujarat, Andhra Pradesh and Karnataka (Das, 2005). An important question that demands an answer is: Will this lead to a new wave of the Zamindari system?

**Farm Size**

Studies by the National University of Juridical Sciences have highlighted the role that small farmers play in agricultural production in India. Small farmers make optimum use of their land, which results in a higher output per hectare (Chakraborty, 2004).

Though the popular perception is that large farms lead to economies of scale, there are a large number of studies that show small farms can enhance productivity (Arya, 2004). Kumar further argues that since a negative relationship exists between farm size and productivity, land distribution to low income groups is an effective policy instrument (Kumar, 2004).

Other arguments in favour of small farms are that productivity measured in terms of total output per unit area is found to be higher in the case of small farms because of inter-cropping. They tend to rotate or combine crops and livestock and manure serves to replenish soil fertility. The total output of a small farm consists of various grains, vegetables, fruits, animal products, fodder, etc. (Dogra, 2002). A World Bank publication cited by Dogra (2002) illustrated the experience of Thailand, Argentina, Brazil, Chile, Colombia, Ecuador and Guatemala where small farms were found to be three to four times more productive per acre than large farms. Even if 10 percent of cultivated land in India is redistributed (over and above the redistribution that has already been done), it will release 38 million acres of land. Around 25 million of the poorest families can thus benefit with one and a half acres of land per family. However, this exercise will be successful only if it is accompanied by small-scale irrigation works and the poor families are given, wherever possible, land in a continuous stretch and are encouraged to work in close cooperation. The support of government officials is crucial for the small farms (Dogra, 2002).

Policy and strategies must help diversify farm and off-farm activities to enhance sustainability and productivity. This will help the small-farm households to remain hunger-free. The smallholders’ contribution to India’s food security has increased considerably during the recent decades, notwithstanding the fact that the smallholder households are themselves highly insecure and vulnerable. In this connection off-farm and non-farm employment can play a vital role in reducing poverty and hunger. Since liberalisation of agricultural trade has not increased rural area non-agricultural employment, steps such as increased budgetary allocations, an expanding banking system, rural credit for non-farm employment, which create rural enterprises need to be taken. At the same time,
the rural households would require skills—programmes to strengthen their decision-making capabilities and to increase their labour productivity. Human resource development in agricultural and non-agricultural aspects needs to be given high priority and shall be essential if economic and social goals are to be attained (Singh, Kumar and Woodhead, 2002). Thus, opinion is largely in favour of developing small farms.

Several organisational mechanisms are being explored to enhance the productivity of small farms. These include corporatisation of agriculture, contract farming and sub-contracting and cooperative farming and these are discussed below.

The Corporatisation of Indian Agriculture

The idea of corporatisation of Indian agriculture is increasingly being debated as an alternative to small size farms for meeting the challenges of globalisation. The corporatisation of Indian agriculture would mean that Indian agriculture and agri-business would have to integrate and develop on the lines of modern corporate practices using modern farm management practices. This is in sharp contrast to the small size farm. The National Agriculture Policy (NAP) 2000 had also suggested land reforms to facilitate increasing the size of holdings. Its recommendations include providing legal provisions to allow private lands to be given on lease for cultivation and agri-business; the consolidation of holdings; and speeding up tenancy reforms to recognise the rights of tenants and sharecroppers. Private sector investments are to be encouraged in areas such as agricultural research, post harvest management and marketing, and human resource development. The NAP 2000, thus, runs contrary to the earlier land reforms policy of the government, which imposed ceilings on land holdings for redistribution of surplus land to the landless.

However, we need to examine the other side of the corporatisation issue, which is that large corporations will thus establish a monopoly on agriculture. The critics of corporatisation cite the case of the U.S., where a handful of large corporations control the entire agriculture sector thereby marginalising small and medium scale farmers. This argument has serious implications for India where corporatisation of agriculture could wipe out small and marginal farmers, who may be forced to sell their smallholdings and migrate to the urban areas in search of employment (Arya, 2004).

Corporatisation of agriculture has created a situation wherein small farmers are saddled with unequal and unfair contracts, which lock them into new forms of bondage. Liberalisation, which centres around the removal of subsidies on irrigation, electricity, credits etc., creates an enabling environment for trans-national corporations, which at the same time threaten the farmers with dire consequences. With millions of small and marginal farmers living in poverty, the social and political costs of drastic reform need to be carefully analysed. As small holdings dominate the Indian agrarian scene, any policy decision encouraging large land holdings would result in the marginal, small and semi-medium categories of farmers merging to form a single landless or marginal category leading to a sharp rise in unemployment and poverty. Structural changes that influence the market in favour of the poor should be given priority in economic reforms, to stop further marginalisation of the economically and socially marginalised. Land distribution to the landless or marginal farmers may in fact increase production and at a lesser cost as poor farmers use local resources and less expensive methods for farming (Chakraborty, 2004).

Contract Farming and Subcontracting

Liberalisation has forced small farmers to compete in a global market where commodity prices have plummeted while the reduction of government subsidies has made farming more expensive. Government investment in agriculture registered a decline, leaving farmers without access to affordable loans and forcing them to turn to private lenders who
charge significantly higher interest rates. Private banks
directed only 10.8 percent of total credit to agriculture,
well below the government required 18 percent.
Subsequently, farmers have turned to contract farming
for large national and international corporations,
producing cash crops - cotton, potatoes and chillies –
for the U.S. and European markets – instead of food
for India's people. While these contracts can provide
farmers with higher incomes, they also come with
higher risks and costs of production. In most contract
farming situations, the farmer bears the entire financial
risk in the event of drought and crop failure. Such
events have left many farmers heavily indebted, driving
thousands to suicide (Muller and Patel, 2004). Contract
farming envisages farmers working on their fields on
contract with either a multi-national or national
corporation and bearing the risk of crop failure.

In order to compete in the international markets,
starting with the Eighth Five Year Plan, the emphasis has
been on technology upgradation and quality improve-
ment in the food-processing sector. Sub-contracting
offers immense opportunities for both large and small-
scale industries. However, the sub-contracting rela-
tionship is found to be working on informal lines
whereas economic reforms and the spread of
globalisation call for formal arrangements. The Con-
tract Law of India with its origin in 1872 has nothing
specific on sub-contracting.

There are tremendous opportunities for sub-
contracting relationships in agro-based industries,
particularly in the food processing industries. Drawing
upon India info line (http://www.indiainfoline.com.)
database, which provides a comprehensive picture of
agro-based industries in India, Raychaudhuri observes
that agro-based industries offer a high potential for
development. The data shows that though India ranks
among the world’s major food producers with over
600 million tons of food products every year, its share
in international food trade is a miniscule 1.5 percent.
Also value addition to food products by way of
processing is a mere eight percent of the total
production. According to the estimates of the Ministry
of Food Processing, the Processed Food Industry at
Rs. 1,440 billion ranks fifth in size in the country,
accounting for 6.3 percent of the GDP and 13 percent
of the country’s exports. It is interesting to note that
small, unorganised players processing less than 0.5 tons
per day process more than 75 percent of the industry
output in terms of volume and 50 percent in terms of
value. However, processed food exports, which stood
at Rs. 48.95 billion (US $1.04 billion) in 2000-01,
registered a 23 percent decline over the previous year.
Sub-contracting in food processing industries can be
successful provided large firms enter this sector and
develop a cluster of small firms, since small firms are
in a better position to get raw materials from the
farmers. Large firms like ITC Agro, Dabur, Hindustan
Lever and Nestle have started production through a
network of small firms in India. It is however,
important that the Indian Contract Law, addresses
specific issues concerning sub-contracting
(Raychaudhuri, 2004).

The case of small and marginal farmers in Sirohi dis-
trict illustrates their plight in the absence of a formal
contract. In the Sirohi district of Rajasthan it was found
that farmers had gone in for mass scale production of
tomatoes, which were left to rot on the farms, as the
company, which was supposed to collect the crop
refused to do so, because it did not meet their
specifications. In order to avoid such a situation,
provision should be made to make the contract
enforceable in a court of law. The government would
have to put strict regulatory mechanisms in place.
There is also a need to take consumer courts to the
people at the village level. The above-mentioned
situation in Sirohi offered no solution in the absence
of infrastructure such as roads, which could have
helped the farmers transport their produce to urban
areas. The absence of cold storage facilities because
of the lack of electricity in the villages only made
matters worse. No attempt was made by the
government to help the poor farmers (Singh 2000).
Cooperative Farming

Though cooperative farming was considered an effective mechanism for helping small farmers maximise their production, there has been a rapid decline in the number of cooperative farming societies, which have a tendency to break up. Many remain on the Cooperative Department’s registers pending formal liquidation. It has been suggested that reinventing the cooperative movement would be a futile exercise (Kumar, 2004, Chakraborty, 2004). Instead, service type cooperative farming societies may be promoted in areas where sizeable blocks of land are allotted to the weaker sections. This will provide the cooperatives with facilities such as supply of fertilizers and other goods, mechanised cultivation by tractors, irrigation facilities etc. (Chakraborty, 2004).

An important question that needs to be addressed is whether serious attempts were ever made to promote cooperative farming. A study of a government sponsored cooperative farming society in Andhra Pradesh at three different points in time – 1981-82, 1983 and again in 1987 shows why such societies fail. It was found that the cooperative farming society as planned and designed by the government departments had no chance of success.

The “Chenchupally Weaker Sections Cooperative Joint Farming Society” was taken up as an experimental project wherein an attempt was made to resettle the tribals along with the SCs and backward classes by giving them viable resources and means to practice their agricultural occupations.

Around 262 acres of land was purchased at Yenkapally village in the Vikarabad taluka of Rangareddy district of Andhra Pradesh, at a cost of Rs. 12,000 from ITDA funds and three acres each was allotted to 40 Chenchu, 21 SC and five backward class beneficiaries. They were brought together under the umbrella of a co-operative farming society, which was duly registered in August 1980 under the A.P Co-operative Societies Act of 1964. The survey covered all the beneficiaries of the society.

The “Chenchus”, one of the most primitive tribes of Andhra Pradesh, form the largest group among the beneficiaries. All the Chenchus originally belonged to Pargi Taluka of Rangareddy district, which is about 20 kilometres away from Yenkapally village. The SC and backward class beneficiaries were chosen from Yenkapally village. Chenchupally is a hamlet of Yenkapally village. The original plan was to make it a purely Chenchu resettlement project. However, the SC and backward classes were inducted into the cooperative farming venture, with a view to experimenting with a mixed group farming society. Another reason for including them was to maintain social harmony in the area and to avoid the risk of animosity that could arise among the people living in that area towards the Chenchus who were outsiders.

The main objective of the society as spelled out in the by-laws was to encourage owner cultivators, landholders, landless labourers and artisans to pool manpower, to undertake joint farming of land and allied programmes such as dairying, poultry, animal husbandry etc., on a planned basis for increasing agricultural production.

The government nominated a Board of Directors for three years with the sub-collector and Assistant Project Officer, ITDA as Chairman. Two beneficiaries were nominated on the Board, which has representatives from various developmental departments. The State Bank of Hyderabad adopted this Society and the local branch manager of the Bank is a member of the Board. An executive secretary has been taken on deputation from the Animal Husbandry department. His appointment is on full-time basis for giving technical assistance and guidance. However, the Board has not met even once.

The boundaries of the individual holdings have not been demarcated even though the society had completed three years in August 1983. All the Chenchu beneficiaries have now opted for individual cultivation. Only the first crop was jointly cultivated by the Chenchus.
No systematic action plan has been drawn up for the society’s development. This may account for the haphazard development of Chenchupally. There are far too many departments involved in this venture and in the absence of a well-defined plan or programme of action, there is no coordination between the various departments. Frequent transfers also affect the working of the society. During the first three years of the society’s existence there have been three new collectors and three new sub-collectors or project directors.

Technical guidance is not forthcoming and this results in under-utilisation of the land and uneconomical running of the society. The full-time secretary appears to be of limited help, as he is not equipped to solve the land based agricultural problems of the society.

So far as the realisation of the objectives of the society is concerned, the society has failed as a cooperative farming venture with the SCs and backward class beneficiaries absenting themselves from all activities associated with joint farming.

By 1987, all the able-bodied Chenchu members had left Chenchupally in search of employment, leaving behind elderly parents and children. As conceptualised, the society had little chance of success. The reasons for the failure of the government-sponsored cooperative farming venture are clear. The Chenchus were uprooted from their original habitat and resettled amongst people unwilling to be their neighbours and partners in the venture. Though the government took upon itself the role of “promoter”, the Chenchus were left to fend for themselves. The government departments that were to provide extension services to the society were conspicuous by their absence (Singh, 1987).

**Agricultural Research and Extension**

Extension Services have been one of the weakest links in agricultural development in India over the years. However, the need for agricultural extension is far greater today in the post liberalisation era than ever before. Agricultural extension will have to pay serious attention to the needs of farmers who require constant guidance at different stages of the production activities. Hence, the government will have to play a more active role in protecting the poor farmers’ interests.

There is an urgent need to focus research on crops and cropping systems in the dry areas, hills, tribal and other marginal areas rather than concentrate on individual crop-oriented research in irrigated areas. Greater participation or interaction with farmers is central to such research. Research on horticultural products that are both land saving and water saving as well as animal husbandry and dairying integrated with crop production would benefit resource-poor farmers together with being environmentally sustainable. There are immense opportunities in the agro-processing industry and the promotion of a Food Park with the involvement of the private sector. Since private sector participation tends to revolve around profitable crops and enterprises of resource-rich farmers, public sector research should step in to address problems faced by resource-poor farmers in less-endowed regions. Small and marginal farmers with less than two hectares who account for nearly 80 percent of holdings and one-third of the area operated should receive special attention (Hanumantha Rao, 2001).

The innovations from the research laboratories have somehow failed to reach our farmers. A recent effort relates to steps being taken by the ICAR to save local fruits from extinction. They include the jamun, imli, karonda, chironji, mahua, woodapple and khirnee. These are not only nutritionally very rich, but are also recognised by the Indian systems of medicine as being highly beneficial. Scientists at ICAR have highlighted their potential for commercial exploitation. These hardy varieties, which can be easily grown on wasteland, can be lifesavers in times of famine (Chandrika Mago, 2005). The important question is: will these innovations reach the poor farmers in India?

Though there are a multitude of departments working in the field, technical assistance still eludes the rural poor.
A study conducted during 1999-2000 to evaluate the working of the Million Wells Scheme in Rajasthan, highlights the plight of small and marginal farmers in the state. The study covered 31 out of the 32 districts of Rajasthan. Dausa was not covered in the survey since all its blocks were classified as falling under the dark zone.

When asked to indicate the source from where the beneficiary received technical assistance, as many as 42.89 percent beneficiaries said they received no technical assistance. Whereas 35.93 percent named the Block staff as the source of technical assistance, 18.25 percent named private agents including Mistry etc. as providers of technical assistance. Only 2.28 percent sample beneficiaries in the state as a whole named the village panchayat. The role of District Rural Development Agency/Zilla Parishad (DRDAs/ZPs) was even more negligible given the fact that 0.15 percent mentioned that they have received technical assistance from them. Only 0.49 percent had taken technical assistance from “others”.

During the course of the survey, a common complaint heard was the lack of cooperation from the technical staff, particularly the Junior Engineer (JE). A large number of beneficiaries complained that they have had to spend money from their own pockets to get the JE to visit the site. In addition to this, they have to entertain the JE on a lavish scale. Groups of beneficiaries pool their resources for this purpose.

The farmers adopt traditional methods for locating water. The local ‘Papas’ are substitutes for remote sensing devices. To locate water, they use an herb, which is kept behind the ear and then the person goes around the area till the exact place where water can be found is located. People appear to have more faith in traditional methods. Local technical staff such as JEs admitted to hiring the services of ‘Papas’ for locating water on their own farms. The technical staff steps in only when it is time for the disbursal of instalments. The obvious reason behind this is to make the beneficiary share part of the instalment with the local field staff and panchayat functionaries. It appears that in Rajasthan the Zamindar’s men have been replaced by government functionaries (Singh, 2000).

**Impact of Agreement on Agriculture (AoA)**

Globalisation has made an already complex situation even more complicated with a new set of actors playing an increasingly important role in the agricultural arena. Whereas lack of infrastructure facilities makes access to domestic markets beyond the reach of poor farmers, globalisation demands their integration with global markets. Thus, they are being called upon to integrate with the global markets before being integrated with the domestic markets. Any discussion on globalisation and economic reforms would be incomplete without outlining the various international agreements and analysing their implications for Indian agriculture. The major trade related issues that are relevant in the context of agriculture are: (a) reduction in domestic support to agriculture; (b) widening of the market network and issues of accessibility to markets; (c) Trade related intellectual property rights (TRIPS and their protection); and (d) bio-technological issues. Several of the studies undertaken by NUJS have analysed the impact of international agreements on Indian agriculture.

In 1995 India became a signatory to the WTO Agreement on Agriculture (AoA). There is a growing concern that agricultural trade liberalisation would have far reaching consequences on India’s food security. Behind this concern is a fear that trade liberalisation and greater integration of Indian agriculture into world markets through the lifting of restrictions on imports and exports would lead to cheap imports, thereby threatening food security. India is competitive in several major agricultural commodities such as rice and wheat and liberalisation is not likely to have an adverse impact on these. As far as commodities belonging to the pulses group and coarse cereals are concerned, they appear to be efficient import substitutes, though not export
Economic Reforms in India: Pro-poor Dimensions

competitive. However, India remains highly uncompetitive in the production of edible oils, as indicated by a dramatic rise in the import of edible oils. Overall, Indian agriculture remains reasonably competitive. The main problem lies in the implementation of the AoA by developed countries who continue to subsidise exports while simultaneously supporting their domestic agricultural sector. Further trade liberalisation especially as regards the heavily distorted products could pose a serious challenge to India’s agricultural production base (Mukherjee, 2004).

The AoA, which brings under its purview the entire gamut of agriculture, restricts the member nations from evolving agricultural policies that suit their national interest. These include issues like agricultural support and input subsidies for achieving self-sufficiency in food; restrictions on imports to protect domestic agriculture; and market intervention, where necessary, to ensure supplies to the consumers. While the rich farmers have benefited from globalisation in that they have access to new hybrid seeds, the poor farmers have been badly hit. Again, private firms do not invest in improving the so-called “orphan plants” such as sorghum, and legumes like chickpea (Bhrama, 2004).

Tariff Reduction Commitments for both the developed and developing countries is on the following pattern.

### Numerical targets for reducing protection

The reduction in protection as agreed in the Uruguay round is given below. The other figures are targets used to calculate countries’ legally binding “schedules” of commitments.

A member country has to reduce its total tariff every year over a prescribed period of time, which, for developed countries is 1995-2000, and, for developing countries the prescribed time period is 1995-2004. The tariff levels on various agricultural products during these years are included in the member’s schedule and are binding on the member. The guidelines on modalities prescribed an average total reduction of 36 percent (24% for developing countries) over the implementation period, with the condition that there be a minimum reduction of 15 percent (10% for developing countries) in each tariff line (Ronald, 2003).

Agricultural exports gained momentum with the initiation of economic reforms in 1991, because the domestic prices of several agricultural commodities at that time were below the international prices. The gap between the prices further increased with the devaluation of the Indian rupee in June 1991. However, after reaching a peak during 1996-97, there has been a decline in India’s exports of agricultural and allied products – 3.41 percent in 1997-98, to around nine percent each in 1998-99 and 1999-2000. Imports on the other hand have been rising steadily in the post-WTO period (Mukherjee, 2004).

The data on the export and import of commodities shows a mixed trend after 1999-2000 (Table 28 and 29). Whereas tea and coffee indicate a decline in exports, rice, cotton raw including waste, cashew including cashew nut shell liquid, spices, oil meals and marine products have been fluctuating. Tobacco, fruits and vegetables, processed fruits, juices, miscellaneous processed items; sugar and molasses, meat and meat preparations show an increase in exports. So far as imports are concerned, there is an increase in the import of bulk consumption goods especially edible oils and sugar.
### Table 28: Exports of Principal Commodities

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tea</td>
<td>1788.71</td>
<td>1719.22</td>
<td>1652.07</td>
<td>1594.56</td>
</tr>
<tr>
<td>2.</td>
<td>Coffee</td>
<td>1184.87</td>
<td>1094.92</td>
<td>993.98</td>
<td>1082.22</td>
</tr>
<tr>
<td>3.</td>
<td>Rice</td>
<td>2932.21</td>
<td>3174.14</td>
<td>5831.24</td>
<td>4133.08</td>
</tr>
<tr>
<td>4.</td>
<td>Cotton raw including waste</td>
<td>221.07</td>
<td>42.69</td>
<td>50.28</td>
<td>811.47</td>
</tr>
<tr>
<td>5.</td>
<td>Tobacco</td>
<td>867.22</td>
<td>807.70</td>
<td>1022.89</td>
<td>1090.82</td>
</tr>
<tr>
<td>6.</td>
<td>Cashew including cashew nut shell liquid</td>
<td>2053.47</td>
<td>1793.93</td>
<td>2061.50</td>
<td>1700.18</td>
</tr>
<tr>
<td>7.</td>
<td>Spices</td>
<td>1617.74</td>
<td>1496.97</td>
<td>1655.49</td>
<td>1525.60</td>
</tr>
<tr>
<td>8.</td>
<td>Oil meals</td>
<td>2044.69</td>
<td>2262.93</td>
<td>1487.35</td>
<td>3271.63</td>
</tr>
<tr>
<td>9.</td>
<td>Fruits and vegetables</td>
<td>843.31</td>
<td>1054.55</td>
<td>1188.06</td>
<td>1752.65</td>
</tr>
<tr>
<td>10.</td>
<td>Processed fruits, juices, miscellaneous processed items</td>
<td>1317.71</td>
<td>1236.73</td>
<td>1484.21</td>
<td>1494.69</td>
</tr>
<tr>
<td>11.</td>
<td>Marine products</td>
<td>6367.29</td>
<td>5898.34</td>
<td>6928.05</td>
<td>6067.84</td>
</tr>
<tr>
<td>12.</td>
<td>Sugar and molasses</td>
<td>505.09</td>
<td>1781.85</td>
<td>1814.54</td>
<td>1220.55</td>
</tr>
<tr>
<td>13.</td>
<td>Meat and meat preparations</td>
<td>1469.69</td>
<td>1193.28</td>
<td>1377.19</td>
<td>1602.44</td>
</tr>
<tr>
<td>14.</td>
<td>Others</td>
<td>4075.13</td>
<td>4586.73</td>
<td>4926.50</td>
<td>6682.60</td>
</tr>
</tbody>
</table>

Source: Website of RBI (Handbook of Indian Economy)

### Table 29: Imports of Principal Commodities

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cereals and cereal preparations</td>
<td>87.10</td>
<td>86.82</td>
<td>118.58</td>
<td>88.11</td>
</tr>
<tr>
<td>2.</td>
<td>Edible oils</td>
<td>5976.53</td>
<td>6464.97</td>
<td>8779.64</td>
<td>11674.41</td>
</tr>
<tr>
<td>3.</td>
<td>Pulses</td>
<td>498.47</td>
<td>3160.16</td>
<td>2737.09</td>
<td>2251.15</td>
</tr>
<tr>
<td>4.</td>
<td>Sugar</td>
<td>31.11</td>
<td>32.60</td>
<td>32.83</td>
<td>42.83</td>
</tr>
<tr>
<td>5.</td>
<td>Fertilisers</td>
<td>3434.72</td>
<td>3238.44</td>
<td>3028.49</td>
<td>3303.37</td>
</tr>
</tbody>
</table>

Source: Website of RBI (Handbook of Indian Economy)

### Biological Resources, Intellectual Property Rights and Plant Breeders’ Rights

India is a party to the World Trade Organization (WTO) agreements, and the agreement on trade related aspects of intellectual property rights (TRIPS) obligates members to evolve a patent or an effective *sui generis* regime for the protection of plant varieties (Article 27 (3) (b)). This demands closer examination. Developed countries like the United States have argued for patent protection for plant varieties while some other developed and developing countries argued for plant variety legislation. Article 27 (3) & (b) was the compromise that was arrived at. It is therefore important for India to keep pace with global trends in matters of knowledge protection, especially in plant biotechnology.

The various laws outlining the efforts of the Indian government and the trends at the global level, deal with questions such as:
(a) India’s obligations to the international community as a member of these instruments;

(b) India’s ability to comply with the obligations;

(c) The mechanisms through which maximum protection can be assured to the interest of farmers, consumers, scientists/scientific institutions, local community initiatives and the private seed industry of India; and

(d) The mechanisms to reconcile differences between India’s PVP Act, 2001 with the UPOV Convention 1991 (Panickar, 2004).

**Seeds: applicable laws and policies**

Apart from the Act of 1966, the laws and rules governing seeds in India are Seed Rules (Amendment Act 1972), Seed Rules 1968, Seeds (Control Order 1983) and the National Seeds Policy, 2002. In the public sector, the National Seeds Corporation (NSC), State Farms Corporation of India, and the States Seeds Corporation control the quality, production, and marketing activities of seed companies. There are around 200 private seeds companies as well as some multi-national companies currently operating in India. Their focus is on low volume-high value crops and hybrid varieties of oil seeds, maize, cotton and vegetables.

The Seeds Act 1966, was enacted to cater to increased agricultural production and to regulate the quality of seeds. The Central Seeds Committee, Central and State Seeds Laboratories and Central Seeds Certification Board were constituted under the Act to fulfil the above-mentioned objectives. However, the term seed as defined in the Act did not explicitly cover genetically modified seed. The draft of the Seeds (Amendment) Act 2001, which is under the consideration of the GOI, will replace the 1966 Act and will introduce a system of compulsory registration of seed and planting material to ensure availability of better quality seeds. “The National Seeds Board and Protection of Plant Variety and Farmer’s Rights Authority” will replace a Central Seeds Committee. Other important changes include:

(a) Establishment of Seed Certification Agencies or organisations by state governments;

(b) Registration of seed processing units;

(c) De-regulation and de-control of seed industry;

(d) Minimum standards for the import and export of seeds; and

(e) Exemption for farmers from the need to sell any registered varieties of seeds.

The National Seeds Policy (NSP), 2002 has the following objectives:

i) Food and nutritional security at the household level;

ii) Promotion of new varieties;

iii) Sustained increase in agricultural production;

iv) Efficient system for timely supply of quality seeds to farmers;

v) Private sector expansion;

vi) Economic pricing policies for private/public sector seed organisations;

vii) Creation of a facilitating environment for the growth of competitive and localised seed industry;

viii) Import of useful germ plasm;

ix) Boosting of exports;

x) Community benefit for contribution in the evolution of plant variety subject to registration;

xi) Traditional knowledge to be highlighted through suitable mechanisms and incentives;

xii) Formation of National Gene Fund to deal with benefit sharing arrangement and provide compensation for the development and conservation of sustainable use of genetic resources; and

xiii) To keep abreast of global developments in the field of plant variety protection and for technical collaboration, India may consider joining regional and international organisations.
The NSP is divided into different parts, focusing on the following issues:

- Seed production;
- Quality assurance;
- Seed distribution/marketing;
- Infrastructure facilities; and
- Transgenic plant varieties.

The seed market in India consists of two segments: (a) the hybrid seeds market and (b) the open pollinated seed market. Whereas giant transnational seeds corporations are concentrated in the former area, the public sector seeds industry is concentrated in the latter. Again, the public sector operates at two levels – the national and the state levels. Established in 1963, the National Seed Corporation’s primary function was the production and distribution of the varieties developed at institutions funded by the Indian Council of Agricultural Research (ICAR) and agricultural universities. The State Seed Corporation at the state level took over seed production from the NSC. The Multinational Corporations (MNCs) entered seed production in 1987 with the production of High Yielding Varieties (HYV) and hybrid seeds. The Seeds Policy of 1998 was responsible for liberalising the seed import policy for oil seeds, pulses, coarse grains, vegetables and fruits, by lifting restrictions on the import of foreign germplasms. This resulted in the proliferation of a large number of small and large private seed companies. The World Bank policy, which assumes that investment in the public sector seed industry was unproductive, marked the shift in favour of the private sector. This led to a monopoly like situation in the seed industry.

The disappearance of crop related genetic diversity is a direct fallout of the green revolution, with its emphasis on HYVs. The green revolution established dependency on external seeds and the use of uniform technologies, fertilizers, high yielding seeds, pesticides, mechanisation, irrigation, etc. It destroyed local ecological wealth, reduced soil fertility, increased the chances of crop failure due to pest attacks, created super weeds and infectious plant and animal diseases. Patenting of plant varieties and seeds would adversely affect the availability of seeds, bio-fertilizers, and pesticides to the poor farmers at affordable prices (Bhat, 2004).

There is considerable debate on the issue of whether the genetic resources of the world, once manipulated, should be governed by property rights, thus allowing a few companies of the technologically rich countries to control access to food, medical and other resources critical to the health and welfare of billions of people. The other issue is whether the concerned state should be notified before any genetically modified products are exported to them and whether and on what grounds, they may refuse or limit such trade. Developments in biotechnology have been accompanied by a stronger property rights (IPR) regime.

The genetic resources for the invention of transgenetic seeds by the advanced countries are geographically available only in the countries of the respective horizon. There is also a brain drain of agricultural scientists and experts from the less developed countries to the advanced countries with a gene drain from the gene pool of the climatically and geographically suitable countries to the sophisticated laboratories of the advanced countries (Banerjee, 2004).

It is argued that globalisation poses a threat to seed security, with biotechnological innovations relying heavily upon technologies and investment from the West. With the introduction of transgenic crops, the Indian seed industry is moving rapidly into a phase of ‘corporate control over seeds.’ This is being done without assimilating and understanding the adverse impacts inherent in genetically modified crops. The aim of trans-national companies is to create a broad international market for a single product, which will

---

7 The paper was written when the Draft Seeds (Amendment Act 2001) was under consideration.
lead to genetic uniformity in rural landscapes. Farmers will be prevented from sharing, re-using, and storing seeds because of patent protection and intellectual property rights imposed through the Trade Related Intellectual Property Rights (TRIPS) agreement of WTO. Hence, a few varieties will dominate the seed market. With monoculture development of crops, agriculture will increasingly face the threat of plant diseases, insect pests and weeds. Our rich genetic diversity will be eroded by genetically modified crops and intensively managed farms. The tragedy of farmers committing suicides only goes to show the high social and ecological costs linked to the globalisation of non-sustainable agriculture. These issues are not restricted to the cotton growing areas of different states, but hold true for all commercially grown and chemically farmed crops spread over all regions. Their case study on “Andhra Pradesh Cotton Failure” highlights the total negligence shown by the agriculture department of the state in disseminating the advice of scientists, which resulted in the disaster caused by pests (Shiva, Emani and Jafri, 1999).

There are serious flaws in the Seed Act, 2004. Our farmers, have for hundreds of years, sown seeds, harvested crops as well as exchanged seeds with each other. Farmers in coastal areas have developed salt-resistant varieties. Farmers from Bengal and Bihar have evolved flood-resistant varieties. Farmers of Rajasthan developed drought resistant varieties. Similarly, farmers in the Himalayan belt have developed frost-resistant varieties. Not being highly educated they do not understand the implications of getting their seeds registered, which the multinational agents can buy and get registered before they do. They will thus get the power to file cases against the farmers for bartering their seeds with their neighbours. The Seed Act, 2004, introduces “Inspector Raj” vesting the inspectors with the power to not only to enter and search premises, but also break open any container and any door. The fine for seed barter and exchange of unregistered seed is up to Rs. 25,000 (Datt, 2005).

**Protection of Plant Varieties and Farmers’ Rights Act, 2001**

This Act passed in 2001 aimed at fulfilling India’s obligations under the TRIPS Agreement. The main objectives of the legislation include:

(a) Protection of the rights of farmers and plant breeders;

(b) Encouragement for the development of plant varieties as it is vital for the development of agriculture in the country;

(c) Development of the seed industry in the country both in the public and private sector to guarantee quality seeds to the farmers;

(d) Compliance of India under TRIPS, Article 27 (3)(b).

Given the fact that biotechnology as a field is dominated by the corporate sector in the US and Europe, it cannot be denied its role in solving the problems of the developing countries. However, farmers should have the right to preserve, duplicate and replant seed varieties. The notion of ownership can best be understood in terms of a cluster concept with distinct rights, duties and liabilities. Whereas patents or plant variety legislation determines ownership of intellectual property rights in plants, the content of duties and liabilities is determined by other legislations.

What India urgently needs is to develop a team of experts to project its case at the international level. We should learn from the experience of countries like Brazil and South Africa who have had to violate the obligations under patents for complying with their domestic demand for essential medicines at cheaper rates. It is pertinent to point out that we can avail the safeguarding clauses within the TRIPS (such as Articles 7, 8 and 13) in order to counter the much broader commitments. The Indian PVP Act is a combination of the UPOV convention and FAO Treaty thus balancing the rights of the breeder and the farmer. There
could be problems in its implementation given the fact that most of the developed countries have incorporated the pattern of UPOV rather than of FAO. There are two options available to India - one not to be a Party; or second to be a Party but at the same time emphasise the need for protection of its domestic interest. The point to be kept in mind is that when we decide to be a part of an international undertaking we should ensure that it is beneficial to us. For this to happen the cooperation of other developing countries is crucial.

The protection of plant/seed varieties, which have been developed through years of human effort, have to be guaranteed. Though there are enough guarantees both at the national and global levels, with a number of legislations having specific applicability in India, this area of law needs special attention. Though there are contradictions in the PVP Act and the UPOV 1991, India needs to retain provisions for the protection of its farmers. The role of civil society is crucial in this matter. So far as the consumers are concerned, developments in biotechnology demand adequate regulation of the products for consumption. At present the Department of Biotechnology, GOI and the Environment Protection Act 1986, provide regulations and guidelines for this. At the same time there are a number of authorities, which decide on imports, and the commercialisation of genetically modified organisms or transgenic varieties. The lack of coordination among different agencies creates uncertainty in the public mind as is evident from the Bt cotton controversy. Countries like South Africa and Australia have evolved legislation to handle the Genetically Modified Organisms (GMOs) such as the GMOs Act No. 15, 1997 of South Africa and the Gene Technology Act 2000 of Australia.

The private seed industry will have to be given due recognition if India has to compete with the multinationals. In order to ensure adequate protection to plant varieties, many countries are in the process of patenting plant varieties. This is a matter of serious concern as India offers protection only under the PVP Act. In many countries patent protection is assured to the genetic material. Problems may arise wherein the gene of a certain variety may enjoy patent protection while the variety developed from it is protected under the plant variety legislation. Thus, it becomes essential to balance the patent and patent variety protection in such a way that the cost of protection is commensurate with its scope. A comparative study of similar legislations adopted by other countries, particularly the developing countries, may help us to prepare ourselves to face the challenges arising from the operation of various laws/treaties. There are a number of laws operating in the same field, which call for consolidation or clarification. For example benefit sharing under the PVP Act and the Biological Diversity Act, as well as the procedures followed in the registration of varieties under these enactments. Also the enactment of rules for implementing these laws is not yet ready. One way to approach this may be to make detailed regulations to fill the gaps of existing legislations. United Kingdom, China and South Africa have enacted detailed sets of rules to implement their plant varieties laws. India may also adopt a similar approach. The very fact that the GOI proposed to fund more than Rs. 2000 crores and Rs. 900 crores for basic and product oriented R & D respectively in the Tenth Five Year Plan shows the importance attached to the biotechnology sector by the government. The need for an effective legal system in turn gets highlighted (Panickar, 2004).

Article 27.3 (b) of TRIPS obligation is a complex legal issue, which India will have to address. The creativity of traditional breeders must be protected from being marginalised and eventually extinguished by a system of breeders’ rights, which provide no recognition to the knowledge systems and innovations of farmers and indigenous people with regard to crops and plants. Granting monopoly protection over seeds has serious implications in that it vests control over finished products in the hands of few corporate giants. Thus,
TRIPS is considered harmful for developing countries like India. Bandopadhyay cites an empirical study done by the Rural Advancement Foundation International. The case study highlights the adverse effects of the patent regime on indigenous knowledge. In this particular case the patent for quinoa, a plant cultivated in the Andes for centuries, was granted to two professors. The patent claims to control both aspects of plant variety and plant mutation and thus controls the ecological practices of the Andean indigenous farmers. The patent principally threatens food security and bio-diversity conservation of the Andean communities. Property rights erode the local protection and commercialisation of quinoa.

The Plant Variety Protection and Farmers Rights Act (PVPFRA) 2001 is the only one in the world to give farmers’ rights and the same recognition as those of plant breeders. Under this Act the farmer is entitled to save, sow, exchange, share or sell his farm products including the seed of the variety protected under the Act in the same way as he was entitled to before this Act came into force. Thus, the seeds sold by the farmers cannot be branded with the breeder’s registered name. The role of rural communities as contributors in the breeding of new plant varieties is also acknowledged. Breeders would have to seek the permission of the farmers involved in the conservation of varieties and to use the farmer’s variety for essentially derived varieties. Anyone is entitled to register a community’s claim and get it duly recorded at a notified centre. If found genuine, a procedure is initiated for benefit sharing in that the share of profits is made for the use of a farmer variety, in a new variety which goes into a National Gene Fund. PVPFRA is found to be in consonance with the CBD.

However, suitable amendments in the TRIPS agreement will protect the rights of millions of small and marginal farmers. The PVPFRA provisions are found to be pro-poor as they recognise the farmers’ position as the country’s major seed providers, thereby averting substantial loss of income to them. It also provides a unique benefit-sharing scheme between the farmers and plant breeders (Bhat, 2004).

The technical problems arising out of the TRIPS mandate is highlighted in Article 27.3.(b) which first states that countries may exclude from patentability plants and animals, essentially biological processes, for the production of the same, but goes on to impose an obligation on member countries to protect plant varieties by patents or by an effective sui generis system or by a combination of both. The agreement fails to specify an effective sui generis system.

The PPVFRA gives the Central Government the power to exclude any genera or species from protection on the ground of “public interest”, which again has not been defined in the Act. A compulsory license can be granted if the breeder fails to satisfy “reasonable requirement of the public”. The definition of this phase has not been provided, unlike in the Patent Act, where it has been defined elaborately. This raises doubts as to whether the Act could be subject to litigation on the ground of nullification or non-infringement action as provided under GATT articles. The criteria fixed for the protection of new varieties uses technical jargon, comprehensible only to scientists, but not to illiterate farmers. There are bound to be implementation problems. Instead of providing for informed consent of the indigenous community before taking genetic resources from them, the Act calls for legal consent. India’s response to the TRIPS mandate has not been adequate since it cannot claim to be an effective sui generis system from the point of view of foreign investors, nor is it able to effectively protect the interest of the farming community.

There is almost no awareness in rural India about the rights of farmers. Private firms continue to patent crop varieties. Anuradha Brahma cites a case wherein researchers in Australia applied for a patent for varieties of chickpea, which they claimed, they had obtained from the ICRISAT gene bank, but since they had subsequently improved the seeds, they now have a
patent right to them. The FAO placed a moratorium on the patenting of these crops, defining them as “international public goods” only on being alerted by a non-governmental organisation.

Both patent and PVP provide exclusive monopoly rights over creation for commercial purposes over a period of time. A patent is a right, which is granted to an inventor to prevent others from making, using and selling the patented product for 15 to 20 years.

**Biological Diversity Act, 2000**

Convention on Biological Diversity (CBD) passed by the United Nations in 1992, vests three categories of obligations on member states:

- Preserve the knowledge, innovations and practices of communities relevant to the conservation and sustainable use of bio-diversity;
- Promote wider application of this knowledge with the approval and involvement of holders of the knowledge, innovation and practice; and
- Encourage equitable sharing of the benefits arising from such utilisation.

As a member country, India passed the legislation to implement its obligation under the CBD.

Though community rights have been accorded recognition by the PVP Act as well as by the Biological Diversity Act, apprehensions regarding bio-piracy remain. Here again civil society has to be vigilant. It also calls for proper documentation of our traditional varieties, along with dissemination of information to the public. The judiciary can help to check bio-piracy.

The legal regime in India covers an extensive field of intervention by the state to secure a variety of policies aimed at the development of natural resources, food security, nutritional levels, sharing of crops and above all rural development. The use of biotechnology has been highlighted for evolving plants, which consume less water and are drought resistant, pest-resistant, contain more nutrition and are at the same time environmentally safe.

The Bio-Diversity Treaty and the TRIPS agreement present two conflicting visions of future global trade in genetic resources, one dedicated to strengthening international bio-diversity protection and the other establishing strong intellectual property protection in order to promote world trade including trade in biodiversity.

**International Treaties**

**The Union for the Protection of New Varieties of Plants (UPOV) Conventions, 1978 & 1991**

The UPOV instrument is the internationally recognised system for the protection of plant varieties. Whereas the developing countries considered the 1978 version of the Convention to be suitable to their economic conditions, industrialised countries were in favour of the 1991 version. The 1991 version is legally in force. Critics of UPOV argue that it treats agriculture as a commercial activity whereas in most developing countries including India, agriculture is for subsistence.

The 1978 Act ensured the breeder’s prior authorisation of production for the purpose of commercial marketing. Authorisation was not required either for utilisation of the variety as an initial source of variation for the purpose of creating other varieties or for the marketing of such varieties. The 1991 convention defines a breeder as a person who bred or discovered and developed variety. It is obligatory for the states, which are parties to the 1991 convention to grant and protect breeders’ rights.

We will have to pay special attention to the negative aspects of TRIPS and UPOV, which have serious implications for Indian agriculture. There is a perceptible threat of the commercial breeders monopolising the plant variety. Commercial breeders access the germplasms developed by poor farmers in third world...
countries for free, develop varieties from them and claim exclusive breeder's rights thereafter. This hampers farmers' innovative activities by providing breeders' rights over essentially derived varieties.

Indian agriculture, which is primarily based upon the practices developed by the poor farmers, cannot afford a patent regime that excludes them in basic agriculture management. Thus, neither TRIPS nor UPOV is found to be in India's interest. The Union for the Protection of New Varieties of Plants (UPOV) which is supposed to be a system free from the adverse affects of monopolisation of agriculture by the breeder, with more rights to the farmers; in practice, is found granting the breeder more rights. The breeder gets full commercial control over the reproductive material of the variety, which means that farmers growing PVP varieties are prohibited from selling the seeds they harvest from the crop. In many countries they are prohibited from saving or exchanging seeds on a non-commercial basis. The farmer also pays royalty on every purchase of seeds.

Among the many causes for genetic erosion, the most widespread is the replacement of genetically diverse traditional varieties by genetically uniform modern seeds. The UPOV system encourages this process by providing powerful commercial breeders the right to IPR monopolies. The convention does not recognise the traditional system of farming with the process of selection of plants and crossing. In a country like India where agricultural practices have evolved through the poor farmers traditional methods, the farmers are either unaware of the UPOV standards or they are not in a position to pay high fees to the UPOV Council for recognition. Thus, the adoption of such practices would be harmful to their interests. Innovations under the UPOV do not encompass the farmers' views on the usefulness or sustainability of a plant variety. A farmer cannot re-sow the seed he saves from his produce. These restrictions seriously limit the possibility of diversity in traditional farming activities. The very fact that the North controls the UPOV convention, leads to domination of the interests of the large plant-breeding corporations. Thus, there is a need to:

1. Recognise and protect the rights of farmers, indigenous peoples and local communities over plant varieties developed by them.
2. The system should recognise this right without the need for registration.

Breeders' rights should not extend beyond production for commercial marketing (Bandhopadhyay, 2004).

Though the Union Cabinet has approved the decision to join UPOV, India would not be in a position to protect the rights of the farmers or the nation's food security if it joins the UPOV. The control over seed production and supply would shift away from the farmers to the multinational corporations.

However, there is hope in CoFab, a developing country alternative to UPOV. The Centre for Agriculture Development along with Gene Campaign, has drafted an alternative treaty to UPOV in order to provide a forum for developing countries to implement their farmer's and breeders Rights. The treaty is called the Convention of Farmers and Breeders (CoFab). The UNDP, Human Development Report 1999 has commended CoFab as a strong and coordinated international proposal, which offers the developing countries an alternative to following European legislation, by focusing legislation on the need to protect farmers’ rights to save and reuse seed and fulfil the food and nutritional security needs of their people (Banerjee, 2004).

**Convention on Biological Diversity, 1992**

The Convention on Biological Diversity addresses issues in the biotechnology sector. This includes research efforts and adequate protection for research in the area of bio-technology. Patent protection is one such mechanism. Patent accords an exclusive right to the inventor for a specific period of time on the assumption that rewards of exclusive profits and control will encourage creativity. Issued by governments, intellectual
property rights balance the inventor's interests and public's right to embark on unrestricted commerce.

Articles 15, 16 and 19 of the convention on biological diversity have been subject to varied interpretation by the developed and developing countries. According to Article 15 each signatory to the convention has sovereign rights over natural resources. The provisions require the state parties to undertake measures for sharing in a fair and equitable manner, the fruits of research and development of biological resources with the originating nation. As per Article 16 each state party will provide and/or facilitate access for transfer to the other state parties, the technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources. It is mandatory under Article 19 that nations providing biological resources should be provided effective participation in the biotechnological research activities. As Panickar points out, these articles were widely criticised by the developed countries with vibrant technology centres.

A patent holder is in a position of monopoly in that he has exclusive rights of making, using, exercising, selling and distribution of the invention. Thus, CBD and TRIPS are incompatible if the disclosure requirement etc. are made a condition for the grant of patent, but not if it is made a condition for the enforcement of the patent. The best way to comply with TRIPS obligations and to protect Indian National interests is to cover the plant varieties under the patent law regime, supported by subsidiary legislation and a few amendments to the Patent Act (Misra, 2004).

Biotechnology firms invest a great deal in the testing and introduction of new hybrids, which are very expensive. At the same time their ecological consequences are insufficiently known. They protect the investment in ways which are ethically indefensible. Brahma cites the case of the American Biotechnology firm Monsanto that made an attempt to introduce rice seeds containing the so-called “terminator” gene, which makes sure that seeds from this season's rice crop will not germinate when they are sown the next season, so that farmers must buy seeds from the firm again. Non-governmental organisations (NGOs) played an important role, which made Monsanto declare that it was only testing the possibilities of the Terminator gene and had no plans to use it. These incidents highlight the importance of a free media, but at the same time indicate a disturbing abdication by the state of its duty towards the protection of vulnerable sections of the population. She points out that the state has an important role to play in a globalising world, an even more important role than in earlier times (Brahma, 2004).

The Convention of Biological Diversity (CBD) 1992, defined biotechnology as “any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processors for specific uses”. Whereas the scope of plant biotechnology is vast, the attention is now on the transfer of genes between different species in order to develop transgenic crops. The rate of transfer of biotechnology to the field, in the last decade or so, has gone up substantially.

**International Treaty on Plant Genetic Resources for Food and Agriculture, 2001**

The commission on genetic resources for food and agriculture is a permanent forum within the FAO where governments discuss and negotiate matters relevant to genetic resources for food and agriculture. The commission was established in 1983, by the FAO. The mandate of this conference was broadened in 1995 to cover all components of bio-diversity with regard to food and agriculture. The FAO adopted an international undertaking on plant genetic resources in 1983. The undertaking was revised to work in harmony with the Convention on Biological Diversity, 1992. This is known as the International Treaty on Plant Genetic Resources for Food and Agriculture, 2001 (FAO Treaty).

The FAO Treaty spells out the following objectives:
• Conservation and sustainable use of plant genetic resources for food and agriculture; and
• Fair and equitable sharing of benefits arising out of their use.

The treaty acknowledges the contribution of the local, indigenous and farming community towards the conservation and development of plant genetic resources the world over. The responsibility for realising the farmers’ rights rests with the national government. Thus, each contracting party has to adopt suitable measures for the protection of traditional knowledge, equitable participation in benefit sharing, as also the right to participate in decision-making at the national level regarding matters connected with the conservation and sustainable use of resources. Adopted in November 2001 the Treaty came into force on 29th June 2004.

So far as India’s obligations under the international treaties are concerned, India has complied with its obligations under TRIPS. Though India has tried to fulfil its commitments at the global level it needs to examine how the country can face the challenges from the corporate sector of the developed world.

The large number of treaties and agreements outlined and discussed above raise important issues related to the rights and protections accorded to our farmers, specially the small and marginal farmers. They also raise issues of transparency that need to be given highest priority. Policymaking has as much to do with politics as with economics. At the same time the people of this country have a right to know the rationale underlying various agreements and treaties. The Right to Information Act, 2005 could provide citizens and civil society groups the much-needed access to information. However, the operationalisation of the Act needs serious attention.

Protection of Biological Resources

Anirban Mazumdar (2004) draws attention to areas in the legal framework that need to be reinforced in order to protect the intellectual property rights of farmers, traditional knowledge holders and local communities where intellectual property is a shared common resource.

The model Act titled the Biological Resources, Traditional Knowledge and Expressions of Folklore (Protection and Regulation) Act, 2003, is to extend to the whole of India. “Traditional knowledge” means a body of knowledge, practice, technology and belief, evolved by adaptive processes and handed down through generations by cultural transmission, within a community and it includes knowledge and belief associated with biological resources.

The nation is vested with sovereign rights over its biodiversity to be known as national heritage rights. In pursuance of such rights the state shall be duty bound to hold these resources in trust, on behalf of the communities.

The community or communities identifiable with a biological resource, traditional knowledge or with any particular expression of folklore is vested with independent inalienable right to share benefits arising from that biological resource or traditional knowledge or expressions of folklore to be known as community heritage rights. Where the biological resource or traditional knowledge cannot be identified with any determinate community or communities, the sole right over the biological resource or traditional knowledge vests in the nation as national heritage rights.

The model Act calls for the establishment of a National Heritage Authority by the Central Government.

The National Authority is to consist of the following committees:

(a) Committee on Biological Resources and Traditional Knowledge;
(b) Committee on Plant Varieties and Associated Farmers’ Rights; and
(c) Committee on Expressions of Folklore.
It shall be the responsibility of the National Authority to do the following:

1. Create, consolidate and maintain a database, which is to be a public document, by way of documentation of the available biological resource, traditional knowledge systems and expressions of folklore in the country and attempt to trace their origin to individual communities or geographical territories.

2. Recommend the constitution of a National Heritage Fund, to which shall be credited all charges and royalties received by the National Heritage Authority from the licensing of national heritage rights, compensation, fines and damages accrued from the infringement proceedings relating to national heritage rights and all sums received by the National Authority from such other sources as may be decided upon by the Central Government. “The moneys held in the National Fund shall be applied for conservation and promotion of biodiversity, biological resource, traditional knowledge and expressions of folklore, the development of incentive models for providing venture support to communities which apply for commercial development of biological resource, traditional knowledge and expressions of folklore and for any other purpose required for the effective implementation of this Act.”

3. Recommend the formation of a State Authority, which is to carry out all the administrative functions specified under this Act or as delegated by the National Authority. The dispute settlement mechanism includes the establishment of Zonal Heritage Tribunals.

The Central Government shall, by notification in the Official Gazette, constitute four tribunals in every zone, to be known as Zonal Heritage Tribunals, to exercise and discharge such powers and functions as are, or may be, conferred on it by or under this Act or any other law. For the time being the powers of the tribunals may be exercised by benches, constituted by the President of the tribunal and notified by the Central Government. Any person who intends to access or utilise any biological resource, traditional knowledge or expression of folklore found in India, for purposes of research or commercial utilisation, is to make an application in such form as prescribed, to the National Authority for permission to do so (Mazumder, 2004).

Mechanisms for Redressal of Grievances

This brings us to an important issue of providing farmers mechanisms for redressal of their grievances. What then are the options before them?

The District Forum is the lowest stratum where a consumer can lodge a complaint, but it suffers from many limitations. The Act had to be amended to provide more staff and to specify the procedure of serving notice to the opposite party. In the amended Act there is no scope of setting aside of _ex parte_ orders and the remedy lies in appeal.

There is insufficient procedure to process a sample and send it to the appropriate laboratory for test. Where the complainant is a poor farmer or an agricultural worker, it is an additional burden on them if they are to pay the fees for testing the sample. Hence, the state and union government should provide a fund for testing the samples in their prescribed laboratories for poor farmers and agricultural workers who cannot afford to pay for it. In the case of farmers, if the seeds are of inferior quality, it will be revealed only after the crop grows. The farmers should be trained to retain samples of seeds so that they can produce them as evidence.

There is one district forum for each district, but with the increase in population and the number of complaints, more than two to three district forums should be established in each district. The author also recommends the establishment of three to four district redressal agencies in each district.

Suggestions and recommendations to convert the consumer forum to be proactive in the interests of the farmers include:
1. Companies selling fertilizers or pumps etc. should be made accountable even after the guarantee/warranty period is over.

2. A fund should be raised for the consumer forum to be used for investigating the genuineness of a product when the rural people buy it.

3. If the consumer forum cannot test the machine, then the Forum should specify the agency, which is to test it.

4. If the machines are proven to be spurious, then not only should damages be given, but also some serious steps should be taken by the forum to prevent companies and MNCs from exploiting rural people.

5. If the jurisdiction is not specified in such cases then it should be specified by amending the Consumer Protection Act.

6. The forum should admit the evidence of local people who can give expert knowledge of seeds. It is not always possible for rural people to get a certificate from the seed inspecting officer regarding the quality of seeds. In such cases alternate agencies should be specified in the Consumer Protection Act.

7. The union government should provide funds to help farmers in testing seeds, otherwise the poor farmers will not be able to avail the forum.

8. Where the opposite party is an MNC the onus to prove the quality of seeds should be shifted on them.

9. Some provision should be added in the Act, for the admission of statements like farmer’s regular and efficient discharge of duty of watering and sowing of seeds, because very little evidence can be given in this regard.

Non-governmental organisations, policy makers, farmers and farmer bodies and academia from the central Himalayan region/north eastern Himalayan region strongly feel the need for proper domestic policy measures to make the globalisation process less painful for the Himalayan region. The same should be achieved by broadening the network among the stakeholders and generating awareness at all levels so that linkages between grass roots and policy levels are created. The farmers and farmers’ bodies have put forward a strong demand for better market access and preventing displacement of local habitats.

Transgenic plants require to be regulated for various reasons. The dangers of economic domination posed by transgenic plants and advanced genetic engineering technologies are as important as the bio-safety factor. India has some natural checks by way of incoherent market structures for new plant varieties including transgenic plant varieties.

Some necessary steps need to be taken to ensure that Indian farmers reap the benefits from enlarged home and external opportunities such as restructuring and retooling State Land Use Boards. The State Land Use Boards exist, but they are not equipped to deal with and provide proactive advice to farm families on land use planning with the help of meteorological information, market information and management information. An effective consumer forum is necessary to make this possible.

In a landmark decision the Apex Consumer Court has upheld the rights of horticulturists and agriculturists to seek compensation against defective seeds under the Consumer Protection Act. Upholding the award of damages to the farmers who suffer on account of substandard seeds, the court has made it clear that the provisions of the Seeds Act do not prevent a farmer from seeking compensation for substandard seeds under the Consumer Protection Act.

Other major recommendations include:

1. Creation of an exclusive consumer forum for farmers. For this a separate Consumer Protection Act should be passed.

2. A laboratory equipped with instruments for testing seeds, fertilizers, pesticides and other agricultural devices should be established.
3. A separate fund to be maintained to enable testing of defective goods, which are the subject matter of consumer disputes.

4. An awareness creation agency should be established. Individual members should be given specialised knowledge on agriculture to handle farmers’ disputes.

5. Provision of transfer of cases from one sub-division to another to facilitate the convenience of the farmer.

6. Where the complainant is a poor farmer or an agricultural worker, fees for testing the sample would cause hardship. The paper recommends that the state government and the union government should provide a fund for testing the samples in their prescribed laboratories for poor farmers, agricultural workers who cannot afford to pay.

7. If the seeds are of inferior quality, it can be known only after the crops grow. The farmers should be trained to retain samples of seeds so that they can produce them as evidence (Chatterji, 2004).

**Role of Parliament and Central Government**

The power that Parliament and the Central Government exercise in shaping agricultural policy and especially its treaty making powers are indeed far reaching. Though “Agriculture”, “Agricultural Land” etc. are exclusively within the Legislative Jurisdiction of the State Legislature, any general law made by Parliament in the exercise of its power under Article 246 (1) & (2) shall not be invalid, even if it covers or relates to Agricultural Land, if in pith and substance, such a Parliamentary Law is a Law relating to one or more items under its exclusive Legislative Jurisdiction, but the same is incidentally covering matters relating to Agriculture and Agricultural Land.” Though “Agriculture” is a matter in the “State List” and as such is ordinarily and normally within the exclusive legislative jurisdiction of a State, yet “Agriculture” can also be legislated upon by Parliament for a limited period as provided in Article 249 and Article 250 of the Constitution. Parliament can also legislate on “Agriculture” for two or more states in accordance with the provisions of Article 252.

The power to make or enter into treaty or agreement, with other sovereign states is within the exclusive jurisdiction of the Union. “That is what should, and cannot but, be Treaty making, is one of the manifestations of sovereign power and the States in India comprised in the Union of India are not Sovereign in that sense, or any sense, so to say.” After a treaty is entered into by the Union of India with any other Sovereign States, the power to legislate in respect of such treaties is also exclusively vested in Parliament.

Regarding “Treaty-Making power on the Subject of Agriculture”, the position in law therefore, appears to be that even though “Agriculture” is a matter exclusively within the legislative jurisdiction of the state, any legislation implementing any treaty or agreement or other international conventions relating to “Agriculture” can only be made by the Union. This would clearly follow from Article 246 (1) read with Entry No. 13 and No. 14 of the Union List (List 1) and also Article 253, that the Legislation shall not be liable to be challenged or attacked on the ground that it relates, whether wholly or in part, to a State List Matter like “Agriculture”. Thus, what happens to Indian agriculture will largely depend upon the policies framed by the Government of India (Bhattacharya).

**Conclusion**

The foregoing analysis of agriculture related issues highlight problems that government policy will have to address. How well globalisation is managed and how beneficial it is for Indian agriculture will depend on the policy initiatives the government takes.

The fact that 60 percent of our workforce is employed in agriculture is enough reason to make it the core area...
for policy intervention. Again, the fact that 78 percent of the country’s farmers belong to the small and marginal category makes them the most important group of stakeholders in the globalisation process.

Urgently needed, are steps to provide farmers especially the small and marginal farmers, all-out support for making farming a viable proposition. There could be no better example than the US, which has always found innovative ways to promote its agriculture. It has not only been subsidising agriculture, but has gone to the extent of paying farmers not to produce. The 1950s and 1960s saw American agricultural surpluses put to the most efficient use. The PL 480 was one of the most powerful political weapons ever used by the US in its war against communism, though in the guise of feeding the world’s hungry. At the same time the US along with other western countries helped the third world develop agriculture on scientific lines. However, in the globalised economy, farmers from these very countries will be competing with the farmers from the developing countries.

Some of the issues that need attention are:

(a) The vulnerability of small and marginal farmers and steps that need to be taken to protect them.

(b) The importance of agricultural extension services and their role in meeting the challenges posed by globalisation.

(c) Organisational mechanisms best suited for small farms.

(d) The government’s role in providing a level playing field for the Indian farmers in the globalised markets.

Farmers in India, especially, the small and marginal farmers are affected as much by internal conditions as by externally imposed reforms. To face the challenges of globalisation, our farmers need to be provided with the wherewithal to compete in the world market. Agriculture in post-independent India saw the massive presence of the government sector with a host of departments working in the field. However, the Community Development Programme accompanied by the National Extension Service failed to take off. The land reforms movement produced mixed results in that the land allotted was less than an acre and the holdings were fragmented. Moreover, they were not accompanied by other essential support and infrastructure facilities to make farming a success. Under the given situation, cooperative farming could have proved an effective mechanism, but government-managed cooperative farming societies such as the Chenchupally Cooperative Farming Society in Andhra Pradesh sounded the death knell of this important institution. Cooperative farming has been written off in a hurry. It needs to be brought back to the centre-stage as small farmers have limited options, and need to pool together their resources to enhance production.

The government needs to abandon the ad hoc approach adopted so far towards the development of agriculture. Small holdings need to be made more attractive. Organically grown crops, which can capture niche markets in India and abroad need to be promoted.

In India where agricultural practices have evolved through the traditional methods applied by the poor farmers, the farmers are either unaware of the UPOV standards or are not in a position to pay the high fees charged by the UPOV Council for recognition. Hence, adoption of such practices would be harmful to their interests. Under the UPOV, innovations do not encompass the farmers’ views on the usefulness and sustainability of a plant variety. The rights of farmers, indigenous peoples and local communities over plant varieties developed by them should be protected (Bandhopadhyay).

The Plant Variety Protection and Farmers Rights Act 2001 (PVPFRA) is found to be pro-poor given the fact that it recognises the farmers as the country’s major seed providers. It is a matter of concern that there is almost no awareness in rural India about the rights of farmers. Private firms continue to patent crop varieties. The technical jargon used, is beyond the comprehension of illiterate farmers.
The danger of ‘corporate control over seeds’ appears grave. We seem to be going ahead without analysing the adverse impact of genetically modified crops. The large number of farmers committing suicide highlights the damage that genetically modified crops can cause. These issues relate not only to the cotton crop, but also to other commercially grown and chemically farmed crops spread all over the country (Shiva, Emeni and Jafri, 1999, Mehta and Ghosh, 2005).

The Seed Act, 2004, gives draconian powers to the “Inspectors” who would be empowered not only to enter and search premises, but also break open any container or door (Datt, 2005). As the Rajasthan Study suggests, government functionaries at the local level are already a law unto themselves. Would it be advisable to further empower them? A useful suggestion made by Sarvik Chatterji is that the state and union governments should provide for testing the samples of poor farmers.

There are a number of laws operating in the same field, which call for consolidation or clarification, for example benefit sharing under the PVP Act and the Biological Diversity Act, as well as procedures followed in the registration of varieties under these enactments. Special attention needs to be paid to the enactment of rules for operationalising and implementing these laws. The Right to Information Act 2005 should help promote transparency with concerned citizens and civil society groups accessing information to make informed judgements.

We need to build a team of experts to project our case in the international arena. At the same time we need to learn from the experience of countries such as Brazil and South Africa who have had to violate the obligations under patents for meeting their domestic demand for essential medicines at cheaper rates (Panickar).

The initial phase of the agricultural extension services met with limited success mainly on account of the fact that they failed to cater to specific local needs. That was especially true of the era of international experts who freely gave advice irrespective of the local conditions. The government’s role in promoting agricultural development is greater today than ever before. This is especially true in the case of agricultural research and extension. As Hanumantha Rao points out, there is a need to focus research on crops and cropping systems in dry lands, hills, tribal and other marginal areas. Again, research on horticultural products that are both land saving and water saving as well as animal husbandry and dairying integrated with crop production would benefit resource-poor farmers and is environmentally sustainable. Steps should be taken to ensure that innovations reach the poor farmers in India. The agricultural universities, research institutes and NGOs should all come together to make this possible.

The need for technical assistance to reach small and marginal farmers should receive the serious attention of policy makers. Perhaps, stronger monitoring mechanisms and multi-layered monitoring and evaluation could ensure accountability of the field staff. Multi-layered monitoring would involve not only monitoring by government departments, but also by independent organisations as well as the media. Several reports highlighting problems in the field end up gathering dust. Findings from field studies need to be put on the web. This will serve the dual purpose of disseminating information to the community at large and holding the local level functionaries accountable.

For designing organisational mechanisms for the small farmers, we first need all India data on land distribution. How many beneficiaries are still in possession of the land allotted to them? How is the land being utilised? Post-liberalisation, what is the status of these holdings? Reports have been trickling in from different directions, but the overall picture is far from clear. These are important questions that need to be answered.

Various organisational patterns have been suggested for organising farming. Contract farming and subcon-
tracting have been receiving special attention in the post liberalisation era. At the same time, the Con-
tract Law of 1872 continues to be in operation, which does not address issues relating to subcontracting. It
has to be ensured that the contracts are not unfair to the small farmers. In the absence of strict regulation
by the government, the Sirohi case will be repeated many times over. In Sirohi tomatoes grown on a large
scale by small farmers were rejected and left to rot on the grounds that they did not meet the required speci-
fications. It requires just one such crop failure to break the backbone of the poor farmer.
5.1. Infrastructure

Better physical infrastructure is one of the factors associated with escape from poverty. This is clear from the analysis of the NCAER panel data (Bhide and Mehta, 2004) and from the in-depth analysis of NSS data on casual agricultural labour (Bhalla et al, 2004). Therefore Bhalla et al (2004) argue that the impact of superior rural infrastructure on real wage rates is huge and accounts for most of the inter-state variations in real wage rates. A strong case can be made for targeting infrastructure investment to states with relatively poor rural infrastructure endowments, in the interests of the chronically poor and the ‘just poor’ in these regions. Their analysis of rural casual labourers (the largest occupational group characterised by chronic poverty) shows that superior rural infrastructure accounts for regional differences in poverty among rural casual labourers; promotes the shift from low productivity casual labour in agriculture to more productive casual labour in the non-farm sector; is the key to higher wages and one of the keys to improvements in literacy and school attendance. Real wage rates are higher for casual non-farm workers and poverty ratios are lower. Since inter-state disparities in poverty levels are increasing, anti-chronic poverty strategies need to focus on improvement of rural infrastructure in states where poverty ratios are persistently high (Bhalla et al, 2004).

In both rural and urban areas the broader enabling environment does not adequately support the needs of the poor. Rural poverty can be associated with isolation, lack of roads, poor infrastructure and limited institutional presence while urban poverty is generally associated with poor quality housing; over crowded, unsanitary slum settlements; ill-health related to the spread of infectious diseases; the threat of exposure to environmental hazards and fear of eviction from illegal squatter settlements in precarious locations (Loughhead et al, 2000: 7-9 cited in Mehta and Shepherd, 2004).

Recognising the importance of infrastructure in correcting historical disparities in development and poverty, the Rashtriya Sam Vikas Yojana aims at reducing imbalances and overcoming poverty in backward areas through a backward districts initiative, a special plan for Bihar, and a special plan for the undivided Kalahandi, Bolangir, Koraput (KBK) districts of Orissa (Nayyar, 2004). The objective is the holistic development of the most backward districts characterised by low agricultural productivity and under development.

5.1.1. Roads

Rural roads have an impact on production and productivity in agriculture. Families residing near a road enjoy better standards of health, have higher education opportunities, smaller sized families and higher ownership of assets, compared to families living in
remote villages. There are, however, regional imbalances in the connectivity of villages. States like Uttar Pradesh, Madhya Pradesh, Bihar, Orissa and Rajasthan and many hill states have low levels of village connectivity. Maintenance of roads is important as neglect leads to assets falling into disuse. One of the reasons for the slow progress in connectivity was the insistence on providing all weather roads, rather than having roads that get washed away every year (if they were ever constructed in the first place) (Kapoor, 2002: 15-17). Table 30 shows the status of accessibility of villages by all-weather roads. Between 1980 and 2000, the percentage of villages connected by all-weather roads increased from 28% to 55%. However, the connectivity of villages with population exceeding 1500 increased from 53% to 99% over this period.

The GOI’s resolve to provide rural connectivity as part of the poverty reduction strategy has manifested itself in the Pradhan Mantri Gram Sadak Yojana (PMGSY) Prime Minister’s Rural Road Programme, administered by the Ministry of Rural Development (MORD). The task is formidable, as about 170,000 unconnected habitations with a population of above 500 are to be covered. By March 2004, about 31,000 habitations were linked. For providing connectivity to the remaining 139,000 habitations, the cost worked out by the MORD is Rs. 660 billion. It is funded by the diesel cess in the Central Road Fund, and through borrowing from domestic financial institutions and multilateral funding agencies (D. P. Gupta, undated: 3). Of the 8,25,647 habitations requiring connection under the PMGSY, 1,62,576 are still unconnected. Of these, about 1,60,000 habitations are expected to be covered. The investment anticipated is Rs. 60,000 crore (GOI, Ministry of Rural Development, 2005). This does not include investments required for the upgradation of existing roads and earth tracks (Gupta, undated: 3).

Baishya and Mondal (2004) conducted a field study on rural roads in Purulia district of West Bengal and found that: (i) As rural roads expand and the agricultural supply shifts there will not only be changes in the scale of input utilisation but the pattern of input utilisation will also change; (ii) On an average, villages with infrastructure have higher per capita consumption expenditure as compared to villages without it; (iii) Perishable crops like vegetables are cultivated in villages with infrastructure more frequently than in the villages without infrastructure; (iv) In villages with infrastructure the accessibility to modern inputs increases; (v) Productivity is higher in villages with infrastructure; and (vi) The concentration of hired labour is higher in villages with infrastructure. The survey also states that higher population, higher female ratios and higher SC/ST population are found in less developed areas. The study reveals that infrastructure development enhances the demand for agricultural land in rural areas, promotes irrigation facilities, opens up the village to the outside market, boosts commercialisation of food crops and also motivates the farmers to grow cash crops, which could yield

### Table 30: Present Status of Accessibility of Villages by All-weather Roads

<table>
<thead>
<tr>
<th>Population category</th>
<th>Total No. of villages</th>
<th>Number of villages connected by</th>
</tr>
</thead>
<tbody>
<tr>
<td>1500 and above</td>
<td>71623</td>
<td>37950 (53%)</td>
</tr>
<tr>
<td>1000-1500</td>
<td>58229</td>
<td>21970 (38%)</td>
</tr>
<tr>
<td>Less than 1000</td>
<td>459465</td>
<td>107324 (23%)</td>
</tr>
<tr>
<td>Total</td>
<td>589317</td>
<td>167244 (28%)</td>
</tr>
</tbody>
</table>

Note: Figures within brackets give the percentage of villages in each population category to the total number of villages in that category. The basis for population is 1981 census. Source: Planning Commission. Last column gives quick estimates, 2002.
higher revenues, so that farmers get a better price for their produce.

In Chhattisgarh, for example, there is an urgent need to ensure north to south connectivity to link up mineral rich districts in the state. The policies of the Chhattisgarh government in the context of roads are to integrate road development and management; enable private sector participation; and provide dedicated funding and capacity building of state institutions. The objective is to develop high-speed access corridors; linking economic clusters i.e., industrial areas, commercial centres and agricultural mandis and integrating the Gram Sadak Yojana with the overall road development programme (Nair and Majumdar, 2004).

5.1.2. Telecom

In India, telecom reforms were initiated in 1994 with the announcement of the First National Telecom Policy. Licences were given to the highest bidders, not to the companies that would provide services to consumers at the lowest price. The Department of Telecommunications (DoT) was the policy-maker, the licensor and the regulator and was also a competitor to the private telephone companies. An independent regulator, Telecom Regulatory Authority of India (TRAI), was created in 1997 only after all the licences had been issued. By 1999, private telephone companies were about to go bankrupt. Through the New Telecom Policy 1999 (NTP 1999), the government had to bail them out by enabling them to migrate from a fixed, heavy licence fee payment regime to one of revenue-sharing. This “migration package” envisaged that any operator could move to the new regime on the payment of an entry fee, which would be equal to the dues that would have been payable by the operators until 31st July 1999 (Uppal, 2004a: 8). The NTP 1999, pushed reforms further by allowing unlimited competition in all services except those, like mobile, which were dependent on spectrum availability. Technology restrictions were lifted.

The NTP 1999, had also proposed the setting up of a Universal Service Obligation Fund (USOF) to support rural services, which had high costs and seeming low revenue potential with difficulty in attracting investments. To meet the resources for USOF the government raised a ‘universal access levy’ which was fixed as a percentage of the revenue earned by all the operators under various licences. The government set up the following objectives for the universal service:

- Provide voice and low speed data service to the 2.9 lakh uncovered villages in the country by the year 2002.
- Achieve internet access to all district headquarters by the year 2000.
- Achieve telephone on demand in urban and rural areas by 2002.

Due to NTP 1999, the tele-density (telephones per 100 population) rose from 1.94 in 1998 to 5.11 in 2003. After 2003, there was a sharp increase and it reached 9.11 in 2005 (TRAI, 2005). The growth was mobile driven as TRAI facilitated huge reductions in tariffs in 2003-05 and the mobile telephone became handy for the working class. Since 1998, the urban-rural divide has increased very fast due to negligible mobile coverage in rural areas (see Figure 3). Policies must
enable an increase in rural tele-density. The success of the Village Phone Programme, financed by the Grameen Bank in Bangladesh that supports the provision of mobile telecom facilities in rural areas, provides a model for connecting villages through cellular technology. In the villages of Bangladesh, the cellular phone has directly benefited the rural poor by enhancing labour mobility as well as marketing of agricultural produce.

At present, there is negligible rural mobile coverage and growth is driven by Public Sector Undertakings/Universal Service Obligation Fund. Recently, TRAI has issued recommendations for the Unified Licensing Regime (ULR) on January 13, 2005, which have been accepted by DoT and named as ‘Unified Access Services’. Under this regime the niche operators are permitted to operate all services in rural/remote areas (less than 1% tele-density areas) without any entry fee. Besides, this unified licence and niche operators are also allowed Internet Telephony including IP enabled services. This will encourage small entrepreneurs to provide telecom services in rural, remote and telecom facility-wise backward areas.

The ULR has also encouraged free growth of new applications and services for all telecom services and the revenue share licence fee has been reduced to a maximum of six percent of Adjusted Gross Revenue with no revenue share and/or entry fee for a number of services. Now, a licensee shall be able to provide any or all telecom services by acquiring a single licence. Thus, ULR is a step towards simplifying telecom licensing, flexible and efficient utilisation of resources and application of technological developments, encouraging niche operators in rural and remote areas, ensuring easy entry, level playing field, and ‘no-worse off’ situation for existing operators.

Uppal (2004b: 49) supports the ULR for its reduction in debilitating litigation and controversy in the sectors, but notes that it presents an increased challenge in regulating market power since the integrated players, especially incumbents, have the scope for anti-competitive subsidy. India’s telecom market structure is already highly skewed in favour of the incumbent since only it has a national licence to provide all services in contrast to its competitors who have circle and service specific licences. The regulator’s attempt to regulate the incumbent asymmetrically has got stuck as the incumbent has successfully obtained a reprieve from the Telecom Disputes Settlement and Adjudication Tribunal (TDSAT) on the basis of a promise not to engage in anti-competitive practices. This is unprecedented in telecom regulation. He also pointed out the weak enforcement regime without any sensitisation to competition issues, which is likely to compound an already serious risk and could distort competition in the market place and encourage abuse. India’s universal service regime could benefit from the Australian or Latin American model, but only if the anomalies in the licensing regime, which currently favours the incumbent, are removed. Uppal argues that the success of India’s telecom regulatory regime would depend on its ability to replicate creativity (in terms of licensing, universal service, interconnection, number portability and spectrum management) in the international practices to the extent possible.
Box 1 provides a comparison of regulatory charges in developing countries. The highest regulatory levies are in India. If these levies could be reduced it will decrease the cost to the customer and hence, increase penetration in new markets. Thus, the ideal policy would be to charge licence fee and spectrum charges only for USO and covering administrative costs.

Mission 2007, was initiated in 1993, with the objective of creating a network of information kiosks in 600,000 villages in India by August 15, 2007. The following issues need attention for Mission 2007, to be successful (Swaminathan, 2005):

- Through ULR the government has introduced the concept of niche operators in the most backward areas. Yet, to ensure the efficacy of such efforts the government should mandate their using the existing infrastructure at terms fixed by the regulator and the large upfront payments should be avoided and tax holidays should also be provided for a limited period.
- Private sector and civil society organisations should be encouraged to develop information and communication technology (ICT) based supply-chain management systems to sell rural products.
- There is need to invest in certain knowledge databases relevant to rural needs. The content must be local and must use local languages. There should be provision for making available dynamic information, about weather and markets, for the use of rural people.
- Essential services such as education and healthcare can be delivered through ICT penetration in rural areas.
- The government should formulate a policy to outsource functions such as digitisation of land records, data entry operations, collection of local data, etc. with the support of civil society organisations. Outsourcing from urban to rural India and enabling women to manage the rural knowledge centres would be a powerful method of bridging the rural-urban digital divide.
- For nationwide rural connectivity the long distance connectivity should be provided free of cost for five years to Rural Service Providers. In regard to this TRAI has suggested that the costs of rural connectivity can be met out of USOF.
- The government should provide community radio licences to VKCs through a single window clearance system. The Internet-community radio combination is a powerful method for the delivery of dynamic information.

<table>
<thead>
<tr>
<th>Box 1</th>
<th>Regulatory Levies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pakistan</td>
</tr>
<tr>
<td>Regulatory charges</td>
<td>% age of revenue</td>
</tr>
<tr>
<td>Service Tax GST</td>
<td>GST</td>
</tr>
<tr>
<td>License Fee</td>
<td>0.5%+0.5% R&amp;D</td>
</tr>
<tr>
<td>Spectrum Charge</td>
<td>Cost recovery</td>
</tr>
<tr>
<td>USO</td>
<td>1.5%</td>
</tr>
<tr>
<td>Total Regulatory Charges</td>
<td>2.5% + GST + cost recovery</td>
</tr>
</tbody>
</table>

* Backbone spectrum charges extra
** Estimated from spectrum fees and revenue of China mobile
In this context, during his budget speech of 2005-06, the Finance Minister said: “Mission 2007 is a national initiative launched by an alliance comprising nearly 80 organisations including civil society organisations. Their goal is to set up a Knowledge Centre in every village by the 60th anniversary of Independence Day. Government supports the goal and I am glad to announce that the government has decided to join the alliance and route its support through NABARD.” He proposed that NABARD be allowed to provide Rs. 100 crore for Mission 2007.

Government can use Wi-Fi technology in providing connectivity to the rural masses. Wi-Fi technology was intended to be used for wireless devices and local area networks, but is now often used for Internet access. It enables a person with a wireless-enabled computer or personal digital assistant to connect to the Internet when in proximity of an access point called a ‘hotspot’ (available online http://www.bambooweb.com/articles/wi/Wi-Fi.html). In December 2002, indoor Wi-Fi 802.11 (b) was delicensed and in August 2004, outdoor Wi-Fi 802.11 (g) was delicensed. Wi-Fi can become the fulcrum for rural connectivity in rural areas through the use of repeaters and antenna innovation. Media Lab Asia in India has demonstrated that two points over a distance of 50 kilometres could be connected by Wi-Fi (available online http://www.emergic.org/archives/2003/07/31/). The success of the DakNet Wi-Fi project of the GOI involving the linking up of computers to networks without using wires should be used as a model for others to follow (Chowdhary, 2003).

A knowledgeable consumer movement, with the capacity to procure data regarding costs and quality of service and make representations to enable continuous improvement in the quality of service and the rates that are charged is needed (Chowdhary, 2002). The feedback of consumers is necessary for the companies and the regulator, i.e., TRAI, can also use it for framing its policies. The Tenth Five Year Plan in its basic principles for regulation has also recommended development of a framework for interaction between the regulator and consumer bodies so as to ensure the continuous flow of information and feedback from the consumers to achieve desired standards of service quality and regulation. Thus, the government should find a way to assist in the creation and continuation of consumer bodies that will benefit the operators as well as the consumers.

The Report of the Committee on India Vision 2020 (2002) forecasts a bright future for the telecom sector in India by its statement - “Vision 2020 conceives of India evolving into an information society and knowledge economy built on the edifice of ICT, of which telecommunications is the springboard. Telecom is improving opportunities for people across different social strata. A whole range of information based industries and applications have come up, creating new sources of employment and earnings with welfare enhancing consequences for both the poor and the wealthy.” The assumption is that India would complete the transition into digital switching and transmission, VoIP, broadband and 3G by 2020 (India Vision 2020). Yet, Chowdhary (2004) believes that there is a need to prepare the National Telecom Vision 2020 document in the light of technological and industry structure developments in the world and in India and to build it into what the convergence of telecom, computers, broadcasting and data would facilitate and launch a national discourse on the contents and goals of that vision before adoption. He has stated that there is need for more transparency and public involvement in the work of TRAI and TDSAT.

Nair and Majumdar (2004) rank the states on the basis of performance in the IT sector. According to this ranking, Delhi gets the highest score followed by Kerala and Tamil Nadu. States like Chhattisgarh, Assam, Meghalaya, Jharkhand, Bihar and Manipur are the worst performers in the IT sector. Thus the GOI, with the cooperation of the respective state governments, should encourage the private firms to start operating in these backward states by offering them due incentives.
In the context of telecom, the GOI should give due consideration to the following measures to uplift the telecom sector and to increase the rural connectivity so that it becomes accessible to all towns and villages in the country:

(i) For the progress of rural telecommunication, i.e., to increase the rural tele-density GSM/WLL technology should be encouraged. The Tenth Five Year Plan has also supported the use of WLL technology for rural services. In its policy initiatives for promoting rural telecom services, this plan has advised that WLL based limited mobility services be treated on par with basic services and not as value added services and should be priced accordingly.

(ii) At present the universal levy is five percent of AGR and besides this, the GOI is charging a service tax of 10 percent from all telecom operators along with license fee and spectrum charges (Box 1). Thus, to attract more investment in the telecom sector the regulatory charges (for instance, service tax) should be reduced and special concessions given to those operators who want to operate in the rural and remote areas. The Tenth Five Year Plan has also suggested providing adequate USOF support for encouraging the private operators to enable them to expand their network in rural areas.

(iii) Wi-Fi technology should be used to provide rural connectivity through Internet kiosks. The GOI should provide the appliances used for the setting up of VKC on instalments or they should be exempted from any levy.

(iv) At present India’s telecom market structure is already highly skewed in favour of the incumbent since only it has a national licence to provide all services in contrast to its competitors who have circle and service specific licences. The regulator’s attempt to regulate the incumbent asymmetrically has got stuck as the incumbent has successfully obtained a reprieve from the Telecom Disputes Settlement and Adjudication Tribunal (TDSAT), on the basis of a promise not to engage in anti-competitive practices. This is unprecedented in telecom regulation. There is need to regulate the incumbent. The regulator only has powers to determine tariffs and is primarily a recommendatory body.

(v) The working of TRAI and TDSAT should be made more transparent by including other organisations/agencies in the appointments for these governing bodies.

(vi) Consumer bodies should be encouraged. They should be provided all possible assistance (including financial assistance) in their functioning through the government or the operators.

(vii) Over the last 15 years wireless has dominated telecom. Its role and applicability in enabling access to telecom in rural areas is even more significant in view of the cost of laying cables and time taken to do it. Spectrum in India is managed by a committee called SACFA comprising a large number of departments, each of who can veto an application for a transmission license. Given the rapid changes in technologies in this field, the time taken in allowing the entry of new technology has an opportunity cost associated with it. This therefore needs review.

5.1.3. Energy

Since the first oil shock of 1973, energy conservation has received considerable attention. The Fuel Policy Committee (1974), emphasised the need for energy conservation. The Report of the Inter-Ministerial Group on Energy Conservation in 1983, examined specific areas of energy conservation in different sectors. During the Seventh Five Year Plan (1985-1990), the GOI took many initiatives for the conservation of energy: the energy conservation award was introduced; a massive renovation and modernisation programme was launched to improve the performance of the existing thermal power stations. The second
phase of this programme was taken up during the Eighth Five Year Plan (1992-1997). In the agriculture sector efforts were made to improve and replace agricultural pump sets. With a view to energy conservation, the governments of Kerala, West Bengal, Delhi and Tamil Nadu had made energy audits compulsory for all Extra High Tension (EHT)/High Tension (HT) industrial consumers. During the Ninth Five Year Plan (1997-2002), the GOI introduced an Energy Conservation Bill and set up an Energy Conservation Authority for enforcing the efficient use of energy and “laying down energy efficiency standards, making energy audit mandatory, banning the manufacture of equipment not conforming to energy efficiency standards and the imposition of penalty for non-compliance upon the designated consumers are some of the important functions of the authority” (Chaturvedi, undated: 708).

The Energy Conservation Act, 2001, provides for a specialised body, the Bureau of Energy Efficiency (BEE) to play a pivotal role in the implementation of energy conservation measures. The powers and functions of the Bureau include: arranging and organising the training of personnel and specialists in techniques for the efficient use of energy and its conservation; strengthening consultancy services in the field of energy conservation; maintaining a list of accredited energy auditors; specifying qualifications for the accredited energy auditors; specifying the manner and intervals of time in which energy audit shall be conducted; and specifying certification procedures for energy managers to be designated or appointed by designated consumers. An important role of the Bureau is to develop a “strategy for providing training to energy auditors and energy managers in performance test codes, best practices, case studies and software which would be developed for this purpose” (Beniwal et al, 2004: 2-3).

In the Energy Conservation Act, 2001, the definition of energy audit has been expanded to mean the verification, monitoring and analysis of the use of energy, including the submission of a technical report for improving energy efficiency and an action plan to reduce energy consumption (Beniwal et al, 2004: 5-6). Noting that while there are a large number of energy auditors, there is a wide variation in the veracity and practicality of energy audits being carried out, they conducted a survey in 13 companies from industries connected with information technology, consumer goods and heavy engineering sectors to analyse existing legal provisions, laws, by-laws, regulations in India in terms of energy conservation and conduct. The survey in the identified companies showed that:

i. There is a need for proper energy conservation and management practices;

ii. Most of the companies do not have separate budgets in this regard;

iii. In all the companies surveyed there was an absence of separate managers for energy conservation;

iv. It is imperative to have a statutory regime in place (as is envisaged by the Energy Conservation Act) and to ensure that qualified personnel are in-charge;

v. High energy consumers should initiate audits and other management practices on their own so as to ensure that even if the government lacks in implementation, the laws contribute effectively to the economy by adopting and using proper techniques of energy conservation; and

vi. Though there has been a legislation dealing with energy conservation, most of the companies are either not aware of it or have not taken suitable steps to follow the statute (Beniwal et al, 2004: 25).

5.1.4. Electricity and Power

The supply of electricity commenced in India in the 1880s with the commissioning of a small 130-KW hydroelectric plant at Darjeeling. Until independence, the supply of electricity was confined mainly to urban centres and was used chiefly for lighting purposes. Legal provisions to support and regulate the sector were put in place through the Indian Electricity Act (1910). Shortly, after independence, the Electricity
(Supply) Act, 1948, was formulated, paving the way for establishing Electricity Boards in the states of the Union. The State Electricity Boards (SEBs) played a pivotal role in the rapid expansion of the country’s electricity network.

The production of power was reserved for the public sector in the Industrial Policy Resolution of 1956. Due to government priority to this sector, installed generation capacity rose from a mere 1,300 megawatt (MW) at the time of Independence to more than 1,00,000 MW in 2002, and transmission and distribution (T&D) capacity has increased substantially as well. However, the power sector has not kept pace with the growth in demand with the result that the country has always faced energy and peaking shortages. Thermal power plants comprise almost 80 percent of this capacity, hydroelectric plants about 16 percent, while the remaining are from nuclear plants. A relatively smaller percentage is contributed by the non-conventional energy sources.

The state electricity boards (SEBs), have, in the past, played a significant role in the generation and supply of power. Yet, the present financial health of the SEBs is not sound. This is mainly due to uneconomic tariffs for agriculture, lower slabs of domestic consumption and high T&D losses, which often disguise large-scale theft and low billing and collection efficiency.

Power sector reforms were initiated in 1991 to encourage competition in each sub-element of the sector, namely, generation, transmission and distribution under an independent and transparent regulatory regime. With this objective in mind a Central Electricity Regulatory Commission (CERC) has been set up at the national level and State Electricity Regulatory Commissions (SERCs) set up in 19 states, 11 of which have issued tariff orders. Private sector participation has also been set in motion with the enactment of the Electricity Laws (Amendment) Act in 1998. The Electricity Act, 2003 came into force on 10th June 2003. This Act seeks to bring about a qualitative transformation of the electricity sector through creating a liberal framework of development for the power sector by distancing the government from regulation. This Act has replaced the Indian Electricity Act, 1910; the Electricity (Supply) Act, 1948; and the Electricity Regulatory Commission Act, 1998. This Act also gives a boost to complete rural electrification and provides for the management of rural distribution by panchayats, cooperative societies, NGOs, franchisees, etc. (available online http://powermin.nic.in/JSP_SERVLETS/internal.jsp). These reforms have to be carried forward aggressively to improve the financial health of the SEBs.

The issue of one-time settlement of dues payable by SEBs to central power utilities (CPUs) has been addressed by securitising the dues. It is likely to facilitate further reforms in the sector. Reforms in the distribution sector have been identified as the key area of reform. The Accelerated Power Development Programme (APDP) was initiated in 2000-01, in order to give a fillip to the reform process in the power sector, to ensure better utilisation of funds for reforms.

Poor performance of power utilities and public financial institutions is likely to continue to translate into increased fiscal pressures in the near future. Combined state utility financial losses are estimated at approximately Rs. 260 billion. Central to this problem is the power sector. Power sector losses are placing massive stress on virtually all the state governments. They also threaten the financial health of central utilities and of the financial institutions that fund the sector (Ferro, Rosenblatt and Stern, 2002).

There are initiatives and active discussions of measures for hardening the budget constraint of public utilities, namely of state power utilities, by restricting their ability to accumulate arrears to central utilities and suppliers. Other recent initiatives of the government, such as the motivation of state-level reforms through the Fiscal Reform Facility or the Accelerated Power Development and Reform Program, may en-
courage improved fiscal performance at the state level (Ferro, Rosenblatt and Stern, 2002).

Power supply is viewed by many as the strongest and most widespread bottleneck to investment and growth in the non-farm sector of India. Access to reliable power at reasonable cost is a prime concern for most manufacturing firms and is critical to improving productivity of businesses in India. Industry in India receives low-quality power and is forced to pay tariffs above cost to cross-subsidise residential and agricultural consumers. First, because of the poor supply of power they receive, firms are often forced to purchase and run their own power generator, an activity which inevitably increases business costs, especially for small and medium-scale firms. Second, they face among the highest industrial power tariffs in the world. Thirdly, variable voltage in the power supply can damage telephone equipment or irrigation pumps. In addition, farmers often leave the supply on at night— to get whatever energy might be available— leading to occasional flooding, waste of water and energy and soil erosion. The main reasons behind the poor financial and technical performance of power utilities include inadequate tariffs for non-industrial consumers and excessive losses, a large part of which is due to weaknesses in metering, billing and collection and outright theft. Reforms in this sector are urgent (Ferro, Rosenblatt and Stern, 2002).

Nair and S. Majumdar (2004) conducted a study on infrastructure development in Chhattisgarh and found that the state has surplus generating capacity. More significantly, with availability of large reserves of coal, its potential to generate more power is very high. This generation can sustain the industrial clusters that are envisaged for Chhattisgarh.

**Rural Electrification**

The rural electrification programme is one of the important components in rural development. With this in view, the government has been focusing on village electrification since the beginning of the planning process. Even though this has resulted in the electrification of around 86 percent of the country’s villages, the use of electricity in villages for productive and subsistence needs is still very limited. About 70 percent of the rural households are yet to get electric connections and power-based economic activities in the electrified villages are minimal. The actual benefits of the investments made in the rural electrification programme can only be realised if the people are in a position to use electricity for their day-to-day activities as well as for industrial and commercial activity. Therefore, the second phase of the rural electrification programme, apart from seeking 100 percent electrification, must also ensure more widespread use of electricity by the rural people in a time-bound manner.

In 1991, only 5,00,000 of the 5,87,000 villages (86%) were electrified on the basis of the existing definition. However, only 31 percent of the rural households are electrified. Finally, against the total estimated potential of 19.5 million electric pump sets for irrigation; only 12 million pump sets have been energised. The expansion of the programme of energising pump sets needs to take into account issues like energy efficiency, water conservation, watershed management, rainwater harvesting and other matters related to the optimum use of ground water and the danger of over exploiting this scarce resource.

Thirteen states have declared 100 percent electrification of their villages. The villages yet to be electrified are mostly in Assam, Arunachal Pradesh, Bihar, Jharkhand, Madhya Pradesh, Meghalaya, Orissa, Rajasthan, Uttar Pradesh, Uttarakhand and West Bengal (Tenth Five Year Plan 2002-07).

Out of the estimated 80,000 villages yet to be electrified, the Tenth Plan proposes to electrify 62,000 villages through grid supply. It is proposed that the balance 18,000 remote villages are electrified by 2011-12 through the use of decentralised non-conventional
sources of energy. In order to facilitate the flow of funds, the rural electrification programme has been included as a component of the Pradhan Mantri Gramodaya Yojana (PMGY) and the states are being encouraged to pool resources from other schemes under the Minimum Needs Programme (MNP) and Rural Infrastructure Development Fund (RIDF) to meet the objective of 100 percent electrification (Tenth Five Year Plan 2002-07).

A suitable mechanism to disburse funds directly from the central government to states may be followed for which the states will be required to maintain a separate account so as to ensure that the funds are not diverted for purposes other than rural electrification.

The Kutir Jyoti programme to extend single point light connections to rural households below the poverty line (BPL) will be revamped so that 100 percent coverage of such households will be achieved by 2012. The norms of expenditure for rural BPL households have already been enhanced from the present Rs. 1,000 to Rs. 1,800 per household in special category states and Rs. 1,500 in other states (Power, Tenth Five Year Plan, 2002-07).

Village level organisations like PRIs, rural cooperatives and NGOs will play a crucial role in the rural electrification programme. Community participation is essential for the success of the programme. The concept of barefoot solar engineers may be adopted.

There is an urgent need to attend to the fuel problem of the rural poor. Social forestry relying on quick growing species is one alternative. Developing suitable technologies for using agricultural waste as a source of fuel is another alternative. Popularisation of smokeless chulhas is a third and by far the most promising alternative in the immediate future. This activity should form an integral part of the beneficiary-oriented schemes.

The conservation of energy is not a practice, but is an alternate source of energy. In order to further the cause of energy conservation, “it is imperative to understand how energy is being lost or abused…it is necessary to develop energy-auditing practices in all energy consuming sectors in the country” (Beniwal et al, 2004: 1).

5.1.5. Water

Issues in the context of water include lack of universal access, lack of achievement of minimum consumption norms, irregularity of supply, distance from source and quality. Poor quality of water can have serious health related ramifications.

The National Water Policy 1987, announced that by 1991, adequate drinking water facilities should be provided to the entire population both in urban and rural areas. Yet, till 1991, only 62.3 percent of the total households had access to safe drinking water, in which the share of urban and rural areas were 81.4 and 55.5 percent respectively (available online http://www.censusindia.net/cendat/datatable28.html). As per the Census of India, if a household has access to drinking water supplied from a tap or a hand pump/tube well situated within or outside the premises, it is considered as having access to safe drinking water. The Census of India 2001, shows that safe drinking water has become accessible to 78 percent of the population, in which the share of urban and rural areas are 90 and 73 percent respectively (available online http://www.censusindia.net/2001housing/S00-015.html). Thus in 2002, the GOI announced a new National Water Policy, which restated the same commitment.

The Tenth Plan targets the provision of potable water to all villages. The Department of Drinking Water Supply was allocated Rs. 14,200 crore for rural water supply and sanitation in the Tenth Plan.

Pricing of Water

Water rates play an important role in regulating water use and in ensuring equitable water distribution and efficiency in its management. The declining per capita availability of water is cause for serious concern. Since 1951, the per capita availability of water has declined by 65 percent (Mid-Term Appraisal of Tenth Five Year Plan 2002-07). It is expected to fall further to 1340 m$^3$
in 2025 and 1140 m³ in 2050. The Central Water Commission (2004) in its report on ‘Pricing of Water in Public System in India’ has concluded that:

- There is an urgent need for a review and to restructure the water rates to ensure full recovery of recurring Operations and Maintainance (O&M) cost initially and a part of capital cost subsequently.
- There is an apparent need for a more frequent review and consequent revision in the water rates at periodic and regular intervals of time. There should be an inbuilt provision to incorporate the increase in cost due to inflation.
- Differential water rates, based on the holding size of the cultivators, should be adopted.

Mathur and Thakur (2003) show that the deficiencies in urban water pricing in India, are:

1) Low price in relation to the cost incurred in its provision.
2) As a fall out of under pricing, the quality of service is poor. There is also a lack of incentives to expand the spatial coverage of services.
3) Failure to achieve the objective behind large-scale subsidisation of water on grounds of lack of affordability by the poor.
4) Macro economic implications – Under pricing has affected both the financial health of the state governments that have absorbed the losses incurred by the utilities and capacity expansion, which has suffered due to reduction of capital account support for capacity expansion.

They state that the objective of large scale subsidisation of water on grounds of lack of affordability by the poor has not been achieved and that the poor pay two or three times the costs if coping costs are included and the price subsidy meant for them and built into tariff structure is appropriated by the non-poor households. Subsidies on private taps are poorly targeted, as only 30 percent of the beneficiaries are poor. Large proportions of urban poor households do not have private connections and therefore are unable to benefit from water subsidies. Moreover, the under-pricing of water for those categories of consumers who have the ability to pay has resulted in poor revenue realisation of the utilities and their poor financial health. This indirectly affects the poor as it impedes the expansion of water services universally. From their study of five cities, they conclude that pricing policies do not distinguish between access and usage. Subsidies are generally on the price of water, but access charges in some cities tend to be high as they are linked to possession of built up space. This makes the subsidies perverse and anti-poor. This report proposes implementation of a rational tariff structure, which matches the costs and charges in relation to the incidence of benefits. It also, proposes an expansion of the consumer base that can pay for the water. Most importantly it recommends metering of all users i.e., both the poor and the non-poor. They recommend guidelines for tariff restructuring, to cater to the interests of the poor and these are:

1. Establishing a link between tariff and cost by introducing separate charges for connection, infrastructure development, and consumption.
2. By introducing a base tariff level and maintaining the financial liability criterion by a lifeline block in the tariff structure for consumption related tariff. It also proposes the use of explicit subsidies to the poorer segment for connections and infrastructure development charges.

They also recommend pooling of subsidies for slum settlements provided by the state and central government plan allocations.

Community Participation
Reforms in the rural drinking water sector were adopted in 1999, through ‘Sector Reform Project’ on a pilot basis and have been scaled up throughout the country in the form of ‘Swajaldhara’ launched on 25th December, 2002. The programme is a paradigm shift
from supply driven to demand driven, centralised to decentralised implementation and the government’s role from service provider to facilitator (available online http://ddws.nic.in/swajaldhara/html/index.html).

In Uttar Pradesh and Uttaranchal, the success of ‘Swajal’ Project, with the assistance of the World Bank, is a pioneer in the reforms of this sector. The project is a major innovative experiment in community participation, community procurement and partial capital cost recovery in water supply systems. Communities are expected to share about 10 percent of the capital cost and 100 percent of the O & M cost of water supply systems. A subsidy of up to Rs. 2250/- is given in constructing individual sanitation facilities, such as household sanitary latrines. In every project village, a village water and sanitation committee is formed, which functions as a sub-committee of the Gram Panchayat and is responsible for planning, implementation, operation and maintenance at the community level (available online http://www.swajal.org/index_background.htm).

In Maharashtra the state government has introduced a number of supportive policy directions guided by the principle of demand driven approach. The institutional framework should be such that a demand driven approach is promoted. The demand driven approach implies that the community, rather than the state government sets service standards. It should be based on an assessment of the costs involved and the benefits. This approach has also been attempted in urban areas. Thus, in community participation the demand driven approach should be adopted for covering the rural and especially remote areas (TERI, Vol. II, 2000). In Rajasthan a number of community initiatives for rainwater harvesting and management of the water resource exist, example the Barefoot college (Tilonia) and the Tarun Bharat Sangh. To institutionalise local development through capacity building, several programmes have been launched like Gopal Scheme of Cattle Breed Improvement, Saraswathia Scheme, etc. (TERI, Vol. III, 2000).

A legal and institutional framework, which specifies ownership and responsibility for infrastructure investments in community initiated projects and gives a legal status to a community group operating a government owned scheme needs to be put in place to strengthen community participation (TERI, Vol. I, 2000).

**Other Issues**

Since water is one of the most crucial elements in developmental planning, the recycling and re-use of water need special attention. An important aspect is water quality. Improvements in existing strategies and the innovation of new techniques resting on a strong science and technology base will be needed to eliminate the pollution of surface and ground water resources, to improve water quality and to step up the recycling and re-use of water. Special efforts should be made to investigate and formulate projects either in, or for the benefit of, areas inhabited by tribal or other specially disadvantaged groups such as SCs and STs. In other areas also, project planning should pay special attention to the needs of SCs and STs and other weaker sections of society. There should be a scientific, periodic reassessment of the ground water potential, taking into consideration the quality of the water available and economic viability. Exploitation of ground water resources should be regulated so as not to exceed the recharging possibilities, as also to ensure social equity (available online www.saciwaters.org/nwp_india.htm#need).

A nationwide survey of habitations in 1994, showed that over 43.5 million people living in 1.42 lakh habitations are at health risk due to the poor quality of drinking water like presence of excess fluoride, arsenic, salinity, iron and chemical pollutants like pesticides and insecticides. In India, many of the waterborne diseases such as gastroenteritis, diarrhoea, dysentery, cholera, etc. owe their origins to the pathogens present in drinking water (Dinesh Chand, 1999: 4). The India Development Report 1999-2000 also notes that several diseases like diarrhoea, hepatitis, ascariasis (roundworm), hookworm, trachoma and guinea worm have been linked to human contact with pol-
luted water. The World Bank and WHO have estimated that in India, 21 percent of all communicable diseases (11.5% of all diseases) are water related (Parikh, 1999). They estimate that every year 1.5 million children under five years die in India of water related diseases and the country loses 1,800 million persons hours (over 200 million person days) each year due to these water borne diseases. A quantitative measure that integrates premature deaths and temporary disabilities due to diseases is Disability Adjusted Life Years (DALYs). About 30.5 million DALYs are worth Rs. 36,600 crores. Thus the country should be willing to spend that amount annually to provide clean drinking water to all. Improvements in water supply and sanitation can substantially reduce the incidence and severity of these diseases as well as the infant and mortality associated with diarrhoea.

The safe level of fluoride in ground water for drinking purposes is 1.5 milligrams/litre and of arsenic in ground water is 0.05 milligram/litre. Fluoride contamination in ground water has been recorded in Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu and Uttar Pradesh. A total of 64 blocks in eight districts of West Bengal have high levels of arsenic. Further, the safe limit for occurrence of iron in drinking water supply is 0.8 milligram/litre. The ground water of the northeastern and eastern states has iron exceeding the permissible limit. About 1.9 lakh sq. km. in Haryana, Punjab, Delhi, Rajasthan, Gujarat, Uttar Pradesh, Karnataka and Tamil Nadu are affected by inland salinity caused by over-exploitation of ground water and excessive surface irrigation (Sharma, 2001).

Policy Initiatives

For the improvement in water and sanitation facilities the following policy initiatives are suggested:

- Drinking water should be the priority in planning and operation of systems.
- Private sector participation should be encouraged in planning, development and management to introduce corporate management and improve service efficiency. The process of privatisation should be transparent and public opinion should be included in forming any policy regarding the privatisation of water or sanitation facilities.
- Measures should be taken to supply better quality water.
- Special attention to the needs of SCs and STs and other weaker sections of society. Need to ensure social equity.
- Periodic reassessment on a scientific basis of the ground water potential is needed.
- Clean and potable drinking water should be supplied to all people to ensure better health and higher productivity.
- Special attention should be paid to the maintenance of existing water resources schemes under these institutional arrangements.
- A participatory approach should be adopted and water user associations and local bodies should be involved in the operation and maintenance, to lead to the eventual transfer of management to the local bodies/user groups. In community participation, a demand driven approach should be adopted for covering the rural and especially remote areas.
- A standardised national information system with a network of data banks and data bases, integrating and strengthening the existing central and state level agencies should be established.
- Exploitation of ground water resources should be so regulated that they do not exceed the recharging possibilities and also ensure social equity.
- Universal access to water and sanitation services should be ensured.
- Improvements in the quality of service delivered are needed. Improvements in quality of water supplied and sewerage disposal are also needed.
- Setting standards of service and enforcement is needed.
• There is an urgent need for a review and to restructure the water rates to ensure full recovery of recurring O&M costs initially and a part of capital cost subsequently.

• There is an apparent need for a more frequent review and consequent revision in the water rates at periodic, regular intervals of time. There should be an inbuilt provision to incorporate the increase in cost due to inflation.

• Differential water rates, as per the holding size of the cultivators, should be adopted.

• Economic efficiency, financial viability, social equity and simplicity should be given special attention at the time of pricing environmental infrastructure services.

• In rural areas, there should be transparency and openness in the work of gram sabhas over panchayats executing construction work and various state and centrally sponsored programmes.

• Low cost sanitation programmes/schemes should be given impetus. The pay-and-use toilets scheme should be encouraged throughout the country.

The provision of infrastructure facilities and services is lagging far behind the pace of urbanisation. This has resulted in the proliferation of slums, the growth of the informal sector and educational deprivation and deteriorating health levels of large sections of urban inhabitants.

It is now widely recognised that the public sector has neither the funds nor the capacity to provide the required level of infrastructure and services in all the urban areas in the country (Tiwari, 2004). Considering the huge gap in the requirements and availability of funds for urban infrastructure, it is imperative that alternative sources for financing infrastructure are exploited and the dependence of the urban local bodies on budgetary allocations and transfers from the state government is reduced. To achieve this, several state governments in the country have initiated the urban reform process aimed at improving the creditworthiness of urban local bodies, increasing transparency and accountability in their functioning and developing their partnership with private sector and communities in the provision of urban services. Public policies are being developed for attracting investment from the private sector as well as foreign direct investment in urban infrastructure. Thus, there is a major thrust on developing public-private-people partnerships. Almost all the state governments have signed the Memorandum of Agreement with the central government to carry out the reforms envisaged in the Urban Reform Incentive Fund.

The India Infrastructure Report (GOI, 1996) recommended that public policy should aim at increasing the range of affordable options for services of the type and quality required by the poor. Often this will call for directing policies to facilitate alternative forms of provision by the private sector within a framework of regulation, which protects safety and fairness. It assessed the total annual investment needs of water supply, sanitation and roads sectors per year on an average at Rs. 282.98 million during 1996-2001, and Rs. 277.73 million during 2001-06, but funds to that extent are not available. To overcome these constraints and challenges, the Ministry of Urban Development & Poverty Alleviation has initiated institutional, fiscal and financial reforms.

Some of the recent developments in infrastructure law in India are the establishment of regulatory authorities like Telecom Regulatory Authority of India (TRAI), Tariff Authority for Major Ports (TAMP), Central Electricity Regulatory Authority (CERC), State Electricity Regulatory Commissions (SERC), etc. The National Law School of India University (2003) organised a National Round Table on ‘Infrastructure Law and Policy’ with the objective of improving the quality of infrastructure in India. During the Round Table it was realised that infrastructure is a matter of concern for national as well as state level social and economic development.
following reforms are suggested:

1. Since the central government does not have sufficient resources to bring about any substantial change in the quality and quantity of infrastructure, there is a great need for the private sector to step in. It is important to encourage private investment in infrastructure development by creating a favourable atmosphere for private investors.

2. Infrastructure projects should be designed in such a manner that they have an in-built public grievance redressal mechanism.

3. It is important to maintain the efficiency, reliability as well as quality of service in any infrastructure project. The composition of the regulatory authority must be such that the regulator is independent and efficient on the one hand and minimises opportunity costs on the other.

4. For the efficient functioning of a regulatory authority, it should be vested with sufficient amount of independence. It is important to ensure transparency and accountability in such bodies on the same lines as private bodies. To ensure the effectiveness of the regulatory authority, appeals relating to the decisions of the regulatory authority should only be on points of law and should be heard by special High Court benches.

For the development of urban infrastructure, finance can be made available through the domestic capital market, which can emerge as a viable and potentially important source of financing (Pethe and Ghodke, 2002). In India, till date, the financing of infrastructure is dependent on budgetary support and funds from other financial intermediaries. Yet, a strong secondary market in debt and evolving new products can be created to cater to the specific fund requirements of infrastructure.

5.2. Micro Credit/Micro Finance as an Enabler for Exiting Poverty

Credit without collateral has traditionally been available only at exorbitant rates of interest. History provides considerable evidence of how the combination of illiteracy, poverty, lack of assets and lack of access to institutional credit resulted in a whole saga of indebtedness, bonded labour and immiserisation of the Indian peasantry (Mehta, 1996). Therefore, lack of access to credit, especially in times of difficulty, can lead to entry into poverty for the non-poor and worsening of deprivation for those who are already in poverty. Possible ‘interrupters’ that may enable poor households to escape poverty include asset transfers, skill formation, and micro enterprise development supported by access to micro credit.

It is generally recognised that “the poor are poor only because they have no assets – no land, no livestock, no houses and often no education. Their only assets are time and labour. The challenge therefore lies in enhancing the economic value of the time and labour of the poor”. Enhancing the economic value of the time and labour of the poor can be achieved “only by building the assets of the poor through a transition from unskilled to skilled work. Asset building and community development have to be the pathways for poverty eradication. This will call for a paradigm shift in developmental mindset, a shift from a patronage and “do good” approach to one of genuine partnership with the poor… The rural poor can take to new technologies like fish to water, provided they are enabled to learn through practical work experience and not through classroom lectures. The asset building exercise is based on micro-level planning and micro-enterprises supported by micro-credit” (Swaminathan 2004: 49-51).

The failure of formal financial institutions to provide access to loans for the rural poor led to the formation of micro-credit groups (Gupta 2004: 6) or self help groups (SHG). The primary objectives of micro credit programmes are: income and production enhancement, generating employment and delivering financial services to the poor people. Loans are usually given to the group on the condition of joint liability.

In his budget speech (2005), the Finance Minister said that the programme of linking SHGs with the bank-
ing system has emerged as the major micro-finance programme in the country. As many as 560 banks including 48 commercial banks, 196 Regional Rural Banks (RRBs) and 316 cooperative banks are now actively involved in the programme. He proposed to enhance the target for credit linking in the next fiscal from two lakh SHGs to 2.5 lakh SHGs.

In India, SHG banking, or linking banks and SHGs, is the largest and fastest-growing microfinance program in the developing world. Implemented since 1996 on a national scale, it has reached 1.43 million groups with 21 million members, covering over 100 million people from the lowest strata of the rural population (as of March 2005) (Seibel).

There has been a skewed growth of SHGs across the regions. The southern region of India accounts for 67 percent of SHGs and 78 percent of SHG credit. The poorer regions like the northeastern, eastern and central regions account for only 0.2, 4.1 and 6.9 percent of SHG credit (Dasgupta 2001). Currently, it is estimated that only about three percent of the 75 million poor households in India who need access to credit, receive financial services from the formal financial institutions and the micro finance sector put together. The potential for the micro finance industry in India is still vast (FWWB India, 2002).

Over the last few years there has been considerable debate regarding the “claims made by development agencies and practitioners that micro credit is or could be a panacea for rural development” (Roth 1997: 6 and 28). It is argued that there has been “frenzied promotional activity” in the context of micro credit and these schemes often treat the symptoms and not the causes of poverty as it often results from powerlessness. The results of the few empirical studies that have assessed the impact of micro credit schemes on the ‘poorest of the poor’ seem to suggest that they benefit the richest segment of the poor. The results of the studies of the impact of 13 micro credit schemes in Asia, Africa and South America in improving incomes, indicate unanimously that the benefits of the micro credit schemes under study were not scale neutral - the upper and middle income poor tended to benefit more than the ‘poorest of the poor’ (Roth based on Hulme and Mosley).

In respect of reducing the vulnerability of the ‘poorest of the poor’, the study by Hulme et al found that the same result obtained in 10 micro finance institutions surveyed (James Roth, 1997).

- Over half the institutions simply excluded the ‘poorest of the poor’ outright or allowed only a very small percentage to take part in their schemes.
- Of those who engaged with the poorest, the result of the loans in respect of increases in asset holdings seems inconclusive - a mix of increased asset holdings and high rates of enterprise failure.
- None of the institutions influenced investment in risk reducing activities.
- Less than a third of all the institutions provided accessible savings/storage facility.
- Only two of the recorded institutions gave additional entitlements during crisis periods.

They conclude that whether these trends are global and inherent to micro finance institutions in developing countries is open to debate. However, for reasons mentioned above, the ‘poorest of the poor’ will always benefit the least and will always be the riskiest clients (ibid).

Other concerns shared by some NGOs and women’s groups in the context of micro credit (Burra et al 2005) are that:

- Interest rates charged by the group are usurious.
- Micro-credit is increasing indebtedness amongst the poor.
- Women are taking loans for husbands who often do not pay back the loans, thus increasing their vulnerability.

---

8 Available at http://www.microfinancegateway.org/content/article/detail/25566
• The burden on children, particularly girls, has increased with children working longer hours to assist their mothers.

• The rules leave no space for flexibility for savings and this puts a huge burden on women, whose incomes are uncertain.

In comparison there are other studies that show that micro credit has a host of positive impacts on families that receive it. A World Bank study in 1998 reported that five percent of Grameen Bank, BRAC, and RD 12 of Bangladesh Rural Development Board (BRDB) borrowers move out of poverty each year. A recent World Bank study by Khandkar (2003) shows that micro credit programs operating in Bangladesh over a long period have produced a greater impact on extreme poverty than on moderate poverty. “The results of this study strongly support the view that micro credit not only affects the welfare of participants and non-participants, but also the aggregate welfare at the village level” (Yunus, undated).

Despite having a wide network of rural bank branches in the country and implementation of many credit linked poverty alleviation programmes, a large number of the very poor continue to remain outside the fold of the formal banking system. Constraints in coverage for formal financial institutions include high travel and supervision costs in dealing with the very large number of clients in rural areas, high costs of maintaining ledgers and accounts and high manpower costs in servicing a very large number of clients with small accounts (Gupta, 2004: 19). Caution needs to be exercised in that in no case should banks be asked to push credit targets, as this can cause difficulties in repayment if credit is taken for developing new skills or activities without ensuring adequate market demand (Mehta 1996: 419). However, banks do need to be rated on the extent to which they provide coverage to the poor and make financial services available to them.

**Beyond Micro Credit**

If the purpose is to enable escape from poverty, access to credit alone is not enough and a combination of enabling factors is necessary. Credit alone is not a vehicle for generating income. Without substantial support services that include training, savings mobilisation techniques and group formation, market incentives and infrastructure, borrowers are likely to remain in debt, as they have limited options to make profitable investments (SAHDR, 2000: 66).

Micro finance is a step in this direction and “has come to be referred to as small-scale financial services (including savings, credit, insurance, business services and technical assistance) provided to people who work in agriculture, fishing, herding; who operate small or micro-enterprises, who provide services; who work for wages or commission; and other individuals and groups working at local levels” (Gupta 2004: 19). Gupta argues that micro finance can make a sizable impact on rural poverty reduction and income growth if they are able to promote strong backward and forward linkages between agriculture and the non-farm sector (Gupta, 2004: 10).

Gautam Gupta outlines the three models of SHGs prevailing in India as the promotion of SHGs by banks; NGOs technically facilitating and nurturing SHGs; and NGOs playing the role of financial intermediaries. He points out that of the three models, the second is the most frequently observed in India and that until 1992, almost 90 percent of the linked SHGs were comprised of women, as they are better at saving and at repaying loans. In West Bengal the NGOs were involved mainly as social intermediaries in income generating activities for the poor using mostly donor funds. This involved the mobilisation of the poor into SHGs for building social capital that would generate a sound base for the members to develop their credibility as borrowers and encourage financial institutions to develop confidence in establishing a lending relationship (ibid: 34). It is however important to note that there are laws that govern savings mobilisation, lending and interest
charging operations in the country and these acts require permission and approval from several bodies such as the Reserve Bank of India (RBI). None of the SHGs at present are operating in consonance with these laws. The need for a law arises for registration of the operation; protecting members of the group from cheating; and resolution of conflicts in the process of sanctioning loans, fixing repayment schedules, rates of interest, etc. An Act is therefore needed to facilitate these activities.

5.3. Disaster legislation to enforce the obligation of the state for vulnerable groups

India is vulnerable to natural disasters like floods, droughts, cyclones, earthquakes and landslides. It has been estimated that 60 percent of the landmass is prone to earthquakes; over 40 million hectares is prone to floods; 68 percent of the area is susceptible to drought and about eight percent of the total area is prone to cyclones (The High Powered Committee on Disaster Management, 2002). Every year there is loss in terms of human lives, property and environments, community and public assets, etc. In the decade 1990-2000, 4344 people lost their lives and about 30 million people were affected by disasters every year (GOI, 2004: 3). It has been estimated that the decade 1990-2000 has seen the worst disasters in terms of human and property losses in the country (see Table 31).

Disasters not only affect the developmental process, but “the poorest and the weakest are the most vulnerable to disasters…mitigating the impact of disasters must be an integral component of our development planning and of our poverty reduction strategy” (Tenth Five Year Plan, 2002-07). The GOI, 2004, notes that “disasters retard socio-economic development, further impoverish the impoverished and lead to diversion of scarce resources from development to rehabilitation and reconstruction.”

In India, the central and state governments have specific responsibilities for dealing with disasters. However, there is a need for strengthening and streamlining institutional arrangements for disaster response. The Tenth Five Year Plan (2002-07), as well as the High Powered Committee on Disaster Management, emphasised the need to create “a body of legislation dealing with response to natural disasters and other emergencies, clearly delineating responsibilities and powers of each entity” (Tenth Five

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of people killed or missing</th>
<th>No. of people affected (in Lakh)</th>
<th>No. of houses and buildings partially or totally damaged</th>
<th>Amount of property damages (Rs. Crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>1,804</td>
<td>595.6</td>
<td>24,49,878</td>
<td>40.06</td>
</tr>
<tr>
<td>1986</td>
<td>1,200</td>
<td>550.0</td>
<td>20,49,277</td>
<td>30.74</td>
</tr>
<tr>
<td>1987</td>
<td>1,835</td>
<td>483.4</td>
<td>29,19,380</td>
<td>20.57</td>
</tr>
<tr>
<td>1988</td>
<td>4,533</td>
<td>101.5</td>
<td>2,42,533</td>
<td>40.63</td>
</tr>
<tr>
<td>1989</td>
<td>1,718</td>
<td>30.1</td>
<td>7,82,340</td>
<td>20.41</td>
</tr>
<tr>
<td>1990</td>
<td>1,855</td>
<td>31.7</td>
<td>10,19,930</td>
<td>10.71</td>
</tr>
<tr>
<td>1991</td>
<td>1,860</td>
<td>342.7</td>
<td>11,90,109</td>
<td>10.90</td>
</tr>
<tr>
<td>1992</td>
<td>1,367</td>
<td>190.9</td>
<td>5,70,969</td>
<td>20.05</td>
</tr>
<tr>
<td>1993</td>
<td>9,936</td>
<td>262.4</td>
<td>15,29,916</td>
<td>50.80</td>
</tr>
<tr>
<td>1994</td>
<td>2,344</td>
<td>235.3</td>
<td>10,51,223</td>
<td>10.83</td>
</tr>
<tr>
<td>1995</td>
<td>2,508</td>
<td>543.5</td>
<td>20,88,355</td>
<td>40.73</td>
</tr>
<tr>
<td>1996</td>
<td>3,789</td>
<td>549.9</td>
<td>23,76,693</td>
<td>50.43</td>
</tr>
<tr>
<td>1997</td>
<td>1,881</td>
<td>443.8</td>
<td>11,03,549</td>
<td>n.a.</td>
</tr>
<tr>
<td>1998</td>
<td>n.a.</td>
<td>521.7</td>
<td>15,63,405</td>
<td>0.72</td>
</tr>
<tr>
<td>1999</td>
<td>n.a.</td>
<td>501.7</td>
<td>31,04,064</td>
<td>1020.97</td>
</tr>
<tr>
<td>2000</td>
<td>n.a.</td>
<td>594.34</td>
<td>27,36,355</td>
<td>800.00</td>
</tr>
<tr>
<td>2001</td>
<td>n.a.</td>
<td>788.19</td>
<td>8,46,878</td>
<td>12000</td>
</tr>
</tbody>
</table>

Year Plan, 2002-07, p.197 and High Powered Committee on Disaster Management).

Some of the major issues confronting the Indian disaster management system are: collecting information about the disaster; opening of control rooms; accurate information about the disaster; evacuation of people; medical attention; emergency hospitals, and communication and transportation. Authorities should ensure – water and food; sanitation and nutrition; shelter and survival; maintenance of law and order, smooth administration, re-establishment of normalcy; relief centres; coordination of relief centres; financial aid to the well determined parameters; rehabilitation as an integral part of disaster management; and protection of human rights. Besides, the “disaster management authorities should be free from political considerations and they...should be empowered to give necessary order/direction and guidelines.” These authorities should also perform “as a link between the Union Government, State Government and District Administration” (Alex, 2003: 7-10). To fulfil these responsibilities, he suggests that specialised agencies with adequate powers to manage disasters be established.

He suggests the need to incorporate the following major changes for disaster management in India: “the enforceable right of the people to get relief and rehabilitation after a disaster; establish specialist commissions and councils for disaster management; the focus of disaster management exercise should be shifted from ‘post-disaster reaction’ to ‘pre-disaster preparation’; powers and responsibilities of role players need to be expressly mentioned; the role of military, NGOs, para-military, police, philanthropic agencies, civil defence people, etc. should be well defined; the allocation and management of finance should be based on needs; there should be appropriate punishment for violating the provisions of law/order/directions; insurance disaster loans and compensation need to be given increased importance; dispute redressal and protection of human rights need to be treated as a part of disaster management exercise; and rehabilitation should also be treated as a part of disaster management exercise.” Further, disaster legislation should spell out “legal standards, procedures, rights and duties, establish authorities for disaster management, so as to institutionalise the disaster management system.” It has been pointed out that the legislation “will ensure the visibility of governmental institutions - their objectives, powers and functions and will place the disaster management exercise on a more firm foundation” (Alex, 2003: 12-15).

The High Powered Committee on Disaster Management also discussed and provided a detailed account of the Disaster Management Act. However, the Disaster Management Act proposed by the High Powered Committee provides only organisational structures, funding; culture of preparedness; forecasting and warning systems; role of police and para-military forces, etc. Alex not only highlights the problems in the existing set-up, but also identifies issues that plague the present disaster management system. Besides, he gives an overview of the fundamental right to rescue/relief and rehabilitation under the constitution and disaster management legislations in selected countries. He has designed a comprehensive statute outlining powers and functions in the GOI and state government; powers and functions of National Commission for Disaster Management; functions of the NCDM (now NIDM); powers, functions and duties of the State Commission for Disaster Management as well as District and Sub-District Council for Disaster Management; besides giving powers of Central Relief Commissioner, State Relief Commissioner and District Relief Commissioner. This study provides comprehensive as well as operational aspects of financial arrangements, compensation, insurance and disaster loan, rehabilitation aspects, dispute settlement and protection of human rights; liabilities and legal proceedings in the context of India.

Alex (2003: 11-12) points out that under the doctrine of parens patriae the state is obliged to render ad-
equate relief and rehabilitation to the victims of disaster. The victims of disaster have an enforceable right to rescue, relief and rehabilitation while the attitude in enforcement of existing government schemes/policy is one of charity by the state and not entitlement for the victim. The state has an obligation to make necessary preparation and planning to face a disaster situation. There is need for legislation to allocate responsibilities in legal form, ensure uniformity of approach and provide for the protection of the peoples’ rights.

Relief assistance and supplies often do not reach those who are the most socially, economically and culturally vulnerable. In this connection, when addressing the relief requirements of disaster victims, priority should be given to the special needs of the vulnerable population i.e., the poor, children, women and the disabled.


The objectives of the Public Distribution System (PDS) are: maintaining price stability; increasing the welfare facilities for the poor by providing access to basic food at reasonable prices; rationing during periods of scarcity; and keeping a check on private trade (Bapna, 1990: 4-5). Commodities worth more than Rs. 30 thousand crore are distributed to about 160 million families annually through an extensive network of 4.62 lakh fair price shops (FPS) (Tenth Five Year Plan, Vol. II: 367).

Till 1992, the PDS was a general entitlement scheme for all consumers and implementation was the joint responsibility of the central and state governments/Union Territories. However, in 1997, in an attempt to curtail the food subsidy, the GOI introduced the Targeted Public Distribution System (TPDS). Under “TPDS, the size of the entitlements for the BPL population is decided by the central government. The allocations for APL populations or (additional allocations for the BPL and APL populations) are decided somewhat arbitrarily, based on the past utilisation and demands from states and according to the TPDS guidelines” (Swaminathan, 2003: 6).

Under TPDS each poor family was entitled to 10 kilograms of food grains per month and it was expected that this would benefit about 60 million poor families. However, from April, 2000, the “Government increased the allocation for below poverty line (BPL) families from 10 kilograms to 20 kilograms per month at 50 percent of economic cost” (Tenth Five Year Plan, Vol. II: 368). Further under the TPDS in July 2001, the government initiated the following steps: the allocation of food grains was increased from 20 kilograms to 25 kilograms per BPL family; the government decided to allocate food grains to above poverty line (APL) families at the discounted rate of 70 percent of the economic cost (Tenth Five Year Plan, Vol. II: 369).

In order to make the implementation of TPDS more effective the Tenth Five Year Plan suggested the following:

- Items other than rice and wheat need to be excluded from the purview of TPDS.
- Sugar should be kept outside the purview of PDS.
- All further attempts to include more and more commodities under the coverage of food subsidy should be resisted.
- The Fair Price Shop (FPS) should be permitted to sell all commodities (other than rice and wheat) at full market prices in order to ensure their economic viability.
- The coverage of TPDS and food subsidy should be restricted to the BPL population (Tenth Five Year Plan, Vol. II: 369-370).
However, the introduction of the TPDS led to an initial rise in distribution, but with the new price regime introduced in March 2000, there was a virtual exclusion of the APL population and a big decline in off-take. Thus, while TPDS has greatly increased the price differential between APL and BPL households, it has not improved access for the BPL, at these prices (Swaminathan, 2003: 6).

Besides, over a period of time, a number of problems were noticed in the working of TPDS – firstly, targeting has led to the large-scale exclusion of genuinely needy persons from the public distribution system; secondly, targeting has adversely affected the viability of the PDS network; and thirdly, TPDS has failed in the regional task that was performed by the earlier PDS, namely for transferring cereals from surplus to deficit regions of the country (Swaminathan, 2003: 6).

The TPDS was examined by the Expenditure Reforms Commission (ERC) in 2000, (available online http://expenditurereforms.nic.in/vsexpenditurereforms/foodsubsidy.htm) as well as by the High Level Committee on Long Term Grain Policy (HLC) in 2001. While the ERC broadly supported the continuation of TPDS with narrower targeting and some shift from food distribution to cash distribution by the centre, the HLC recommended an immediate return to the old PDS with universal coverage and uniform prices. It also recommended that states be given a cash transfer to facilitate their capacity to design location-specific food-related schemes for the poor (Swaminathan, 2003: 15-16).

In the context of the working of TPDS, Madhura Swaminathan (2003: 27-28) suggests:

- The states should be given greater flexibility in the design of the food security system.
- India should take its concerns about food security to the WTO and ensure that provisions for food security are exempted from the calculation of the Aggregate Measure of Support (AMS). India should work hard to fine-tune its proposals for ‘food security box’ and to garner support for the same from other less developed countries.

It is now being broadly recognised and accepted in the country that PDS is essential for making available foodgrains and other necessities for the survival of the poor at subsidised prices in the whole country. In this background, there is a need to start a supplementary rural employment programme like Food for Work giving both a food and cash component in wages. There is also a need to take up this programme in a much bolder spirit than hitherto undertaken. It has been estimated that more than 50 percent of our crop land suffers from various forms of soil degradation. Besides, due to the onslaught on our forest resources, the ecological system is under severe threat. As a consequence there is no dearth for taking up productive works. There is a need to take up in this programme various schemes relating to land levelling, soil and water conservation, reclamation of saline, alkaline, acidic, and water logged lands, construction of irrigation channels and drains, afforestation, etc. (Radhakrishna, 2005: 1820-21; and Vyas, 2000: 4403).

On the problem of WTO provisions and their impact on public distribution, Madhura Swaminathan observes: The WTO agreement on agriculture has placed a ceiling and reduction commitments on government subsidies and other forms of domestic support to agriculture. The extent of subsidy is measured in the form of the Aggregate Measure of Support (AMS). However, “on the distribution front, there is a possible conflict between a universal food security system such as the PDS and the WTO provision of exemption of subsidy on cheap food only...
for the poor consumers….in a country like India with mass under nutrition, a universal programme can be more effective in reaching the needy than a narrowly targeted programme. A universal programme can also perform the role of price stabilisation better. Thus, universal coverage may be required for effective food security for the poor…that subsidies for public stockholding and the PDS should be excluded from the calculation of the AMS. The reasoning here is that for a poor nation, food security is a critical objective and is necessary for ensuring the right to food and nutrition to its citizens….India should take its concerns about food security to the WTO and ensure that provisions for food security are exempted from the calculations of the AMS” (Swaminathan, 2003: 26-27).

5.5. Municipal Governance

5.5.1. Municipal Accounting Reforms

The first generation urban sector reform - known as the 74th Constitutional Amendment Act of 1992, recognises the principles of local self-government and empowers urban local bodies with financial resources through the Central Finance Commission and State Finance Commissions. Subsequently, in order to strengthen these local bodies, second-generation reforms have also been initiated. In the last decade, enormous progress has been made in removing the impediments to efficient investment. Yet, there are certain issues associated with these attempts/experiments of Municipal Accounting Reforms, which need immediate attention, documentation and analysis (National Institute of Urban Affairs, 2004):

1. Individuality/Heterogeneity – A uniform accounting system with built-in flexibility at the local level should be the goal/objective of the entire gamut of municipal accounting reforms.

2. Slow pace/incomplete attainment – Present municipal accounting reform experiments have taken too much time for implementation and only a handful of local bodies have attained complete conversion to accrual based double entry accounting system.

3. Modified Accrual base Accounting System – Indian municipal bodies essentially require an accounting system, which brings in features of accrual based double entry accounting system, but at the same time, it should be suitable to their characteristics, activities and purposes. In other words municipal bodies require modified accrual base accounting system for speedy and complete implementation.

4. Non-replication of reforms – One does not find replication of innovations and reforms that have been successful in one or more Urban Local Bodies (ULBs). Another ULB should start the reform process from scratch.

The GOI should play the role of a navigator taking diverse agencies towards a unified nation-wide municipal accounting system, while maintaining identity and diversity at the local level. The Ministry of Urban Development, GOI, has prepared a set of accounting policies and standards by bringing together C&AG, ICAI, representatives of state governments, representatives of municipal bodies. The National Institute of Urban Affairs (2004) suggests that the following steps be taken by the GOI:

(i) It is essential that necessary rationalisation, updating should be carried to the C&AG Task Force Report. Then a model municipal accounting manual and account code, which will comprise of charts of accounts, budget code, system description and operational guidance should be prepared on the basis of agreed upon accounting policies and standards for municipal bodies.

(ii) The GOI should enforce this model municipal account code with some legal sanction. A state government can adopt it in full or can develop a separate municipal account code. Under these circumstances it will have to follow charts of accounts, budget code up to the second level of
the model municipal account code and all the major accounting policies and standards in totality. This model municipal code will act as a common/linking thread running through the state level municipal accounting codes and will bring about the much-desired comparability of municipal data.

(iii) The GOI should give consideration to modified accrual basis of accounting coupled with fund accounting. This board should look for development, standardisation and regulation of the municipal accounting system. It should also work for the promotion of professionalism in municipal bodies.

(iv) The GOI should provide necessary help to form an Association of Municipal Accountants and Auditors of India, which will create a much-desired platform to share experiences and to inculcate professionalism among the municipal accountants and auditors.

The Task Force constituted by the Office of C&AG of India had recommended the introduction of an accrual basis of accounting system for the ULBs and suggested model budgeting and accounting formats for that purpose. The Task Force Report was circulated to all states/union territories for adoption of accrual basis of accounting system as well as the budget and accounting formats for that purpose. The central government is in the process of preparing a model legislation for facilitating private sector participation in urban infrastructure, which will ensure a competitive bidding process in a transparent manner. This is necessary, as the present legislative scenario does not encourage private sector participation in this field.

Since the state government plays a crucial and leading role in municipal accounting reforms, therefore, the National Institute of Urban Affairs (2004) has suggested the following guidelines:

(i) The state government should undertake the task of revising the municipal account code using the national level model municipal accounting manual.

(ii) The state government should place a modified accrual based double entry account code in place because it can provide a legal mandate and compel municipal bodies to implement the improved accounting system.

(iii) The state government should undertake a massive programme of upgrading accounting systems of municipal bodies. It will have to take the initiative to provide adequate institution strengthening services to municipal bodies. Such an initiative will require a lot of funds. The lending agencies like World Bank, Asian Development Bank, Housing and Urban Development Corporation, Life Insurance Corporation, etc. should be roped in to share the cost of institutional strengthening.

(iv) The state government should adopt the following strategies for the timely implementation of the new accounting system/reforms:

- Setting a time frame spanning two to three years for the implementation of the double entry accounting systems in the ULBs.
- Indicating the incentives for compliance with specified time frames for upgradation and punitive measures on non-achievement.
- Demanding financial statements produced by improved accounting systems at defined periodicity.

One area that will need special attention is the incorporation of budgetary systems and reports in the Modern Municipal Financial Accounting System. Therefore, it is important that in the initial stages of the implementation of the plan, the reformatting of budgetary statements is incorporated in consonance with the accounting system and financial statement presentations. The Central and state governments should address this issue while framing model accounting system for the municipal bodies. A municipal body should take care of its operational side. An appropriate programme for human resource development of municipal bodies will have to be undertaken by the respective state governments.
5.5.2. Financing Municipal Services

The main problem faced by municipalities in initiating programmes to fight poverty is the lack of financial resources. According to the 54th round of the National Sample Survey Organisation, urban infrastructure and services in India are grossly inadequate and of poor quality (cited in Mathur, 2003). Backlogs and inefficiencies in service delivery and management are attributable to insufficient investment in creating new facilities and maintaining existing systems. Rapid urbanisation in India is increasingly placing a strain on the financial capacity of governments to provide the urban services and infrastructure that will be needed to promote sustainable economic growth. In India, investing in urban infrastructure and services has historically been a public sector activity. Commercial lending to India’s urban infrastructure sector is a tiny proportion of the total lending. The engagement of the banking institutions too is negligible, although banks have begun to participate in urban infrastructure projects through co-financing. The flow of resources for urban infrastructure has been far too small relative to needs.

Municipal governments are rarely able to generate surpluses large enough to finance big infrastructure projects (Mathur, 2003). In fact, the financing of urban infrastructure in India through the central and state governments’ plan allocations, institutional finances, donor and multilateral agencies and internal resources of municipal and infrastructure agencies have proved to be insufficient. So, borrowing allows them to undertake infrastructure development projects. The India Infrastructure Report (GOI, 1996) has also recommended the use of municipal bonds for resource mobilisation, which could prove to be a series of long lasting reforms in the mode of urban governance. In many other countries, municipal bonds have been successfully used to finance infrastructure and stimulate the development of the local bond market. For the investor, municipal bonds have been a source of high returns, because they are often tax-exempt.

In principle, municipal bonds promote inter-generational equity by having successive generations pay for the infrastructure service. Credit Rating Information Services of India Ltd. (CRISIL), Investment Information and Credit Rating Agency (ICRA), and Credit Analysis and Research Ltd. (CARE), have developed their own criteria and systems for evaluating the credit worthiness of municipalities. Credit enhancement is usually a guarantee provided by a third party to pay the interest and principal on a bond if the issuer is unable to make the required payment. In municipal bonds issued in India, the same purpose is achieved by escrowing a part of the future cash flows, which are used for making the required payments.

The Capital market is a useful, if not indispensable, instrument for financing investment needs of municipal governments in growing economies. It allows a municipal government to undertake a capital investment programme. It promotes inter-generational equity by making the future generations, who are expected to benefit from capital works, pay for them. An important decision that municipal governments are usually faced with is where to borrow money from for financing infrastructure projects: banks, financing institutions and specialised municipal bank or the market.

The critical measure of efficiency and credit worthiness is a municipality’s ability and willingness to repay its debts. From this perspective, it is important for municipal authorities to borrow as long as they are in a position to repay their debts with a safety margin. For evaluating the financial performance of a municipality its budget should be examined thoroughly.

Based on a case study of the Ahmedabad Municipality, UNDP has made the following recommendations:

(i) Keep the budget under control - Municipal bonds require the existence of an accountable, transparent and financially sound local government. In cities that consistently experience budget deficits, the decision to issue municipal bonds must be preceded by a reorganisation of city finances. This is important for both
establishing credibility and ensuring ability to repay the debt.

(ii) Implement the project quickly - To generate the revenue needed to meet repayment deadlines. This will make it easier to borrow again in the future.

(iii) Invest in revenue-generating activities - The loans obtained from both local and international markets do not necessarily have to be spent on anti-poverty policies in order to have an impact on poverty alleviation. They may in fact be spent on activities that are more likely to raise the revenue needed to pay back the debt. This extra revenue liberates part of the regular budget that can in turn be used to finance other poverty-fighting measures. Regardless, outstanding debt and late interest payments have an adverse effect on poverty, so punctual reimbursement of all borrowed funds is an effective means of combating poverty.

(iv) Create an adequate legal and institutional framework. In order to issue municipal bonds, a municipality must have the legal ability to borrow directly from the credit market. The procedure becomes extremely complicated in countries where local governments cannot take such fiscal measures independently from the national government. Credit markets require adequate legal and regulatory frameworks that cover all stages of the process: debt issuance, settlement and repayment. A framework is necessary to establish clearly both creditors’ and debtors’ rights and responsibilities.

The National Urban Renewal Mission is an important initiative for promoting infrastructure development in selected cities through the integrated development of basic services to the urban poor, including the provision of security of tenure, housing, water and sanitation and convergence of schemes of healthcare, education and social security with emphasis on universal accessibility.

5.6. Corporate Governance

5.6.1. Securities Regulation

Since the beginning of the financial sector reforms in the early 1990s, boundaries between products and intermediaries have been blurring rapidly. The entry of several large government-owned as well as non-governmental financial sector participants in a variety of related domains such as securities trading, investment banking, commercial and retail banking, insurance and asset management, which are regulated by independent bodies has posed some unique supervisory challenges for the Indian financial system (Mor and Nitsure, 2002).

A transparent and efficient financial market can mobilise the level of resources required for the development of basic infrastructure, such as power, transportation, water, and communication. The securities market plays a crucial role in mobilising resources, allocating them to the efficient sectors and promoting growth on a sustained basis. While significant progress has been made since 1994 in creating the foundation for market stability and integrity, much more remains to be done. In areas such as regulatory oversight, development of long-term debt, disclosures and investor protection, the Indian markets remain below international standards. Further, India’s insurance market, recently opened to domestic and international competition, is underdeveloped by international standards.

The National Law School of India University (undated), in association with UNDP, organised a National Round Table on the regulation of the primary market.
market, secondary market, mergers and acquisitions, derivatives trading, securities fraud and investor protection. The National Round Table on ‘Securities Regulation’ at the National Law School of India University suggested that:

1. India should learn from European stock exchanges where the exchanges are permitted to create a common book for companies listed on more than three stock exchanges. The model of a single clearinghouse should be adopted, because this will lead to greater operational efficiency. It will also help overcome the financial constraints, which restrict the growth of external competition.

2. Mutual fund distributors should be regulated. The Securities and Exchange Board of India (SEBI) should build in-house expertise in order to facilitate a better understanding of the mutual fund industry. The number of circulars governing mutual funds should be kept to a minimum or alternatively be cross-referenced to the SEBI Regulations in order to minimise inadvertent non-compliance with the laws governing mutual funds.

3. India should learn lessons from international accounting standards, which begin with defining financial statements. The meanings of several terms need to be clarified.

4. Takeovers, mergers, acquisitions, etc. can play a very important role in any economy and need to be regulated by people who are able to cope with the dynamic nature of the markets.

5. There are allegations of favouritism against banks. The Reserve Bank of India must be in a position to rebut such allegations and companies engaged in unlawful conduct, should be delisted.

6. In many foreign countries, for the valuation of a company or the valuation of securities of a company, there are self-regulatory valuation bodies, which issue registration and licences to individual valuers or individual firms.

7. In SEBI there should be a department, which records the various frauds that are committed. This department should be independent, capable of handling every kind of situation and answerable only to the Parliament.

Today, across the globe, financial markets are being redefined, reinvented, and reconfigured on a persistent basis, because the securities market industry is providing a multiplicity of products. There is a need to include the innovative perspective in the regulation of securities market. Bajpai (undated) has also recommended a global regulatory framework, which will lead the Indian market to the global market place. According to him, regulators need to co-ordinate their operations, striking an inter-linked balance between the safety of the market under their regulatory jurisdiction and creative initiatives of the market participants. Therefore, the regulator needs laboratories to produce instruments for risk control, problem solving and compliance management. Since financial resources are scarce, the government can use disinvestment programmes to redeploy the resources for the benefit of the poor.

Loss making companies in the infrastructure sector should be either privatised or government holdings in them divested. The pension system makes equitable distribution of pension resources by making possible more investments in private infrastructure; such savings contribute to long-term growth and benefit the poor directly. So, in India a private pension fund should be created (Malik, 2004).

5.6.2. Corporate Governance

Corporate governance is generally defined as efforts to create a structure to make managers accountable to stakeholders and to generate incentive-compatibility for managers to take proper decisions in a transparent manner. In India the Confederation of Indian Industry (CII) framed a code of corporate governance in April 1998 (CII, 1998), which “deals with laws, procedures, practices and implicit rules that determine a company’s
ability to take managerial decisions *vis-à-vis* its claimants—in particular, its shareholders, creditors, customers, the state and employees.”

Since the Indian conditions required a statutory rather than a voluntary code of corporate governance, the SEBI constituted an 18-member committee, chaired by Kumar Mangalam Birla, with a view to protecting the investors’ interests. The Committee made 25 recommendations, out of which 19 were mandatory i.e., enforceable. The listed companies were obliged to comply with these on account of the contractual obligation arising out of the listing agreement with stock exchanges (SEBI, 1999).

The SEBI also instituted a committee under the chairmanship of N. R. Narayana Murthy, which submitted its report in February 2003, and recommended enhancements in corporate governance. However, these recommendations are yet to be accepted. The key mandatory recommendations focus on strengthening the responsibilities of audit committees; improving the quality of financial disclosures, including those related to party transactions and proceeds from initial public offerings; requiring corporate executive boards to assess and disclose business risks in the annual reports of companies; boards to adopt formal codes of conduct; the position of nominee directors; and stock holder approval and improved disclosures relating to compensation paid to non-executive directors. Non-mandatory recommendations include moving to a regime where corporate financial statements are not qualified; instituting a system of training of board members; and the evaluation of performance of board members (Kannan, undated).

The Department of Company Affairs, GOI, constituted a committee under the chairmanship of Naresh Chandra, to examine various corporate governance issues. This committee’s recommendations are now mandatory. The thrust of the recommendations is on providing a greater role for the independent directors on the company boards, disciplining the auditors, and making the Chief Executive Officer (CEO) and the Chief Financial Officer (CFO) accountable for financial reporting and statements. In other words, its recommendations are aimed at reducing the scope for conflict of interest between the company and the auditors. The Committee wants at least 50 percent positions on the board of a public limited company with a paid up capital of Rs 10 crore and above, and a turnover of Rs 50 crore and above to go to independent directors. Nominees of financial institutions cannot be counted as independent directors. The Naresh Chandra Committee made the following recommendations (Naik, 2003):

- Annual accounts of companies have to be certified by the CEOs and CFOs.
- Setting up of quality review boards for the Institute of Chartered Accountants of India (ICAI), the Institute of Company Secretaries of India and the Institute of Cost and Works Accountants of India, instead of a Public Oversight Board similar to the one in the US.
- Making it compulsory for auditors to forward copies of qualified accounts to SEBI, Registrar of Companies and stock exchanges.
- Ensuring that only independent directors man audit committees.
- Setting up a Serious Frauds Office to deal with bigger crimes.
- Amendment of the Companies Act to enable the Department of Company Affairs to order compliance audits and also provide it with powers of attachment of bank accounts to ensure that proceeds from illegal acts and frauds do not escape recovery.
- Beefing up staff and infrastructure facilities in the Department of Company Affairs, which is unable to cope with the workload.
- Prohibiting audit firms from providing several non-audit services to their clients.
The following changes, for improving the scenario of corporate governance, were suggested at the Round Table at the National Law School of India University (2002):

1. Insider trading should be prevented.

2. SEBI should be given powers to control trading as well as traders. In reality the corporates have a hostile attitude towards the regulator, ‘corporates don’t want a strong regulator. They are working overtime to attack SEBI and even resort to personal attacks on senior officials…………..’ (Mehta, 2002).

3. For controlling the corporate structure, it is important to punish those who create obstacles in the smooth functioning of this system.

4. Some small changes in the law and the statute, i.e., sending the notices, etc. by courier or by some other reliable and faster service could solve some problems and save time.

5. Minutes of the meetings of the Board of Directors should be maintained.

6. There is a need to reform multiple accounting standards through which a company can go for Sick Industrial Companies Act (SICA) protection.

7. There is a proposal to create a rehabilitation fund through a levy of a 0.005 percent cess on corporates, which is based on the value of the turnover of every company. This is not only good for the safety of corporates, but also for the health of the whole economy.

8. There is also a proposal for creating a comprehensive bankruptcy code including a bankruptcy code to deal with cross border insolvency, which should be given high priority in view of the globalisation and liberalisation of the economy.

A comparison of the financial practice and corporate governance structure with Sarbanes-Oxley, USA Act 2002, shows that there are only a few areas in which further work is needed (Table 31). The challenge is to design and sustain a system that imbibes the spirit of corporate governance and not merely the letter of the law (Goswami, 2002).

The attitude of the regulators and of the political executives; speed and efficiency of enforcement and quality of surveillance are critical issues (Ghosh, 2003).

The law or other regulations should clearly spell out the directors’ responsibilities - professionalism and competence. Training institutes can play a significant role in this regard. The Department of Company Affairs has set up ‘National Centres for Corporate Governance’, which will provide and promote professionalism in India. To apply high regulatory standards in corporate governance, the GOI should also submit their domestic laws and policies to independent third-party scrutiny (Carter, 2004).

The basic components of good governance in a regulatory institution – independence, accountability, transparency and integrity – which the investors expect of the regulatory agencies, cannot come about without the active support and encouragement of the political executive. There is a wide gap between what they should do and what they have done so far. The efficacy of the regulatory regime and the success of the reform process will depend on how the political executive moves to reduce this gap between expectation and reality. In India there is a need to create a corporate conscience and consciousness, the culture of transparency and openness in the organisation; the confidence that every person in the corporation will know and do on his own, what is right (Dadiseth, 1997).

Areas that need special attention, identified by Naik (2003) are:

- The quality of audit, which is at the root of effective corporate governance;
- The accountability of the CEOs and CFOs;
- The quality and effectiveness of the regulatory framework; and
Table 32: Comparison between Sarbanes-Oxley and Indian Corporate Governance Structure

<table>
<thead>
<tr>
<th>Sarbanes-Oxley</th>
<th>Indian situation</th>
<th>What might be needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certification of annual accounts by CEO, CFO</td>
<td>At least two directors must sign, of whom one must be the Managing Director</td>
<td>Need to change to have MD/CEO plus Finance Director/CFO to sign</td>
</tr>
<tr>
<td>Fully independent audit committees</td>
<td>Fully non-executive, majority independent audit committees</td>
<td>Need to consider (i) fully independent (ii) tighter definition of independence</td>
</tr>
<tr>
<td>Disgorgement of CEO/CFO compensation in event of restatement</td>
<td>Accounts and profits once published cannot be re-stated</td>
<td>Need to see if ESOP payments need to be disgorged if there is a restatement</td>
</tr>
<tr>
<td>Prohibition of insider trading</td>
<td>Prohibits insider trading</td>
<td>Nothing is needed</td>
</tr>
<tr>
<td>Prohibition of insider loans to directors</td>
<td>Strict cap on insider loans to directors; requires prior government approval</td>
<td>Caps are stringent enough to prevent insider abuse</td>
</tr>
<tr>
<td>Real time disclosure concerning changes in financials and operations</td>
<td>Listing agreement mandates companies to report quarterly results and material changes</td>
<td>Nothing is needed</td>
</tr>
<tr>
<td>Mandatory periodic review of company’s filings once every three years</td>
<td>No such provision</td>
<td>Need to consider how this can be done without creating administrative hassles</td>
</tr>
<tr>
<td>Auditors prohibited from nine types of non-audit services to audit clients</td>
<td>These services are already prohibited in India</td>
<td>Nothing is needed</td>
</tr>
<tr>
<td>Auditors to report to Audit Committee on critical accounting policies</td>
<td>Mandated by the listing agreement and the Companies Act amendments</td>
<td>Nothing is needed</td>
</tr>
<tr>
<td>Rotation of audit partners every five years</td>
<td>No such provision exists</td>
<td>A committee is considering such a change</td>
</tr>
<tr>
<td>Up to 20 years in prison for fraud and destruction of records</td>
<td>No such provision</td>
<td>Need to consider tougher penalties, including longer imprisonment</td>
</tr>
</tbody>
</table>

Source: Omkar Goswami, Presentation on Doing Things Right: Corporate Governance in India, Confederation of Indian Industry, Fourth Meeting of the Asian Roundtable 11-13 November, 2002

- Quality and effectiveness of the legal and administrative framework.

5.6.3. Corporate Insolvency

When a corporation fails or becomes defunct, the lives of millions of people get adversely affected, either directly or indirectly. Hence, the primary task of a legal system must be to avert the calamity of insolvency. Failing this, the next best step would be to bury the corporation quickly and by cheap means, so that the legal heirs of the company may inherit its estate without further depletion of their wealth in a prolonged liquidation process. In the event of insolvency of a company, the law must play a balancing act between assuring equity and parity of treatment to all the stakeholders and safeguarding the investors’ interests. The role of the state and its position in the scheme of
distribution must be revisited (National Law School of India University, 2004).

Insolvency law is important for avoiding the fraudulent shifting of consequences from those who are responsible for the bankruptcy of a firm. It is the main tool for imposing financial discipline and a hard budget constraint on enterprises. In India, the process of winding up of companies is regulated by the Companies Act and is under the supervision of the court. Although Article 19 (1) (g) of the Constitution of India gives freedom to practice any profession or to carry on any occupation, trade or business, to the citizens of India, there are restrictions on closure of any industrial undertaking. Such restriction is justified on the ground that it is in public interest to prevent unemployment (Umarji, 2004: 3-4).

**Changes in Creditor Rights**

With the enactment of the Recovery of Debts due to Banks and Financial Institutions Act (DRT Act), 1993, and the Securities and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (SARFAESI Act), the debtors are now under pressure to make prompt payments of the loans on due dates and creditor rights have been strengthened (Umarji, 2004). The government has increased the number of Debt Recovery Tribunals all over the country. About 22 such tribunals are functioning and the entire process of recovery of bank loans through such tribunals has now stabilised. The enactment of the SARFAESI Act has changed the entire environment in regard to the recovery of non-performing loans of the banks and financial institutions. With the powers of taking possession of the secured assets given to the secured creditors, the fear of getting dispossessed has resulted in fewer defaults. However, where there are defaults, more and more defaulters are approaching the banks for the purpose of out-of-court settlements of the defaulted loans.

**Companies (Amendment) Act, 2002 (1 of 2003):**

Both houses of the Parliament of India passed the Sick Industrial Companies (Special Provisions) Repeal Bill, 2003, in the winter session, 2003. The Bill seeks to facilitate/expedite/revive/rehabilitate sick companies and protect workers’ interest and where necessary, wind up companies. The repeal of the Act will result in the scrapping of the Board for Industrial and Financial Reconstruction and the Appellate Authority for Industrial and Financial Reconstruction (AAIFR) and in the creation of the National Company Law Tribunal and National Company Law Appellate Tribunal as envisaged in the Companies (Second Amendment) Act, 2002 (1 of 2003), based on the recommendations of the Justice Eradi Committee, had to come into force on February 6, 2003, but one of its provisions, i.e., keeping more professionals and less bureaucrats in the National Council of Law Tribunal (NCLT), was found objectionable by the Madras High Court, which welcomed the concept of tribunals. Therefore, the status quo relating to the rehabilitation of sick industrial companies by the BIFR continues and the amended provisions of the Companies Act, 1956, have not yet become effective and operational. As a result of the Madras High Court judgement there is a vacuum that needs to be addressed urgently.

The following measures regarding Second Amendment of the Companies Act have been suggested (Mallick, 2004):

- Any judicial reform in India must first increase the number of judges from the current level of 11 per million population to almost 100 per million, as found in mature democracies.
- Politicians must provide necessary infrastructure to allow the judiciary to reform itself.
- According to the Supreme Court, the creation of a single umbrella organisation will remove many ills of the present system. Such a supervisory
authority must try to ensure that the independence of the members of the tribunals is maintained. To that extent, the procedure for the selection of the members of the tribunals, the manner in which funds are allocated for the functioning of the tribunals and all other consequential details will have to be clearly spelt out.

- The selection committee for the appointment of the Chairperson and members of the Appellate Tribunal and President and members of the tribunal should include economists, chartered accountants and company secretaries, instead of bureaucrats from various ministries of the central government.

- The central government should make necessary legislative changes in the Second Amendment with respect to the handling of cross border insolvency problems arising out of the fast changing scenario of increasing cross border investment, trade and commerce.

- Immediate steps should be taken to deal with bankruptcy proceedings involving banks and financial institutions in consultation with the RBI, because this aspect of bankruptcy proceedings has been the responsibility of RBI.

On account of the phenomenal rise in retail lending in India, it will be necessary in the near future to look again at the personal insolvency laws to ensure that any insolvency proceedings against individuals are also expeditiously decided (Umarji, 2004).

The commercial laws in India recognise the rights of the secured creditors to remain outside the winding up/insolvency proceedings against a borrower and enforce the securities taken for the loan outside such insolvency proceedings. There is a need to streamline statutory provisions in regard to the rehabilitation of sick industrial companies and work out schemes for reviving these companies.

There is also a need to give due importance to the claims of unsecured creditors and other claimants. Reforms are urgently required for expediting decisions in insolvency proceedings to prevent deterioration of the assets to be sold, for ensuring better realisation of the assets and a possibility of selling the business enterprise as a going concern, which can take care of the claims of unsecured creditors to a certain extent. The following are the reform measures suggested by Umarji (2004):

- Repeal provisions relating to the rehabilitation of sick industrial companies.
- Any scheme for rehabilitation should be made in accordance with the provisions contained in sections 391 to 396 of the Companies Act.
- The law may be amended for facilitating work-outs if the shareholders and other stakeholders with a three-fourth majority approve the scheme.
- A suitable provision can be made for protecting the interest of minority stakeholders.

The participants of the National Round Table, organised by National Law School of India University (2004), suggested the following reforms:

1. The objective of law should be to avoid multiplicity and vagueness and should be guided by a single ex-post efficiency principle like maximisation of asset value for the creditors in bankrupt states.

2. The barriers to restructuring have to be removed. The Goswami Committee has also recommended the removal of the bias of the Sick Industrial Companies Act (SICA), and the Board of Industrial and Financial Reconstruction (BIFR), towards restructuring. Besides, Indrajit Mallick (2004), has suggested the following measures to protect the interests of all stakeholders during restructuring:

- Competing bids have to be advertised in leading media and through gazettes. The potential bidders must have the right to inspect company records.
- A time frame should be set up for the submission of bids (for cash and securities).
A mixed bid will be valued at present cash value by appropriate discounting by the operating agency of the cash flow stream arising from the non-cash part of the bid.

3. In most of the insolvency cases the High Court takes considerable time, which is a major set back for the corporate insolvency proceedings. Factors that contribute to delay should be identified, understood and mitigated through appropriate actions, strategies and infrastructure design.

4. There should be a mechanism to ensure that directors and other responsible officers are compelled to present all required information to the liquidator. Unless this is done, the liquidator will not be able to discharge his duties.

5. The office of the liquidator should be more professional.

6. There is a need for harmonising various laws relating to winding up, which currently make it extremely difficult to complete the process.

7. There should be a time frame for winding up the process, which should normally be within six months. The maximum time frame should not be more than around two years.

8. The agreement between institutions and the company should be worded clearly. Once the proceedings start almost all the assets might go to satisfy the secured creditors and the fate of the unsecured creditors would become uncertain.

9. The concept of a whistle blower should be introduced in cases of impending insolvency. When the auditors are able to sense that the company is likely to head towards balance sheet insolvency, there must be an onus on them to disclose this fact. Similarly, the directors should also take upon themselves the responsibility to state in their report whether the companies are heading in the right direction, or whether there is some risk involved.

10. NCLT should be constituted, as it is a better alternative than the courts, because the courts have their own problems and once professionals handle the matters, decisions would be quicker.

11. One of the informal workouts for industrial undertakings is the Corporate Debt Restructuring Scheme (CDR). This scheme has a three-tier system and was introduced by RBI. Its aim is to preserve viable units – it is in the interest of everybody involved, the equity holders, the owners, the government, the economy at large, and the labourers. With the proposed Bill before the Parliament to repeal SICA and BIFR in a phased manner, CDR can be made a statutory body and given a status similar to that of SEBI.

Impact of Corporate Insolvency on Unemployment and Poverty

With the initiation of economic reforms, Indian industry has been exposed to global competition. In order to remain buoyant most of the companies want to reduce costs by way of upgrading technology and reducing workforce, but under the Industrial Disputes Act, 1947, downsizing cannot be resorted to without the government’s permission. The Act is applicable to establishments employing one hundred workers or more. As a result many such establishments have either introduced voluntary retirement schemes (VRS) for downsizing or have closed down and vanished from the scene without paying compensation, dues, etc. to workers. The Second Labour Commission has reported that a large number of workers have lost their jobs as a result of VRS, retrenchment and closures both in the organised and unorganised sectors (Dhar, 2005). The figures recorded by National Sample Survey Organisation on the current daily status of employment show that unemployment in India has increased from 5.2 percent in 1987-88 to 7.1 percent in 1999-2000. During the same period rural unemployment has increased from 4.6 percent to 7.2 percent (cited in Lobo, 2003).
Most of the developed countries where the majority of jobs are on a contract basis have an elaborate and effective system of social security. However, in India there are no such provisions. The Labour Ministry has made a small beginning in this regard recently by launching the Rajiv Gandhi Shramik Kalyan Yojana for providing unemployment allowance to workers for a maximum period of six months during involuntary unemployment. The scheme covers about 80 lakh workers who are members of the Employees’ State Insurance Scheme. The Second Labour Commission has recommended that under Chapter V B of the ID Act, the eligibility ceiling should be raised from establishments employing 100 employees to 300 employees. At the same time the ministry has strongly favoured a substantial increase in the retrenchment benefits of workers, raising the compensation from 15 days of wages for each year of service to 60 days of wages.

The absence of adequate and broad based safety nets for the country’s workforce is the major constraint in making the labour laws flexible. In the organised sector, the Employees Provident Fund Scheme and Employees State Insurance Scheme have been operating since the 1950s, but both of them cater to only about eight to nine percent of the country’s total work force. These schemes do not have in-built mechanisms to neutralise/compensate for the adverse fall out of globalisation like closures, retrenchments, etc. Thus, the GOI should take steps to cover the entire workforce by the social security schemes. In addition to this, the focus of reforms in labour policy should be on the upgradation of workers’ skills (Dhar, 2005).

Due importance should be given to issues like organisation of NCLT, simplification of laws related to corporate insolvency, professionalism of the liquidator’s office and setting up a time frame for the winding up of any company. Steps should be taken to cover the entire workforce with social security schemes to save labourers from unemployment due to the liquidation of any company.
Reforms have been part of development efforts since India gained Independence in 1947. However, these were internally generated to meet the changing needs of the country. The economic reforms introduced in 1991, were designed to meet the balance of payment crisis and were reinforced by trends towards globalisation and liberalisation. This paper tries to synthesise the findings of research conducted at seven leading research institutions in the context of economic reforms in health, agriculture, infrastructure - power, telecom, energy, water, micro-credit, disaster management, public distribution systems, municipal services and corporate governance. It also tries to highlight the impact of these reforms on the poor and tries to identify some of the pro poor dimensions of the reforms.

Urban and rural poverty build on each other. Rural poverty is found to aggravate urban poverty, in that large-scale migration of the rural poor to urban areas results in shifting of poverty to urban areas, in the absence of adequate skills and work opportunities. In both rural and urban areas the broader enabling environment does not adequately support the needs of the poor. Whereas rural poverty is associated with isolation, lack of roads, poor infrastructure and limited institutional presence, urban poverty is associated with poor quality housing, unsanitary slum settlements and ill health. However, lack of safe drinking water, unsanitary conditions and inadequate medical facilities plague both urban as well as rural areas.

In the social sector, health care services remain a cause for concern with unacceptably high mortality and morbidity rates. The social sector in general and health sector in particular, has been facing severe cuts in public expenditure as a result of economic reforms. We have not been able to meet health related targets and goals as spelled out by the MDGs and the Tenth Plan. A very large proportion of our population continues to die from preventable infections like diarrhoea, pneumonia, TB, malaria and HIV/AIDS. At the same time financial allocations to public provisioning of these services have been declining. The CMDR survey in Maharashtra, Karnataka and Orissa indicates that economic reforms in India have led to structural shifts in the fiscal framework of all categories of states. The studies also indicate the growing disparities in access to health facilities between rural and urban areas, better and poorly performing states and better off and more vulnerable sections of society.

The Bhore Committee (1946) pointed out that no individual should fail to secure adequate medical care because of the inability to pay for it. It stressed the importance of providing medical relief and preventive health cover to the vast rural population and highlighted the need to locate health services as close to the people as possible so that they could derive maximum benefit from it. To meet the urgent need of providing health care services to the rural poor, steps should be taken to enforce compulsory rural postings for all medical students in the form of a resident posting, after which the degrees / certificates would be awarded to them. The monitoring of the PHC staff should be entrusted to the gram panchayat since it is the representative body of the entire village community.
In China, Sri Lanka and Russia, while total government expenditure declined in the post reforms period, expenditure on public health did not decline. The lessons for India are clear in that public expenditure for health needs to be increased substantially in order to achieve improvement in health indicators. The high incidence of water borne diseases and the prevalence of communicable diseases and malnutrition, call for urgent public provisioning of post-natal care, nutritional supplements programmes, safe drinking water and sanitation on priority.

Possibilities of a Health Insurance Plan for the poor should be explored. The CMDR experiment in Karnataka, based upon a partially subsidised health insurance scheme covering all the households in the village and managed by a health committee with local representation, that provides outpatient care at the village clinic and is linked to a private or district hospital for referral or inpatient care, needs close examination. Another option could be based on the Madhya Pradesh experiment of the Rogi Kalyan Samiti. However, privatisation of health care services is not a solution as the experience of other countries indicates that whereas privatisation of health services improve the quality of health care, it excludes the poor from access to health care services.

Problems facing the drug industry have a direct impact on the cost of health care services, especially in the context of the TRIPS agreement. There is an urgent need to focus on R&D activity and new project development based on the Indian systems of medicine. It is equally important to enforce price controls in order to protect the poor from price increases as a result of the introduction of product patents.

Reforms in agriculture have a direct impact on the poor as this sector employs 60 percent of our work force. It is important to bear in mind that 78 percent of the country’s farmers are small and marginal farmers. This makes them the most vulnerable group of stakeholders in the globalisation process. Agriculture led economic growth has been mainly responsible for reducing rural poverty. However, recent trends in agricultural growth in the era of globalisation and liberalisation raise issues of serious concerns.

The poor farmer is caught in a struggle on two fronts – land reforms within the country and reforms imposed externally through liberalisation and globalisation. Whereas the post Independence period in India witnessed the massive presence of the government sector, the agricultural sector in the post-reforms period is dominated by global players.

There is inadequate data on the impact of land reforms and this makes it difficult to draw firm conclusions. However, micro level studies indicate that all is not well with land reforms even in a state like West Bengal, considered a model for others to follow. Therefore, there is an urgent need for all-India data on land reforms. At the same time there are reports that draw attention to corporates entering agro-business in a big way. The pertinent question is where are these corporates getting land for their ventures? Has this land been acquired from small farmers? Will this not lead to another variety of Zamindari system?

Agricultural practices in India have evolved through the traditional methods developed by the poor farmers, who have been working in a world unconcerned with the legal implications flowing out of WTO agreements. The danger of corporate control over seeds is indeed grave. The UPOV standards do not encompass the farmers’ views on the usefulness and sustainability of our plant variety. Thus, the rights of farmers, indigenous people and local communities, over plant varieties developed by them, have to be protected.

The government will have to play a more pro-active role. Small holdings will have to be made more viable. One way to do this would be to promote organically grown crops, which can capture niche markets in India and abroad. Other mechanisms will also have to be worked out to make small farms attractive. The government is also responsible for the failure of cooperative farming ventures. The effectiveness of
cooperative farming as a means to organise small farmers should be re-examined.

Various other organisational patterns are receiving the attention of policy makers. Contract farming and subcontracting are being promoted. At the same time the Contract Law of 1872, which does not address issues relating to subcontracting, continues to be in use. Contracts have to be so designed that they are not unfair to the small farmers. The Sirohi case discussed in Section 4 shows the vulnerability of small tomato growers whose produce was left to rot, as it did not meet the specifications of a large company. Government policy should ensure that such incidents are not repeated, through strict regulation of the Contract Law.

A large number of laws are in operation and need to be consolidated and procedures clarified and simplified. Enactments of rules for implementing these laws need to be given special attention. At present there is a lot of confusion as far as various international agreements are concerned. Panicker stresses the need to build a team of experts to project our case in the international arena. At the same time, we need to learn from the experience of countries such as Brazil and South Africa who have had to violate obligations under patents, for meeting their domestic demand for essential medicines at cheaper rates.

It is also important to introduce transparency in decision-making. Though it is an accepted fact that international agreements are influenced as much by politics as by economics, the people of this country nonetheless have a right to complete information. India, with the support of other developing countries, is in a position to play a leading role, in formulating policies that protect poor farmers.

Agricultural research and extension demands high priority. The focus of research should be on crops and cropping systems in dry areas, hills, tribal and other marginal areas. Again, the emphasis should be on both land saving and water saving products as well as animal husbandry and dairy integrated with crop production, which would benefit the poor farmers. Steps should be taken to ensure that innovations reach the poor farmers. Providing technical assistance to small and marginal farmers is one such area that the government needs to focus on. One way to ensure that technical assistance reaches the poor would be through multi-layered monitoring, which includes monitoring not only by government departments, but also independent organisations as well as the media. The findings from such surveys should be put on the web. This will make the community aware of problems in the field and will also help in making lower level functionaries accountable.

Several studies have shown that there is a direct correlation between infrastructure development and poverty reduction. Roads play a key role in providing connectivity, thus impacting on production and productivity in agriculture. The GOI’s resolve to provide rural connectivity as part of the poverty reduction strategy has manifested itself in the Pradhan Mantri Gram Sadak Yojana (PMGSY), which is administered by the Ministry of Rural Development. About 1,70,000 unconnected habitations with a population above 500, are to be covered. Out of the 8,25,647 habitations requiring connection under the PMGSY, 1,62,576 remain to be connected. Steps should be taken to put this programme on a fast track, as this would help in linking industrial areas, commercial centres and agricultural mandis. The Sirohi farmers had no alternative, but to let the tomatoes rot in the absence of connectivity to urban areas. There are linkages with the National Employment Guarantee Act, 2005, as rural road construction would provide opportunities for employment.

Reforms in the telecom sector also enhance connectivity, especially in the rural areas. The ‘Unified Access Services’ permits operators to operate all services in rural/remote areas (less than 1% tele-density areas) without any entry fee. However, universal coverage i.e., of 6,07,491 villages targeted in the NTP (1999), has still not been achieved. Policy must thus enable an increase in rural tele-density. In the villages of Bangladesh, the cellular phone has been found to directly benefit the rural poor in terms of
enhancing labour mobility and in facilitating the marketing of agricultural products.

The India Infrastructure Report (GOI, 1996) recommended that public policy should aim at increasing the range of affordable options for services of the type and quality required by the poor. Water is one such resource, which is not only scarce, but also of poor quality, with serious health related ramifications. According to the Census of India, 2001, safe drinking water has become accessible to 78 percent of the population, with urban and rural areas at 90 and 73 percent respectively. However, the National Water Policy 1987, had earlier announced that by 1991, adequate drinking water facilities should be provided to the entire population in both urban and rural areas. The National Water Policy, 2002, restates the same promise. It has been found that under-pricing of water for those categories of consumers, who have the ability to pay, has resulted in poor revenue realisation of the utilities and their poor financial health. This indirectly affects the poor as it impedes the expansion of water services universally.

Innovative schemes such as the “Swajal” Project in Uttar Pradesh and Uttaranchal, launched with the help of the World Bank, may be replicated in other places. The project, an experiment in community participation, involves community procurement and partial capital cost recovery in water supply systems. A subsidy of up to Rs 2,250/- is provided for the construction of individual sanitation facilities such as household sanitary latrines. Community participation is the key to all such innovative schemes. Government policy should focus not only on improving access to and the quality of water, but also to the needs of SCs and STs and other weaker sections of society, in order to ensure social equity.

Other steps include:

Periodic reassessment of ground water potential; community participation should be in-built in water management programmes; low cost sanitation programmes/schemes should be given priority; and to help poor farmers, differential water rates should be adopted keeping in view the size of the holding.

Rural electrification is another important component of infrastructure development, having far reaching implications covering food security, better health, literacy etc. The government has been focusing on village electrification, which has resulted in the electrification of around 86 percent of the country’s villages. However, the use of electricity in villages for productive and subsistence needs is limited. About 70 percent of the rural households are yet to get electricity connections and this benefit has yet to reach the rural poor. Small steps have, however, been taken in this direction. This includes interest subsidy that is to be provided for the loans to be taken by the state governments for the electrification of un-electrified villages including dalit bastis. A lot more needs to be done using both conventional as well as non-conventional sources of energy. It is proposed that under the Kutir Jyoti Programme a single point electric connection to be provided to rural household below the poverty line is to be revamped so that 100 percent coverage of such households will be achieved by 2012.

Another important area, where the government can help the rural poor is through addressing their fuel requirements. Amongst the alternatives is social forestry, which relies on quick growing species. The provision of smokeless chullas is yet another alternative that could be considered.

How can we prevent entry into and enable the poor to escape poverty? Mehta and Das (2005), among others, highlight the lack of access to credit, especially in times of emergency and how this can lead to entry into poverty and a debt trap, as also how use of credit for development of micro-enterprises can enable escape from it. However, despite a wide network of bank branches in rural areas and despite the implementation of credit linked poverty alleviation programmes, a large number of poor remain outside the fold of the formal banking system. Though caution needs to be exercised to ensure that this does not cause difficulties in repayment if credit is taken for developing new skills and activities which do not have adequate market demand, banks do need to be rated
on the extent to which they provide coverage to the poor and in making financial services available to them. However, if the purpose is to help the poor escape from poverty, access to credit alone is not good enough and a combination of enabling factors to help move to the next phase of successful micro business is necessary. There is a need to mobilise the poor into SHGs, for building social capital and encourage financial institutions to develop confidence in establishing a lending relationship. The need for a law arises for the registration of the operation, protecting members of the groups from being cheated and resolution of conflicts in the process of sanctioning loans, fixing repayment schedules, rates of interest etc.

As India is prone to disasters such as floods, droughts, cyclones, earthquakes and landslides, the poor are the most vulnerable and worst hit by such disasters. This calls for special attention to be paid to the needs of the vulnerable groups such as the poor, children, women and the disabled. The answer to this will be legislation protecting the rights of the people and making it obligatory for the state to take responsibility for relief and rehabilitation.

Any discussion on poverty would be incomplete, without raising issues concerning the provision of social security schemes for the poor. As a result of globalisation, Indian industry finds itself in a fiercely competitive environment. The industrial scene is marked by retrenchments and closures. Whereas the developed countries have in place, an elaborate and effective social security system, there are no such provisions in India. Figures from the National Sample Survey Organisation on the current daily status of employment, indicate that unemployment has increased from 5.2 percent in 1987-88 to 7.1 percent in 1999-2000. The Rajiv Gandhi Shramik Kalyan Yojana provides unemployment allowance to workers for a maximum period of six months during involuntary unemployment. However, this scheme covers only about 80 lakh workers who are members of the Employers' State Insurance Scheme. There is an urgent need to cover the entire workforce under social security schemes. This is especially true keeping in view the post reform demands for flexible labour laws in order to make Indian industries globally competitive. The policy should address issues at two levels – a) providing safety nets through social security schemes; and b) upgradation of skills of workers in order to meet the requirements of the globally competitive industries.

The Public Distribution System (PDS) could be made an important component of the social security system. Under the Targeted Public Distribution System (TPDS) introduced by the GOI in 1997, each BPL family was entitled to 10 kilograms of food grains, which in April 2001 was increased to 25 kilograms per month. However, targeting has been found to exclude genuinely needy persons. In view of this, Madhura Swaminathan (2003) recommends a return to the system of universal PDS, especially considering the huge food stocks available with the GOI. An important suggestion made by her relates to the calculation of the Aggregate Measure of Support (AMS). She emphasises the need for India to take its concerns about food security to the WTO, to ensure that provisions for food security are exempted from the calculation of AMS.

Perhaps the recently passed “National Rural Employment Guarantee Act 2005”, which covers all rural families, in combination with the “Right to Information Act 2005”, will be able to provide a safety net for the poor. Works under the National Rural Employment Guarantee Act, 2005, will have to be prioritised, with special emphasis on projects related to infrastructure development and minor irrigation projects for poor farmers. The Right to Information Act lays down that a BPL family shall not be charged any fee for getting information from the government. The civil society groups and NGOs will have to play an active role in making the system accountable. However, they will have to work in tandem and a lot will depend upon how the two Acts are operationalised.
Poverty


Gaiha, R.1989. ‘Are the chronically poor also the poorest in rural India?’, Development and Change, 20(2).


Health


Berman, Peter 1996a. ‘National Health Accounts in Developing Countries: Appropriate Methods and Recent Applications’, Harvard School of Public Health.


Declaration of Alma-Ata, International Conference on Primary Health Care, Alma-Ata, USSR, 6-12 September, 1978. (available online: www.who.int/hpr/NPH/docs/declaration_almata.pdf)


Government of India, 1946. Report of the Health Survey and Development Committee (Bhore Committee), Delhi, Government of India Press.

Government of India, Tenth Five Year Plan 2002-07, Planning Commission, New Delhi. (available online: www.planningcommission.nic.in)

Government of India, Tenth Plan Mid-Term Appraisal. (available online: www.planningcommission.nic.in)


National Human Development Report 2001. (available online: planningcommission.nic.in/ reports/genrep/nhdrep/foreword.pdf)

Nayantara, S. N. 2004. ‘Economic Reforms and Health Sector in India with Special Reference to Orissa, Karnataka and Maharashtra – Reflections from NSS 28th, 42nd and 52nd Rounds’, Centre for Multi-Disciplinary Development Research.

Economic Reforms in India: Pro-poor Dimensions


Panchamukhi, P. R. and Nayantara, S. N. 2004. 'People's Participation in Health: Pre-payment Mechanism through Health Care Cooperative', Centre for Multi-Disciplinary Development Research.


Agriculture


Chatterji, Souvik 2004. 'A Proactive Agriculture – Focussed Consumer Forum for Farmers, Agricultural Workers', National University of Juridical Sciences, Kolkata.

Chakraborthy, Gangotri 2004. 'Land Reforms and Corporatisation of Agriculture', National University of Juridical Sciences, Kolkata.

Das, Arun Kumar 2005. 'Back to basics: Corporates step up focus on farm biz', Times of India, September 11.


Kumar, Harsh 2004. 'Land and Water Imperatives to Agricultural Growth', National University of Juridical Sciences, Kolkata.

Mago, Chandrika 2005. 'ICAR steps in to save local fruits from extinction', Times of India, New Delhi.


Mukherjee, Abhiroop 2004. 'Treaty-Making Powers of the Union (With respect to the State Subject of Agriculture)', National University of Juridical Sciences, Kolkata.


Mazumder, Anirban 2004. 'Biological Resources, Traditional Knowledge and Expressions of Folklore', National University of Juridical Sciences, Kolkata.


Raychaudhuri, Ajitava 2004. ‘Subcontracting and Economic Reforms in India with Special Reference to Agro-Based Industries in India’, National University of Juridical Sciences, Kolkata.


Microcredit:


Bastelaer, Thierry Van 2000. ‘Imperfect Information, Social Capital and the Poor’s Access To Credit’, February. (available online: www.nabard.org/roles/mcid/erhardkropp.pdf)

Burra, Neera 2005. ‘Women and Microcredit: Some Challenges’, (available online: www.undp.org.in/events/microfinance/Womenpercent20andpercent20Microcreditpercent20percent20percent20percent20some percent20challenges.doc)


Dadhich, C.L. undated. ‘Lessons from the Micro Credit Experiences of India’. (available online: www.apraca.th.com/Sign_Guestbook/Infomarket/Lessons_from_the_Micro_Credit_/body_lessons_from_the_micro_credit_.html)


Friends of Womens World Banking 2002. (available online: www.fwwbindia.org/annualreport.pdf)

Gupta, Gautam 2004. ‘Legal reforms for sustainability of micro Credit in Rural West Bengal’, National University of Juridical Sciences, Kolkata.

Kelkar, Govind; Nathan, Dev and Jahan, Rownok 2004. ‘Redefining Women’s Samman: Micro credit and Gender Relations in Rural Bangladesh’, Economic and Political Weekly, Special Articles, August 7.

Kevane, Michael and Wydick, Bruce 1995. ‘Microenterprise Lending to Female Entrepreneurs: Sacrificing Economic Growth for Poverty Alleviation?’; (available online: www.usfca.edu/fac-staff/wydick/femaleentrepwd.doc)


Micro credit for Indian Agriculture: A New road Ahead. (available online: www.jbims.edu/downloads/Microcredit.pdf)


‘Role of Micro credit in the Eradication of Poverty’, Report of the Secretary-General. (available online: www.grameen-info.org/microcredit/unreport.html)

Roth, James 1997. ‘The Limits of Micro credit as a Rural Development Intervention’, Prepared for the Institute for Development Policy and Management, Manchester University. (available online: www.gdrc.org/icm/jimmy-roth.pdf)


Singh, Kavaljit; Dawkins-Scully, Nan and Wysham, Daphne Undated. ‘Micro Credit: Band-aid or Wound?’. (available online: www.ieo.org/kav001.html)

Important internet sources:
www.gdrc.org
www.sidbi.com
www.fwwbindia.org
www.grameen-info.org
www.indiastat.com
www.microfinancegateway.org

Disaster


Alex, Jacob P. 2003. ‘Disaster Management: Towards a legal framework’, National University of Juridical Sciences, Kolkata.

Infrastructure


Roads


Fund Requirement, Funds, Road Network, National Highway Authority of India. (available online: www.nhai.org/fundrequirement.htm)


Gupta, D. P. Undated. ‘Pro-poor and Pro-growth provision of Road Infrastructure in India: Issues and Strategies’. (available online: webdomino1.oecd.org/COMNET/DCD/PovNet.nsf/viewHtml/index/$FILE_I_Berlin_CPC_India_percent20transport.pdf)

‘Infrastructure in India, Requirements and favourable climate for foreign investment’, Asia Trade Hub, Vyapaarasia. (available online: www.asiatradehub.com/india/intro.asp)


Policy Initiatives for attracting Private Investment, Government Policy Initiatives, Road Network, National Highway Authority of India. (available online: www.nhai.org/govtpolicy.htm)

Roads, India in Business. (available online: www.indiainbusiness.nic.in/infra-roads.htm)

Roads, Infrastructure, Economic Survey, 2004-05. (available online: indiabudget.nic.in)


Roadways, Indian Core Sector. (available online: www.indiacore.com/roadways.html)

Important internet sources:
www.worldbank.org
www.morth.nic.in

Telecom

Background Paper submitted to the Committee on India: Vision 2020. (available online: planningcommission.nic.in/reports/genrep/bkpap2020/1_bg2020.pdf)

BambooWeb Dictionary, Wi-Fi. (available online: www.bambooweb.com/articles/w/i/Wi-Fi.html)


Grameen Telecom. (available online: www.grameen-info.org/grameen/gtelecom)

National Alliance for Mission 2007 convenes its first Steering Committee meeting. (available online: www.digitalopportunity.org/article/view/102552/1/1089)


Swaminathan, M. S. 2004. ‘Connecting rural India - Village Resource Centres [VRC]’, Speech on Programme of launching the Indian Space Research Organization, MS Swaminathan Research Foundation, October. (available online: mssrf.org/events_conferences/content_events/vrc_prof_speech.htm)

‘Tech Talk: Transforming Rural India 2: Solution Building Blocks (Part 2)’. (available online: www.emergic.org/archives/2003/07/31)


**Electrical Power and Energy**


**Power**


The Electricity Act 2003. (available online: powermin.nic.in/JSP_SERVLETS/internal.jsp+)

**Important internet sources:**

www.planningcommission.nic.in
www.indiainbusiness.nic.in
www.indiainfoline.com

**Water**

Background of SWAJAL Project (available online: www.swajal.org/index_background.htm)

Census of India 1991. (available online: www.censusindia.net/cendat/datable28.html)

Census of India 2001. (available online: www.censusindia.net/2001housing/S00-005.html)


Mid-Term Appraisal of Tenth Five Year Plan 2002-07, Planning Commission, New Delhi. (available online: www.planningcommission.nic.in/midterm/english-pdf/chapter-06.pdf).

National Water Policy – India, South Asian Consortium for Interdisciplinary Water Resources Studies. (available online: www.saciwaters.org/nwp_india.htm#need).


Corporate Governance


Dadiseth, K. B. 1997. ‘Corporate Governance in India’, 32nd A. D. Shroff Memorial Lecture delivered under the auspices of the Forum of Free Enterprise on October 24, Mumbai.


Kannan, Undated. ‘Corporate Governance: Relevant recommendations of Naresh Chandra Committee on Corporate Governance included in the Report of Narayanamurthi Committee’. (available online: www.geocities.com/kstability/inbank/corpgovern/dca.html).


National Law School of India University 2002. National Round Table on Corporate Governance, Organized in collaboration with UNDP and Department of Economic Affairs, Government of India, Bangalore, July 13-14.

OECD 2004. OECD Principles of Corporate Governance, France. (available online: www.oecd.org/document/49/0,2340,en_2649_34795_31530865_1_1_1_1,00.html).

SEBI 1999. Report of the Kumar Mangalam Birla Committee on Corporate Governance, May 7. (available online: www.sebi.gov.in/Index.jsp?contentDisp=Section&sec_id=5).

Corporate Insolvency


National Law School of India University 2004. National Round Table on Corporate Insolvency and Restructuring, Organized in collaboration with UNDP, April 25.


Infrastructure Law and Policy

National Law School of India University Bangalore 2003. National Round Table on Infrastructure Law and Policy, Organized in collaboration with UNDP, March 22.


Securities


National Law School of India University Bangalore (undated). National Round Table on Infrastructure Law and Policy, Organized in collaboration with UNDP.

Municipal Accounting


Financing Municipal Services


PDS


About the Series Editors

Aasha Kapur Mehta is Professor of Economics at the Indian Institute of Public Administration, New Delhi and leads the Chronic Poverty Research Centre's work in India. She has a Masters from Delhi School of Economics, an M.Phil from Jawaharlal Nehru University and a PhD from Iowa State University, USA. She has been teaching since 1975, initially at a college of Delhi University and then at IIPA since 1986. She is a Fulbright scholar and a McNamara fellow. Her area of research is now entirely focused on poverty reduction and equity related issues.

Pradeep Sharma is an Assistant Resident Representative and heads the Public Policy and Local Governance Unit in the India Country Office of United Nations Development Programme (UNDP). A post-graduate from University of East Anglia (UK) and Doctorate from Jawaharlal Nehru University, he has held several advisory positions in the Government of India and has taught economic policy at LBS National Academy of Administration, Mussoorie. He has several publications to his credit.

Sujata Singh is an Associate Professor at the Indian Institute of Public Administration. She completed her doctoral studies in Public Administration and Public Policy at Auburn University, USA. Her primary research interests are in the area of Comparative and Development Administration, Public Policy Analysis, Organizational Theory and Evaluation of Rural Development Programmes.

R.K. Tiwari is Senior Consultant, Centre for Public Policy and Governance, Institute of Applied Manpower Research, Delhi. He was formerly Professor of Public Administration at the Indian Institute of Public Administration (IIPA), New Delhi. He received his education at Gwalior, Allahabad and Delhi. He has undertaken a number of research studies in Development Administration, Rural Development, Personnel Administration, Tribal Development, Human Rights and Public Policy. He has conducted consultancy assignments for the Department of Posts and in the Ministry of Rural Development, Government of India; and for the Government of Orissa and the Narmada Planning Agency, Government of Madhya Pradesh. He has published several books.
The Government of India (GOI) introduced economic reforms in mid 1991. The reforms were triggered by a balance of payments crisis combined with the need to correct an unsustainably high fiscal deficit. The reforms package included the abolition of industrial licensing for most industries, liberalisation of rules pertaining to foreign direct investment and foreign technology agreements, disinvestments, privatisation, financial sector liberalisation, private investment in infrastructure and reduction or removal of restrictions on trade. The purpose was to enable increased economic growth and efficiency through a reduction in controls and restrictions and roll back of the state. The assumption was that this would lead to significant economic growth, which in turn would, through the trickle down effect, lead to poverty reduction. While poverty has declined, strategies to significantly accelerate the progress on human development and access to infrastructure and basic amenities continue to be a priority.

The GOI-UNDP Economic Reforms Project supported policy research in several areas. These included legal reforms in the context of globalisation to render laws and regulations pro-poor while reducing transaction costs for economic efficiency; macro effects of economic reforms on the health sector and identification of measures to strengthen delivery of health services under the reforms package; reforms of infrastructure sectors with a special focus on designs and practices of regulatory systems, pricing, user charges and benchmarking; and municipal debt, a pricing system for municipal infrastructure provision and creating an enabling environment for private sector investment in infrastructure provision.

This paper draws upon the work of Chronic Poverty Research Centre, India and synthesises the findings of over 50 reports that have been prepared as part of this project by the Centre for Multi-Disciplinary Development Research (CMDR) on the status of health and impact of reforms on the health sector; the National University of Juridical Sciences (NUJS) on issues relating to agriculture in the context of globalisation; the National Institute of Public Finance and Policy (NIPFP), National Council of Applied Economic Research (NCAER), National Institute of Urban Affairs (NIUA), The Energy and Resources Institute (TERI) and National Law School University of India (NLSUI) on the reforms in infrastructure, taxes, municipal services and regulatory governance, and draws together the policy conclusions.

For further information, please contact:

Indian Institute of Public Administration
I. P. Estate, Ring Road
New Delhi 110 002

United Nations Development Programme
55, Lodi Estate
New Delhi - 110 003