# The Madhya Pradesh Human Development Report 1995

**The Madhya Pradesh Human**

**Development Report**

1995

Government of Madhya Pradesh

By the Madhya Pradesh Human Development Report
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"I will give you a talisman. Whenever you are in doubt, or when the self becomes too much with you, apply the following test.

Recall the face of the poorest and the weakest man you may have seen, and ask yourself, if the step you contemplate is going to be of any use to him. Will he gain anything by it? Will it restore him to a control over his own life and destiny? In other words, will it lead to *swarajya* for the hungry and spiritually starving millions? You will find your doubts and yourself melting away."

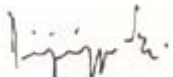
MOHANDAS KARAMCHAND GANDHI

## *Foreword*

Today, the process of liberalization and economic change is sweeping the country, and indeed the world. Madhya Pradesh is a part of this process of economic change. This change is expected to bring about more rapid economic growth. At the same time, it is now universally recognized that rapid economic growth does not always automatically ensure an improvement in the lives of rhea poorest. Conscious, focused action is needed to step up the pace of human development and improve the well being of the people. Social investments in education, health, nutrition, and water are both an end and a means of progress, meeting human needs today as well as enabling more equitable growth in the future. This is the broad perspective in which we have prepared the Madhya Pradesh Human Development Report.

Within this overall perspective, how is the Report relevant for Madhya Pradesh? Over the last forty years, both in absolute and relative terms, much progress has been made towards eradication of poverty in the State. Similarly, our progress in education and health has been significantly better than the progress in most other States. However, this progress is not enough for us. Because of the historically low baselines, the State continues to lag behind the all India attainments in these areas.

Our Government is committed co ensuring that the lives of the people of the State improve until they are at least as well off as in the most advanced States in the country. We have taken several new initiatives to promote rapid poverty reduction and human development by putting people and their well being at the centre of the development process. I see this Report as a necessary complement to our thrust to strengthen the social sectors and expand opportunities for rural employment through a synergy of popular empowerment through Panchayat Raj and the Mission approach. We have therefore consciously prepared this independent Report, and set out in this Report a diagnostic balance sheet of the state of human development in Madhya Pradesh today. It is my hope that the Report will help all of us in the State, collectively and individually, at whatever level and of whatever persuasion, co come co grips with today's realities, and spark the demand for more rational resource allocation decisions. For us, the Madhya Pradesh Human Development Report is a critical input in focusing priority attention co the issues of education, health and livelihood security, and in helping co accelerate the pace of progress in these areas of human development so fundamental to improving the lives of the poor in our State.



**Digvijay Singh**
Chief Minister
Madhya Pradesh

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The Madhya Pradesh Human Development Report Project has been able to fulfill its mandate well within its deadline of 180 days from the date of commencement (April 3, 1995) with the support of a multitude of people. While the project team has worked long hours for their objectives, we were greatly helped and encouraged by the cooperation and dedicated assistance of many individuals. In the course of our interaction with them, our understanding of the very notions on which we were offering our expertise deepened greatly. Formal notes such as this cannot capture our debt of gratitude to them. Still we would like to list and thank those whose contributions were vital for our efforts. The responsibility for any error and omissions is, of course, ours.

In course of our visits to the districts (and the Project team traveled to all forty-five districts in the state) we had the privilege of interacting with officials of the development administration at the district, block and village level. From them, from voluntary workers in NGOs and from representatives of the newly empowered Panchayats, we have learnt a lot regarding the processes of data generation at the grass roots level. Our interactions with patwaris, kotwars and village-level workers have given us valuable insights into the process and enterprise of development in Madhya Pradesh. This report has been greatly enriched by their contributions. We can only hope this report will reflect the magnitude of their tasks and the crucial role they play in the structure and process of human development.

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Contributors from all over Madhya Pradesh have provided several case studies, which have been used in this report. We are grateful to all the contributors, and would like to especially mention Shri Harsh Mander, Shri Mihir Shah and the District Collectors of Rajnandgaon, Bhind, Betul, Raigarh, Indore, Jhabua, Jabalpur and Gwalior. Dr. T. P. Sharma

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## THE ADVISORY GROUP:

This Advisory Group was constituted by the Government of Madhya Pradesh to guide and review the Madhya Pradesh Human Development Report Project. Two workshops of the entire Advisory Group were held in Bhopal during the formulation of the Report. The first workshop, presided over by Shri Ashok Jaitley, was held on January 17, 1995. It set the terms of reference for the report. The second workshop, presided over by Dr. Vijay Vyas, was held on August 19, 1995. It reviewed the draft report and made suggestions for improvement. Apart from these workshops, the members of the Advisory Group have individually interacted with the project team from time to time, thereby greatly enriching the report.

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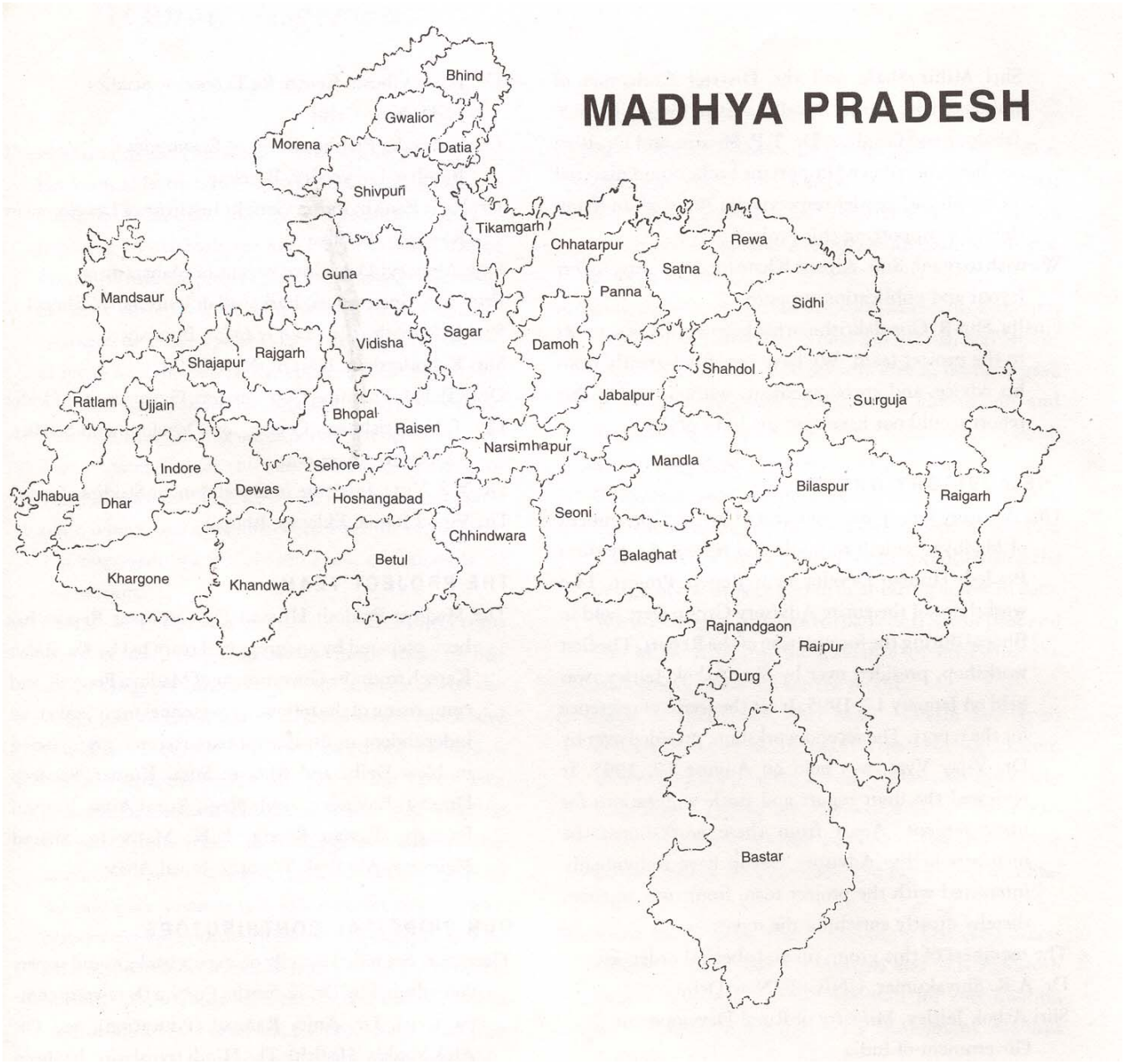
## THE PROJECT TEAM

The Madhya Pradesh Human Development Report has been prepared by an integrated team led by Dr. Rajan Katoch from the Government of Madhya Pradesh, and comprising of the following personnel from Sanket, an independent multi-disciplinary research group based in New Delhi and Bhopal: Suraj Kumar, Sandeep Dikshit, Ravinder Singh Negi, Rumi Aijaz, Rashmi Painuly, Pawan Khera, K.K. Malhotra, Sharad Malhotra, Akhilesh Tripathi, Jamal Ahsan.

## OUR PRINCIPAL CONTRIBUTORS

The report has relied heavily on expert background papers contributed by Dr. K. Seeta Prabhu (Interstate comparisons), Dr. Anita Rampal (Education), and Dr. Alok Shukla (Health). The Hindi translation has been painstakingly undertaken by Dr. Sushil Joshi. We are extremely grateful to them, for their valuable contributions, as also for the effort and the time spared by them for the report.


MADHYA PRADESH
Bhind
Gwalior
Morena
Datia
Shivpuri
Tikamgarh
Chhatarpur
Rewa
Satna
Guna
Panna
Sidhi
Mandsaur
Sagar
Vidisha
Damoh
Rajgarh
Shajapur
Shahdol
Ratlam
Ujjain
Jabalpur
Surguja
Bhopal
Raisen
Narsimhapur
Mandla
Indore
Sehore
Jhabua
Dhar
Dewas
Hoshangabad
Bilaspur
Raigarh
Seoni
Chhindwara
Betul
Balaghat
Khargone
Khandwa
Rajnandgaon
Raipur
Durg
Bastar

# The Madhya Pradesh Human Development Report : An Introduction

The use of measures of well-being and quality of life as indicators of human development has found an increasingly vocal constituency in the development sector. People's access to resources-human, material and infrastructure is now widely accepted as a more relevant measure of their status than traditional income-based comparisons. While income continues to be a factor in measures of human development, it is now considered only in combination with measures of education and life-chances. Planners and policy-makers are looking more seriously at efforts to satisfactorily evolve a simple composite index, derived from measures of outcomes for knowledge, longevity and livelihood, as well as reflecting the availability of resources for a good life. The Madhya Pradesh Human Development Report is an effort in consonance with this series of initiatives.

The Government of Madhya Pradesh has taken the initiative of preparing a Madhya Pradesh Human Development Report (henceforth MPHDR), presenting district-level data on people's well-being as well as deprivation vis-à-vis education, health and livelihoods, for a credible and transparent documentation of human development in the state. The Report delineates the existing situation of the state in clear terms, using data already available so that policy formulation and planning can have more or less clear benchmarks on which to base future strategies.

Before we analyse human development in Madhya Pradesh specifically, it is important to define our terms and objectives in general. We shall first elaborate upon the concept of human development and Human Development Reports (HDRs). A brief overview on the development of Madhya Pradesh will then be followed by an explanation of the objectives and structure of theMPHDR.

## THE CONCEPT OF "HUMAN DEVELOPMENT"

Human development is the combination of people's entitlements and attainments relating to education, health and livelihood. These three arenas, taken together, form the everyday experience of "development" for the people as individuals and as members of a community, state or nation. Human development is, then, the sum of outcomes relating to schooling (both access to schools and quality of schooling), health services (both access to hospitals and medicare experts, and quality of life-chances such as life expectancy and nutrition), and income (both access to a secure and adequate livelihood and the quality of consumer choices that flow from it).

"Human Development" as a concept in the 19th century was the menstruation and analysis of the vital and body parameters of small groups (known as "humance groups") in a particular habitat such as the Niger delta, the Alleghenies in upstate New York, the Bayoudwellers in Louisiana or any area similar in scale, catering to a more or less ethnically uniform cohort of inhabitants. Doctors catering to particular communities in rural America, missionaries and later anthropologists in the African "copper belt" were the pioneer users of the concept of "human development".

In the late 1970s, the notion of human development expanded beyond the confines of medical practice and anthropology to the intellectual discourse of development economics. It was successor here to the notion of "physical quality of life" which had been put forth as a subject of menstruation and planning focus by critics

of national income comparisons between economics.[1]

In 1979, Morris David Morris came our with a highly controversial yet seminal work on the use of a physical quality of life index (PQLI) co measure the status of poverty versus well-being in developing economies, especially India. Morris argued that income comparisons between nations and between regions in the same nation were flawed in that they did not indicate the levels of satisfaction or quality of life derived from income. His argument was not that income was too wide a concept to specify development. He argued, instead, that it was too narrow to encompass the outcomes of choice and constraint for individuals, communities and nations. The contention that choice and satisfaction derived from income anyway was rejected by Morris on the grounds that it implied an implicit formula for conversion of income into choice which was unscientific since it could not be clearly defined.[2]

Morris and other critics argued that the cross-national income comparison derived from GDP to population ratio was not relevant for "measuring the condition of the world's poor". It provided a datum of per capita income which could be used to rank countries, bur it had little explanatory force. It could not reflect the position of the weaker sections of the society. It reflected income as an input rather than a developmental outcome. Moreover, the linkage with the everyday lives and activities of the people was very weak. Development strategists therefore required new indices to better understand the impact of outlay upon society.

Since the late 1980s, planners and policy makers have used the concept and measurable parameters of human development to argue for outcome-oriented focusing and monitoring of plan outlays in the social sectors of poverty alleviation (both rural and urban), education and health.

The idea of evaluating development strategies in the light of the difference they make in the everyday lives of the people, as reflected in the human development parameters of education, health, etc., has been concretised in Human Development Reports. Today, Human Development Reports also focus on diverse issues such as women's empowerment, citizen's rights and human rights, defence expenditure, AIDS, as well as silent emergencies of the environment, domestic abuse, etc. At the core of all these efforts was the opinion that income alone does not capture the essence of people's lives. Additional measures were needed, sensitised to issues that were not directly reflected in income measures of National Accounting schemes. The inadequacies of pure economic/income comparisons were seen as reasons for devising measures of human well-being which cover non-economic (often non-menstruate) arenas of everyday life. For planning and development initiatives, it was these measures which covered both qualitative as well as quantitative aspects of human existence. At the same time, it was felt that "human development" needed to be demarcated, for practical and logical purposes, from development in general.

### *Measurement of Human Development: The Human Development Index*

The relevance of human development does not have co be explained co its "objects", "beneficiaries" or "target groups", for whom schooling, health care, access co drinking water, roads and electricity have a direct immediacy and relevance. In this sense, one can say that the poor live and breathe the reality of human development. They may not articulate the concept of human development, but as a daily problem of sustenance and of work, it is a direct experience for them.

However, for policy-makers, planners and academicians, the "measuring scheme" of human

development, the issue of quantifying human development, assumes great significance. It is impossible, and perhaps undesirable, to evolve universally valid measures of human development. Any measuring scheme of human development cannot be all-embracing in that it cannot include each and every aspect of development and the development experience. Many factors, especially those relating to the quality of or satisfaction from education or health, have a subjective element which hinders comparability between persons, groups and societies. An index of human development has to balance the ideal with the practical like politics, it may be described as "the art of the possible". Therefore, measurability is the main methodological lemma of all attempts to ensure human development.

While the notion of PQLI generated much debate in the early 1980s, it was only with the UNDP 's Human Development Reports (HDRs), beginning in 1990 that a large constituency of planners and other sectors in the development sector focused seriously on non economic measures of well-being as an aid to planning and resource allocation.

### *UNDP's Human Development Reports:*

### *Overview and Significance*

The backdrop to efforts to evolve human development measures and prepare Human Development Reports was contrapuntal to the focus on "hard" data and issues of income and infrastructure in the World Development Reports. While the World Bank had concentrated on income and economic measures of development, UNDP argued that it was necessary to go beyond the "economistic fallacy" where income and life-chances were seen as interchangeable. It was proposed that "non-economic" measures (including political and social indicators of development) were mote relevant to the lived experiences of people as far as "development" and "quality of life" were concerned.

The concept of human development, as put forward by UNDP, is a people-centered approach to development where the primary concern is "to create an enabling environment for people to enjoy long, healthy and creative lives". This condition may be created by "increasing people's choices"-and the use to which these increased options may be put. Human development therefore corresponds to a holistic approach in the process of development.

The Human Development Reports (HDRs) published annually by the UNDP since 1990 may be regarded as the first worldwide attempt to look at development in terms of human well-being and welfare, away from the confines of economic development.

The Human Development Report 1990 analyses the record of human development for the last three decades and the experience of 14 countries in managing economic growth and human development. The Report discusses the meaning and measurement of human development, proposing a new composite index with longevity, knowledge and wealth as the principal indices. HDR 1990 concludes that there is no automatic link between economic growth and human progress, and that modest levels of income may result in fairly respectable levels of human development. This may be brought about by reallocation of resources according to human development priorities along with a favourable external environment and aid facilities. A sustainable development approach has been suggested along with active popular and NGO participation for successful human development.

While HDR 1990 emphasises the concept, components and parameters of human development, the subsequent Reports have central themes, which broadened the premises of HDRs. HDR 1991 points to an enormous potential for restructuring of both national budgets and international aid allocations in favour of human development. HDR 1992 focuses on the global dimensions of human development. Since unequal competition prevails in the global market a two-pronged strategy focusing on strengthening national technological capabilities and providing institutions working for a new economic order becomes imperative. HDR 1993 has people's participation as the central theme, identifying three major means of such participation: people-friendly markers, decentralisation of power and community organisations (NGOs). HDR 1994 focuses on human security in all its ramifications co ensure universal primary education, primary health care, safe drinking wafer and sanitation facilities, optimum nutrition levels and credit for self employment opportunities. The 1995 HDR has as its main theme the empowerment of women and suggests global and scare strategies to this end.

In the light of the foregoing, the specific context of this Report needs to be stated.

## MADHYA PRADESH: THE CONTEXT

Madhya Pradesh is the largest, and according co most interstate comparisons, one of the most backward states in the country. It is sufficient here co state that while the natural resource endowment of the state puts it among the from-ranking states as far as resources are concerned, its very size and variations in terrain and agro climatic zones militates against effective statewide service delivery systems for the benefits derived from these resources. The tables andfact-sheesinthis

### INDIAN DISCUSSIONS OF UNDP'S HUMAN DEVELOPMENT INDEX

Indian scholars have contributed both to the formulation of UNDP's HDI and to the debates amongst development economists on its utility and accuracy. Dutta et al offer a critique on the methodology of HDI calculation by introducing notions of intrinsic social indicators and relative deprivation. In this study Madhya Pradesh offers a picture of increasing gender disparity and low achievement indices in education and health. Parikh (1995) emphasises environmental sustainability along with compulsory primary education with 100 per cent enrollment, drastic reduction of infant mortality to 20 or less, and implementation of an employment guarantee scheme through a watershed development programme. In Sudershan (ed. 1994), environmental sustainability in development remains an area of prime concern. Prabhu and Chatterjee (1993) point out that the human development scenario has large inter-state, intra-state and rural-urban variations and that achievements and access to facilities lag far behind the required level. Analysis of state expenditures shows that Madhya Pradesh occupied one of the last three positions in per capita expenditure and social sector spending. The case is for a simultaneous rise in all sectors of social expenditure, viz. health, education and nutrition, given their "synergistic relationship". Chandrasekhar (1993) pointed out that the areas of immediate attention are food, employment and environment. The emphasis on people's participation (HDR 1993) should also keep in mind the adverse consequences of such a process. In his view this involves a "reformulation" of the role of the state as pioneer and "participation is the device that can ensure that transition, monitor its effects and shape corrective responses when required".

Report will provide further documentation of the context in which human development initiatives have proceeded in this state. However, the context of human development is both real-time as well as historical. It is a picture of both current gaps between expectation and reality as well as enduring and entrenched backwardness.

Indeed, the historical backdrop of the backwardness of the various regions that came to form Madhya Pradesh has overshadowed-all initiatives, both governmental and non-governmental, to promote human development. In the words of Jawaharlal Nehru, "... The deadweight of history has decreed that the state is backward today because it was extremely backward yesterday and the day before yesterday and the day and the years before that."

Given the historical burden of "colonial backwardness", the scenario of human development in Madhya Pradesh is indeed grim, as subsequent sections and chapters indicate. Whether it is education, health or livelihoods, outcomes (such as literacy and school enrollment, fertility and access to health services, etc.) relating to quality of life and entitlements of the people are far from satisfactory. The background of the state's genesis and a perspective of continuity and change since its formation will put things in a proper context.

Before analysing Madhya Pradesh's balance sheet with regard to human development, a brief overview of the state itself is needed to better comprehend the issue of poverty versus well-being. The following section attempts to enumerate the salient features of the state, its regional and cui rural diversity as also the baggage of historical backwardness it inherited at the time of its formation. This section provides a backdrop framing the issue of human development in Madhya Pradesh.

In 1947, Madhya Pradesh was an amalgamation of the pre-independence Central Provinces (whence the name), and the principalities of the Chhattisgarh feudatory states, Surguja, Raigarh and Bastar. Coterminous with this unit were the Category "B" stare of Madhya Bharat (comprising mainly of the Gwalior and Indore kingdoms, their feudatories and the states of the Central India Agency), the Category "C state of Vindhya Pradesh and the "Chief Commissioner's Province" of Bhopal. In the reorganisation of states in 1955, these were merged and the Sironj tehsil transferred from Rajasthan. The Marathi-speaking districts of Nagpur, Wardha, Chanda, Bhandara, Akola, Amaravati, Yeotmal and Dhule were transferred to what is now Maharashtra. Nimar was divided into East Nimar (Khandwa) and West Nimar (Khargone). On November 1, 1956, the state of Madhya Pradesh with its current boundaries was reconstituted, and the state government assumed office under the chief ministership of Pandit Ravishankar Shukla. Originally, the state comprised 43 districts. In 1972, the Bhopal and Rajnandgaon districts were created.

At the time of its inception, Madhya Pradesh was a predominantly agricultural state with a very large tribal population. The major towns were Gwalior, Indore, Bhopal, Jabalpur and Raipur. The main function of these centres was administrative, military, trading or as junction-points on trade and communications routes. Nearly forty years since then, the scenario is marked by considerable continuity and some change. The state's primary urban centres have remained the same. However, pockets of industrial growth have emerged in Pithampur, Dewas, Malanpur, Mandideep and on the outskirts of most major towns, especially the rajbhogi towns.

The state (not to be confused with the government alone) has made remarkable progress in the fields of poverty eradication, control of disease, pestilence and famine, as well as in greater

harvesting of its natural and industrial productive assets. However, considerable gaps remain to be covered. The strategies for the exploitation of its forest and mineral resources need some reassessment in terms of prospects for "sustainable development" of the state. Moreover, certain problems of habitat and environment have been aggravated by the very process of "development" in the state. Desertification and degradation of its forest covers as well as increased biotic pressure on resources related to civic infrastructure, e.g., drinking water these are problems that the state has to confront now more seriously than ever before. More recently, greater attention is being drawn to social questions of tribals' rights, maintenance and strengthening of common property resources. Also, there is greater sensitivity to issues of displacement caused by mega-projects as also ensuring representation and empowerment of social groups such as women. The state government is evolving strategies and policies for these.

While the well-being or physical quality of life is to be seen as conceptually neutral to forms of social organisation or adopted paths/models of development, there are value references built into the notion of "human development" that militate against such neutrality. Obviously, the model behind the notion of human development as understood by UNDP is that of western, liberal social democracy, perhaps of the Scandinavian variety. However, such models seem often inadequate when applied to the reality of Madhya Pradesh. This is a state where several civilisational processes are at work: sometimes in isolation, but mostly in direct contact, often in confrontation. Broadly, we can see the state's development dynamics as being influenced by the characteristics of its several zones.

Taking cultural/historical factors into consideration, Madhya Pradesh can be seen as having not one history but many histories: those of the Malwa people, and of the Bundelkhand, Baghelkhand, Chhattisgarh, Bastar and Gond regions. Politically the state is an amalgam of Madhya Bharat, Mahakoshal and Bhopal, Vindhya Pradesh, the Chhattisgarh states, Bastar, and the Gond principalities. Constituted as a linguistically uniform entity, Madhya Pradesh has several regional variations. In geographical terms, Madhya Pradesh can be divided into the Malwa plateau, the Vindhyachal and Satpura ranges, the Sone-Narmada drainage region, the Bastar plateau and the Chhattisgarh plains. There is a clear divide in terms of agriculture between the rice-growing Chhattisgarh belt (which survives largely on rain-fed irrigation and is therefore chronically drought-prone) and the wheat-growing Malwa and Gondwana regions.

Further, linkages with neighbouring states affect regional characteristics within the state. This is partially due to traits not obliterated by the reorganisation of states in 1955 and historical/cultural affinities (for example, Jhabua has many elements in common with Banswara and Udaipur in terms of folkways), but also due to trade-route or railway-route nexuses (for example, Rajnandgaon and Durg are linked to Nagpur on the old Bengal-Nagpur Railway line), mandi/market connections (for example, between the cotton-growing regions of Maharashtra and Madhya Pradesh), and folk migrations (for example, Raigarh is linked to the Palamau, Gumla and Singhbhum areas of Bihar).

Thus, the interplay of intra-state contrasts with inter-state linkages has given a distinctive flavour to the development and social dynamics of Madhya Pradesh. Any attempt to analyse human development must be seen against this backdrop of diversity, since it is likely co have consequential limitations.

## THE MADHYA PRADESH HUMAN DEVELOPMENT REPORT: RELEVANCE AND OBJECTIVES

The Madhya Pradesh Human Development Report is the outcome of the state's strategies in the social sector and also a logical culmination of the UNDP initiative.

The Government of Madhya Pradesh has grappled with the issue of poverty and strategies to counter it since its very inception. The ill-fated experiment of Vindhya Pradesh sensitised the founding fathers of the state to the necessity to have a pragmatic focus of resources along two lines: infrastructure-building and poverty alleviation through interventions in health, education and employment programmes. Even non-governmental, people's initiatives in the state have focused largely on education, health and sanitation, and income generation and self-help programmes. The logic of these strategies calls for an assessment of the efficacy of the programmes and initiatives not in terms of targets but of outcome-based increments or changes in people's physical quality of life and a reduction in their deprivation of access to resources.

The logical outcome of the UNDP initiative is to carry the human development evaluation agenda to those who actually fund and monitor the development process with regard to education, health and poverty alleviation. In India, the state governments play this role, apart from direct interventions by people's initiatives, in substantial measure. Therefore, an assessment of human development outcomes and issues for state governments is relevant.

For such evaluations or reports for Madhya Pradesh, at issue is the record of the state vis-à-vis Human Development and the state of the quality of life for people of the state in terms of education, health and livelihood. Here, we are looking as baseline information on human development in Madhya Pradesh, according to indicators conforming broadly to these three parameters available uniformly across all 45 districts, enabling significant comparisons. These can then be put up against the human development objectives of the state government. This exercise in comparing reality with expectation, performance with objective, can help us identify problems, evaluate prospects and further refine strategies.

### *Madhya Pradesh and Human Development Outcomes*

Madhya Pradesh is one of the more backward states in the country. Both in absolute and relative terms much progress has been made towards poverty eradication in the state in the last forty years. However, nearly 10 per cent of the absolute number of people living below the poverty line in India reside in the state of Madhya Pradesh. Female literacy rates, infant mortal icy rates, considered to be important indicators of human development, continue to be far below the national average. It is in this context that the need to prepare a Madhya Pradesh Human Development Report was felt. This study focuses on critical issues relevant to the achievement of rapid growth in levels of nutrition, health, literacy and more effective strategies to combat poverty, etc., in the specific context of Madhya Pradesh.

The MPHDR has a mandate to identify inter-district disparities in the levels of human development. Human development can be measured by an assessment of human development indicators such as education, health, life expectancy, access to drinking water, sanitation, employment and income patterns, availability of infrastructural facilities and resources, etc., at the district level. Thereafter, a Human Development Index (henceforth HDI) can be the basis for comparison between districts.

The indicators selected by UNDP for the preparation of its HDI (UNDP reports first introduced the Human Development Index as a measure of human development), the UNICEF report on the 'Progress of Nations'-country-specific HDRs by various organisations, and the indicators used in the World Development Report have been consulted for this study. The HDI worked out by UNDP is a composite index of three variables, viz. life expectancy, education and income. All three components have been given equal weight. As many as 173 countries and areas have been ranked on a scale ranging from 0.000 to 1.000. UNDP took into account several indicators relating to life expectancy at birth, food security, wealth/poverty, demography, education, communication, employment, natural resources, international trade and indebtedness, aid flows, policy options, etc., and then selected the three variables mentioned above to arrive at the HDI.

An assessment of these reports led to productive solutions. However, for purposes of this study, indicators have been selected depending upon the availability of data at the state and district level.

In the light of the foregoing, the MPHDR will aim to do the following.

- Present the state of human development in the districts of Madhya Pradesh.
- Draw up a district-wise Human Development Index (HDD based on measurable indicators.
- Provide a database of out comes which can assist further efforts to set human development goals and targets.
- Outline the social content of the state government's policy Initiatives, such as Panchayati Raj. the Rajiv Gandhi Missions and the likely Impact of these interventions on the present human development status.

The methodology of the study is detailed in the appendices.

However, it is helpful to review here the broad steps taken by the project team.

- Review of existing literature on similar Human Development Reports and related development works prepared by organisations such as UNDP, UNICEF, World Bank, etc., for various countries to understand the approach adopted for human development.
- Assessment of existing policies formulated for human development.
- Enumeration of indicators reflecting human development such as education, Health, drinking water, status of women, etc.
- Collection and collation of data on selected indicators of human development from secondary sources at both the state and district level such as Statistical Abstracts of districts, District Profiles, Census of India, etc.
- Computation of a Human Development Index (HDI) at the district level.

The output brings out inter-district comparisons in the levels of human development. These baseline comparisons, apart from providing a "snapshot" balance sheet for the state, will help identify areas/regions for intervention. State and district-level data was collected for this study. The focus was on collection of district level disaggregated data. Such data on human development will help identify issues in human development. It will also help point out districts which require immediate attention from policy-makers and planners. Besides compiling district-level data, this study also attempts to identify issues related to human development such as poverty, income, inequality, and employment.

The expected outcomes of this Report may be summarised as follows.

- To focus priority attention on the human development of the people of the state and to place human development at the centre of the government's agenda, both at the state level and at the local level.
- To serve as an aid for more rational inter-district allocation decisions based on inter-district comparisons. The analysis of districts' performance in terms of outcomes and the status of infrastructure pertaining to education, health and poverty alleviation can allow a ranking of districts according to this menu of parameters.
- As a tool for monitoring outcomes: the variations in outcome can be matched with inputs and performance to serve as a monitoring tool.

## STRUCTURE OF SUBSEQUENT ANALYSIS

The issues of livelihood, sustenance and development in Madhya Pradesh are legion. The state confronts all the problems that a developing region has to confront. Issues related to its forest and mineral resources, people's livelihoods, habitat and environment, people is initiatives, human rights-all these deserve intensive analysis by themselves. Future initiatives may examine these issues in detail. Meanwhile, the MPHDR has set itself a more modest target-the delineation of human development as conventionally understood and as a notion distinct from development in general.

The subsequent chapters in this report bring into closer focus on the status and prospects of human development in Madhya Pradesh. The areas of focus in these chapters are respectively:

### *Fiscal and Expenditure Patterns: Interstate Comparisons*

This chapter presents the pattern of resource allocation relevant to the 'social sector', especially health and education. The status of social sector expenditure in Madhya Pradesh is compared with that of other major states. An analysis is made of the trends in state expenditure to support human development initiatives.

### *Education for All: From Rhetoric to Reality*

This chapter analyses the constraints and situational reality for attaining the desired objective of 'Education for All'. It first explains the status and structure of basic education in Madhya Pradesh. Inter-district comparisons supplement the general issues. The problems and prospects of basic education are delineated. Finally, some action issues for achievement of the objective of universal education are enumerated.

### *Perspectives on Health and Nutrition*

This chapter sets out a perspective on health for human development in Madhya Pradesh. It first states the district-wise scenario for outcomes and infrastructure related to health as a component of human development. After a delineation of the structure and process of health care and various initiatives in health, the major issues regarding the health status of the people of Madhya Pradesh are stated and analysed. Thereafter, some strategies for the future are spelt out.

### *Some Issues of Income and Employment*

This chapter buttresses the discussions of outcomes and issues in health and education with an income profile of the state. It spells out the scenario in the state with regard to various components of per capita incomes, employment, and some infrastructure issues, providing

comparison with other states in the country, and between the districts of Madhya Pradesh.

*Gender Issues and Women's Empowerment*

This chapter analyses the status of women in Madhya Pradesh with reference to various parameters of human development. It provides a perspective on regional and other variations in the indicators pertinent to women's well-being and access to enhanced human development. It focuses specifically on the provision of physical, economic and political security for Madhya Pradesh's women. It concludes with an overview of the problems and prospects of women's empowerment in the state.

*Information Base and Human Development Concepts*

This chapter buttresses data issues mentioned in the preceding chapters with the results of an intensive study of the structure and process of human development data generation and use in Raisen district, undertaken by the Project Team. It deals with district and sub district level sources of information pertaining to human development parameters. It then delineates the mechanisms and the process whereby dam pertaining to outcomes and infrastructure in education, health and poverty alleviation are generated and used. It also enumerates broad issues for producing valid baseline information for monitoring and evaluating human development in Madhya Pradesh.

*State Strategies*

Here, the state's concerns with regard to human development are discussed. The strategies adopted by the government for enhancing human development outcomes in Madhya Pradesh are spelt out, to provide a perspective on the state government's commitment to a social democratic agenda.

*The Madhya Pradesh Human Development Index*

Finally, this chapter provides a summary of inter-district comparisons through a Human Development Index, calculated for all 45 districts of Madhya Pradesh. Districts are assessed and ranked on the basis of secondary data pertaining to human development outcomes. This is a pioneering attempt at providing a more rational basis for inter-district allocation and for focusing priority attention on human development at the district level.

*Annexes*

The annexes include a bibliography, a special section on Methodology for compilation of the Human Development Index, and tables with data relevant to human development.

## NOTES

1. See Morris 1979. For a brief overview on human development as the economists' new shibboleth, also see Pal and Chakraborty1994. While economists have come rather late to human development and economists' studies on human development are of recent vintage, it is encouraging that an influential constituency of knowledge producers is now professing to put people at the centre of their intellectual and policy agenda.

2. Interestingly, the Purchasing Power Parity debates, which base themselves on conversion of incomes into purchasing power with a common numeraire, have a striking resonance with Morris' line of reasoning, often unacknowledged.

3. It did not take into account the human and social capital of economies and social groups. Moreover, the biases of exchange rate differentials influenced the common numeraire in the form of the currency of choice, most often the US dollar. Differences in purchasing power internal to the national economy in question were also not accounted for in this mode of national income comparison. Many of the socialist economies (Jean Monnet's Second World) provided a non-monetised (and certainly not calculated in any of the First World currencies) 'social wage' which was not factored into national income. And North European social democracy combined many elements of income and social suppose structures for its citizenry. Also, local economies, non market transactions, etc. were not reflected in the national income accounts matrices of almost all nations. In sum, it is fair to say that national income comparisons were seen as both limited in use and in utility fur development planning or analysis.

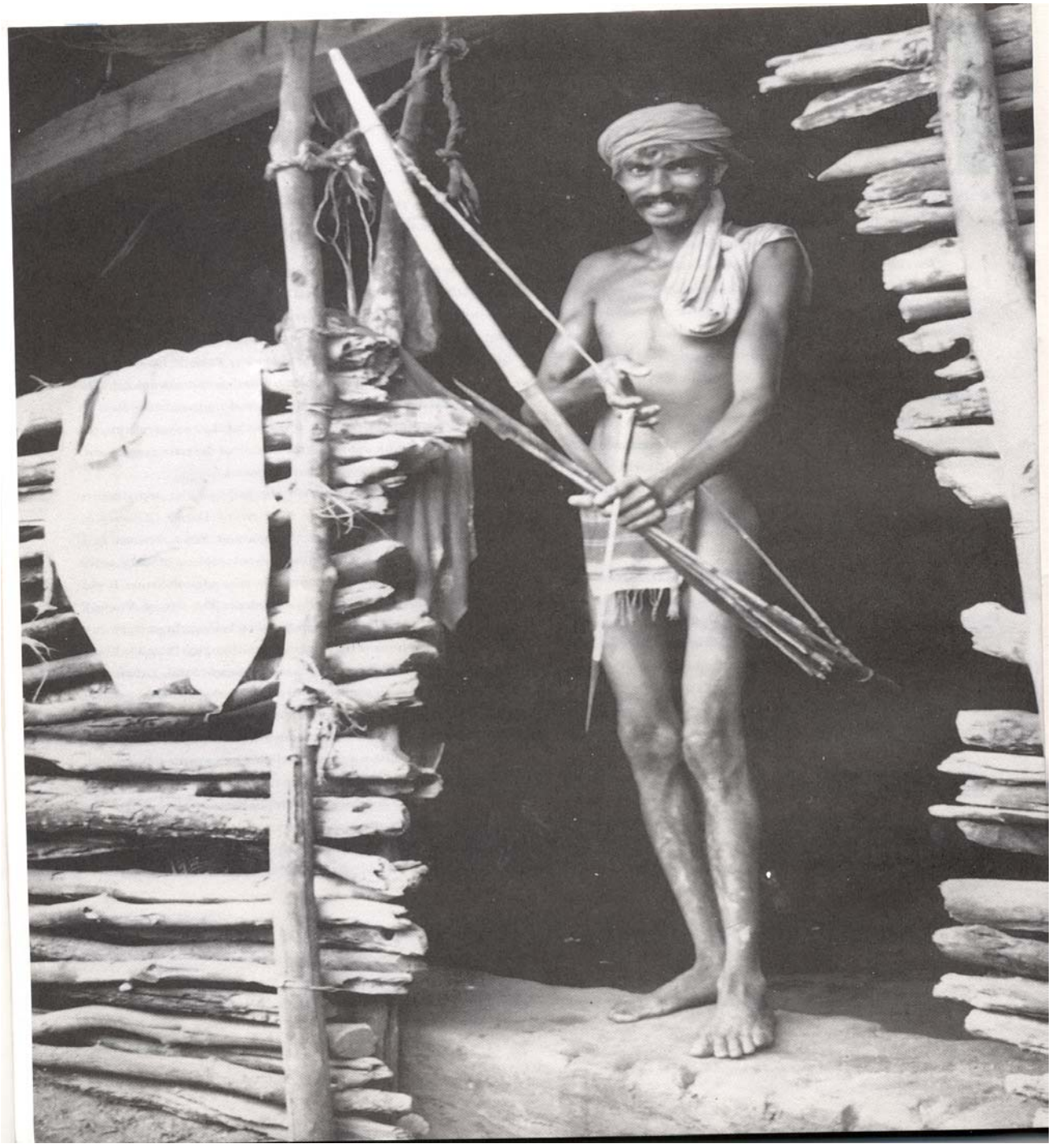
4. Indeed, this reasoning seems to have found acceptance even in the World Development Reports. The World Bank presentation on the 1995 World Development Report argued for a "return to the social' in terms of strengthening the social safety net for those underprivileged sections who are affected by 'reforms' and adjustments.

5. Even in the much-cited North European social democracies, the social security net is now under strain with the new, often non European immigrant populations whose cultural self-expression, community organizations and work ethic do not conform to the cultural reference-points (for instance, in relation to women) of the hegemonic ideologies of these states. Confron tations between 'race', 'class' and 'nation' are quite real in Europe. See Balibar and Wallerstein 1991 for a cogent discussion of this issue.

6. The major difference, however, between an HDR exercise of the UNDP type and the MPHDR is that the former is by its very nature detached and analytical, while the latter (wherein the analysis is being made by the same agency that is responsible for action i.e., the Government of Madhya Pradesh) has necessarily to reflect a strong commitment and action orientation. The MPHDR therefore has to analyse and suggest, not only as an independent analysis, but also with a balance appreciating the potential, limitations and the nature of the state government, and the needs of human development.

7. Vindhya Pradesh comprised the principalities and districts forming the present-day districts of Datia, Chhatarpur, Tikamgarh, Sarna, Panna, Damoh and Rewa. Formed as a Category 'C' state, it immediately faced problems of food scarcity and lack of resources even to run the state administration. It was finally merged into Madhya Pradesh. The fate of Vindhya Pradesh was a compelling argument behind the merger into Madhya Pradesh of the principalities of Surguja (Surguja, Korea and Chhang Bhaker) and Raigarh (Raigarh, Sakti, Jashpur and Udaipur), which also contained the relatively (but only relatively) more prosperous Chhattisgarh region.

8. We do hope that the responses to the MPHDR generate positive debate and discussion and are followed up with independent reports on human development issues in Madhya Pradesh from our colleagues and critics. This is just the starting point, not the end, of the journey.



# *Fiscal and Expenditure Patterns: Interstate Comparisons*

Madhya Pradesh accounts for 7 .83 per cent of the country's population and 13.48 per cent of the country's geographical area. However, it is among the poorest states in terms of per capita income as well as human development. In fact, Madhya Pradesh along with Bihar, Rajasthan and Uttar Pradesh are often called the BIMARU states, I an acronym that suggests that these state economies are ailing.

There has been renewed interest in human development in recent times. Public provisioning of social sector services has been considered an important instrument for enhancing human development. However, the task of raising the living standards of the people through government efforts presumes a thorough understanding of the general as well as the specific factors influencing human development.

Two factors that have a bearing on the human development levels of a state are:

- the development of infrastructure for delivery of social sector services; and
- the quantum and quality of services rendered therein.

While the above factors are measures that directly affect human development, the rate of growth of the economy has an important impact on per capita incomes which in turn influence the quantum and quality of social sector services demanded. This chapter examines the specific supply-side factors that influence human development across states. The attempt is to place the human development scenario in Madhya Pradesh in perspective through interstate comparisons. The following section presents a comparison of the ranking of various states on the Human Development Index.This is followed by a discussion on the extent of development of social infrastructure across states. The disparities in the level and pattern of expenditure incurred on social sectors are then discussed. The next section is concerned with various issues concerning the effectiveness of the expenditure incurred by the government. The impact of structural adjustment on social sector expenditure in Madhya Pradesh is discussed briefly before presenting some conclusions of the analysis.

## HUMAN DEVELOPMENT INDEX

There have been several efforts at constructing a Human Development Index for Indian states following the derivation of such an index for various countries by UNDP on an annual basis since 1990. Table 2-1 (A) and (B) present three such indices for major Indian states. What is remarkable is that despite differing methodologies2 adopted by the analysts, ranks obtained by states do not differ substantially. Madhya Pradesh and other members of the BIMARU group, i.e., Bihar, Rajasthan and Uttar Pradesh, occupy the lowest positions with respect to human development. A mote detailed picture is available if one examines the indicators that have been used to construct the Human Development Index (Table 2-2). The indicators are per capita state domestic product, life expectancy, and a composite indicator comprising literacy and average number of years of schooling. Along with data on the above, infant mortality rates are also provided as they are crucial determinants of life expectancy. A perusal of the achievement of the states with respect to each of the indicators is quite revealing. Madhya Pradesh's position is particularly poor with respect to infant mortality and literacy.

The low level of human development at the state level is reflected by the very poor levels of attainment in

most of the districts in the state. This is revealed in a Human Development Index constructed by K. Seetha Prabhu (1992) for 312 districts in India for the year 1981. The indicators used for the district index were different from those used for the state index as the required data were not available at the district level. Thus, the net value of agricultural production per capita was used as a proxy in place of per capita district income. Similarly, in place of life expectancy, its crucial determinant, infant mortality, was used. Literacy rates alone were used to measure educational attainment. The three indicators were combined using principal component analysis. Since data on infant mortality are not available at the district level beyond 1981, the index had to be constructed for that year only. While further refinements are possible with better availability of data, the present index can serve as a rough approximation of the level of human development of Indian districts. It is evident that except for Indore, the remaining districts in Madhya Pradesh belong to the category of low human development. In fact, 33 out of 43 districts for which data have been presented had secured ranks beyond 200. The lowest rank was that of Jhabua, whose position at 309 was better than only 3 districts of Rajasthan-Barmer, Bhiloria and Jalore. The uniformly low levels of human development of a majority of the districts in the state are a cause for concern.

## INFRASTRUCTURE FOR HUMAN DEVELOPMENT

The significance of providing infrastructural facilities for attainment of human development goals cannot be over-emphasised. Public provisioning of schools

**TABLE 2-1(A)**

**INDICES OFHUMAN DEVELOPMENT**

| State | HDI1 | HDI2 | HDI3 | HDI4 |
|---|---|---|---|---|
| ndhra Pradesh | 0.36 1 | 0.33 7 | 0.39 8 | 0.39 |
| ssam | 0.25 6 | 0.25 2 | 0.44 1 | 0.37 |
| ihar | 0.14 7 | 0.13 4 | 0.21 8 | 0.30 |
| ujarat | 0.56 6 | 0.54 3 | 0.49 0 | 0.46 |
| laryana | 0.62 4 | 0.59 5 | 0.66 6 | 0.51 |
| arnataka | 0.50 2 | 0.47 2 | 0.46 8 | 0.47 |
| erala | 0.77 5 | 0.77 9 | 0.73 3 | 0.65 |
| adhya Pradesh | 0.19 6 | 0.18 3 | 0.08 8 | 0.34 |
| aharashtra | 0.65 5 | 0.64 0 | 0.61 6 | 0.53 |
| rissa | 0.22 4 | 0.21 2 | 0.29 0 | 0.34 |
| unjab | 0.74 4 | 0.71 1 | 0.72 5 | 0.58 |
| ajasthan | 0.24 6 | 0.22 4 | 0.32 1 | 0.34 |
| amil Nadu | 0.50 8 | 0.48 3 | 0.49 5 | 0.48 |
| ttar Pradesh | 0.17 0 | 0.10 5 | 0.28 2 | 0.29 |
| est Bengal | 0.43 6 | 0.41 6 | 0.53 8 | 0.46 |

**TABLE 2-1(B)**

**RANKING OF STATES ACCORDING TO HUMAN DEVELOPMENT**

| State | HDI1 | HDI2 | HDI3 | HDI4 |
|---|---|---|---|---|
| Andhra Pradesh | 9 | 9 | 0 | 9 |
| Assam | 0 | 0 | 9 | 0 |
| Bihar | 4 | 4 | 4 | 4 |
| Gujarat | 5 | 5 | 7 | 8 |
| Haryana | 4 | 4 | 3 | 4 |
| Karnataka | 7 | 7 | 8 | 6 |
| Kerala | 1 | 1 | 1 | 1 |
| Madhya Pradesh | 3 | 3 | 5 | 3 |
| Maharashtra | 3 | 3 | 4 | 3 |
| Orissa | 2 | 2 | 2 | 1 |
| Punjab | 2 | 2 | 2 | 2 |
| Rajasthan | 1 | 1 | 1 | 2 |
| Tamil Nadu | 6 | 6 | 6 | 5 |
| Uttar Pradesh | 5 | 5 | 3 | 5 |
| West Bengal | 8 | 8 | 5 | 7 |

Sources: 1. Tilak (1991), 2. EPW Research Foundation
3. Prabhu and Chatterjee (1993), 4. Shiva Kumar (1991)

**TABLE 2-2**
**INDICATORS OF HUMAN DEVELOPMENT**

| S. No. 1 | State 2 | Literacy Rate (%) 1991 3 | Female Literacy Rate 1991 4 | Avg. No. of Yrs. of Schooling 1987-88 5 | IMR 3 Yrs. Avg. 1988-90 6 | Life Expectancy Combined 1981-86 7 | PC SDP (in Rs.) 1989-90 8 |
|---|---|---|---|---|---|---|---|
| 1 | Andhra Pradesh | 45.10 | 33.70 | 4.52 | 78 | 58.00 | 1743 |
| 2 | Assam | 53.40 | 43.70 | 3.15 | 89 | 52.40 | 1650 |
| 3 | Bihar | 38.50 | 23.10 | 4.00 | 88 | 54.10 | 981 |
| 4 | Gujarat | 60.90 | 48.50 | 4.43 | 83 | 56.80 | 2629 |
| 5 | Haryana | 55.30 | 40.90 | 3.98 | 80 | 60.60 | 3193 |
| 6 | Karnataka | 56.00 | 44.30 | 3.92 | 75 | 60.60 | 2109 |
| 7 | Kerala | 90.60 | 86.90 | 4.01 | 22 | 67.60 | 1500 |
| 8 | Madhya Pradesh | 43.50 | 28.40 | 3.61 | 116 | 52.40 | 678 |
| 9 | Maharashtra | 63.10 | 50.50 | 4.31 | 62 | 60.20 | 3281 |
| 10 | Orissa | 48.60 | 34.40 | 4.06 | 122 | 53.00 | 1557 |
| 11 | Punjab | 57.10 | 49.70 | 4.37 | 61 | 64.30 | 3658 |
| 12 | Rajasthan | 38.80 | 20.80 | 3.50 | 94 | 55.10 | 1669 |
| 13 | Tamil Nadu | 63.70 | 52.30 | 4.15 | 70 | 58.10 | 1864 |
| 14 | Uttar Pradesh | 41.70 | 26.00 | 3.69 | 113 | 49.10 | 1572 |
| 15 | West Bengal | 57.70 | 47.20 | 4.27 | 70 | 56.60 | 1989 |
| | All India | 52.10 | 39.40 | 4.15 | 88 | | |

**RANKING OF STATES ACCORDING TO HUMAN DEVELOPMENT (DESCENDING ORDER)**

| S. No. 1 | State 2 | Literacy Rate (%) 1991 3 | Female Literacy Rate 1991 4 | Avg. No. of Yrs. of Schooling 1987-88 5 | IMR3 Yrs. Avg. 1988-90 6 | Life Expectancy Combined 1981-86 7 | PC SDP (in Rs.) 1989-90 8 |
|---|---|---|---|---|---|---|---|
| 1 | Andhra Pradesh | 11 | 11 | 1 | 7 | 7 | 8 |
| 2 | Assam | 9 | 8 | 15 | 11 | 14 | 10 |
| 3 | Bihar | 15 | 14 | 9 | 10 | 11 | 14 |
| 4 | Gujarat | 4 | 5 | 2 | 9 | 8 | 4 |
| 5 | Haryana | 8 | 9 | 10 | 8 | 3 | 3 |
| 6 | Karnataka | 7 | 7 | 11 | 6 | 4 | 5 |
| 7 | Kerala | 1 | 1 | 8 | 1 | 1 | 13 |
| 8 | Madhya Pradesh | 12 | 12 | 13 | 14 | 13 | 15 |
| 9 | Maharashtra | 3 | 3 | 4 | 3 | 5 | 2 |
| 10 | Orissa | 10 | 10 | 7 | 15 | 12 | 12 |
| 11 | Punjab | 6 | 4 | 3 | 2 | 2 | 1 |
| 12 | Rajasthan | 14 | 15 | 14 | 12 | 10 | 9 |
| 13 | Tamil Nadu | 2 | 2 | 6 | 4 | 6 | 7 |
| 14 | Uttar Pradesh | 13 | 13 | 12 | 13 | 15 | 11 |
| 15 | West Bengal | 5 | 6 | 5 | 4 | 9 | 6 |

* Ascending Order

and Primary health centers either in the villages or in close proximity to a group of villages has been an important element of government policy. Government's provision of social services comprises two parts: (a) the expenditure on provision of infra-structure, i.e., capital expenditure; and (b) the expenditure incurred on personnel, materials and supplies which constitutes the revenue expenditure of the Government. Issues of capital expenditure are discussed in this section whereas interstate disparities in the revenue expenditure incurred by state government is dealt with in the next section of this chapter.

**TABLE 2-3**
**STATEWISE SHARES OF REVENUE AND CAPITAL EXPENDITURE IN TOTAL EXPENDITURE EDUCATION AND HEALTH: 1988–91**

| States | Education | | Health | |
|---|---|---|---|---|
| | Rev.ex . In Tot | Cap.ex . In Tot | Rev.ex . In Tot | Cap.exp In Tota |
| Andhra Pradesh | 99 2 | ( 3 | 98. 3 | 0. 1 |
| Assam | 98. 7 | 1. 3 | 98. 4 | 8. 6 |
| Bihar | 96. 9 | 3. 1 | 86 4 | 13 6 |
| Gujarat | 99. 5 | 0. 5 | 88 3 | 11 7 |
| Haryana | 97. 5 | 2. 4 | 96. 4 | 3. 6 |
| Karnataka | 99. 7 | 0. 3 | 97. 2 | 2. 3 |
| Kerala | 98. 7 | 1. 3 | 95. 4 | 4. 6 |
| Madhya Pradesh | 96. 9 | 3 3 | 97 5 | 2 5 |
| Maharashtra | 99. 6 | 0. 4 | 96. 7 | 3. 3 |
| Orissa | 96. 1 | 3. 9 | 95. 9 | 4. 1 |
| Punjab | 98. 8 | 1. 2 | 97. 7 | 2. 3 |
| Rajasthan | 97. 6 | 2. 4 | 72 5 | 27 5 |
| Tamil Nadu | 99. 5 | 0. 5 | 96. 6 | 3. 4 |
| Uttar Pradesh | 98. 7 | 1. 3 | 94. 9 | 5. 1 |
| West Bengal | 99. 9 | 0. 1 | 93. 3 | 6. 7 |
| All States | 98. 4 | 1. 6 | 90. 7 | 9. 3 |

Source: Based on Reserve Bank of India, article on State Finances for relevant years.

The infrastructure for social services that is currently in existence reflects the fructification of capital expenditure incurred over a secular to long-term time-period. By the same token, any neglect or decline in the importance given to capital information is bound to undermine the future development of social sectors.

A typical feature of the social sector expenditure incurred by state governments in India is that the bulk of expenditure is revenue expenditure. Table 2-3 presents the shares of revenue and capital expenditure in total expenditure for two important social sectors, viz. education and health. In education, the share of capital expenditure was relatively low as compared to revenue expenditure. In health, the share of capital expenditure was the highest in Rajasthan, where large expenditures are being incurred on drinking water and sanitation. It is also noteworthy that the variation across states in the capital expenditure incurred on health is also very high.

Another significant trend is that the disparity across states in terms of capital expenditure incurred has been increasing. In the case of health, where capital expenditure is relatively large, the coefficient of variation in real per capital expenditure increased from an already high level of 106.96 percent in 1984-87 to 128.43 percent in 1988-91. This can aggravate the existing disparities in the provision of health infrastructure across states. Expert analysis shows that infrastructure is an important determinant of health attainment.

The high and rising disparities in the levels of capital expenditure are reflected in the infrastructure provided in the states for social sectors. Tables 2-4 and 2- 5 present data pertaining to key indicators in this regard for 15 major states along with a ranking of the states in descending order with respect to each indicator. It is evident that the position of Madhya Pradesh is relatively good with respect to number of schools per lakh population and teacher-pupil ratio, though the same cannot be said in the case of indicators of health infrastructure. In almost all the indicators pertaining to health infrastructure, Madhya Pradesh is at the lower end. This indicates the inadequate development of health facilities, aggravated by the large area and dispersed pattern of settlement of population groups in the state. The number of primary health centres as well as dispensaries per lakh population is 32.5 per cent and 16.4 per cent respectively of the all-India average in this regard. With respect to doctors per lakh population, Madhya Pradesh's provision of around 13 doctors per lakh population is one-third of the all India figure of 39 doctors per lakh population.

The provision of infrastructure is necessary but not sufficient to ensure the attainment of human development goals. What also is required is the provision of adequate quantum and quality of services in the infrastructure provided at public cost. The status with respect to the provision of social sector services as reflected in the revenue expenditure incurred as well as the effectiveness of the expenditure in terms of utilisation of the facilities provided are dealt with in the subsequent sections.

## REVENUE EXPENDITURE ON SOCIAL SERVICES

Revenue expenditure on social services is incurred to meet the salary and related expenditure of the personnel appointed as also materials and equipment. This is a critical component of social sector expenditure. The level of revenue expenditure incurred therefore gives an indication of the extent of services provided in publicly funded schools and health centres. The real per capita revenue expenditure incurred on social services, education and health for the years 1988-91 for 15 major states is given in Table 2-6. It is evident that the levels of expenditure incurred by Madhya Pradesh are relatively low, especially in comparison with other states.

Apart from levels, it is important to examine the pattern of expenditure in order to judge its potential effectiveness. Available data points to the distorted pattern of social sector expenditure. Tables 2-7 and 2-8 present intra-sectoral locations for education and health for the years 1985-86 and 1990-91 for 15 major states. The data shows that in 1985 -86, in the state of Madhya Pradesh, the share of elementary education in total expenditure on education was lower than the average for 15 major states.

However, in 1990-91, the share increased sharply from 46.8 per cent to 60.5 per cent and was considerably higher than the 15 states' average in this regard. Despite this increase, the share is lower than the two thirds share that has been recommended for elementary education by the Education Commission (1966) and the three-fourths share suggested by other analysts. Moreover, most of the revenue expenditure incurred on education tends to primarily consist of salary expenditure. "For instance, all-India figures show that salary expenditure of teaching staff constituted 93.6 per cent of recurring expenditure in the year 1983-84 with the salaries of non-teaching staff amounting to another 2.8 per cent. Apparatus, games and sports had a nominal share of 0.1 per cent each while scholarships and other Educational aid amounted

**TABLE 2-4**

**INDICATORS OF EDUCATION INFRASTRUTURE**

| Sl.No | State | No. of Schools Per lakh Pop | | | No. of Schools Per 100 Sq. Km | | | Teacher Pupil Ratio | |
|---|---|---|---|---|---|---|---|---|---|
| | | Primary | Middle | Secondary | Primary | Middle | Secondary | Primary Sch | Middle Sch |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | Andhra Pradesh | 73.44 | 9.22 | 10.09 | 17.72 | 2.22 | 2.43 | 56 | 44 |
| 2 | Assam | 129.52 | 25.58 | 15.44 | 36.81 | 7.27 | 4.39 | 48 | 31 |
| 3 | Bihar | 61.68 | 15.25 | 4.75 | 30.63 | 7.57 | 2.36 | 50 | 41 |
| 4 | Gujarat | 32 | 41.49 | 12.33 | 6.72 | 8.72 | 2.59 | 39 | 41 |
| 5 | Haryana | 30.16 | 8.1 | 13.89 | 11.13 | 2.99 | 5.13 | 45 | 37 |
| 6 | Karnataka | 52.54 | 36.42 | 11.4 | 12.27 | 8.51 | 2.66 | 111 | 21 |
| 7 | Kerala | 23.33 | 10.03 | 8.85 | 17.43 | 7.49 | 6.61 | 33 | 32 |
| 8 | Madhya Pradesh | 101.08 | 21.13 | 6.01 | 15.07 | 3.15 | 0.9 | 45 | 27 |
| 9 | Maharashtra | 49.68 | 23.94 | 13.17 | 12.71 | 6.13 | 3.37 | 39 | 38 |
| 10 | Orissa | 127.04 | 29.85 | 15.63 | 25.71 | 6.04 | 3.16 | 45 | 23 |
| 11 | Punjab | 61.27 | 7.06 | 13.59 | 24.57 | 2.83 | 5.45 | 40 | 18 |
| 12 | Rajasthan | 68.89 | 19.66 | 8.51 | 8.83 | 2.52 | 1.09 | 45 | 29 |
| 13 | Tamil Nadu | 53.88 | 10.11 | 9.27 | 23.05 | 4.32 | 3.97 | 45 | 46 |
| 14 | Uttar Pradesh | 55.06 | 10.49 | 4.31 | 26 | 4.95 | 2.04 | 45 | 31 |
| 15 | West Bengal | 74.76 | 6.15 | 10.01 | 57.27 | 7.67 | 7.67 | 40 | 41 |
| | All States | 66.13 | 17.27 | 9.31 | 16.99 | 4.46 | 2.39 | 42 | 33 |

**RANKING OF STATES ACCORDING TO EDUCATION INFRASTRUTURE**

**(DESENDING ORDER)**

| Sl.No | State | No. of Schools Per lakh Pop | | | No. of Schools Per 100 Sq. Km | | | Teacher Pupil Ratio | |
|---|---|---|---|---|---|---|---|---|---|
| | | Primary Middle Secondary | | | Primary Middle Secondary | | | (1987-88) | |
| | | Primary | Middle | Secondary | Primary | Middle | Secondary | Primary Sch | Middle Sch |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | Andhra Pradesh | 5 | 12 | 8 | 8 | 15 | 11 | 2 | 2 |
| 2 | Assam | 1 | 4 | 2 | 2 | 5 | 5 | 4 | 9 |
| 3 | Bihar | 7 | 8 | 14 | 3 | 3 | 12 | 3 | 5 |
| 4 | Gujarat | 13 | 1 | 6 | 15 | 1 | 10 | 14 | 3 |
| 5 | Haryana | 14 | 13 | 3 | 13 | 12 | 4 | 7 | 7 |
| 6 | Karnataka | 11 | 2 | 7 | 12 | 2 | 9 | 1 | 14 |
| 7 | Kerala | 15 | 11 | 11 | 9 | 4 | 2 | 15 | 8 |
| 8 | Madhya Pradesh | 3 | 6 | 13 | 10 | 11 | 15 | 5 | 12 |
| 9 | Maharashtra | 12 | 5 | 5 | 11 | 6 | 7 | 13 | 6 |
| 10 | Orissa | 2 | 3 | 1 | 5 | 7 | 8 | 10 | 13 |
| 11 | Punjab | 8 | 14 | 4 | 6 | 13 | 3 | 11 | 15 |
| 12 | Rajasthan | 6 | 7 | 12 | 14 | 14 | 14 | 6 | 11 |
| 13 | Tamil Nadu | 10 | 10 | 10 | 7 | 10 | 6 | 8 | 1 |
| 14 | Uttar Pradesh | 9 | 9 | 15 | 4 | 8 | 13 | 9 | 10 |
| 15 | West Bengal | 4 | 15 | 9 | 1 | 9 | 1 | 12 | 4 |

**TABLE 2-5 INDICATORS OF HEALTH INFRASTRUCTURE**

| Sino. | State | No. of Hospitals | No. of Hosp. Beds. | No. of Dispensaries | No. of Primary Health Centres | No. of Doctors | No. of Nursing Personnel | No. of Hospitals | No. of Dispensaries | No. of Primary Health Centres |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Per 1 Lakh Population | | | | Per 100 Sq. Km. | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1 | Andhra Pradesh | 0.93 | 55.76 | 1.2 | 1.93 | 44.1 | 59.64 | 0.22 | 0.29 | 0.47 |
| 2 | Assam | 0.91 | 62.79 | 1.43 | 1.97 | 44.04 | 31.71 | 0.26 | 0.41 | 0.56 |
| 3 | Bihar | 0.35 | 32.43 | 0.49 | 2.32 | 27.16 | 26.83 | 0.17 | 0.25 | 1.15 |
| 4 | Gujarat | 3.8 | 123.86 | 14.23 | 1.71 | 46.57 | 42.79 | 0.8 | 2.99 | 0.36 |
| 5 | Haryana | 0.47 | 49.03 | 1.31 | 2.24 | 0.39 | 45.23 | 0.17 | 0.48 | 0.82 |
| 6 | Karnataka | 0.64 | 78.11 | 2.31 | 2.53 | 59.64 | 82.96 | 0.15 | 0.54 | 0.59 |
| 7 | Kerala | 7.07 | 254.88 | 6.02 | 3.05 | 53.62 | 219.13 | 5.28 | 4.5 | 2.28 |
| 8 | Madhya Pradesh | 0.55 | 33.26 | 0.55 | 1.79 | 12.89 | 51.71 | 0.08 | 0.08 | 0.27 |
| 9 | Maharashtra | 2.39 | 120.64 | 11.6 | 2.09 | 52.11 | 101.93 | 0.61 | 2.97 | 0.53 |
| 10 | Orissa | 0.91 | 44.43 | 0.63 | 2.93 | 31.31 | 24.91 | 0.18 | 0.13 | 0.59 |
| 11 | Punjab | 1.31 | 108.96 | 7.76 | 10.08 | 121.91 | 240.26 | 0.53 | 3.11 | 4.04 |
| 12 | Rajasthan | 0.61 | 50.14 | 2.2 | 2.39 | 26.46 | 49.04 | 0.08 | 0.28 | 0.31 |
| 13 | Tamil Nadu | 0.73 | 88.07 | 0.92 | 2.49 | 71.93 | 127.25 | 0.31 | 0.39 | 1.07 |
| 14 | Uttar Pradesh | 0.53 | 38.12 | 1.26 | 2.23 | 21.13 | 25.47 | 0.25 | 0.59 | 1.05 |
| 15 | West Bengal | 0.6 | 79.43 | 0.81 | 2.26 | 56.98 | 56.57 | 0.46 | 0.62 | 1.73 |
| All States | | 1.2 | 74.02 | 3.35 | 2.43 | 39.28 | 59.54 | 0.31 | 0.86 | 0.62 |

**RANKING OF STATES ACCORDING TO HEALTH INFRASTRUCTURE (Descending Order)**

| Sino. | State | No. of Hospitals | No. of Hosp. Beds. | No. of Dispensaries | No. of Primary Health Centres | No. of Doctors | No. of Nursing Personnel | No. of Hospitals | No. of Dispensaries | No. of Primary Health Centres |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Per 1 Lakh Population | | | | Per 100 Sq. Km. | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1 | Andhra Pradesh | 5 | 9 | 10 | 13 | 8 | 6 | 9 | 11 | 12 |
| 2 | Assam | 7 | 8 | 10 | 12 | 9 | 12 | 7 | 9 | 10 |
| 3 | Bihar | 15 | 15 | 15 | 7 | 11 | 13 | 12 | 13 | 4 |
| 4 | Gujarat | 2 | 2 | 1 | 15 | 7 | 11 | 2 | 3 | 13 |
| 5 | Haryana | 14 | 11 | 8 | 9 | 15 | 10 | 11 | 8 | 7 |
| 6 | Karnataka | 9 | 7 | 5 | 4 | 3 | 5 | 13 | 7 | 9 |
| 7 | Kerala | 1 | 1 | 4 | 2 | 5 | 2 | 1 | 1 | 2 |
| 8 | Madhya Pradesh | 12 | 14 | 14 | 14 | 14 | 8 | 14 | 15 | 15 |
| 9 | Maharashtra | 3 | 3 | 2 | 11 | 6 | 4 | 3 | 4 | 11 |
| 10 | Orissa | 6 | 12 | 13 | 3 | 10 | 15 | 10 | 14 | 8 |
| 11 | Punjab | 4 | 4 | 3 | 1 | 1 | 1 | 4 | 2 | 1 |
| 12 | Rajasthan | 10 | 10 | 6 | 6 | 12 | 9 | 15 | 12 | 14 |
| 13 | Tamil Nadu | 8 | 5 | 11 | 5 | 2 | 3 | 6 | 10 | 5 |
| 14 | Uttar Pradesh | 13 | 13 | 9 | 10 | 13 | 14 | 8 | 6 | 6 |
| 15 | West Bengal | 11 | 6 | 12 | 8 | 4 | 7 | 5 | 5 | 3 |

to 0.5 percent The situation is not likely situation is not likely to be different at the state level. The negligible share of materials and equipment results in schools that lack blackboards, teaching aids and the like which results in poor quality education being imparted which in turn affects the enrolment of students.

TABLE 2.6
STATEWISE REAL PER CAPITA REVENUE EXPENDITURE ON EDUCATION AND HEALTH : 1988 –91
(Amount in Rupees)

| State | Education RPC Rev. Exp. | Health RPC Rev. Exp. |
|---|---|---|
| Andhra Pradesh | 78.39 | 34.01 |
| Assam | 98.02 | 44.65 |
| Bihar | 67.31 | 18.71 |
| Gujarat | 107.08 | 37.24 |
| Haryana | 101.04 | 40.78 |
| Karnataka | 88.28 | 34.83 |
| Kerala | 124 9 | 45.96 |
| Madhya Pradesh | 64.57 | 36.76 |
| Maharashtra | 108.77 | 43 7 |
| Orissa | 70.38 | 28.67 |
| Punjab | 130.02 | 51.71 |
| Rajasthan | 85.06 | 42.81 |
| Tamil Nadu | 102.79 | 44.71 |
| Uttar Pradesh | 143.17 | 28.17 |
| West Bengal | 86.84 | 33.44 |
| All States | 88.85 | 36.09 |

Source: Based on Reserve Bank of India Article on State Finances for relevant years and Report on Currency and Finance, 1992-1993. Real expenditures obtained by deflating nominal expenditure by GDP deflator.

In the health sector, the intra-sectoral allocations were quite low for public health in 1985-86 for most states. In Madhya Pradesh, the share of public health in 1985-86 was 11.4 percent as against the 15 states average of 12.6 percent. In 1990-91 the state's share declined to 7.8 percent and was much lower than the reduced average of 15 states of 10.6 percent. A perusal of the share of salaries and commodities in the health sector is of crucial importance as the need and importance of personnel in health facilities is reduced in the absence of medicines and diagnostic aids. The situation in this respect is revealing. The available data suggest that the share of salaries in the health sector (i.e., medical and public health taken together) in 1974-78 was, on an average, 59 percent for 15 major states while the share of commodities was 31.3 percent. In 1985-88, the share of salaries increased to 66.1 percent even as the share of commodities declined to 25.3 percent.

In the case of Madhya Pradesh, the share of salaries was higher than the 15 states average in 1974-78 and it increased further from 62.8 percent to 70.6 percent during the period under consideration. The share of commodities, which at 29.7 percent was lower than the 15 states' average even in 1974-78, declined further to 23.3 percent in 1985-88. Such a reduction in a state with high infant mortality rates and low health status is a cause for concern. It needs to be notes further that the rates of growth of social sector expenditures have been decelerating since the mid- eighties as a consequence of the financial. Stringency experienced by the state governments. Although the absolute levels are low, the rates of growth of real per capita expenditure on education have generally been either protected or increased even as the growth rate of real per capita expenditure on

health decelerated. In the case of Madhya Pradesh, the growth rate of real per capita expenditure on education increased from 4.10 per cent in 1974-75 to 1984-85, to 6.57 in 1985-86 to 1991-92, whereas for health, it declined from 8.44 per cent to -1.69 per cent during the corresponding periods. Given the synergistic relationship between elementary education and public health, this trend is a cause for concern.

## UTILISATION OF SOCIAL SERVICES

The brief picture presented above concerns mainly the level and pattern of expenditures on social sectors. The provision of social sector services by the government presents only one side of the picture. In order to make a dent on human development indicators it is essential that the facilities provided be adequately utilised. A lacuna of the publicly provided social sector services in Indian states is their under-utilisation. Studies have pointed out that this is due to the poor quality of services provided in public health facilities and schools. In the case of health, the 1990 NCAER survey provides data on this aspect across major states in rural and urban areas separately. The same are reproduced in Tables 2-9 and 2-10. It appears from this data that only 1.7 per cent of all illness episodes in rural Madhya Pradesh are referred to primary health centres. In the case of education, the drop-out rate indicates the extent of under-utilisation of facilities for elementary education. Table 2-11 provides the relevant data. The high drop-out rate clearly reveals the sad state of affairs. The poor utilisation of the infrastructural facilities in Madhya Pradesh compounds the problem of inadequacy of social infrastructure.

What is also intriguing is that that there is substantial under-utilisation of social sector services despite the subsidies provided. Table 2-12 provides information regarding the per capita subsidies provided in the education and health sectors in major states in the year 1987 -88. It is evident that the level of subsidies provided by the Madhya Pradesh government differs across sectors. While in medical and public health the per capita subsidy (Rs. 31.70) was nearer to the all states' average, in water supply and sanitation it was much above the average. In the case of education, the per capita subsidy of Rs. 88.65 was substantially lower than the all states' average of Rs. 114.19. Subsidies to education and health (including water supply and sanitation) amounted in 1987-88 to Rs. 98.18 crore which accounted for 45.77 per cent of the total subsidies given by the state government in that year. That social infrastructure remains under-utilised despite such generous subsidies is a reflection upon the quality of services rendered in the state institutions.

## STRUCTURAL ADJUSTMENT AND SOCIAL SECTOR EXPENDITURES IN MADHYA PRADESH

The initiation of structural adjustment policies in the country since mid-1991 has implications for human development. Following the experience of several Sub-Saharan African and Latin American countries which undertook similar policies with unfavourable impact on social sector development, fears have been expressed regarding the repercussions on poverty and human development in India. The Government of India has sought to allay these fears by stating that structural adjustment in India will have a 'human face'. The main responsibility of implementing structural adjustment with a human face rests with the state governments as in the constitutional division of responsibilities, the departments and subjects which ensure attainment of human development goals are with the state governments.

**TABLE 2-7**
**INTRA-SECTORAL ALLOCATION FOR EDUCATION:**
**1985 – 86 AND 1990 – 91 (PER ECNT)**

| | | 1985-86 | | | | | 1990-91 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S.No | State | Ele | Sec. | Univ. and Higher | Adult | Tech | Ele. | Sec. | Univ. and Higher | Adult | Tech |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | Andhra Pradesh | 47 | 29.2 | 20 | 0.6 | 3.1 | 45.4 | 29.3 | 22.3 | NA | 3 |
| 2 | Assam | 60.1 | 25.8 | 10.5 | 1.4 | 2.2 | 58.5 | 27.7 | 11.3 | 0.5 | 1.9 |
| 3 | Bihar | 63.6 | 20.7 | 12.5 | 1.8 | 1.4 | 64.9 | 21.1 | 11.2 | 0.9 | 1.9 |
| 4 | Gujarat | 60.7 | 27.6 | 8.6 | 0.5 | 2.6 | 52.4 | 33.5 | 10.5 | 0.8 | 2.8 |
| 5 | Haryana | 40.2 | 42.9 | 13.6 | 1.2 | 2.2 | 46.2 | 35.2 | 14.6 | 1.6 | 2.4 |
| 6 | Karnataka | 54.9 | 22.9 | 18.4 | 0.9 | 2.9 | 52.8 | 28.7 | 14.5 | 1.2 | 2.9 |
| 7 | Kerala | 51.9 | 30 | 13.2 | Negl. | 4.9 | 53.1 | 30.3 | 12.4 | 0.1 | 4.1 |
| 8 | Madhya Pradesh | 46.8 | 34.7 | 13.2 | 1.4 | 3.7 | 60.5 | 23.7 | 11.3 | NA | 4.5 |
| 9 | Maharashtra | 47.6 | 33.9 | 14.1 | 0.6 | 3.9 | 41.3 | 40.7 | 12.9 | 0.8 | 4.3 |
| 10 | Orissa | 42.7 | 38.9 | 15 | 0.9 | 2.4 | 55.9 | 24.7 | 14.6 | 0.9 | 3.9 |
| 11 | Punjab | 35.2 | 49.5 | 13.3 | 0.6 | 1.3 | 32.9 | 50.2 | 14.6 | 0.3 | 1.8 |
| 12 | Rajasthan | 54.4 | 33.2 | 10.1 | 1.1 | 1.2 | 55.3 | 32.6 | 9.3 | 1 | 1.7 |
| 13 | Tamil Nadu | 51.7 | 26.9 | 16.7 | 1 | 3.6 | 49.7 | 35.7 | 10.5 | 0.7 | 3.4 |
| 14 | Uttar Pradesh | 50.3 | 35.4 | 9.9 | 1.1 | 3.3 | 58.4 | 30.3 | 7.9 | 0.9 | 2.5 |
| 15 | West Bengal | 42.3 | 41.3 | 13.7 | 0.6 | 2.1 | 36.7 | 47.2 | 13.7 | 0.5 | 1.9 |
| Mean | | 50 | 32.9 | 13.5 | 0.9 | 2.7 | 50.9 | 32.7 | 12.8 | 0.7 | 2.9 |

Including Pre – University Education

Source : Prabhu and Chatterjee (1993)

**TABLE 2–8**
**INTRA-SECTORAL ALLOCATION FOR EDUCATION:**
**1985–86 AND 1990–91 (PERCENT)**

| | | 1985-86 | | | | 1990-91 | | | |
|---|---|---|---|---|---|---|---|---|---|
| S. No | State | Medical | Public Health | Water Supply & Sanitation | Family Welfare | Medical | Public Health | Water supply & Sanitation | Family Welfare |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | Andhra Pradesh | 38.7 | 14.5 | 31.5 | 15.3 | 50.9 | 10.6 | 24.3 | 14.2 |
| 2 | Assam | 36.4 | 13.7 | 38.3 | 11.6 | 37.7 | 6.3 | 47.6 | 8.5 |
| 3 | Bihar | 39.5 | 7.7 | 38.3 | 14.5 | 50 | 10.4 | 21.5 | 18.2 |
| 4 | Gujarat | 41.4 | 16.3 | 24.8 | 17.6 | 51.1 | 11.6 | 24.6 | 12.7 |
| 5 | Haryana | 28.5 | 21.1 | 37.7 | 12.8 | 42.6 | 10.6 | 36.3 | 10.4 |
| 6 | Karnataka | 55.3 | 12.1 | 15 | 17.6 | 61.5 | 5.8 | 20 | 12.6 |
| 7 | Kerala | 63.6 | 8 | 17 | 11.4 | 57.3 | 6.3 | 23.6 | 12.9 |
| 8 | Madhya Pradesh | 31.4 | 11.4 | 43.3 | 13.9 | 44.4 | 7.8 | 37.5 | 10.3 |
| 9 | Maharashtra | 25.4 | 21 | 43.8 | 9.8 | 31.9 | 27.6 | 31.1 | 9.5 |
| 10 | Orissa | 38.9 | 12.9 | 34.5 | 13.8 | 44.6 | 12.4 | 26.6 | 16.3 |
| 11 | Punjab | 53.5 | 12.2 | 23.3 | 10.8 | 62 | 9.5 | 19 | 9.5 |
| 12 | Rajasthan | 28.8 | 6.2 | 55.7 | 9.4 | 34.8 | 5.2 | 50.9 | 9.1 |
| 13 | Tamil Nadu | 52.5 | 7.6 | 30.1 | 9.8 | 49.5 | 10.6 | 28 | 12 |
| 14 | Uttar Pradesh | 42 | 14.6 | 23.1 | 20.3 | 43.9 | 13.2 | 24.9 | 18.1 |
| 15 | West Bengal | 62.5 | 9.5 | 16.9 | 11.1 | 63.8 | 11.4 | 13.9 | 11 |
| Mean | | 42.6 | 12.6 | 31.6 | 13.3 | 48.4 | 10.6 | 28.7 | 12.4 |

Source : Prabhu and Chatterjee (1993)

**TABLE2–9**

**UTILISATION OF HEALTH FACILITIES :RURAL1990**

**( Per Cent of Illness Episodes Referred To)**

| S.No. | State | Govt. Hospital | Est. Hospital | Pvt. Hospital | PHC | Charitable Disp. | Medical Shops | Others |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Andhra Pradesh | 31.47 | 8.07 | 29.73 | 6.18 | 0.39 | 12.71 | 11.45 |
| 2 | Assam | 36.11 | 3.11 | 39.62 | 10.31 | 1.76 | 7.65 | 1.44 |
| 3 | Bihar | 21.35 | 1.04 | 48.54 | 10.93 | 0.9 | 9.36 | 7.88 |
| 4 | Gujarat | 27.82 | 0.00 | 66.2 | 3.11 | 0.00 | 1.43 | 1.44 |
| 5 | Haryana | 20.78 | 0.00 | 44.11 | 10.28 | 0.00 | 2.83 | 0.00 |
| 6 | Karnataka | 39.66 | 0.00 | 50.05 | 1.9 | 0.00 | 4.69 | 3.7 |
| 7 | Kerala | 29.11 | 2.72 | 42.01 | 0.00 | 2.72 | 2.23 | 3.21 |
| 8 | Madhya Pradesh | 29.02 | 0.22 | 48.11 | 1.73 | 2.55 | 9.21 | 9.16 |
| 9 | Maharashtra | 17.04 | 0.84 | 49.07 | 20.79 | 0.00 | 8.04 | 4.22 |
| 10 | Orissa | 61.14 | 0.05 | 7.21 | 15.78 | 0.34 | 5.37 | 10.11 |
| 11 | Punjab | 12.19 | 0.00 | 46.96 | 18.57 | 0.00 | 19.57 | 2.71 |
| 12 | Rajasthan | 8.8 | 8.67 | 14.55 | 0.00 | 1.61 | 15.71 | 10.66 |
| 13 | Tamil Nadu | 6.4 | 0.00 | 58.16 | 2.48 | 0.00 | 0.47 | 2.49 |
| 14 | Uttar Pradesh | 17.94 | 0.51 | 58.73 | 8.61 | 0.32 | 6.92 | 6.97 |
| 15 | West Bengal | 15.54 | 1.5 | 16.75 | 7.09 | 2.62 | 40.95 | 15.55 |
| 16 | All States | 28.03 | 1.69 | 43.43 | 8.18 | 0.96 | 10.82 | 6.89 |

Source : National Council of Applied Economic Research (1992)

**TABLE 2- 10**
**UTILISATION OF HEALTH FACILITIES : URBAN 1990**
**(*Per Cent of illness Episodes Referred To*)**

| S.No | State | Govt. Hospital | Est. Hospital | Pvt. Hospital | PHC | Charitable Disp. | Medical shops | Others |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Andhra Pradesh | 30.11 | 1.00 | 41.26 | 10.55 | 0.15 | 16.28 | 0.65 |
| 2 | Assam | 58.58 | 7.16 | 20.11 | 5.15 | 0.19 | 5.19 | 3.62 |
| 3 | Bihar | 12.17 | 1.73 | 56.41 | 2.1 | 1.66 | 24.00 | 1.93 |
| 4 | Gujarat | 26.26 | 1.02 | 53.07 | 5.04 | 0.46 | 11.64 | 2.51 |
| 5 | Haryana | 8.53 | 3.88 | 76.92 | 0.88 | 0.00 | 7.66 | 2.13 |
| 6 | Karnataka | 36.96 | 2.10 | 44.63 | 1.97 | 0.00 | 8.88 | 5.45 |
| 7 | Kerala | 39.14 | 3.36 | 30.89 | 3.69 | 0.00 | 21.26 | 1.66 |
| 8 | Madhya Pradesh | 30.64 | 3.11 | 49.23 | 0.93 | 1.12 | 12.55 | 2.42 |
| 9 | Maharashtra | 26.44 | 3.1 | 42.8 | 15.95 | 0.55 | 7.48 | 3.68 |
| 10 | Orissa | 60.00 | 2.98 | 29.07 | 2.05 | 0.32 | 2.47 | 3.11 |
| 11 | Punjab | 13.04 | 0.38 | 62.62 | 6.72 | 0.00 | 11.45 | 5.79 |
| 12 | Rajasthan | 39.45 | 2.3 | 24.54 | 0.00 | 1.44 | 32.26 | 0.01 |
| 13 | Tamil Nadu | 34.89 | 1.42 | 52.25 | 3.54 | 1.22 | 5.22 | 1.46 |
| 14 | Uttar Pradesh | 23.51 | 1.63 | 55.13 | 9.18 | 0.36 | 8.07 | 2.12 |
| 15 | West Bengal | 34.54 | 0.83 | 23.36 | 4.59 | 4.1 | 27.12 | 5.46 |
| Mean | | 31.16 | 2.1 | 43.95 | 5.8 | 0.88 | 13.59 | 2.52 |

Source : National Council of Applied Economic Research (1992)

**TABLE 2-11**
**STATE-WISE SCHOOL DROP-OUT RATIO**

| State | Drop Out Rate (%) 1987-88 (Classes I-VIII) |
|---|---|
| Andhra Pradesh | 71.3 |
| Assam | 72.4 |
| Bihar | 79.3 |
| Gujarat | 61.7 |
| Haryana | 38.2 |
| Karnataka | 66 1 |
| Kerala | 15.9 |
| Madhya Pradesh | 5. 3 |
| Maharashtra | 59.7 |
| Orissa | 64.3 |
| Punjab | 63.3 |
| Rajasthan | 66. 5 |
| Tamil Nadu | 48.2 |
| Uttar Pradesh | 54 2 |
| West Bengal | 75.1 |
| All India | 62.9 |

**TABLE 2-12**
**STATE-WISE PER CAPITA SUBSIDIES ON EDUCATION AND HEALTH: 1987-88**

*(Amount in R )*

| State | Educatior | Heal |
|---|---|---|
| Andhra Pradesh | 112.3 | 36. 5 |
| Bihar | 96. 3 | 21. 5 |
| Gujarat | 149.3 | 36. 5 |
| Haryana | 144. 2 | 41 4 |
| Karnataka | 132.4 | 42 3 |
| Kerala | 178. 3 | 47. 3 |
| Madhya Pradesh | 88.5 | 31 7 |
| Maharashtra | 147. 3 | 44.7 |
| Orissa | 98.3 | 32. 9 |
| Punjab | 176 4 | 56. 7 |
| Rajasthan | 116. 3 | 37. 1 |
| Tamil Nadu | 121.3 | 37. 3 |
| Uttar Pradesh | 74.2 | 29 2 |
| West Bengal | 116. 2 | 38.9 |
| All States | 114. 9 | 35.3 |

Source : Mundle and Rao (1991)

The state governments have been facing severe financial stringency since the mid-eighties. The onset of structural adjustment at the central level has had adverse repercussions on the finances of state governments. Given the fact that in the past financial stringency had led to a slowing down of social sector expenditures, it is essential to examine the trends in this regard in the period following. The state the initiation of structural adjustment. This is particularly important in the case of Madhya Pradesh whose level of human development is already low and where the proportion of population below the poverty line is alarmingly high, at over 40 per cent of the population.

The analyses of the trends in social sector expenditures are conducted in terms of ratios rather than real per capita expenditures as they are more appropriate in the present context of expenditure compression. The ratios used are the Social Allocation Ratio, the Social Priority Ratio and the Priority Allocation Ratio. Social Allocation Ratio (SAR) is defined as the proportion of total revenue expenditure devoted to social sectors. Social Priority Ratio (SPR) is defined as the proportion of social sector expenditure devoted to areas of social priority, in this case elementary education, public health, water supply and sanitation, maternal and child health services and nutrition. Priority Allocation Ratio (PAR) is the ratio of revenue expenditure on sectors of social priority to total revenue expenditure. The data on these ratios for Madhya Pradesh for the years 1990-91 to 1993-94 are given in Table 2-13.

It may be observed from this table that there has been a decline in the relative allocations to social sectors as reflected in the decline of the SAR from 39.41 in 1990-91 to 36.25 in 1993-94. A redeeming feature, however, is the increase in SPR which indicates that within the social sectors, the allocations to areas of social priority are being increased.

## CONCLUSIONS

This chapter thus far highlights the fiscal and expenditure patterns of human development in Madhya Pradesh. It is clear that in both aspects of public provisioning, viz. infrastructure development, as well as per capita revenue expenditure incurred, the position in Madhya Pradesh needs to be improved. This is particularly true in the case of the health sector. Not only is the infrastructure provided inadequate, the level of utilisation of the government facilities is also poor pointing to the low quality of services rendered. Another important aspect is the differential emphasis given to education and health. The education sector has experienced an increasing trend in real per capita government expenditure incurred on it. Within education, the pattern of allocation has favoured elementary education. In sharp contrast, growth in real per capita expenditure on health has been decelerating since the mid-1980s.

**TABLE 2 – 1 3**
**SOCIAL SECT0R EXPENDITURES DURING STRUCTURAL ADJUSTMENT: MADHYA PRADESH**

| Years | *Social Allocation Ratio* | *Social Priority Ratio* | *Priority Allocation* Ratio |
|---|---|---|---|
| 1990-91 | 39.41 | 38.92 | 15.24 |
| 1991-92 | 38.83 | 39.44 | 15.02 |
| 1993-93 | 37.77 | 40.55 | 14.9 |
| 199.94 (RE) | 36.25 | 40.36 | 14.66 |

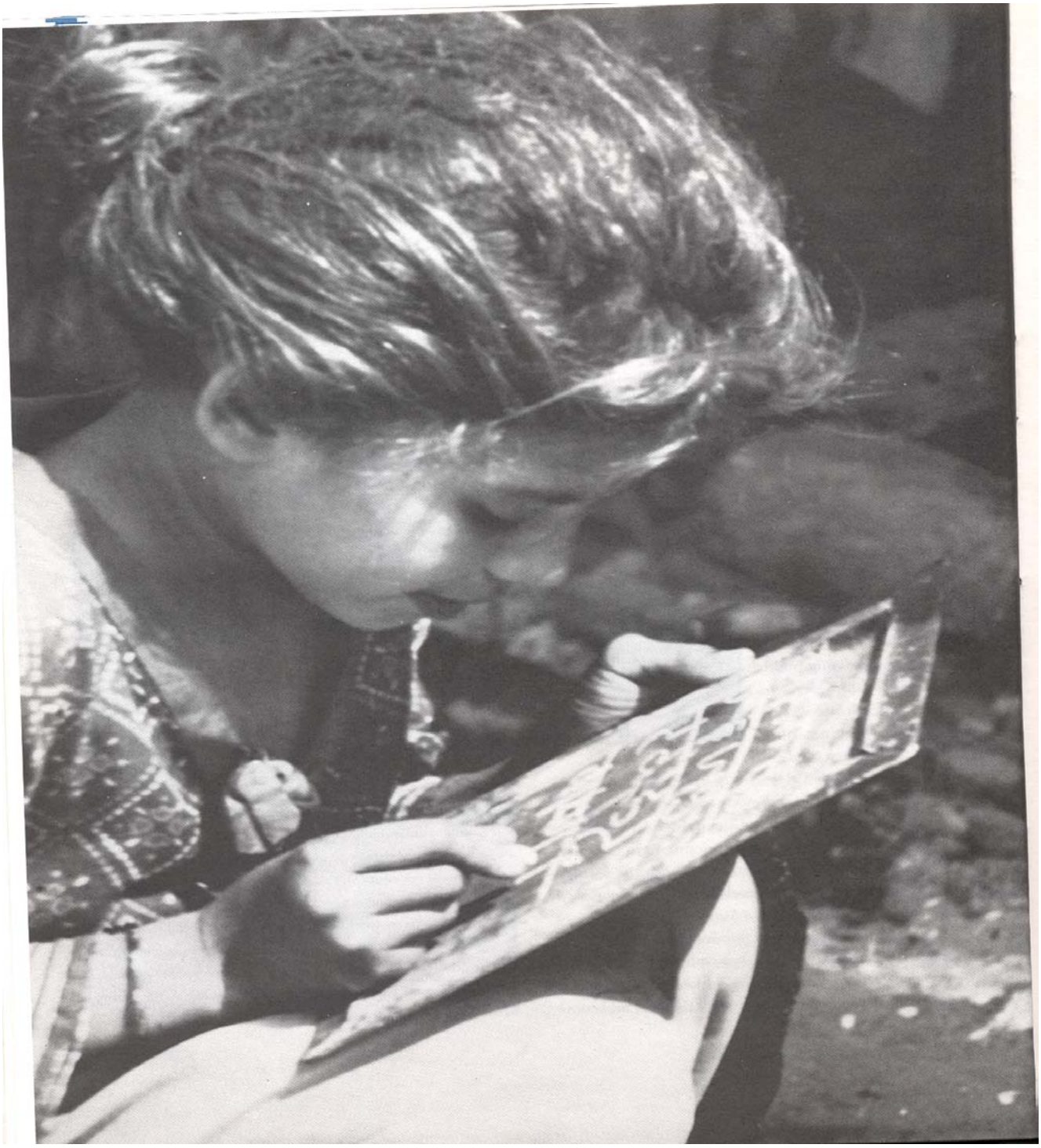
In view of the low level of human development in the state, it is essential that the allocations to both the sectors, and within them to basic level facilities, be increased sharply and simultaneously. Alongside, it is necessary to upgrade the quality of services rendered in the public institutions providing basic education and health services. The mechanisms by which these measures can be implemented require careful thought and commitment at all levels. People's participation, either through the Panchayati Raj institutions and/or through NGOs is necessary and is being implemented through the Panchayati Raj initiatives in the state. It needs to be stressed that human development is a long and arduous task and returns to investment in these sectors would be available only after a considerable time lag. The implementation of a policy of nurturing the social sectors and enhancing human development during a period of fiscal stress is daunting, but not impossible given the requisite political will.

## NOTES

1. The term was coined by Professor Ashish Bose, the eminent demographer, and it has now become part of the lexicon of development economists in India.

2. The method used by Prabhu and Chatterjee 1993, was slightly different from that of other analysts. The Human Development Index was calculated from three indices representing education, health and nutritional attainment. The indices were arrived at by using principal components analysis. The scores of the three indices were then used along with log of income distribution adjusted per capita SDP, to arrive at the composite index.

The intra-sectoral analysis- of education has been restricted to revenue expenditures. In the case of health expenditures, for the budgetary heads medical, family welfare and public health, the expenditures ate only revenue, whereas water supply and sanitation, capital disbursements are also included as they form a significant proportion of expenditures in a number of states.



EDUCATION

# Education for All: From Rhetoric to Reality

It is now almost a decade since the National Policy on Education (1986) was formulated and a number of implementation strategies were outlined. A National System of Education was envisaged which would lay the greatest stress on elimination of disparities and promote the equality of women, with special attention to the needs of minorities and other disadvantaged sections, so that the system could "move towards the ideals enshrined in the Constitution", Subsequently, a 'dual track' approach was posited to simultaneously focus on adult literacy and primary education, which, after the Jomtien World Conference in 1990, came to be reaffirmed by the collective emphasis on 'Education for All' (EFA). Article 1 of the 'World Declaration on Education for All: Meeting Basic Needs' states that:

"Every person—child, youth and adult-shall be able to benefit from educational opportunities designed to meet their basic learning needs. These needs comprise both essential learning tools and basic learning content required by human beings to be able to survive, to develop their full capacities, to live and work in dignity, to participate fully in development, to improve the quality of their lives, to make informed decisions, and to continue learning."

The World Declaration lays stress on *universalizing access and promoting equity*, the two issues which also happen to be most crucial to our own basic agenda. It states that "basic education services of quality should be expanded, and consistent measures must be taken to reduce disparities". Underserved groups-the poor; street and working children; girls and women; rural and remote populations; nomads and migrant workers; indigenous peoples; ethnic, racial and linguistic minorities; refugees-should not suffer any discrimination in access to learning opportunities. More significantly, "whether or not expanded educational opportunities will translate into meaningful development-for an individual or for society depends ultimately on whether people actually learn as a result of those opportunities, i.e., whether they incorporate useful knowledge, reasoning ability, skills, and values. The focus of basic education must, therefore, be on actual learning acquisition and outcome, rather than exclusively upon enrolment, continued participation in organised programmes and completion of certification requirements. Active and participatory approaches are particularly valuable on assuring learning acquisition and allowing learners to reach their fullest potential." (Articles 3-4; emphasis as in the original)

Significantly, the Declaration views education as a means for human development, for development of the individual first and subsequently of society, and lays stress on the state being responsible to ensure that all human beings are allowed to develop their full capacities and are able to live and work in dignity. This is in contrast to the more 'instrumental' view, which obscures the individual and audits for systemic benefits only, perceiving education simply as a means co increase productivity. This trend is most crudely visible in the case made out for girls' education, which is publicly propounded as a measure to reduce birth rates, co ensure enlightened motherhood, or even to create more conscious cooks for a healthy and better-nourished family. Indeed, such 'messages' have consistently been transmitted through our plans and strategies, which have often failed to couch upon the learning needs, concerns and aspirations of the majority of individuals who constitute our population. The MPHDR moves

from the purely instrumental view to focus, instead, on how 'Education for All' could be attempted as a means to achieve human development.

It might be useful at this point to play the 'devil's advocate', and articulate some very basic questions in order to convince ourselves that there is indeed a case for EF A in our country. To begin with, why has it become imperative to apparently change gear and speak of 'education for all'? After all, we cannot deal with all our problems at once, and we have all along been trying to focus on and enlarge our primary sector. Haven't we been continuously and consistently increasing our educational infrastructure, and found that our enrolment rates have indeed gone up? It is a gigantic task and our Constitution, though eminently well intentioned, had made an optimistic estimate when it first claimed that "the State shall endeavor to provide, within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of 14 years." Perhaps, we shall manage by the turn of the century, or a few years later? Moreover, it is not as simple as getting hold of them and putting them into. Schools, since there are other 'socio-economic' factors at work which seem to keep them out. We might be able to deal with the 'supply' side of the problem but how can we possibly take on the 'demand' side as well?

This chapter will try to address these issues as we go along. To start with, we shall look at a few salient facts, some critical glimpses from the present scenario, that might help place these issues in an appropriate perspective.

## SHAPING A PERSPECTIVE: THE PRESENT SCENARIO

### *The 'efficient' filter?*

Our educational system effectively 'filters out', orshould we say 'fails to retain', a majority of the children who enter it. According to generous estimates, out of 100 children of school-going age, about 70 actually enroll into class I, of whom 35 drop out even before completing primary school. Less than 10 may finish class VIII (the terminal stage for elementary school, at around the age of 14 years), while finally less than 5 students actually manage to finish high school. This is a national average estimate. For specific populations, such as the urban poor, those in rural schools, tribal areas, or even girls, the figures will naturally be more alarming. This may seem to indicate that the average 'efficiency' of our massive school system is less than 5 per cent.

Children who attend school are learning very little. A number of baseline studies and learning achievement tests conducted by NCERT and NIEP A in the last few years have shown that most children in classes IV and V are not able to read simple words or sentences and are unable to recognise numbers or perform simple arithmetical operations such as addition and multiplication. It is significant to note that the achievement levels of children in Kerala, which has achieved near universal enrolment, better school buildings and regular teacher attendance, are also 'depressingly' poor (Varghese 1994).

Incidentally, the results from Madhya Pradesh have tended to be among the lowest in the country. For instance, the Baseline Assessment Study conducted by NCERT (*Research Based Interventions in Primary*

*Education: The DPEP Strategy, 1994*) shows that 93 per cent and 74 per cent of the sample schools in Madhya Pradesh were unable to achieve an average score of 40 per cent in mathematics and language, respectively.

Almost one-third of the children who do not participate in elementary education are either 'not interested' in school or find 'studies too difficult'. The National Sample Survey (1989) and other recent studies have shown that socio-economic factors are not the only cause of children staying out of school. Boredom, fear, the unattractive environment of school, and the oppressive feeling of 'non-comprehension' are some significant causes of demotivation that have now lent a sense of urgency to the EFA call for a 'joyful, child centered and activity-based process of learning.'

The Yashpal Committee Report made a perceptive comment on the present situation: "a significant fraction of children who drop out may be those who refuse to compromise with non-comprehension-they are potentially superior to those who just memorise and do well in examinations, without comprehending very much!" (Learning Without Burden, 1993)

Access to or availability of a primary school is found to be often mismatched with enrolment figures. In over 20 per cent of the 441 districts analysed, high access to schooling showed only moderate or low enrolment. (EFA: The Indian Scene, 1993)

*Literacy campaigns create a demand for education*

The experience of the Total Literacy Campaign (TLC) has shown that a successful decentralised and participatory model of adult education can generate a demand for primary education and also enhance enrolment rates. In fact, this demand was found to be greater in 'unexpected' quarters-in rural, educationally back ward and disadvantaged communities.

The rural female literacy rate for the country is 30 per cent (1991 Census), though there are many districts in Rajasthan, Uttar Pradesh, Madhya Pradesh and Bihar where the rate is lower than 10 per cent. However, the TLCs, wherever they have ensured people's participation and mobilization in the true sense of the decentralized model, have shown that more rural women than men come forward as learners and even volunteers. Moreover, there have been a number of diverse positive spin-offs, such as the thrift and credit collectives, women's cooperatives, the anti-arrack movement, etc.

The post-literacy phase of the campaign has been much more challenging but less effective. However, a few districts in different parts of the country have, at the initiative of their own Zilla Saksharata Samitis (ZSS), tried to evolve meaningful convergences and generate developmental programmes that can help sustain literacy in the long run. Examples are, the 'land literacy' programme which interfaces with a watershed management action plan, 'literacy to health', or even 'ecoliteracy'. It is worth emphasising that such convergences can only be suggestive, and specific programmes must necessarily emerge from the districts themselves as a result of the momentum they have generated within their own TLC, instead of being dictated from above. Problems and conflicts have surfaced recently when the predominantly voluntary and participatory spirit behind an effective mobilization has been threatened by a bureaucratic order to the district directing it to dovetail certain developmental programmes to the TLC.

The State Open School has been registered and will soon start functioning. It would be "necessary to plan, in collaboration with the State Resource Centres, the Bharat Gyan Vigyan Samiti, the ZSSs, as well as the National Open School, a programme for meaningful continuing education for neo-literates.1t is important

to ensure that the examination designed to impart class III 'equivalence' to neo-literates is carefully designed and conducted, and that it provides enough motivation to them to continue further.

*Where disparities create further disparity*

More than 60 per cent of the primary schools in India have either only a single teacher or at most two teachers to take care of all five classes (I-V). In Madhya Pradesh, 35 per cent schools have a single teacher and another 34 per cent have only two teachers (Fifth All India Educational Survey, 1991). Ironically, these 'impoverished' schools are located in the rural 'backward' regions serving the more 'deprived' sections of the population.

An exhaustive study regarding the quality of basic education in Madhya Pradesh (Govinda and Varghese 1991) had raised this issue about infrastructural 'disparities' which significantly affect learner achievement. Most under-staffed schools are in rural 'backward' areas, where children actually need more time and attention from the teacher, having no parental support and guidance. In their achievement test they found that schools where teachers were forced to adopt multi grade teaching had significantly lower mean scores of learners as compared to schools having one teacher for every grade.

This shows that the present policy of providing teachers according to the pupil-teacher ratio of 40: 1 needs to be reviewed, so that a differential approach can be posited for the deployment of teachers in backward areas which have fewer children per grade.

Incidentally, it is heartening to see that in Himachal Pradesh there exist primary schools with two teachers (and two rooms with a large verandah) for as few as 15 Children, in small remote habitations, often comprising of isolated cluster of a few families living at high altitudes.

**VOLUNTARY EFFORTS FOR CONTROL OF DIARRHOEA IN DURG .**

**Efforts to control diarrhoea**

A unique experiment to tap the voluntary cultu e (generated by the Literacy Mission) was conducted n the diahorrea-affected blocks of Durg. In the montl s of May and June, when the availability of pure drinki g water gets affected, villagers are forced to depend n unsafe sources of drinking water. Later, due to rain s, water-logging and infection of sources of drinki g water become the cause of diarrhoea and dysentery.

To pre-empt the threat, the District Litera y Committee identified 300 villages that get affected l y water-borne diseases, and took preventive measure s. Scripts were written and 70 artists were trained in o 'kalajathas to use folk mediums and highlight tl e importance of cleanliness, both at the personal a d community levels, among 100,000 villagers of 2 7 villages of 5 blocks. The highlight of this programn e was that the enlightened villagers, voluntary worke s associated with the Literacy Mission, panchay t members, office-bearers of 'Mahila mandal' and fie d level health workers were called on the stage to l e explained the use of CAS, and they were made o take a vow to be readily available in times of a y emergency arising out of these diseases.

**Relief work in the flood-affected villages**

Due to excessive rains, villages located on the ban s of the Shivnath and Kharun rivers and their tributari s were severely affected by cholera, dysente /, diarrhoea, malaria, etc. The Collector, anticipating tl e spread of an epidemic, in co-ordination with tl e District Literacy Mission, constituted 130 'kalajatha s, comprising of voluntary workers, akshar sainiks a d volunteers of the National Service Scheme. Son j- dramas were written in the local dialect, underlini g the problems arising out of floods. Pamphlets we e distributed to spread awareness about cleanliness.

House-to house distribution of chlorine tablets, OR ;, Bleaching powder, was also undertaken . Wells we e cleaned and the sick were dispensed immediate relie :.

These are models of genuine people's action for tl e achievement of their own social objectives, a people s programme In Which the bureaucracy only played a n enabling role, leaving the conception ar d Implementation to the' people. This can be seen as a bonus of the National Literacy Mission': The forces of voluntarism unleashed by the National Litera y Mission have ensured that the well beyond tl e seemingly helpless primer. the three Rs approach, ir beyond what was continuously planned. This examp e lights a great beacon of hope, illuminating a whc e new path which the poor can at least aspire and wo k towards gaining gradual control over the extreme y difficult circumstances of their lives.

As the people discover their hidden such participato y programmes' and through such sensitively nurturin g the Panchayati Raj institutions, the critical imperati e for 'all those who believe in the genuin e empowerment of the people is to seize any suc h challenge which provides an opportunity , and bui d brick by brick a new charter of people's action. For i s ideological sustenance, probably the riche st legitimacy and inspiration would come from Gandhij s social philosophy and vision for other concrete mod el of actions , we can look to examples of genuin e people's governance of their own affairs in tl e organisations of village and tribal communities n ancient and medieval India, in the Chines e organization of rural health delivery systems, in tl e mass literacy campaigns of Latin America and Africa , in the intensely humane organization of soci al services in post-war Vietnam, in any volunta y agencies in Madhya Pradesh and so on ( based on a case study by Zilla Saksharta Samiti, Durg).

*Alternative 'informal' schooling*

The large system of Non-Formal Education (NFE), with over 2.5 lakh centres, has only proved to serve as a poor substitute for a regular education. It exists today as a distinctly second-rate option, more dismal than the rural primary school, for those who actually need more affirmative educational inputs. The NFE had initially been envisaged as a more flexible system but the scheme of implementation has been overly rigid and constrained, in terms of time (two hours a day for only two years), poorly paid and often untrained 'instructors' (not teachers!), and ill equipped 'centres' .

Under the centrally sponsored scheme of NFE there are over 35,000 centres in Madhya Pradesh with roughly 7 lakh children enrolled. A detailed evaluation of the programme undertaken by the Bhopal Regional College of Education (1993) showed that while only half the centres were actually functioning tremendous difficulties are faced by the functionaries. Inadequate or no training for instructors, meager honorariums, inadequate supply of teaching/learning materials, lack of rapport with the community, poor supervision and no proper evaluation were some of the main problems cited. It was also noted that of all the children enrolled the percentage of children who passed the class V examination was only about 5 per cent for boys and 3 per cent for girls.

It was recommended that the honorarium must be raised to Rs. 500 and Rs. 1000 for instructors and supervisors, respectively, and that DIETs must seriously take up the tasks of training and continuous evaluation.

Madhya Pradesh is currently trying to give shape to the

idea of 'Alternative Schooling' (in about 400 schools in DPEP districts), which could present a more flexible, meaningful and joyful option for those who cannot attend regular schools, while maintaining its broad 'equivalence' with the formal school.

It is proposed that a separate system of certification be evolved for Alternative Schooling (AS), which is more in consonance with its special character, and evaluates in a friendly manner children's creative and cognitive abilities in the context of their own life-activities, rather than compel them to regurgitate irrelevant facts. This will lend the AS system a legitimation, and not forcibly dovetail it as a second-rate version of the formal system. .Presently, pupils under NFE, who are expected – to cover the same unsuitable 'formal' curriculum as "a crash course in a shorter time period (two hours a day for only two years), under more constrained conditions, are also finally made to take the same grade V examination, which not many are able to clear.

Indeed, we need to make the regular 'formal' school as flexible and 'informal' or 'child-friendly' as possible, especially in terms of timings, schedules and the environment, if a greater measure of retention is to be achieved. To change the school timings to suit the majority of children of the village, especially girls, is a small gesture, and has been found to make a significant difference to the level of attendance, bur is yet to be implemented.

*The 'barefoot teacher'*

The concept of the 'barefoot teacher' or 'shiksha karmi', in consonance with the notion of a barefoot doctor or paramedic, who helped provide extensive coverage and efficacy to health care and management in China, can be effectively extended to the area of education. Rajasthan has shown that the Shiksha Karmi Programme has worked well, especially in remote rural and tribal areas where regular qualified teachers do not wish to live. Village youth (with a minimum requirement of having passed class VIII for boys and class V for girls) have been carefully selected and intensively trained to teach in the village school. The success of the scheme has reflected in enhanced enrolment rates as well as higher achievement outcomes. Moreover, the accountability of shiksha karmis towards the village, their closer involvement with the community, and their initiation as a friend of the children more than as a 'teacher', have been found to have a marked positive effect.

Madhya Pradesh has made a similar attempt, though here it is limited to ensure 'local' recruitment of teachers, while the qualifications required are the same as for regular teachers. The process of selection needs to be made more thorough and the crucial input of effective training is totally missing. In Rajasthan the selection was done by a separate Shiksha Karmi Board, in collaboration with voluntary groups, in a few blocks at a time. In Madhya Pradesh the Janpad Panchayats are expected to do the recruitment of large numbers all over the state. It may be useful to set up a separate Shiksha Karmi Samiti specially for this purpose, to guide the Janpads and to organise intensive training with suitable resource persons at the district level. In addition, the present exercise is purely ad hoc and proper service rules and regulations would need to be drafted soon.

Incidentally, Madhya Pradesh is in the advantageous position of having a TLC in each of its 45 districts, as well as having completed the Panchayat elections. In addition, it also has a State Mission that coordinates work in all the TLCs as well as in primary education for the District Primary Education Programme (currently extended to 24 districts). It can attempt to meaning fully converge these efforts and plan for a

network of trained 'shiksha karmis', selected from amongst the active literacy activists, who work in tandem with the village education committees, through the Jan Shikshan Nilayams, to help realise the dream of 'Education for All, by All'.

*The question of resources*

Commitment towards human development through education must necessarily be commensurate with the budgetary allocations made for this purpose. While it is true that the percentage of plan expenditure allocated for elementary education (47 per cent of the total Eighth Plan outlay for education) and adult education (9 per cent) have increased significantly, our public expenditure on education is still 3.5 per cent of the GNP, a long way off from the cherished goal of 6 per cent of GNP.

While about half the states of the country allocate a share of between 20-30 per cent of their total budgeted expenditure (revenue) for education, Madhya Pradesh's expenditure on education (by the Education Department) was only 18.2 per cent of the total state budget of about Rs. 6600 crores (1993-94).

Moreover, of the Rs.1200 crores budgeted for education, about 62.5 percent, i.e. about Rs. 752 crores, was spent on elementary education (Budgetary Resources for Education, 1995). However, it is significant to note that most of the expenditure is on salaries (98.5 per cent) and a meager 1.5 per cent of the budget goes towards contingencies and other items.

It also turned out that per capita expenditure on education (1991-92) was Rs. 196, whereas in Punjab it was Rs. 315, in Gujarat Rs. 256 and in Himachal Pradesh Rs. 457. (EFA: A Graphic Presentation, 1993).

It has been estimated that increasing the per learner cost, from the present norm of about Rs. 800 to a sum of Rs. 1,000, can bring a qualitative difference to the learning environment of the child, since this includes the expenses for all basic teaching-learning materials as well as the necessary teacher training and orientation camps required to change the present mode of classroom transaction.

Reallocation of state funds for education is important, especially to ensure that a higher component of 'non salary' funds are available for elementary education. Madhya Pradesh gets a large component of the external funds earmarked for the DPEP (District Primary Education Programme). While it is imperative to keep a strict vigil on the cost-effectiveness and efficient implementation of such externally funded programmes, since these normally attract the wrong kind of sociopolitical pressures, it is equally important to plan long-term state strategies independent of external grants or loans.

The Total Literacy Campaign model has been internationally acknowledged as a remarkable demonstration of how non-financial resources, namely, human resources, can be utilised in a cost-effective way. In fact, one of the salient features of this Campaign model is that the total cost per learner is kept very low, below Rs. 65, and millions of volunteers have been working willingly without any remuneration. However, such a model can serve only specific short-term and time bound programmes which demand a high level of mobilisation. Sustained educational programmes certainly require higher levels of sustained funding.

*A picture begins to emerge...*

We have thus far taken a glimpse at the present situation and suggested some possible directions, while also indicating some initiatives that deserve to be

reconsidered. We have seen that our present system is not designed 'for all' and ultimately caters to a very small percentage of our people. The school, the curriculum, the nature of its transaction, the teacher, the teacher's orientation and also 'status' within the educational administration, the role of the administration as well as the panchayats, resources available for education and the nature of the priority it enjoys-all these are crucial constituents of a complex structure. In addition, how do these relate to the child, her health and chances of survival; the community, its life concerns, its culture, language, values, and its aspirations? Education for All is impossible without sensitively interweaving all these inter-relationships. .

Mechanically enlarging the present system has not taken us very far. We may have opened schools (many without any basic facilities), but nor all children come; or they may come for a start but soon drop out; or they may even stay for a while but not learn very much. The few who manage to pass through the system do so at a heavy 'cost', such as tuitions and other financial inputs, parental support and pressures, mental anxiety, and often loss of their critical abilities, confidence and originality. The system has only become unwieldy, inefficient, and rigid. On the other hand, some carefully planned and sincerely implemented interventions have shown that, given an empathetic educational environment, learners and teachers can share an 'enabling' experience. Further, even the most disadvantaged communities, themselves struggling for survival, demand 'good quality' education for their children and themselves.

Clearly, if education is to move out of its current narrow confines, and meaningfully encompass 'all' our people, especially those who need it most to help them change their lives and somehow 'empower' them in their struggle against deprivation, we would need to basi-cally restructure our system and remould the processes that have continued to give it its present shape.

## THE FRAMEWORK

In this section we shall take a closer look at some essential components of the education system, analyse the inherent constraints and suggest possible initiatives that could help restructure it.

### *The Curriculum*

The curriculum is a problem area. A number of attempts to effect a qualitative change have been made. However, till date these have remained unsatisfactory. Our policies have continued to call for a 'child-centered', joyful and activity-based curriculum. However, in this case, policy has often remained confined to rhetoric. This is because those who ultimately design the curriculum have outdated notions about what constitutes' learning', are themselves far removed from a typical average child of this country, and are too inflexible to learn from village teachers and others who regularly interact with children. The system, at present, is highly monopolistic and rigid, and does not allow space for new ideas or creativity.

The elementary school curriculum has to be conceived as a package. At present the process of curriculum design is mechanical and fragmented. It begins with some 'experts' listing out a syllabus, followed by textbooks normally written by isolated authors, in a brief period of one or two months. As a formality these textbooks may get 'field-tested' by a different set of people from some academic institution, and finally these are thrust upon teachers to 'deliver' to their students. On the contrary, the entire process needs to be carried out as an integrated and participatory package.

The planning of the core syllabus, textbook preparation, its testing in a large sample of children and teachers, its reformulation, subsequent changes in teaching methodology and classroom practices, teacher training to motivate and orient teachers towards the curricular changes, and the design of the evaluation system-all these are necessarily linked components of any meaningful effort towards curriculum renewal.

*Inviting new field-based initiatives*

The Government of Madhya Pradesh has recently taken a laudable decision. Under the DPEP initiative it has decided chat curricular change is to be conducted through intensive field trialling of the entire package of processes. Moreover, it has set up a Technical Resource Support Group to supervise, monitor and advise on technical matters related to curriculum renewal. Madhya Pradesh is also the first state to 'open its doors' to new initiatives in curriculum design. It invited a number of agencies, both governmental and non-governmental, with prior experience in primary education, to take up projects for trialling in different regions of the state.

It is hoped chat this process of inviting different agencies, especially those working amongst rural communities, to contribute their experience and efforts towards curriculum improvement will continue beyond this initial exercise. It is also important to create for a where. Such agencies can meaningfully share their experiences and collectively work towards developing a good curriculum for a given region. It needs to be emphasised that developing a good curriculum is not a one-shot affair-it must incorporate inherent mechanisms which ensure that it receives continuous feedback from teachers and children and continues to evolve.

The Zilla Saksharata Samitis that have run good TICs

An innovative model of curriculum development for science in the middle (upper primary) school, on the lines suggested above, has been adopted by the Hoshangabad Science Teaching Programme, being run in Madhya Pradesh for over twenty years now. The programme currently runs in over 500 schools in 4 districts of the state and is spearheaded by the voluntary organisation Eklavya. The innovative curriculum has been designed collectively by academics from eminent science institutions, activists engaged in developmental work, and school teachers, and includes the entire package-the textbook, teacher training, an activity based 'discovery' learning methodology, mechanisms for regular follow-up and, most importantly, the congruent 'open book' examination system. A basic low-cost kit for experiments, integral to the teaching of the .book, is provided, and intensive teacher training revolves around precisely how every chapter has to be transacted. On broadly similar lines, Eklavya has also developed two other curricula, one being run in primary schools and the other as the social studies programme in selected middle schools. One reason why it was possible to attract the best creative talents from across the country to contribute, in whatever possible manner, in this unique endeavor for curriculum development for rural schools in Madhya Pradesh was the 'openness' of the government, in the first place, in allowing a non-governmental organisation such freedom to innovate.

and have created a demand for education could be invited co work on specific programmes for universalisation of elementary education (DEE). They could also be strengthened academically co rake on the task of developing suitable curricula both for primary schools and 'alternative schools', in collaboration with the DIETs.

*Academic decentralisation*

For the curriculum to be conceived as a package and be made more relevant and closer co the child, the present 'centralised' model of academic and administrative implementation would require restructuring. As has been mentioned earlier, the present practice of assigning textbook writing, syllabus framing or even evaluation, piecemeal, co experts 'distant' from the majority of our population, has resulted in the inability of school education to address their life-concerns and rendered it irrelevant. This remote mode of centralised functioning naturally presents a distant perspective, so that even a concern displayed for the distant 'poor', 'rural' or 'tribal' person tends to assume a contrived and often patronising stance.

Clearly, this task of academic decentralisation is easier stated than done, and, co begin with, requires conviction and clarity of purpose. There have been earlier attempts at institutional 'decentralisation' in education, in the form of setting up new District Institutes of Educational Training (DIETs), but these have only been extensions of the SCER T, continuing co look up co it for detailed directives, and have never been envisaged as truly autonomous decentralised units in themselves.

The proposal for decentralisation of the curriculum somehow tends to raise a plethora of doubts and apprehensions. What does it mean? How can it be effected) How far 'down' can we take the process of decentralisation? Does it mean further decentralisation in terms of having separate curricula for the urban and the rural, the tribal and the non-tribal? Is 'relevance' a limiting notion, effectively confining the 'less exposed' to the same small universe they currently occupy? How do we ensure 'equivalence', and what does equivalence really imply? What will happen to examinations, and would Boards need to be reconstituted? At this point it would suffice co say that a suitable model for academic decentralisation that takes us beyond the macro-level of the state to a more convenient unit offering greater proximity, is feasible and can indeed be worked out within the broad parameters of our given system. Moreover, such models are currently being used in many other countries.

A convenient unit co effect curricular decentralisation in our case would ultimately be the district. Ideally, materials and textbooks must be developed, designed and printed by each district, in conformity with a skeletal 'national core curriculum'. It must be the responsibility of the DIETs, in close collaboration with motivated teachers and other resource persons, co constructively weave in specific cultural themes, socio environmental conditions and life concerns of their own people.

At present, DIETs are academically inadequate, but a hands-on programme co upgrade their capacities and train personnel can be taken up in the coming years. Such capacity building of DIETs and facilitation of decentralisation should be the major future task of the state or national level Institutes. Selected DIETs can be strengthened first to make them serve as effective regional resource centres, in turn strengthening the other DIETs in their neighbourhood. This would imply radically restructuring the SCERT, the Textbook Corporation, the State Institute of Education, ete., not only academically, but also functionally,

managerially and financially as well. In fact, 'strengthening' of state-level institutes must certainly not mean mechanically adding more of the same, as is normally done –more posts, more buildings, more vehicles, more funds-leading to more centralisation of the same 'centralising' ethos.

It must be mentioned here that the decision of the National Literacy Mission in this regard was a landmark one in the history of Indian education. The NLM had allowed each district to prepare its own teaching-learning materials, in whichever language (or languages) they deemed fit, in order to cater to the specific needs of the majority of their learners. There is a restrictive clause in this allowance, where all such material is subject to clearance by a national-level committee. Though not all TLC districts have made use of this flexibility, there are many in different states which have formed district academic teams and developed very effective primers and post-literacy materials. It was important to repose faith in the people of a district that, with perhaps a little initial support from state or national resource persons, they can create their own teaching-learning materials, which could be far better than the ones made by distant experts. Moreover, the entire participatory process was crucial for all concerned-those who were creating the books felt greatly motivated, while the volunteers and learners felt a special sense of belonging when, for the first time, they saw in the books their own stories, puns and jokes, and histories of familiar ordinary people. 'Education for All' would require that this spirit of people's participation is carried over to the process of material preparation and curriculum development for primary schools.

*The textbook*

The existing textbooks are grossly unsuitable for children and are, to a great extent, responsible for their inability to learn. Even a cursory look at these books, especially those meant for grade III and upwards, shows that the print size, the density of the text on each page, the lack of visuals, often the absence of any human agency, the poor quality of whatever illustrations there may be, and, most significantly, the language, are alienating for a young child. A detailed analysis would, of course, show that the content too is highly inappropriate and does not take into account the natural cognitive development of a child. It is crucial to recognise that the process of textbook preparation must be a part of curriculum development, and must be bound by rigorous trialling in the field. Mechanisms for eliciting critical and constructive feedback from children and teachers would have to be worked out collaboratively by teachers and resource persons.

*Evaluation*

An integral and often the most crucial part of curriculum renewal is to change the system of examinations. However innovative the teaching-learning materials and methodology might be, they tend to become ineffective if the pattern of evaluation of children's achievement is not changed in consonance with' the child centered philosophy. If the focus of assessment continues to be on recall and testing of memorised information reproduced in the formalised 'un-childlike' language of the textbook, or mechanically using predetermined algorithms only to produce 'correct' answers, then very little headway is possible in the desired direction. Child-friendly and non-threatening methods of evaluating children's diverse creative talents and critical abilities would have to be evolved. Conscious promotion of original responses, in the children's own style and language, would show that there is a 'premium' on

personal understanding. Designing tests which incorporate solving puzzles, playing a game, expressing visually through drawings, completing a story, performing a directed activity or simple experiment, etc., can make even' an examination an enjoyable experience. Instituting 'open book' examinations at all levels can be a starting point, since the very format compels a change in the nature of the questions posed, Practical and simple systems of continuous evaluation on similar patterns would also be required.

A deeper problem is related to the evaluation of knowledge itself, and what constitutes 'knowledge' worth evaluating. For instance, when quizzed in concrete, familiar , terms about what frogs' eggs look like and where one can look for them, or about the minute differences between a cicada and a cricket, or about how a field is actually prepared before sowing a particular crop and the various implements used, the rural child would be far more knowledgeable, having keenly observed and lived closer to the natural world. Similarly, the tribal child might learn from the treasure of empirical knowledge painstakingly accumulated by her community, details about metal casting, identification of medicinal herbs, or even about the much talked-of 'biodiversity' of her forests-all of which scientists today continue to marvel at, but which receives no legitimacy from school, in terms of being valuable Or 'assessable' in any way.

## *The Teacher*

The 'sutradhaar' or protagonist of the entire educational programme is the teacher, who, ironically, happens to be the least important in terms of having a voice in decision-making. The rural primary school teacher occupies the most unenviable position in the highly hierarchical administrative structure, and is normally expected to beat the burden of the crucial task of 'nation-building' in complete isolation, with hardly any support. She or he also serves as convenient scapegoat-all fingers get pointed at the teacher for all failures of the system. In addition, teaching seems to be only one of the many jobs of the teacher-often the least important as far as the administration is concerned. From the census to elections, from family planning programmes to the photo identity card, the teacher seems to be the sole multipurpose village functionary, expected to perform whatever function the government finds necessary at any given time. This problem becomes acute in the case of village schools which have only a single teacher, or at most two teachers-and almost 70 pet cent of the primary schools in Madhya Pradesh fall under in this category, For days at a stretch the school may remain closed because the teacher has been called for some ocher 'duty', and this tends to further demotivate the children in these areas, who need much more regular attention and extra time.

### *Teacher motivation*

Lack of teacher motivation is a major hurdle in the achievement of desired goals. However, simple interventions which have focused on ensuring an 'empathetic environment' for teachers have found that they do respond favourably and are willing to work much beyond expectation. To begin with, it might take very little to keep the morale of the teacher high-smooch and timely payments of salary, prompt reimbursement of their (traveling or daily allowances (which' they often do not receive for years together), some autonomy in being able to purchase essential materials for teaching, a rational transfer policy which allows them to function unhindered and close to their homes,and,

most importantly, priority accorded to their teaching work by the local administrative officials.

The UNICEF-assisted Teacher Empowerment Project called 'Shikshak Samakhya' is a significant step in this direction. It has served as an initial mobilisation of teachers to enhance their self-esteem and motivation. Further sustained interactions on a planned long-term basis would be required to consolidate the gains from these efforts. The programme has also sought to improve the appearance of schools, to transform them into Bal Mitra Shalas.

The Government of Madhya Pradesh has announced a transfer policy based on teachers' options and domicile, bur we have to see how effectively it will be implemented. Transfers have normally been the cause of much displacement and resentment (besides the 'business' interests they have served), and according to a recent research study, they have resulted in low job satisfaction, low motivation and low performance (Jangira et al, 1994).

Regular meetings at the block level, to discuss academic as well as administrative matters, have been found to serve an important function in relieving teachers of their sense of isolation, also allowing them to share with one another the problems they face in teaching, or the improvisations and innovations they may have tried. Persons from amongst them can be trained to conduct these meetings and the Block Educational Officer (BEO) must playa supportive role. It has been seen that an authoritarian hierarchical environment stifles teachers; it reduces their self-respect and brings early frustration. Therefore, all possible measures need to be taken to alleviate this burden. More autonomy and some avenues for leadership will have to be sought for teachers if we want to keep up their motivation.

*Performance-related incentives*

There are few performance-related rewards and incentives for teachers. There is no appropriate 'dignified' procedure for identifying and selecting good teachers for such rewards. The system of awards at present compels them to 'plead their own case'-to prepare a file of their own achievements, often with photographs or other evidence, and to collect recommendations and congratulatory 'certificates' from politicians or other eminent persons-a process which many find to be cumbersome, expensive and demeaning.

The panchayats and village education committees could be asked to nominate teachers for 'book awards' or even fellowships, which allow them to spend a few weeks with an educationist, at an educational institution or with a voluntary organisation working in a different state. There could also be inter-state teacher exchange camps, where each local teacher hosts a guest teacher from another state, and during the day they collectively teach one another games, activities and innovative classroom practices. Being invited by another state of the country is a great incentive for teachers, giving them a chance to see how others like them are doing in different situations. Trying to make sense of another language only adds to the excitement of being in a foreign land! In any case, teachers who are motivated must periodically be offered 'sammaan' or 'ceremonial respect' by the panchayats in order to make them more visible to the entire community.

*Career advancement*

A suitable promotion policy and opportunities for career advancement for primary school teachers need to be worked out. The present criteria for promotion depend on qualifications and years of

service with no consideration of the teacher's performance. More importantly, a policy with a channel for career advancement needs to be formulated so that good primary teachers can become master trainers, Block Education Officers, members of DIET faculties, and also join the SCERT or the Directorate of Education.

*Representation and recruitment*

Madhya Pradesh has a large cadre of over 1,60,000 primary school teachers, of whom about 35,000 are women (Fifth All India Educational Survey 1991). However, this figure masks the alarmingly disproportionate representation of women in the service. A disaggregated view shows us that of the bulk of the 1,20,000 teachers in rural schools, women happen to constitute less than 10 per cent and the aggregate figure is pushed up only by the higher percentage (50 per cent) in Urban areas. To rectify this, the government has recently announced a recruitment policy reserving 30 per cent of the positions for women teachers. Moreover, there are very few women in the educational administration at the block and district levels and special efforts are needed to identify and train potential women for these positions.

Further disaggregation reveals that of the 1,20,000 rural primary school teachers, only 17,000 and 23,000 belong to scheduled castes and scheduled tribes, respectively, while barely 7 per cent of them are women. Special steps must be taken soon to correct this imbalance; reservations need to be accompanied by special integrated courses to prepare women teachers in tribal areas, akin to those run by the Mahila Shikshan Kendras in some other states.

A pupil-teacher ratio of 40: 1 is the accepted norm for deployment of teachers in primary schools. However, in backward areas where the number ofchildren enrolled is low, most schools invariably end up having only a single or at most two teachers to teach all five grades. The government needs to review this policy and formulate a differential approach for the provision of teachers in such areas, especially in the interest of disadvantaged children.

Where there is an acute shortage of teachers there should also be provision for them to select and appoint on an ad-hoc basis a 'sahyogi' or 'sahyogini'-a youth from the same village-to assist them in classroom management. These could be from amongst the trained literacy volunteers of the village.

*Training and continuous education*

A large segment (roughly 40 per cent) of teachers in rural schools of Madhya Pradesh are untrained, and there are no comprehensive policies to ensure good in-service training for them. As has been mentioned earlier in relation to the 'shiksha karmi', a good intensive training programme can make a significant difference to the performance of a teacher and to learners' achievement. Much needs to be done to improve the quality of our pre-service and in-service trainings. In brief, the DIETs have not been appropriately staffed to provide academic guidance, and do not function autonomously, as had been originally envisaged. There are no faculty members with any experience of teaching at the primary level. Moreover, in-service training programmes are few, generally uninspiring, and take the form of a series of lectures (or occasional demonstrations) delivered in a formal 'top down' fashion. Teachers are rarely encouraged to participate in stimulating discussions conducted democratically; they are not involved in creating materials and activities; and they are not actively guided in evolving strategies that can

transform their interactions with children to usher in a perceptible change in their classrooms.

In the DPEP districts, there is a plan to decentralise training through the Block Resource Centres (BRC) and Cluster Resource Centres (CRC). Clearly, this requires careful identification and selection of suitable personnel, and there is a need to insulate local recruitments from undue political pressures.

There are plans to form a competent state resource group of resource persons and master trainers, from amongst the DIET faculties as well as selected school teachers, which would provide academic leadership in a proposed statewide programme of teacher training throughout the year, The Regional Institute of Education, Eklavya and SCERT are together engaged in this massive endeavor, sponsored by the RGSM. It is hoped that as a result of this programme all teachers will be reached through cluster-level workshops, and trained to adopt learner-centered teaching practices that can address the creative abilities of 'all' children, to ensure that meaningful learning does take place.

The Kerala study on 'School Quality and Student Learning' (Varghese 1994) provides some interesting insights and raises important questions about the nature of teacher training, It shows that even in that exemplary state which has achieved almost universal enrolment where almost all schools have buildings and teachers who attend regularly, where multi-grade teaching is almost non-existent, and where more than half the primary school teachers are women-the level of learning achievement of children drops sharply in class III, and is very poor by the time they complete primary school. The study suggests that teachers are not qualified and trained to teach properly, and that "it is their resistance to change the mode of teaching which is one of the major problems in the Kerala situation", The content of in-service training is weak and outdated, and teachers feel that these programmes do not equip them to do their job satisfactorily.

In addition to restructuring regular in-service programmes, we need to think of ocher flexible arrangements for continuous teacher training and education. Mobile teacher-educators have proved to be effective in some countries, especially to serve schools in remote or tribal areas, whereby a person stays in a village or cluster for a few weeks and conducts regular training sessions, while also guiding teachers in their own schools. This would especially benefit women teachers who are unable to leave their homes to attend trainings organised at the district level.

With regard to women teachers it must be stressed that suitable arrangements for temporary crèches for their infants must be made at every residential training course or workshop, and special care taken to ensure their regular participation.

The system of school inspection has proved to be quite ineffective, especially in providing academic guidance, and has at times even added to the teachers' burden of a 'harassing' hierarchy. It will be worthwhile to consider a policy to convert this large cadre of school inspectors into 'academic counselors', who are trained to provide essential support, especially to those isolated teachers serving in single or two-teacher schools.

The 'government order' is probably the only written material 'that ever reaches a primary school teacher. Important policy decisions and documents about primary education are nor disseminated to those who are the protagonists of the system, It is essential for the DIETs to bring out district-level newsletters and teachers' bulletins with the participation of the teachers themselves.

### *The School*

The present picture of a typical school is that of a gloomy, poorly lit room, crammed with children of

all five grades huddled together, squatting on the bare uneven floor, in passive postures of 'pin-drop' silence. The image is far from attractive—certainly not fit for a child-and the reality is often still harsher.

Madhya Pradesh has over 70,000 primary schools, and 76.5 percent of these are run by the government, through the School Education Department and the Tribal Welfare Department, which runs schools mostly in tribal areas. While 13 percent are nominally under the management of local bodies (through the teachers are government employees), 10 per cent are run by private bodies, some financially aided by the government.

According co available statistics, roughly half the schools are situated in non-pucca structures, and about half the schools (or sections therein) are without a blackboard. In face, Madhya Pradesh ranks among the lowest in terms of provision of blackboards and ocher ancillary facilities in primary schools. Moreover, these aggregate figures rend co mask the real situation in a number of places. A disaggregated view of different districts having schools with pucca buildings, for instance, shows that in Bastar there are a mere 2 per cent, in Sidhi only 11 per cent, in Raigarh 15 per cent, in Shahdol only 27 percent and in Surguja 28 per cent (Fifth and Sixth Education Surveys). Similarly, the situation of schools coping without such basic facilities as a blackboard, chalk, or even drinking wafer, is alarming when viewed in a disaggregated fashion. One can only wonder how children and teachers in Daria rural schools with only 16 per cent of the sections having a usable blackboard, or in Bhind district with only 22 per cent. These are in sharp contrast to Indore district, endowed with 88 per cent pucca schools having 87 per cent sections with usable blackboards, or Gwalior and Jhabua districts with 84 per cent and 79 per cent pucca buildings, respectively.

Operation Blackboard was meant to overcome such gross deficiencies in schools and co provide some basic minimum facilities. However, its centeralised mode of implementation had a limited chance of success, and even when some materials managed co reach the schools, teachers failed co make use of them for lack of proper training, storage space, and their suitable integration with the curriculum. With the present call for decentralisation and increased accountability of the local administration, through village education committees and panchayats, it might become possible to ensure that funds meant to change the dismal shape of schools are indeed appropriately utlised. An initiative taken by Surguja district, for instance, has shown thatthe basic appearance of schools can be improved and brightened up. The 'School Chalo Abhiyan', initiated by the Shiksha Mission through the panchayats co increase enrolment, would need co also focus on transforming the present shape of schools and enlist as much community support as possible.

The uninviting image of the school and poor infrastructural facilities combine with the low demand for education in less developed rural areas, and act as likely disincentives for children there. The lease we could do is co ensure a reasonably pleasant and comfortable place for the child, a structure thatis capable of sustaining a 'learning environment'.

### *A learning environment*

'A school with a learning environment would have co offer more than just the basic facilities-a teacher for every grade, classroom space, chalk, blackboards, durries co sir on, drinking wafer, coilers, etc. It must provide teachers trained to actively engage children, sufficient space for them to perform such learning activities, and some basic

reaching-learning materials, such as paper, colours, card sheets, children's maps, a simple science kit, etc. In addition, it is necessary to have a small library of children's books, which are used as essential complementary materials for language learning, along with appropriate storage facilities.

*A pre-school*

An attached pre-school or 'play school', provided free of cost, must take care of the younger siblings of school going children, especially girls, and provide them with a stimulating environment essential for early learning. It has been seen that pre-school education, especially for disadvantaged children, not only compensates for the lack of such opportunities at home, but also reduces the chances of their dropping our of school early. However, the pre-school should be meant for promoting the child's development through play, stories and other creative activities and not for any 'formal' teaching, as is increasingly being done in private nursery schools.

The District Primary Education Programme (DPEP) has taken such an initiative under the scheme to open Shishu Shiksha Kendras.

*The mid-day meal*

It has been seen that schools covered by the mid-day meal (MOM) programmes in different states have had higher enrolments as well as better nutritional status among children. Tamil Nadu has run an exemplary noon meal scheme, providing hot cooked food to all 74 lakh children studying in classes I-X, at a total cost of about Rs. 185 crores. It has used an extensive network of functionaries and organisation at over 68,000 noon meal centres. It is now recognized that providing essential nutritional support to education is not only important to improve the health status of children in school but is a major incentive in the context of universalisation of education. The Report of the Committee on Mid-Day Meals (1995), set up in April to operationalise the decision of the Government of India to extend the scheme to cover all states, has made very useful recommendations. It has suggested that though the hot meal option would be the most satisfying, states could opt for either pre-cooked meals or for provision of food grains to each child with minimum 80 per cent attendance in school. It has also recommended that blocks under the Employment Assurance Scheme (EAS) and having low female literacy could be _hosen initially to cover children in primary schools, though the programme should ultimately aim to cover all children in elementary schools (classes I-VIII).

From October 2,1995, the Government of Madhya Pradesh will scheme in 297 EAS blocks, though only in 174 tribal blocks will there be provision of hot cooked meals. Since cooking of food requires an additional input (GOI is providing only the food grains), the state has decided to cover the cost of about Rs. 25 crores for only the tribal blocks; providing cooked food to all 297 EAS blocks would have required an input of at least Rs. 40 crores. While it is true that arranging to provide hot cooked meals is a more taxing task and would require an extensive and effective mechanism, it is recommended that the scheme of cooked meals be introduced in all 297 EAS blocks this year, and soon expanded to cover all 479 blocks of the state.

*On monitoring and management*

Statistics on schools and facilities available therein are cited in this section, more to show relative disparities than to present complete indicators of the real situation. Indeed, questions are often raised about the degree of 'reliability' of the vast amount

of data routinely generated around educational statistics. Reliability of data assumes special. Significance in the context of this Report, since it is an effort aimed at an honest understanding of the problems inherent in the present practices of data collection and a sincere attempt to suggest alternative measures. Clearly, detailed disaggregated data which reliably reflect reality in every pocket of this large state would go a long way in ensuring more realistic and effective planning.

Supervision and monitoring of government schools is done entirely by the Assistant District Inspector of Schools (ADIS), who is normally assigned between 80-100 schools in a specified area. The Inspector is expected to regularly visit each school, inspect records, assess the quality of the teaching-learning process, provide necessary guidance to the school, and recommend any action to be taken by the higher authorities. However, remote village schools requiring greater attention are rarely visited by any official. In addition, in tribal areas there is a dual problem owing to the divided responsibility of the Tribal Welfare Department and the Education Department-while maintenance of schools and recruitment of teachers is looked after by the former, academic supervision and monitoring comes under the latter. According to the study done by Govinda and Varghese(l993), "the existing inspectorial arrangements for monitoring school quality of government schools is unable to meet the burgeoning demands of the system. The resources available for this purpose are not commensurate with the work involved. Further, external monitoring from long distances, as it happens with the Departmental Inspection system, can hardly create the necessary environment that can ensure the daily functioning of schools in an efficient manner." It has also been pointed out that the nature of the monitoringmechanisms make a large difference to the functional efficiency of the two sectors-the government and the private.

The network of about 1,500 school inspectors and Block Educational Officers (BEO) spanning the entire state are academically inadequate to perform the crucial task of monitoring the quality of education. While on the one hand there is an urgent need to academically orient and transform inspectors into 'counselors', there is also now a need to reorient BEOs to perform professional managerial roles in close collaboration with the panchayats. For instance, the proposed State Institute for Educational Management and Training (SIEMT) could take up the task of training BEOs in the areas of micro-planning, collation and analysis of educational data at the block level, etc., so that they can in turn provide professional support to the panchayats in their endeavor towards Education for All. This could also help in generating more personal involvement in the process and create more academic interest in educational data, thus ensuring greater reliability.

### *The Community*

The education system has failed to perform satisfactorily because mechanisms of feedback, supervision and monitoring have either not existed or have proved ineffective. One of the largest bodies of government functionaries and structures, it has continued to ingest substantial inputs with very poor output and hardly any public accountability. In fact, the community has remained at the peripheral, receiving end, somehow trying to cope with the burden of failure this system continues to thrust upon it. If children find studies difficult or school uninteresting, if they drop Out, fail, play truant, or resort to 'unfair' means in examinations, it is always they and their parents who are to blame,with no questions asked of the system. To effect a change in the role of the

community is a complex but essential task, especially in the context of EFA.

To make village education committees functional and to place control in the hands of panchayats would be the first crucial step. This must necessarily be followed by extensive mobilisation, through campaigns, conventions, public meetings, media coverage, jathas, ete. For the kind of 'Education for All' we envisage. The community must first have faith in its own learning capabilities, believe that it is the responsibility of the system to impart an enabling education, have faith that the system will now positively address 'all' its children, that the village school can acquire a different look to sustain a learning environment, and, finally, that it must necessarily exercise control over all this.

*Tribal communities*

The question of tribal education assumes special importance in Madhya Pradesh since almost one-fourth of the population is constituted of Scheduled Tribes (over 1.5 crores out of a total of 6.6 crores, according to the 1991 Census). Apart from the inevitable nexus between the existing low demand for education, low infrastructural facilities (including inadequate teachers) in schools, and disadvantaged family backgrounds, another factor which begs attention is the alienating nature of the education imparted to them.

A number of studies have pointed out that the reasons for this alienation can be traced to the following.

· The language of the teacher and the textbook is very different from (and insensitive to) the children's spoken language.

· The curriculum does not address their social and cultural values and may even portray them as 'oddities'.

· · The majority of non-tribal teachers have biased and unsympathetic attitudes, which also reflects their low expectations of tribal children and can negatively influence children's performance.

The special DPEP study in Madhya Pradesh has recommended that local tribal teachers should be appointed in these areas, and that the curriculum needs to be redesigned to make it attractive for tribal children in the context of their own culture while also linking it to their economic activities. This latter can only be strongly reiterated, though it needs to be pointed out that the process of developing a suitable curriculum necessarily requires a sensitive and decentralised approach.

The present practice of allowing the Tribal Welfare Department to run schools in tribal areas needs to be reviewed. Since this department has many other tasks and schemes to implement, it is possible that education gets a low priority. In addition, the 'welfare' approach to education is not responsive to the local and community requirements and responses. The division of responsibilities between the two departments running government schools in tribal areas, in terms of academic and administrative functions, often creates further problems.

The issue of language is most crucial and also quite complicated. While language is central to the tribal identity and most communities would want to preserve it as an integral part of their culture, almost as a measure of their own survival, they ate also acutely aware of the 'market' value of the dominant language. Moreover, tribals who regularly interact with non-tribals are often bilingual. Therefore, it is proposed that education must begin with the mother tongue, in this case the specific tribal dialect, and the Devanagari script (or the prevalent script of that region) be used to write what the child already knows as a spoken language. The child can continue to learn bilingually and gradually, perhaps by the end of the

second year, switch to Hindi (or the dominant regional language). However, it must be noted that the present form of sanskritised Hindi taught to even non-tribal children is alien from the familiar form used in everyday communication, and seriously inhibits their learning capabilities.

*Continuing education for the community: an expanded vision*

The World Declaration on Education for All has laid stress on providing educational opportunities designed to meet the basic learning needs of every citizen-child, youth and adult. It needs more than are-commitment to basic education as it now exists, "an 'expanded vision' that surpasses present resource levels, institutional structures, curricula, and conventional delivery systems, while building on the best in current practices" (Article 2; emphasis as in the original).

As long as we have a limited notion of 'Education for All' as confined only to enrolling children into schools, and of 'mass adult education' as passively receiving patronising messages from above, it would be impossible to move towards a 'learning' environment in society. We require a truly expanded vision, to allow ourselves to dream of all possible scenarios and then proceed to shape them into realisable plans.

For various reasons related to urban life-patterns, the TLCs in urban areas have had limited success. Will it be possible for us to ensure that every factory or industrial institution runs its own adult schools to continuously provide opportunities for its workers or employees to be able to upgrade their educational skills) Or can we have city centres which run short popular courses on art appreciation, architecture or even astronomy? In Bhopal, for instance, there are institutions with tremendous infrastructural capacity that remains unutilised after office hours. Why can we not make use of these to run popular educational and enrichment courses? In rural areas, can we not have creatively designed courses closely related to people's occupations, such as agriculture, animal husbandry, fish farming, leather tanning, etc.? These courses will have to go beyond the simplistic message-driven 'dos and don'ts' to engage in critical thinking about 'how and why', and also suggest how better 'appropriate technologies' could improve production processes. A beginning in this direction could be made by the Technology Missions of the state.

## RECOMMENDATIONS FOR PRIORITY INTERVENTIONS

Clearly, the task is immense and complex, and requires some bold initiatives to reshape the existing system of education. This chapter of the MPHDR has critically looked at some broad areas and suggested possible measures. A few priority interventions are either reiterated or specially highlighted in this concluding section.

- Textbooks should be made free for all children in primary schools, and for girls up to class VIII. All girls up to class VIII must be provided free uniforms.
- School timings must be fixed to suit the majority of children of a locality, especially girls, and the weekly holiday may be rescheduled according to the weekly marker. The zilla panchayats have recently been asked to determine school timings.
- A school health scheme needs to be implemented, which could innovatively try to involve older children to conduct an annual health check-up for the school.The Arunima scheme needs to be reviewed and reactivated,

- The mid-day meal scheme providing cooked meals to all children in primary schools must be introduced in all blocks of the state.
- Schools in tribal and other remote rural areas must receive priority attention in terms of basic infrastructural facilities, It is crucial that teacher deployment in such schools must follow a different approach, not confined to the simple ratio of one teacher to forty students.
- The educational administration must accord top priority to teaching among the various functions expected of a teacher.
- Performance-related criteria for promotion of primary teachers need to be worked out; a channel for career advancement must allow motivated teachers to get selected as head-teachers, BEOs, DIET faculty, SCERT faculty, etc
- A policy needs to be formulated to review the system of school inspection and to convert inspectors or ADIS's into a cadre of 'academic counselors'.
- Careful selection of shiksha karmis' followed by intensive training is essential, and there must be ways to ensure that at least 30 per cent of them are women. Suitable service rules need to be drafted soon.
- Steps should be taken to specially identify, train and ensure that a larger number of women are paced in local educational administrative positions, as BEOs, coordinators of CRCs and BRCs, head-teachers, etc.
- The government must continue to invite more field based initiatives for decentralised curriculum development, including preparation of teaching-learning materials.
- A State Committee for Examination Reform, comprising national resource persons engaged in designing innovative evaluation systems, must be constituted to review the present system of examinations at all levels, and to suggest changes in consonance with an effective pupil-centered philosophy.
- Restructuring and genuine decentralisation of state level institutes, such as the SCERT, the TBC and the SIE, needs to be taken up soon.
- Community control of primary schools and increased accountability of the system must be actively promoted.
- Concerted efforts are required to avoid bureaucratization of TLCs and to ensure the participatory character of the programme through genuine people's committees.
- Sustained post-literacy programmes, such as establishing rural libraries, starring vocation-linked adult education courses, ere, need to be undertaken.
- Most importantly, the government will have to ensure higher allocation of budgeted funds for elementary education, especially the non-salary component, to be able to provide a better quality of education for all.

# Perspectives on Health and Nutrition

Good health should be the basic objective of any development effort. The concept of human development as defined by UNDP, rests on the three pillars of knowledge, health and livelihoods. The notion that people's life chances or their health and longevity are central to their socio-economic status, is now accepted as a necessary component of development and planning. In India, health is increasingly seen as a basic component of social sector support and not merely a department isolated from mainstream planning initiatives.

Health as defined by World Health Organization (WHO), is more than Just the absence of disease. It is a state of complete physical, mental and social well-being. It is a goal in its own right. Health is central to social and economic development. It is a means to achieve and sustain development

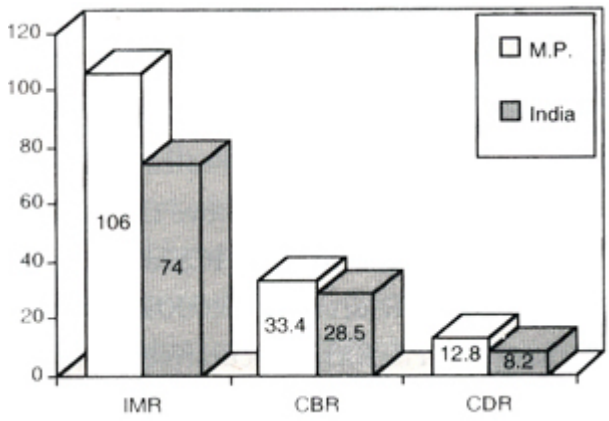
Health and disease are closely related to environmental, social, cultural, political and economic factors. The empowerment of women, for instance, is one of the most important determinants of health. Other determinants of health are tightly interwoven with interactions between individuals and their social, cultural, and political contexts

As a means of achieving sustainable development, and as a goal of development by itself, health assumes a very important role- Society and its institutions must therefore appreciate the responsibility of promotion of health- This implies that promotion of the health of the people is not only the responsibility of the health sector; social and economic policies should be evaluated against their net contribution to human health and well-being. The health of a human being is a measure of happiness, welfare and well-being, and the ability to live a long and disease-free life as a productive member of society The guiding principle of health care should be the elimination of poverty, ignorance and ill health. The Constitution of India directs the state to regard raising the level of nutrition and the improvement of public health as one of its primary duties.

## STATUS OF HEALTH IN MADHYA PRADESH

Madhya Pradesh is quite backward in the field of health, and a look at most health indicators given in Figure 4-1 shows that the performance of the state is well below the Indian average. Along with Uttar Pradesh, Bihar and Rajasthan, Madhya Pradesh accounts for the largest portion of mortality and morbidity of India. The reasons for this backwardness are not difficult to see. Other indicators of social and economic development in these states are also very

**Figure 4-1**
**Comparison of Health indicators of Madhya Pradesh with India**




Source : Sample Registration System

low: they have the poorest literacy rates, lowest school enrollments, highest number of drop-outs, and lowest per capita incomes.

## HEALTH CARE DELIVERY NFRASTRUCTURE

At the state government level, there are separate departments for Public Health and Medical Education. Under these two departments there are the Directorates of Public Health, Medical Education, Indian Systems of Medicine, Danida Assisted Health Care Project, and the Controller of Food and Drugs.

The main responsibility of looking after the public health needs of the people is with the Directorate of Public Health. The main officer of the health system in the district is the Chief Medical and Health Officer(CMHO).

At the village level the multi purpose health worker (MPW) is responsible for the delivery of curative, preventive and promotive health services. There is one male and one female MPW for one sub-health centre (SHC). The nationally accepted norms are for one SHC for a population of3,000 in tribal areas and for a population of 5000 in other areas. For a population of 20,000 in tribal areas, and 30,000 in other areas there is a sector level primary health centre (PHC). Every sector PHC has a doctor, and a male and a female supervisor to supervise the work of the MPWs. At the block level there is a block level primary health centre which has indoor facilities for 6 beds. Above the PHC there is a community health centre (CHC) for a population of 80,000 in tribal areas, and 1,20,000 in other areas. The CHC has greater facilities for curative health, including facilities for specialists. Every district has a district hospital(there are 42 district hospitals in Madhya Pradesh.Though the remaining three,namely Gwalior,

### JAN SWASTHYA RAKSHAK

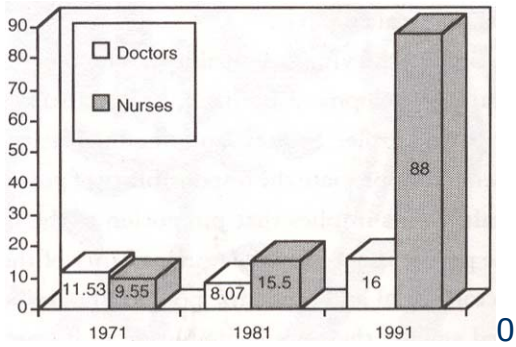
Educated unemployed youth from villages will be trained under TRYSEM in giving curative services for minor illnesses and for the delivery of public health services in villages. These "jan swasthya rakshaks" will be licensed by the Zilla Panchayat for practicing in the villages. They will charge the village community a small amount for these services. This will give the village youth an opportunity for gainful employment, and also make some contribution towards the well-being of their own people. This will also, to an extent, solve the problem of lack of trained manpower in the health sector

**Table 4-1**
**Health Infrastructure in Madhya Pradesh**

| | Institutions required as Per Norms | | | Available at Present | | |
|---|---|---|---|---|---|---|
| | Non-Triba | Triba | Total | Non-Triba | Triba | Total |
| Sub Heal ı Cent e | 5923 | 5383 | 12310 | 5877 | 4858 | 11938 |
| PHC | 1153 | 807 | 1960 | 1058 | 783 | 1841 |
| CHC | 290 | 198 | 488 | 85 | 85 | 190 |

Source: Health Department, Govt. of Madhya Pradesh

**Figure 4-2**
**Health Manpower in Madhya Pradesh**




Number per 100,000 population
Source: Ravi Duggal et al, 'Health Expenditure across States', Economics and Political weekly

Rewa and Raipur, have other hospitals) which are the secondary level referral hospitals, the primary level referral hospitals being the CHCs. The state has 6 medical colleges, and one college of dentistry. All medical colleges have hospitals attached to them. These hospitals are the tertiary level referral hospitals, and provide specialized health care of all kinds.

At the district level, the CMHO is assisted by senior programme officers who look after their individual health programmes. Apart from this, there is a district training center headed by a district training officer, a media wing headed by the district media officer, and the supporting staff for accounts and general administration.

In terms of medical personnel, both doctors, and nurses have increased in the state over the last few years. However, it is still far from satisfactory, and well below the national average. The state government is considering some innovative ideas like the Jan Swasthya Rakshak Scheme of barefoot doctors to solve this problem.

The number of health institutions has increased in the state over the years as can be seen from Table 4-2.

However, if we look at infrastructure for rural areas, the availability of buildings of rural health institutions is still very poor. In terms of buildings required sanctioned centres,74 per cent of sub-health centres still need a building, 55 per cent PHCs and 73 per cent CHCs need a building. Some buildings are being constructed under externally aided projects, like India Population Project-6, and Danida Assisted Health Care Project. The state government has also taken a decision to construct sub-health centre buildings using the funds under Jawahar Rozgar Yojna (JRY).

**TABLE 4-2**
**HEALTH INSTITUTIONS IN MADHYA PRADESH: 1961-1991**

| | Hospitals | | | Beds | | |
|---|---|---|---|---|---|---|
| Year | Rural | Urban | Total | Rural | Urban | Total |
| 1961 | 0.24 | 2.23 | 0.53 | - | - | 30.75 |
| 1965 | 0.13 | 1.86 | 0.40 | - | - | 39.39 |
| 1971 | - | - | 0.40 | - | - | 36.70 |
| 1976 | - | - | 0.43 | - | - | 39.64 |
| 1981 | 0.17 | 1.95 | 0.53 | 3.21 | 146.28 | 32.24 |
| 1986 | 0.13 | 1.89 | 0.51 | 2.99 | 147.18 | 34.59 |
| 1988 | 0.17 | 2.00 | 0.58 | 4.37 | 145.26 | 36.03 |
| 1991 | 0.65 | 0.48 | 0.61 | 43.38 | 21.37 | 38.27 |

Figures given are per 100,000 population.

## IMPORTANT HEALTH CARE ISSUES IN MADHYA PRADESH

In spite of difficulties in socio-economic development, Madhya Pradesh has made some impressive progress in the last few years. The infant mortality rate of the state which was 216 in 1941, has dropped to 106 in 1991 according to the sample registration system (SRS). According to the National Family Health Survey (NFHS) conducted in 1992 the IMR of Madhya Pradesh is only 85.2. The crude birth rate and crude death rate of the state has shown a steady fall over the last three years as shown in Table 4.3 (SRS data). The indicators of maternal and child health have however not shown similar improvement. While the state has made substantial progress in decentralisation, other areas of child survival and safe motherhood have not received equal attention.

It is probably due to this over-emphasis on immunisation at the expense of programmes of control of other equally important diseases that the state has not been able to achieve the desired results in maternal and child health. While vaccine preventable diseases (vpd)

account for only 21 per cent of childhood mortality, 28 per cent of childhood mortality is caused by acute respiratory infections (ARI), and another 28 per cent is caused by diarrhoeal diseases. One must remember that almost half of infant mortality is actually neonatal mortality.

Apart from ARI, a very substantial proportion of mortality among new-born children is directly related to unsafe motherhood practices. The important causes are neonatal tetanus (NNT) which can be prevented by two injections of tetanus toxoid (TT) during pregnancy; low birth weight, which is a direct consequence of poor nutritional status of the mother; neonatal septicemia and NNT which are largely the result of not following aseptic precautions during delivery; and birth injuries and birth asphyxia which can be prevented by good obstetric care. The other major cause of infant mortality is premature delivery.

Good antenatal care, and good obstetric care are also necessary co reduce the maternal mortality rate which is also very high for Madhya Pradesh. The major causes of maternal mortality are given in Figure 4.4. Deaths due co most of these causes are preventable by taking proper precautions in the antenatal, intrapartum and postpartum periods.

***Child Survival***

*Vaccine preventable diseases*

The coverage levels of immunisation in, as reported by the state government health system, have improved significantly over the last few years. For example, OPT achievements went up from below 80 per cent co 96.7 per cent from 1994-95, and measles vaccination from 81.4 per cent to 99.6 per cent in the same period. However, the morbidity and mortality due co vaccine

**TABLE 4-3**
**REDUCTION OF CBR AND CBR IN MADHYA PRADESH (LAST THREE YEARS)**

| | 1991 | 1992 | 1993 |
|---|---|---|---|
| CBR | 35.8 | 34.9 | 33.4 |
| COR | 13.8 | 12.9 | 12.8 |

Source: Sample, Registration Scheme

**Figure 4-3**
**Causes Of Mortality**

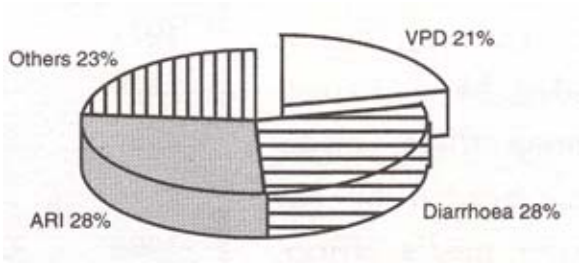
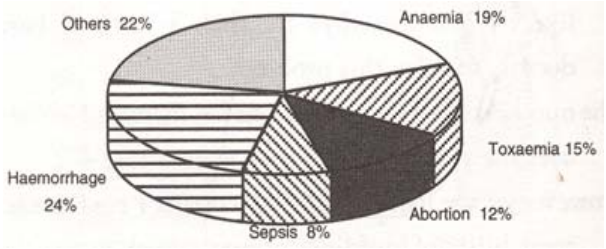



**Figure 4-4**
**Causes of Maternal Mortality**

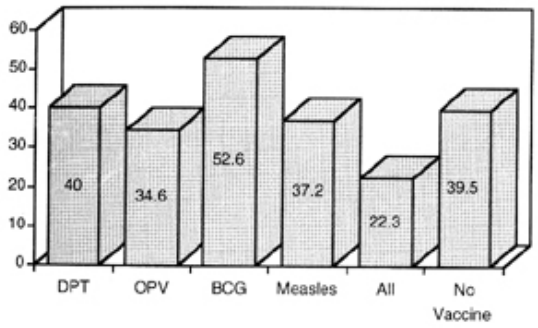



|Source: Registrar General of India

preventable diseases have not reduced proportionately. It is necessary to analyse the reasons for this.

One of the reasons may be higher reporting than actual coverage levels, and this can be seen from the data reported by NFHS on coverage levels for various antigens. This data compares well with the data of coverage evaluation surveys conducted every year by UNICEF. The survey shows that actual coverage is much lower than the reported coverage. However, it is heartening to note that even the coverage evaluation

**Figure 4-5**
**Coverage in Immunisation (by independent evaluation)**



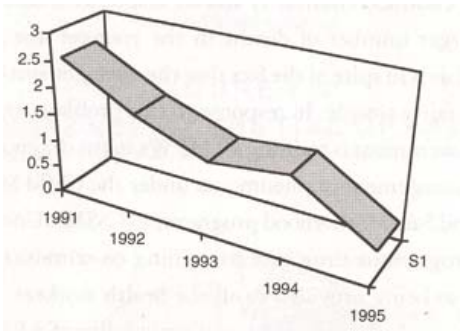

Source: NFHS
Figures given are coverage levels in present for children
below one year who have received all doses
Figures relate to 1982

surveys have shown an improvement in coverage levels in the last few years. Another reason for continued high mortality and morbidity due to VPDs may be the fact that very little immunisation is done during the first half of the year. It is only near the end of the year that the system picks up speed, and high coverage levels are achieved. Thus, children remain unprotected for a significant period of their early life. A third reason may be the existence of low coverage pockets, where the level of immunity remains low and epidemics continue to occur. Whatever be the reason, the goals of elimination of neonatal tetanus, control of measles, and eradication of polio remain a challenge for the state, at the present moment.

## *Control of diarrhoeal diseases*

Diarrhoea is a major cause of childhood mortality and morbidity in the state. According to estimates, almost 28 per cent of childhood mortality is because of diarrhoeal diseases.

**Figure 4-6**
**Case Fatality rate for Diarrhoea**




CFR:Number of deaths per 100 cases
Source: State Health Department
Figures for 1995 and upto july

Every child under 5 suffers from one or two episodes of diarrhoea every year. Non availability of safe drinking water and insanitary conditions are the two major factors responsible for such a high prevalence of diarrhoea. The state government launched the Rajiv Gandhi Mission for the Control of Diarrhoeal Diseases on August 20, 1994. The objectives of the Mission are the reduction in mortality due to diarrhoea by 70 per cent and reduction in cases of diarrhoea by 70 per cent by 2000 AD.

According to the National Family Health Survey (NFHS, 1992) 22.1 per cent children suffering from diarrhoea were given ORS, 16.5 per cent children were given home solutions, and 33.5 percent children were given some form of OR T. Since then there has been significant increase in the use of ORT. As a result of this the case fatality rate has been reduced significantly. The efforts of the Mission are likely to bring down the case fatality rate further.

### *Control of acute respiratory infections*

Acute respiratory infections (ARI) account for 28 per cent of childhood mortality and are responsible for an even larger number of deaths in the younger age group. This is in spite of the fact that the management of ARI is fairly simple. In response to this problem, the state government is training all MPW s in the diagnosis and management of pneumonia under the Child Survival and Safe Motherhood programme (CSSM). Under this programme drug kits containing co-trimoxazole are also being provided to all the health workers.

However, there are problems of availability of ARI medicines 'over the counter' (OTC), and, limitations of coverage of this programme. There is need for focusing on this problem, to ensure availability of drugs and greater coverage through government and private providers.

### *Safe Motherhood*

As seen earlier, the health of the mother and safe delivery, while being important in themselves, are also' very important for the health of the child. Maternal health has not received as much attention in Madhya Pradesh as should be its due. According to NFHS, only one quarter of pregnant women get antenatal check-ups from doctors. Only half of them get tetanus toxoid immunisation, and less than half receive iron folic acid tablets during

**RAJIV GANDHI MISSION FOR**

**THE CONTROL OF DIARRHOEAL DISEASES: STRATEGIES**

*For prevention of cases:*

- Safe drinking water through hand pumps, chlorinating of wells, use of chlorine tablets.
- Promote sanitation-sanitary latrines, drainage, hand-washing, garbage disposal, etc.

*For prevention of deaths:*

- Promote CRT-home-available fluids, ORS, continued feeding, timely referral.
- Exclusive breast feeding.
- Rational diarrhoea treatment
- Prevention and control of epidemics.

**RATH YATRA WITH A DIFFERENCE**

The Rajiv Gandhi Mission for Control of Diarrhoeal Diseases launched a Rath Yatra in April-June 1995. Raths carrying video equipment and folk artists were flagged off by the Chief Minister. These raths went to all the block headquarters and many other large villages of the state. The raths carried the message of sanitation, safe drinking water and ORT. During this period, jathas of volunteers traveled on foot to all the gram panchayats of the state, taking with them the message of prevention and control of diarrhoea to every corner of the state.

pregnancy. This is one of the main reasons for a large proportion of babies being born with low birth weight, and with deficiencies of various kinds. This is also the reason for such a large number of neonatal tetanus cases in Madhya Pradesh.

A look at Figure 4-8 will show that professional help is not available to most women at the time of delivery. While only 14 per cent deliveries are attended by doctors, in 71 per cent deliveries no trained person is available at the time of delivery. The NFHS estimated that around 83 per cent of all deliveries took place at home, as against only 11.5 per cent in the public sector.

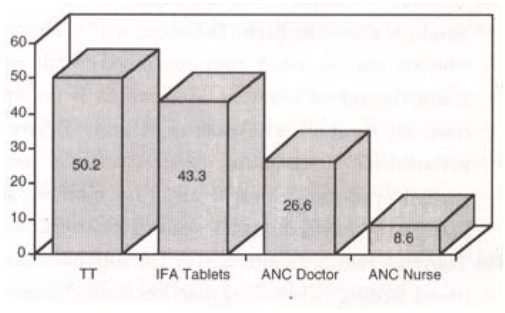
The Government of Madhya Pradesh has started a scheme of training traditional dais to solve this problem. The aim is to make at least one trained dai available in every village. The salient features of the dai training scheme are given in the box below.

### *Nutrition*

#### *Protein energy malnutrition (PEM)*

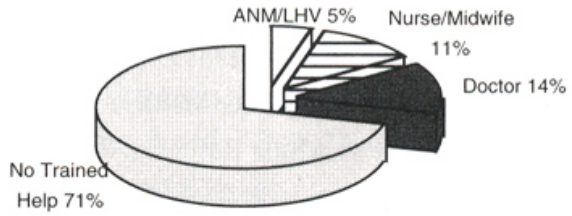
Madhya Pradesh has a severe problem of protein energy malnutrition. Though there has been a reduction in their numbers over the last few years, the number of malnourished children in Madhya Pradesh still remains despairingly high. It is a matter of great concern that more than 50% percent of the state's children are malnourished.

**Figure 4-7**
**Antenatal Care**




Source:NFHS.
Figures given are percentage of pregnant women who received this services

**Figure 4-8**
**Assistance at the time of Labour**




Source:NFHS.

**DAI TRAINING IN MADHYA PRADESH**

- One day to be trained for every village.
- Training will be of one month duration.
- Training in good hospitals under specialist supervision.
- Emphasis on practical training, hands-on experience.
- Stipend from TRYSEM and CSSM combined.
- Reporting fees to be given to trained dais.

The number of children who are born with low birth weight is also quite high. The percentage of children who are malnourished rises continuously till they attain the age of one year, after which it becomes relatively constant. The cause of this high degree of malnutrition in children, therefore, can be traced partly to poor nutritional levels of the mothers, and partly to breast-feeding and weaning practices.

The National Family Health Survey has summarised the breast-feeding and weaning practices of the children in Madhya Pradesh. While the good practice of continuing breast-feeding the child till almost two years of age is widely prevalent, most of the children are not given supplementary solid mushy food along with breastfeed till a much later age. This is the most important reason for the increase in the number of malnourished children with the increase in age. Another area of concern is the relatively low level of exclusively breast feeding for the first three months, and the percentage of mothers giving bottle feeds being higher than one would expect in a state like Madhya Pradesh.

There are many factors which influence the level of nutrition of the people of the state. The most important factors are summarised in the chart.

Most of the factors described in the chart are self explanatory. Availability of food however, needs explanation.

**Figure 4-9**
**Prevalence of underweight:**
Children below 4 years
Source:NNMB 1974-90, NFHS 1992-93

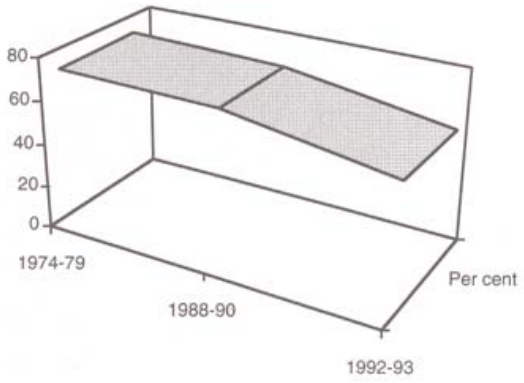
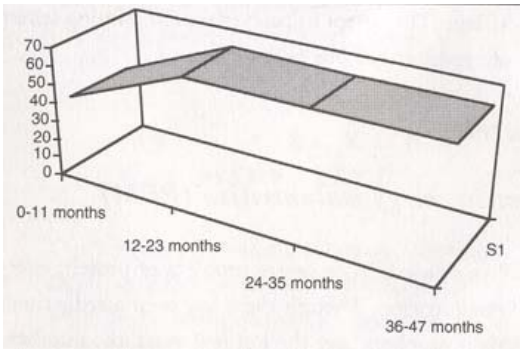



**Figure 4-10**
**Prevalence of underweight:**
Among Children by age in months

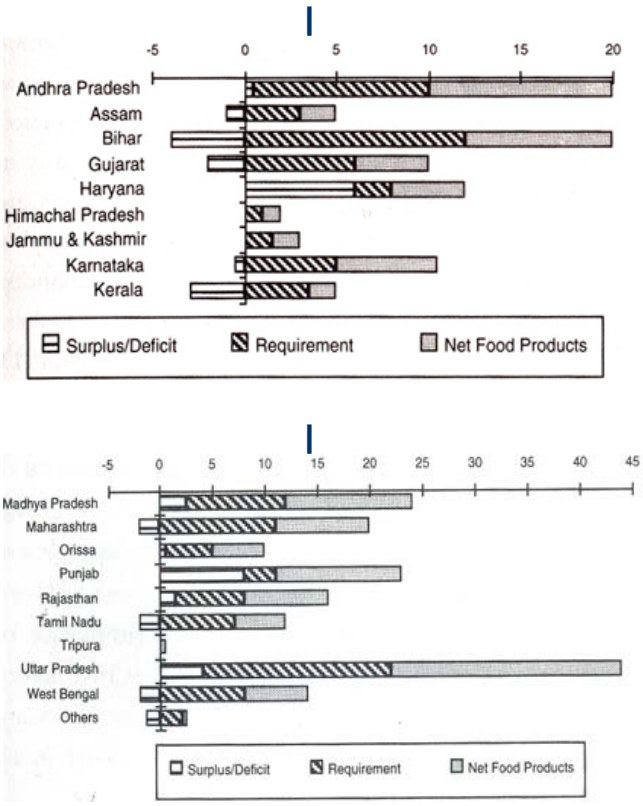



Source:NNMB 1974-90, NFHS 1992-93

**FACTORS INFLUENCING NUTRITION**

- Availability of food
- Poverty
- Drought
- Maternal empowerment and education
- Breast-feeding and weaning practices
- Vicious circle of low nutrition and child-bearing
- Special problems of vulnerable groups like the landless, slum dwellers and tribals

**Figure 4-11**
**Food grain Availability in States**
(Taken from State of India's Health, VHAI)




Source: Compiled from ICMR data()1986
in million tonnes

As can be seen from Figure 4-11, showing food grain availability, there is no direct correlation between food production and its availability to the poor. Though Madhya Pradesh has surplus food production, it also has a very large population suffering from PEM. This fact is also borne out from the prevalence of PEM in the country in spite of large buffer stocks of food. The Mid-Day Meal Programme which is to be launched from October 2, 1995, in the state is an effort to correct this imbalance.

Besides the Mid-Day Meal Programme, the state government runs other supplementary nutrition programmes like the Integrated Child Development Services (I CDS) and the Special Nutrition Programme (SNP) in certain urban slums.

The effect of empowerment through education of women also deserves a little elaboration. When women are educated, they can appreciate better the importance of nutrition, and contribute directly to the level of nutritious food in daily intakes of the family. Education will also enable them to utilise the indigenous knowledge that many of them, especially women of the tribes of Madhya Pradesh, possess on nutrition and nutritious foods, in combination with modern knowledge. Similarly when women earn, they are known to spend more on nutrition of the family, and can even influence decisions in the family, ensuring greater and more knowledgeable spending on nutrition.

*Micronutrient malnutrition*

The issue of micronutrient malnutrition is equally important. The three most important micronutrients are iron, vitamin A and iodine. Though data is not available for a proper assessment on the prevalence of iron and vitamin A deficiency in the state, it is known that the deficiency of both these micronutrients is widely prevalent. To counter this, health programmes give iron folic acid tablets to pregnant women, and vitamin A to children at the age of 9 months with the measles vaccination, and thereafter at six-monthly intervals till the age of two years. However the coverage levels are quite low, and efforts need to be intensified to attain universal coverage.

Iodine deficiency has received greater attention in the state. The state government launched the Rajiv Gandhi Mission for the Elimination of Iodine

Deficiency Disorders on August 20, 1994. The Mission has conducted a survey of the entire state. According to this survey, iodine deficiency is prevalent in the entire state, but it is significantly higher in the eastern part of the state and in the two western districts of Dhar and Jhabua. The goals of this Mission are to eliminate iodine deficiency in the state by 1997, ensure availability of iodised salt in all villages by mid-1995, ensure that by 1997 all salt sold in the state is iodised, i.e. 90 per cent of salt samples show> 15 ppm iodine. The Mission has met with considerable success.

**RAJIV GANDHI MISSION FOR TH.E ELIMINATION OF IODINE DEFICIENCY DISORDERS**

- All salt traders of the state have pledged not to sell non-iodised salt.
- Major awareness campaign through Panchayati Raj institutions, and NGOs.
- Involvement of Literacy Mission and Education Department.
- More than one lakh salt samples taken every month.
- Commitment to achieve the goal of the Mission I y January 26, 1996, before the stipulated goal of achieving by 1997.

### *Other Diseases*

Other important diseases for Madhya Pradesh are malaria, leprosy, tuberculosis, and blindness due to cataract. According to the NFHS 1992,33.5 percent of people suffer from partial blindness, and 47.3 per cent suffered from malaria in the past three months.

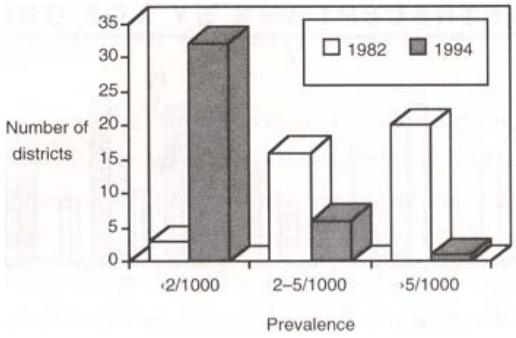
The state has a substantial portion of the total malaria load of the country, with over 10 per cent of malaria cases in India from the state. Moreover, Madhya Pradesh has about 12 per cent of the total Plasmodium falciParium (Pf) cases of the country, a particularly severe form of malaria. Malaria accounts for a substantial proportion of morbidity and mortality in the state, especially in the densely forested tribal areas. Special efforts are needed to control this menace. What makes control of malaria difficult is the fact that the state is surrounded by high prevalence states on all sides-Maharashtra (13 per cent of all malaria cases in India), Gujarat (11 per cent), Rajasthan (12 per cent), and Orissa (15 per cent of all malaria cases in India).

The state has made remarkable progress in the control of leprosy. The number of districts with a high prevalence of leprosy has been continuously going down. The overall prevalence of leprosy has also been reduced to a large extent. However the goal of elimination of leprosy is still distant. The prevalence of leprosy is very high in the districts of Chhattisgarh region. The state government has launched multi-drug therapy in all the districts to attack this problem.

The National Tuberculosis Control Programme suffers from financial constraints, and the resources for drugs, and x-rays are highly inadequate. Coupled with this is the problem of low patient compliance. The problem of tuberculosis deserves far greater attention by the state than is being accorded at present.

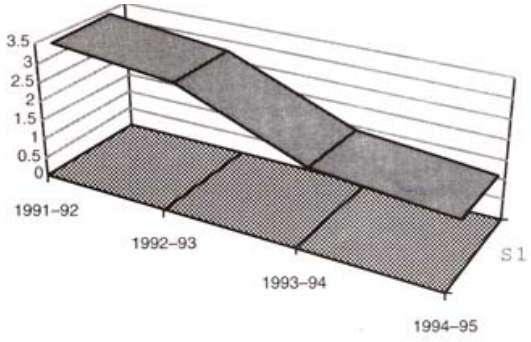
The National Blindness Control Programme has been launched in the state with the help of the World Bank. The state is attempting to clear all the backlog of cataract operations within the project period of years. Under the project, a large infrastructure of operation rooms and eye beds will be created in the state.

**Figure 4-12**
**Prevalence of Leprosy**




Source: State Government Health Department

**Figure 4-13**
**Prevalence of Leprosy**




Source: State Government Health Department

*Family Planning*

Madhya Pradesh has a very high birth and fertility rate. The crude birth rate of Madhya Pradesh according to the Sample Registration System is now 33.4. The fertility rate, according to NFHS, for the three-year period prior to the survey in 1992-93 is 3.9.

High population growth throws developmental efforts out of gear. The state has been making steady progress towards a high couple protection rate, and a low birth rate. It can be seen from Figure 4-14 (hat the couple protection rate has increased to 49. It can also be seen that this increase in (he couple protection rate has been mainly due to an increase in the use of spacing methods. This has also resulted in a reduction in CBR which, in the corresponding period, has come down from 35.8 in 1991 to 33.4 in 1993.

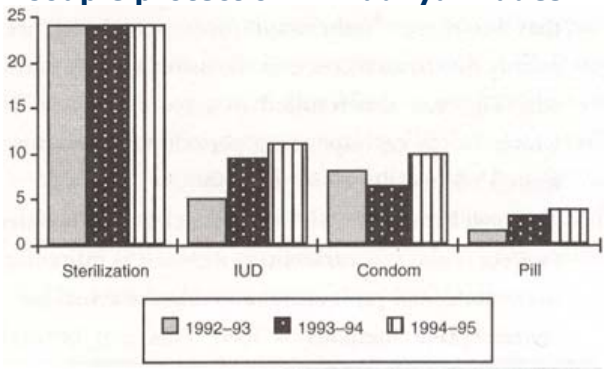
The National Family Health Survey has clearly shown that awareness about contraceptive methods is quite high in the state, and yet it also shows that (he actual use of contraceptive methods is low. This gap between awareness and actual use can be due to attitudinal problems, or due to a poor service delivery mechanism.

Poor service delivery can be seen from Figure 4-15. This graph shows that the only family planning service, which is delivered mainly by the government system, is sterilisation. It is the private system, which takes care of the needs of spacing methods of the community. It points to the urgent need to reorient the government system towards the family planning needs of the community, and place more emphasis on spacing methods.

It can be seen from Figure 4-16 that though women with less number of children either do not want children or at lease do not want them for the next two years, yet they are not using contraceptives. This is clearly a failure of the system to deliver much needed services to the beneficiaries.

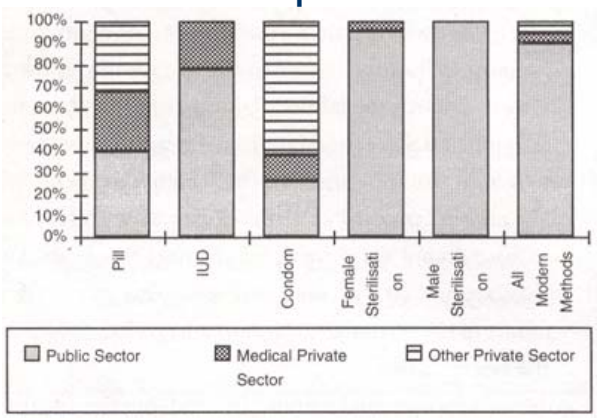
Similar conclusions can be drawn by studying the desire of women for more children, and actual use of contraceptives by them, by age group. It can be seen that women of lower age groups do not immediately desire children, and yet do not use contraceptives. If this data is analysed together with the fact that the public sector does not usually provide family planning services relating to spacing methods, the cause of high fertility will be easily understood.

**Figure 4-14**
**Couple protection in Madhya Pradesh**




Source: State Government Health Department

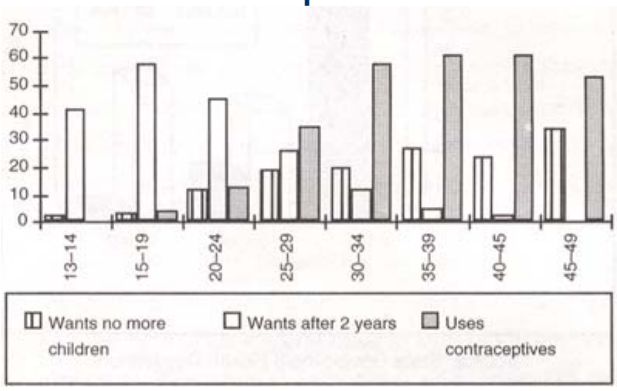
**Figure 4-15**
**Source of Contraceptive Methods**



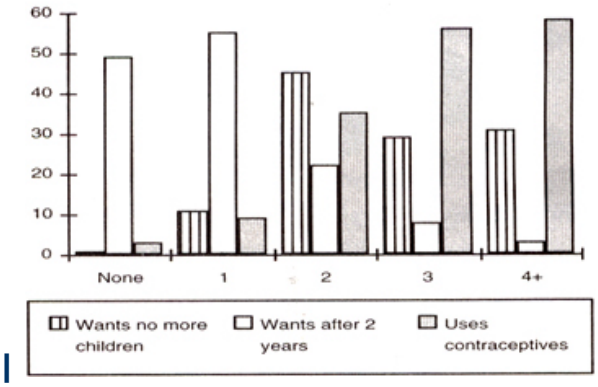

Source:NFHS
Figures given are percentages

In short we need to go beyond talking about increasing awareness. Now is the need to change attitudes. The public sector should start placing more emphasis on spacing methods, and should provide good quality

**Figure 4-16**
**COMPARISION OF DESIRE FOR HAVING CHILDREN WITH USE OF CONTRACEPTIVES BY AGE GROUP**




**Comparison of desire for having children with use of Contraceptives by number of living children**




Source:NFHS
Figures given are percentages

## GOVERNMENT INITIATIVES

Many new initiatives have been taken by the state government to increase the efficiency of the delivery mechanisms in the health sector in the last

three years, which have resulted in improved functioning of the sector. Some of these new initiatives are as follows.

### *Village Health Committees*

Village health committees have been constituted in each village. One couple who is interested in health activities, and is acceptable to the people of the village is selected from a neighbourhood of every 15-20 households, and these couples constitute the village health committee. The village health committee is responsible for the information, education and communication activities in the village. The committee also motivates the villagers to accept the relevant state sponsored programmes of the department. The committee is a lively link between the health worker and the village community.

**VILLAGE HEALTH C0MMITTEES**

- One VHC in each of the 71 ,000 villages of state
- Couples are made members of VHC to focus on the family
- One couple for a neighbourhood of 15-20 house holds
- Selection based on choice of the community,
- Panchayat, members made members of VHC
- VHCs actively involved in solving health problems

### *Training and Supervision*

Training of health workers has been an important activity in the last few years. It has resulted in capacity building in the government for communication, supervision, monitoring, motivation, etc. During the last 3 years, all health workers have been trained under IPP6, and are now being trained under the CSSM programme. An induction course has been started for newly appointed doctors, so that they can be trained in the national programmes and their role in the department. Supervisory capability has been definitely improved at all levels by training. The emphasis laid on the supervisory role of sector doctors has resulted in better supervision and improved performance.

### *Monitoring*

Improvement in monitoring has resulted in timely problem solving and better performance. The reporting system also appears to have improved considerably, Regular meetings are held every month at sector, block, district, division and state level. All programmes are regularly monitored in these meetings. The Department of Public Health brings out a monthly health bulletin regularly giving the progress in all programmes. Monitoring is followed by feedback to the lower levels about the areas where improvement is desired with constructive suggestions about how to bring about this change.

## PRIVATE AND ALTERNATE SYSTEMS OF MEDICINE

A survey conducted by Mode Research in Madhya Pradesh in 1993, showed that of the respondents studied, 19 per cent used only government institutions for health care and 36 per cent used government as well as private institutions. Though the majority use government institutions, a large number of 44 per cent "always go to a private doctor". This clearly shows the importance of private medical care in the state and serves as a reminder that any attempt to better health needs to

involve the government and the private medical care community equally. Greater involvement of private practitioners in meeting the health needs of the people, to the extent possible, is something that needs to be explored further by the government.

Apart from the allopathic system of medicine there are the Indian systems of medicine (such as ayurveda, and unani), and the homeopathic system of medicine. The former category of medicines has a wide network of practitioners all over the state and provides reliable, effective, and cheaper alternate cures for many illnesses. Ayurveda, followed by unani and homeopathy, are popular in the state, and their relatively cheaper medicines and cures, the availability of practitioners, and effectiveness in dealing with some chronic diseases like asthma, piles, liver disorders, asytis, paralytic group of diseases, respiratory diseases, ete., have led to a good demand base.

Under the Indian systems of medicines, the related health directorate covers ayurveda, unani, homeopathy and naturopathy. In spite of the shortage of funds and proper infrastructure in the state, there is a substantial demand for the ayurvedic system all over the state and for unani in certain areas.

Due to non-availability of funds, ayurveda hospitals are unable to provide the prescribed diet to indoor patients and medicines to outdoor patients (a sum of Rs. 8 per indoor patient and Re. 0.50 per outdoor patient are sanctioned by the Health Department). Doctors prescribe medicines, but no medicines have been bought for over four years. There is no laboratory or research center for these systems in the state.

There is a case for encouraging research, development and increased coverage of Indian systems of medicine in view of their cost-effectiveness for the poor, particularly where these systems are shown to provide effective treatments.

## *PROBLEMS OF THE HEALTH DELIVERY SYSTEMS*

The problems of the government health system may be grouped under two broad headings:

- Financial problems
- Managerial problems
-

### *Financial Problems*

The table below gives the proportion of the budget of the Health Department in the state budget.

**Rs. In lakhs**

| Year | State Budget | Health Budget | Per cent |
|---|---|---|---|
| 1990-91 | 73350 6 | 3141 5 | 4.28 % |
| 1991-92 | 79555 7 | 3524 6 | 4.43 % |
| 1992-93 | 87629 6 | 3811 4 | 4.35 % |
| 1993-94 | 91874 5 | 4060 3 | 4.42 % |

Source: Department of Health, Government of Madhya Pradesh

It is clear from the table that on an average the health budget is just about 4.2 per cent of the state budget. Moreover, since almost 35 per cent of the money in the health budget comes from Government of India, the Health Department gets only about 3 per cent of the state's resources. This is also true of the Eighth Plan in general. The allocation for the Health Department is only 2.69 per cent of the total Eighth Plan for the state.

More disturbing is the fact that the revenue expenditure on health as a percentage of total

expenditure by the state has been continuously decreasing. This decrease in the availability of money for health and related activities has had a diverse effect on the delivery of health services in the state.

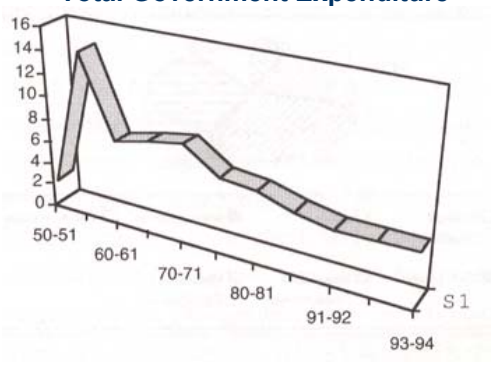
The per capita expenditure on health is represented in Figure 4-18. It can be seen that the per capita expenditure on health in Madhya Pradesh is one of the lowest in the country, being higher than only Bihar and Uttar Pradesh. This clearly shows that health has not received the attention due to this important sector by planners. If we want rapid improvement in the health system, increase in resource allocation will be immediately necessary.

Within the resources available in the health budget, very little money is used for the problems which have been outlined above as the most important public health problems of our state. Only 0.57 per cent expenditure is on maternal and child health, and 9.34 per cent on national disease programmes. Greater emphasis and resources need to be devoted to delivery of primary health care, rather than secondary, tertiary and curative health services.

This resource constraint has resulted in a situation where the government is not in a position to propose any new scheme. Even the continuation of old schemes is difficult. It is difficult to properly maintain the existing health infrastructure and to deliver services effectively, due to fiscal constraints.

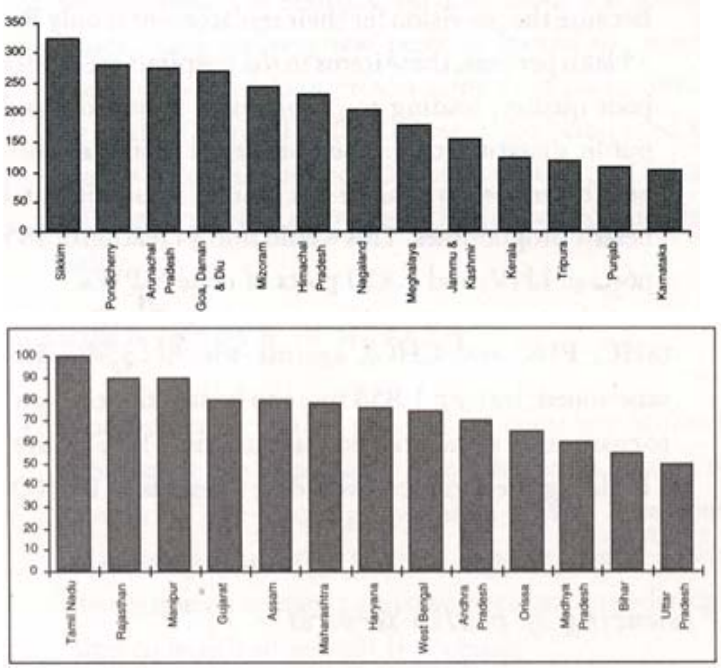
For example, only Re. 0.50 is spent per outdoor patient and Rs. 2.50 per indoor patient on medicines, and this needs to be more than doubled. To provide at least one ambulance for each of the 42 district hospitals, 77 civil hospitals, 190 CHCs, and 269 block PHCs, 414 new ambulances are needed. For purchasing new equipment and maintaining existing equipment and buildings, an annual cost of Rs. 6.75 crore is necessary. The maintenance and replacement of furniture, beds, linen in the.

**Figure 4-17**
**Revenue Expenditure on Health as a Percentage of Total Government Expenditure**



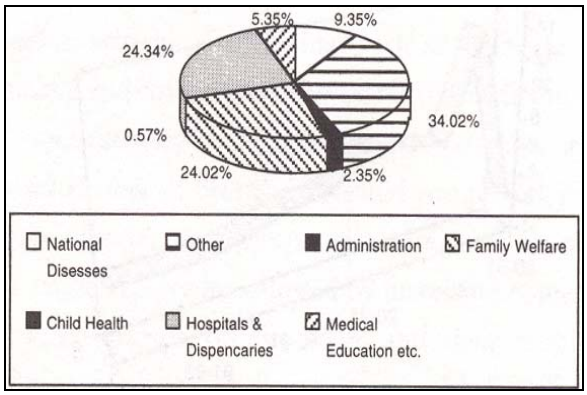

Source: Health expenditure across States, Part I, Economic and Political weekly, April 15 1995. Ravi Duggal et al.
Figures given for 1993-94 are revised estimates

**Figure 4-18**
**Per capita Expenditure on Health**




Source: Health expenditure across States, Part I, Economic and Political weekly, April 15 1995. Ravi Duggal et al. Figures given for 1993-94 are revised estimates

**Figure 4-19**
**EXPENDITURE ON HEALTH UNDER DIFFERENT HEADS**
**(As a percentage of the total health expenditure)**




Source: Health expenditure across States, Part I, Economic and Political weekly, April 15 1995. Ravi Duggal et al.
Figures given for 1993-94 are revised estimates. Figures are in percentages.

hospitals according to the prescribed replacement schedule requires Rs. 7.50 crore every year Because the provision for their replacement is only Rs. 75 lakh per year, these items in the hospitals are of very poor quality, leading to problems of sanitation, and public dissatisfaction. The state needs to staff all sub health centres, to achieve the desired results in rural health programmes. This would imply creation of 485 posts of LHV, and 1,820 posts of male MPWs.

As per norms, the state needs 15,821 health institutions (SHC, PHC and CHC)', against which 13,967 are sanctioned, leaving 1,854 more to be sanctioned. Just to ensure that all sanctioned institutions (13,967) have a building the total cost would be in excess of Rs 500 crore.

*Financing of health services*

If we put together all the additional funds needed for minimal maintenance, new equipment and buildings and consumables as outlined above, the amount comes to roughly Rs. 30 crore annually. Additional funds needed for basic minimum capital infrastructure amounts to over Rs. 500 crore. Comparing these figures with the state budget, we see that the recurring annual funds needed amount to only 0.34 per cent of state's budget for 1992-93 (7.9 per cent of health budget). This is an achievable figure. The funds required for capital infrastructure amount to 5.7 per cent of the state's budget 0992-93), and are more than the total annual health budget. Substantial additional capital outlays will be needed for capital infrastructure.

While there is no doubt that state investment in health care needs to be stepped up in order to mobilise such large volume of funds, we also need to look at sources outside the government. This is also necessary for the financial sustainability of programmes, to ensure quality of delivery, and to ensure that investments made in the past do not fall apart due to lack of resources.

Cost recovery is an important issue that is related to the sustainability of public health programmes. Cost recovery is neither desirable nor possible where it has the effect of limiting the access of the poor to health services, but it must be explored in better-off areas, where there is a willingness to pay for reliable services. Additionally, in rural areas, even poor rural patients may regard it more desirable to have access to regular and efficient health care services close by, even if these services are partially funded by fees from the users, rather than to have to travel miles to get basic health care, especially where travel and physical costs are prohibitive.

The options are community participation in managing and funding health services in a participatory manner, even if contributions are small; encouraging private investment in health, both private medical facilities and services and private investment in government and public facilities and

services; and increased state investments in basic health. Government needs co concentrate resources on aspects of health which will not find private investment, and which will directly and particularly benefit the poor.

Government health expenditure, planning and programmes should also take a look at possible reduction in expenditure on tertiary facilities, and reorienting expenditure cowards primary and preventive health care, There is a need for encouraging private investment in areas outside essential services.

The health system must also seriously examine and act on all possibilities of promoting alternate Indian systems of medicine which provide accessible and cheaper forms of health care and have a base of practitioners and traditions in all pares of the state. Promoting such alternate systems will also ease the pressure on the formal health system, and costs for the government as well as the people.

### *Managerial Problems*

Certain management-related issues of the government health system have affected programme delivery in health. These are discussed below.

- *Doctors.* There are no doctors in 375 of the 1,841 state PHCs, whereas many urban hospitals have surplus doctors. Apart from this, approximately 50 doctors are on unauthorized leave at any given time. This has resulted in poor quality of services in the rural health institutions, An attempt was made by the state in 1993 co remedy the situation to a certain extent by posting doctors in remote single-doctor PHCs, and insisting that they join in their place of posting. However the situation has worsened in the last year.

- *Health Workers.* There are complaints that many health workers do not stay at their headquarters. Though, in many cases, these complaints are true, many health workers face genuine difficulty in staying in their headquarters, as there are no houses for them. Most of these health workers are women, many of whom are unmarried young women, and they find it difficult to stay in their headquarters under these circumstances.

- *Decentralisation. A major malaise* of the health set-up is over-centralisation of authority. All the authority in a district is centralised in the Chief Medical and Health Officer. This results in the CMHO becoming overloaded with unproductive work, and a lack of initiative in other officers. Delegation of sufficient financial and administrative authority co block level officers and to hospital superintendents is needed co improve delivery of services to the people.

- *Departmental reorganisation.* The department needs rationalisation and reorganisation of posts. This is necessary for better delivery of services and better cadre management. For example, there are many subjects in which there are very few posts of specialists, while there is the need for a greater number of posts. Similarly, the District Health Officer is not being used as well as he/she should be the post of a Block Medical Officer is needed to improve health services in the field.

## GENDER ISSUES IN HEALTH

The discussion on health will not be complete without discussing the importance of gender issues related to health. While health problems of women have been discussed in the earlier sections, a more comprehensive discussion on women's empowerment and its relationship to health in general is necessary.

In general it can be said that women's empowerment is not only helpful to the improvement of the health status of the community, but is an absolute prerequisite for it. A comparison between the index of women's advancement (WDI) (calculated by adding percentage of female literacy, percentage of women gainfully employed, and percentage of unmarried women in the age group 15-19), and infant mortality rates of districts of Madhya Pradesh in spite of some fluctuations shows the general trend is that where ever the index of women advancement is low, the IMR is high.

This becomes clearer when we compare the districts at either end of the spectrum. Thus, Morena, Bhind and Shivpuri, which have a very low index of maternal development, have a high IMR. On the other hand, Indore, Bhopal and Durg have a high index of maternal development and a low IMR.

This correlation can be explained on the basis of many hypothesis. The more important ones are:

1. Better education leading to better marriage, and better Incomes.
2. Better education leading to better nutrition and health related knowledge, and better care during sickness.
3. Greater role in decision-making in the household by women.
4. Higher age of marriage, better spacing of children, better spacing of available resources, and services.

Whatever be the reason it cannot be denied that empowerment of women will lead to better health for the community.

Traditionally health has generally been considered the responsibility of women. Thus almost 80 per cent sterilisation operations are performed on women; it is women who take care of the child during illness and brings it to the health care institution for immunisation, etc.; women are responsible for the drinking water and nutrition needs of the family..

**KAYAKALP**

Maharaja Yashvantrao Holkar Hospital is one of the biggest health institutions in the state of Madhya Pradesh located at Indore, serving Indore and neighbouring districts and bordering states. Established in 1959, the institution got into a poor state, and the condition of the building severely deteriorated. Private wards were occupied by the doctors and other hospital staff. The institution became the shelter home for homeless people beside population of rodents, bed-bugs and mosquitoes. Wastage also piled up wherever it found space.

The condition of the hospital became a matter of concern when the plague hit Gujarat. The need for immediate and complete renovation of the hospital was felt. As the funds from the state government departments were getting delayed, the district administration undertook the responsibility through the District Red Cross Society, and made an open appeal for people's participation and public donations. A war strategy was designed and a steering committee with various other coordinating committees were formed.

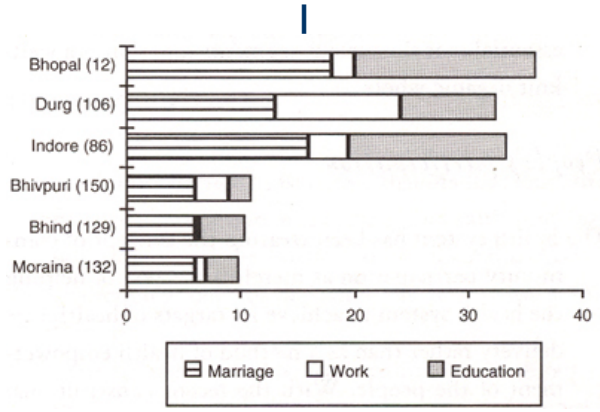
A decision to collect nominal registration fees from the patients was taken and the amount collected was deposited in the account of

'Patient Welfare Samiti' to provide free heal h services to the poor and for better maintenanc e of the hospital. A sum of 'Rs. 55 lakh wa s' collected through people's participatio n, especially efforts of the Indore Press club whic h collected material worth about Rs. 8 lak h. Different groups and individuals came togeth er as a helping brigade (NGO's, association s, faculty members of the Medical College, docto s and other staff of MY Hospital); and it seemed a s if a whole populace had joined The ma n activities were classified, as (a) vacating th e hospital building and making alterna e arrangements; (b) operation rodent, control; ( c) repairing, Whitewashing and painting ( d) scientific area management. The goal of Kayakalp of MY Hospital took just about a month.(Based on a report by ,Red Cros s Society, Indore .)

**SANJIVINI ABHIYAN**

A similar but smaller experiment was, carried o ut in Satna where the district authorities took th e lead in encouraging local participation in a maj or public hospital. Volunteer citizen's ,Participatio n was brought to manage cleanliness and hygier e of the hospital, and renovation of buildings. Th s effort is known as the Sanjivini Abhiyan and s running very successfully.

**Figure 4-20**
**Index of Women Advancement**
(Selected districts of Madhya Pradesh)




This has resulted in women getting over-burdened with the task of providing good health to the community, while men have more or less abdicated their responsibility

There is also a necessity for men to share more responsibilities. The concept of responsible fatherhood needs to be popularised.

## ISSUES IN HEALTH CARE

The health sector is an important social sector with direct implications for the quality of life. It also indirectly assists in development and productivity. It is important, therefore, to ensure that increased resources are made available to this sector and to see that whatever resources are provided they are equitably distributed with emphasis on the tenets of primary health care, for the benefit of the people, not forgetting the rural masses and the poor. The primary health care concept is not restricted to the provision of services and infrastructure at the periphery alone. Health care delivery should be seen as a continuum, a spectrum that ranges from basic care delivered by the community itself at one end to the most evolved

tertiary care facility at the other extreme. The entire chain is needed if any part of the system is to work at optimal efficiency. It is essential that the various segments function as a well knit organic whole.

### *People's participation*

The health system has been treating the concept of community participation as merely a method of helping the health system to achieve its targets of health care delivery rather than as a method of health empowerment of the people. With the recent constitutional introduction of gram panchayats in the state, people's participation will not be merely passive acceptance of health care but would progress towards the ideal of an active partnership and a dynamic decision-making role for the community.

Active steps should be taken to make the health services relevant by ensuring that planning exercises are carried our at all levels – particularly at the block level – annually. The Janpad sabha, and the Gram Panchayats must be involved in this activity and in the delivery of the health services. The state would do well to initiate block and district-level planning ensuring people's involvement through the Panchayat system, making the health care delivery system more of the people and for the people.

In a significant move in this direction, the state government in a recent cabinet decision has declared the formation of Rogi Kalyan Samitis all across the state as societies that will manage all state-owned hospitals. This scheme places the management of the hospitals in the hands of the users. The Rogi Kalyan Samitis will be set up at different levels managing district, block and other hospitals, and will have panchayat representatives, district officials, and all people who donate more than Rs. 1 lakh towards the hospitals as members. To be implemented from next year, all matters pertaining to hospitals will be managed by them, including fund management.

Non-governmental and voluntary organisations have been very successful in implementing health-related programmes, especially concerned with basic health, managing reach remote and inaccessible areas, and motivating the people through extension and communication. Though Madhya Pradesh does not have a very strong tradition of NGOs and voluntary effort, unlike neighbouring Gujarat and Rajasthan, there are some good examples in the state such as the Sanjivini Abhiyan in Sarna, the Ramakrishna Mission in Raipur, the Rural Development Service Society (ROSS, Silvani) in Raisen. The state should encourage NGOs and voluntary effort in health, and specially involve them in basic health, women and child health, community health, and health delivery to the poor and in remote areas.

### *Information management*

One of the stumbling blocks in planning is the non availability of local-level statistics. Apart from this, the staff and managers of health programmes and health delivery systems, either at the primary health centre or the district level, are not trained to look critically at data or to plan interventions in the broad area of public health. The data collected should have direct relevance to public health for managerial interventions. The process of district-level health planning and programme designing and management needs a support base of knowledge and skills which should be brought together and developed in districts.

In spite of extensive data collection at the sub-health centre level, no reliable statistics are available to those who can use this data in a meaningful manner. The format of record-keeping and reporting is generally not designed with either

health care or local-level utilisation in mind, but is primarily an accounting system for generation of numerical data.

The system of accounting rather than reporting meaningful statistics can often be misleading. While the state reports that the immunisation coverage is more than 80 per cent, several coverage evaluation studies have revealed immunisation coverage in the state to be about 30-40 per cent only. Neither figure is wrong in itself; the first is the accountant's view, the second is from the perspective of a health scientist. Added to this is the problem of over-reporting of desired targets in many programmes, for example immunisation coverage.

One aspect that needs attention is that the vast majority of the people living in the villages are unaware of the health and medical services available to them. When people are informed about the arrangements and availability of health services, the utilization of services provided for will increase.

Health education cannot be imported by doctors or health workers alone. Material for appropriate health education and information for transmission to the public must be devised jointly by the medical profession (who would provide the technical information), sociologists and anthropologists (who would translate it into a form acceptable by the people), and educationist (who are trained to communicate). What has been missing in mass communication initiatives is involvement of mass communication and media experts in design, planning and implementation.

## SUMMING UP

By way of conclusion, it must be said that Madhya Pradesh's balance-sheet of outcomes related to health is not yet satisfactory and the goal of Health for All remains a challenging one for the state, at least within this century.

While part of the solution is clearly to direct more resources to the formal health sector, persistent and singular problems require unique and innovative solutions. Programme coverage needs to be extended through strategies aiming at the involvement of persons from the target population centres. The local communities need to be empowered by upgrading their human resources to tackle their health care problems (at least for preliminary diagnosis and preventive treatment). Cost recovery options need to be explored. Extension programmes in the traditional sense need to be reinforced with innovative strategies where the target communities will themselves be able to provide doctors from amongst themselves or from their immediate vicinity. State strategies, institutional programmes and people's initiatives in Madhya Pradesh must seek the answers to their problems by finding comrades and activists amongst those who need their services the most- the people of Madhya Pradesh.

# Some Issues of Income and Employment:

Apart from education and health, livelihood and income is the third factor in the simple composite index of human development. Livelihood and income together indicate the ability of a person and a people to source products and utilities to sustain themselves.

In Madhya Pradesh, the issues of livelihood are subject to great regional variations, and range from subsistance based economies and peoples to formal and registered employment and activities. For marginal economic categories such as tribals, the very poor, and those living in remote, underdeveloped and backward pares of the state, the issue is much more of sustenance and survival, and their status is not adequately reflected in standard measurements of income, employment estimates or infrastructure parameters. For them the questions of access to infrastructure and service delivery, of more traditional, local and non-mechanised economic activities, and the constant struggle against encroachment on their physical (land and forests), social (traditions and society) and economic (shrinking markets and competing products) worlds are critical, threatening their sustenance and even survival.

The scope of this chapter is limited to a brief analysis of the quantifiable income and assessment of the employment and infrastructure status of the state. The issues of livelihoods in the state, especially for the poor, have not been touched upon. 1 Some of these issues that need to be separately addressed are flagged below.

- Mining policy, including focus on exploitation of major and minor minerals, the former under the central government and latter under the control of the state government, and quarrying activities, and its impact on forests, environment and resettlement.
- Forests With a large but dwindling forest cover, there is need to look at forests, forest policy, livelihoods of people related with forests, commercial exploitation of forests, common property resources, etc Forest Produce Forest produce has been a source of livelihood for the poor, especially the vast majority of tribals in the state. The forest policy and activities of government, forest departments and other economic interventions on forest produce must be looked at (for example, the issues of policy on tendu leaf, collection of chironji and imli in Bastar, ete.), the list of reserved items, etc.
- Tribals constitute a fourth of the population of the state. Questions of their livelihood, income and sustenance deserve to be further analysed.
- Rehabilitation and Resettlement Madhya Pradesh has a large number of people, especially tribals, who have been ousted under different projects (public and private, for example in the Singrauli area). The state has shown great sensitivity to this issue by its stand on the Narmada project, and there is need for further focus on this in other areas.
- Migrant Labour Many districts witness migration into and out of the districts, even into neighbouring states. Focus on migrant labour, the causes, dynamics and issues of migration, and its impact on education and health is necessary.

The aspects of development—education, health, income that we have taken to determine the level of human development in the districts of Madhya Pradesh depend in turn on many factors such as the delivery, quality and quantity of services, and infrastructure that pertain to health, education and economic activity, both in particular to them and in general to the people and their economy. Here, we make an attempt to compare the districts with one another and the state with other states in the

country to determine the level of development and the quality and adequacy of infrastructure that affect income.

The data available to make such an assessment suffers from various problems (please see note on Methodology and Data). Even if we take the data with its anomalies and problems, assuming that we will at least be able to compare districts, there is the problem of availability of relatively reliable data across districts and at comparable points of time. This problem has restricted us from comparing a large amount of data available, and we have focused on that which was found to be relatively safer from problems. Most of the data available specifies provision of infrastructure and service delivery components, like PHCs, hospitals, road length, and electricity connections, but does not always show how they are accessed, or the inequalities in their usage.

The state has been amongst the poorest in the country, with an estimated poverty rate of 36.7 per cent in 1987-88 according to Planning Commission estimates (based on expenditure), compared to the national average of 29.9 per cent. Only Orissa and Bihar among _he major states were worse off. The levels of poverty continue to be high, and it is estimated that over 55 lakh families or over 3 crore people live below the poverty line in rural Madhya Pradesh, according to the rural poverty survey conducted by the state for IRDP (Rural Poverty Survey based on income, Development Commissioner, Government of Madhya Pradesh) in 1992.

Estimates for urban poverty made by the Planning Commission (based on expenditure) placed it at over 20 per cent in 1987-88. The provisional results from the recent survey carried out in the state by the District Urban Development Agencies (DUDA), based on income, to assess urban poverty shows the level to be over 17 per cent, with over 4lakh families or nearly 23 lakh people below the urban poverty line. In 1988-89, the state's per capita income was Rs. 2,739, the fourth lowest amongst 15 major states, against a national average of Rs. 3,835. Madhya Pradesh stands lowest amongst the 15 major states in per capita income at 1980-81 prices, at Rs. 680 compared to the national average of Rs. 2,082.

A study conducted by G. Chakrabarty and S.P. Pal of NCAER (see Table 5-1), shows that in mean expenditure, which shows per capita expenditure, rural Madhya Pradesh is better than only Dadra and Nagar Haveli, Orissa and Bihar, although it does a little better in rural Gini coefficient with a value of 0.293 against a national average of 0.291. Urban Madhya Pradesh has a per capita expenditure rankof20 amongst 28 states. Sen's Welfare Index for rural Madhya Pradesh is again fourth last, though it improves in urban areas, where Madhya Pradesh occupies the twenty-first position. The overall condition of the state is much below national averages.

A UNDP-commissioned study on "Human Development in India" by Bhaskar Durra, Manoj Panda and Wilima Wadhwa, makes estimates of Deprivation Index for Income (see Table 5-2). They have taken per capita incomes based upon state gross domestic products for" four sub-periods in the interval 1970 to 1990, for which annual data are aggregated for these sub-periods. Table 5-2, containing these figures, shows that of the 17 states compared, the rank of Madhya Pradesh (average rank 13.25) for the four periods fluctuates from 14 to 14 to 13 to 12, comparable w Bihar (average rank 17), Orissa (16), Assam (14.5), Kerala (1 3. 5), and Uttar Pradesh (12.75). Not only is Madhya Pradesh very low in the order, bur as is the case with almost every state in the rankings, there is little variation in ranks over time.

**TABLE 5.1**
**COMPARISON OF STATES IN INDIA**

| *District* | *Rural* | | | | | | *Urban* | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Mean Expenditure* | | *Gini Coefficient* | | Sen's *Welfare* | | *Mean Expenditure* | | *Gini Coefficient* | | *Sen's Welfare* | |
| | (Rs/month) | Rank | Coeff. | Rank | Index | Rank | (Rs/month) | Rank | Coeff. | Rank | Index | Rank |
| Delhi | 372.31 | 1 | 0.192 | 3 | 300.83 | 1 | 485.63 | 1 | 0.4118 | 28 | 285.67 | 3 |
| Mizoram | 246.04 | 5 | 0.158 | 1 | 207.18 | 2 | 324.13 | 7 | 0.1645 | 1 | 270.82 | 4 |
| Andaman & Nicobar | 272.55 | 3 | 0.272 | 15 | 198.45 | 3 | 419.32 | 3 | 0.3101 | 14 | 289.03 | 2 |
| Chandigarh | 275.57 | 2 | 0.333 | 27 | 183.85 | 4 | 437.19 | 2 | 0.2903 | 9 | 310.29 | 1 |
| Punjab | 244.28 | 6 | 0.295 | 20 | 172.22 | 5 | 267.44 | 14 | 0.2754 | 5 | 193.77 | 11 |
| Lakshadweep | 262.86 | 4 | 0.351 | 29 | 170.58 | 6 | 276.58 | 10 | 0.2290 | 3 | 213.48 | 8 |
| Manipur | 190.74 | 12 | 0.175 | 2 | 157.39 | 7 | 200.35 | 26 | 0.1646 | 2 | 167.37 | 17 |
| Haryana | 214.81 | 7 | 0.281 | 17 | 154.52 | 8 | 255.31 | 16 | 0.2968 | 12 | 179.54 | 14 |
| Himachal Pradesh | 209.55 | 9 | 0.271 | 14 | 152.73 | 9 | 345.78 | 4 | 0.2958 | 10 | 243.50 | 5 |
| Tripura | 194.05 | 11 | 0.222 | 4 | 151.00 | 10 | 271.18 | 11 | 0.2606 | 4 | 200.52 | 9 |
| Kerala | 211.20 | 8 | 0.323 | 24 | 142.99 | 11 | 266.20 | 15 | 0.3867 | 27 | 163.25 | 18 |
| Goa, Daman & Diu | 183.77 | 13 | 0.245 | 8 | 138.75 | 12 | 329.07 | 6 | 0.3503 | 23 | 213.80 | 7 |
| Jammu & Kashmir | 204.22 | 10 | 0.322 | 23 | 138.49 | 13 | 270.79 | 12 | 0.2816 | 6 | 194.54 | 10 |
| Meghalaya | 174.39 | 15 | 0.259 | 11 | 129.27 | 14 | 334.25 | 5 | 0.2858 | 8 | 238.72 | 6 |
| Sikkim | 169.96 | 16 | 0.255 | 10 | 126.67 | 15 | 277.45 | 9 | 0.3098 | 13 | 191.48 | 12 |
| Rajasthan | 179.65 | 14 | 0.303 | 22 | 125.18 | 16 | 23.08 | 28 | 0.3457 | 21 | 155.72 | 22 |
| Gujarat | 161.21 | 17 | 0.233 | 7 | 123.60 | 17 | 240.32 | 19 | 0.2853 | 7 | 171.74 | 16 |
| Assam | 153.58 | 22 | 0.222 | 4 | 119.49 | 18 | 269.64 | 13 | 0.3367 | 20 | 178.85 | 15 |
| West Bengal | 150.19 | 23 | 0.252 | 9 | 112.40 | 19 | 248.33 | 18 | 0.3525 | 25 | 160.80 | 20 |
| Andhra Pradesh | 160.00 | 18 | 0.301 | 21 | 111.79 | 20 | 227.63 | 21 | 0.3637 | 26 | 144.85 | 26 |
| Maharashtra | 159.44 | 19 | 0.326 | 26 | 107.49 | 21 | 279.88 | 8 | 0.3516 | 24 | 181.48 | 13 |
| Uttar Pradesh | 148.59 | 25 | 0.279 | 16 | 107.10 | 22 | 217.07 | 24 | 0.3286 | 17 | 145.74 | 25 |
| Karnataka | 149.19 | 24 | 0.292 | 18 | 105.63 | 23 | 221.26 | 23 | 0.3359 | 19 | 146.94 | 24 |
| Tamil Nadu | 154.43 | 21 | 0.323 | 24 | 104.62 | 24 | 249.34 | 17 | 0.3499 | 22 | 162.09 | 19 |
| Pondichery | 156.16 | 20 | 0.341 | 28 | 102.98 | 25 | 210.51 | 25 | 0.3174 | 15 | 143.70 | 27 |
| Madhya Pradesh | 142.52 | 26 | 0.293 | 19 | 100.79 | 26 | 235.99 | 20 | 0.3307 | 18 | 157.96 | 21 |
| Bihar | 136.50 | 27 | 0.264 | 12 | 100.49 | 27 | 186.32 | 27 | 0.2967 | 11 | 131.04 | 28 |
| Orissa | 127.54 | 28 | 0.267 | 13 | 93.48 | 28 | 224.53 | 22 | 0.3234 | 16 | 151.92 | 23 |
| Dadra & Nagar Haveli | 114.41 | 29 | 0.231 | 6 | 87.95 | 29 | | | | | | |
| All India | 155.75 | | 0.291 | | 110.44 | | 249.93 | | 0.3522 | | 161.92 | |

Source : Chakrabarty and Pal (1995)

**TABLE 5.2**
**UNDP DEPRIVATION INDEX-INCOME**

| States | Levels | | | | Rankings | | | | Aver. | Change in Dep. Index | Ranking by quantum of change over 4 sub-periods |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | I | II | III | IV | | | |
| Bihar | 0.978 | 0.941 | 0.878 | 0.796 | 17 | 17 | 17 | 17 | 17.00 | 18.60% | 13 |
| Orissa | 0.860 | 0.832 | 0.829 | 0.728 | 16 | 16 | 16 | 16 | 16.00 | 15.30% | 15 |
| Assam | 0.800 | 0.807 | 0.716 | 0.632 | 15 | 15 | 14 | 14 | 14.50 | 21.00% | 12 |
| Kerala | 0.740 | 0.743 | 0.744 | 0.712 | 12 | 12 | 15 | 15 | 13.50 | 3.80% | 17 |
| Madhya Pradesh | 0.789 | 0.807 | 0.706 | 0.596 | 14 | 14 | 13 | 12 | 13.25 | 24.50% | 7 |
| Uttar Pradesh | 0.776 | 0.746 | 0.674 | 0.600 | 13 | 13 | 12 | 13 | 12.75 | 22.70% | 8 |
| Rajasthan | 0.688 | 0.647 | 0.657 | 0.569 | 11 | 11 | 11 | 10 | 10.75 | 17.30% | 14 |
| Tamil Nadu | 0.655 | 0.593 | 0.607 | 0.512 | 10 | 7 | 10 | 9 | 9.00 | 21.80% | 10 |
| Himachal Pradesh | 0.644 | 0.599 | 0.595 | 0.505 | 8 | 10 | 9 | 8 | 8.75 | 21.60% | 11 |
| Jammu & Kashmir | 0.648 | 0.597 | 0.552 | 0.576 | 9 | 8 | 7 | 11 | 8.75 | 11.10% | 16 |
| West Bengal | 0.629 | 0.590 | 0.569 | 0.487 | 7 | 6 | 8 | 7 | 7.00 | 22.60% | 9 |
| Andhra Pradesh | 0.623 | 0.598 | 0.514 | 0.454 | 6 | 9 | 5 | 6 | 6.50 | 27.10% | 6 |
| Karnataka | 0.610 | 0.556 | 0.520 | 0.432 | 5 | 5 | 6 | 5 | 5.25 | 29.20% | 5 |
| Gujarat | 0.547 | 0.450 | 0.372 | 0.318 | 4 | 4 | 3 | 4 | 3.75 | 41.90% | 4 |
| Maharashtra | 0.526 | 0.416 | 0.394 | 0.279 | 3 | 3 | 4 | 3 | 3.25 | 47.00% | 3 |
| Haryana | 0.484 | 0.392 | 0.330 | 0.216 | 2 | 2 | 2 | 2 | 2.00 | 55.40% | 2 |
| Punjab | 0.323 | 0.219 | 0.153 | 0.047 | 1 | 1 | 1 | 1 | 1.00 | 85.40% | 1 |

Source: Human Development in India, Bhaskar Dutta, Manoj Panda, Wilima Wadhwa, UNDP Research Project

However, when compared to a national average improvement over four periods of 28.6 percent in the Deprivation Index, Madhya Pradesh changes by 24.5 per cent, seventh best amongst all the states.

## *POVERTY*

According to the 1991-92 IRDP Rural Poverty Survey, over 60 per cent of rural families are subsisting below the poverty line (BPL) in rural areas of Madhya Pradesh. The average income of a family below the poverty line is Rs. 4,653 per annum, which is less than half of the rural poverty line of Rs 11000 per family in a year (1991-92 prices).

Amongst the state's districts, Narsimhapur has the maximum rural poverty (IRDP Rural Poverty Survey), which is contrary to popular perceptions of this district (see Table 5-3). The extent of rural poverty is over three-fourths in Jabalpur, Seoni, Surguja, Sagar, Bilaspur, Shajapur and Jhabua. In 33 districts, incidence of rural poverty is over 50 per cent. Only Bhind, Chhatarpur and Gwalior have less than one-third of the people in rural areas below the poverty line. In terms of employment category of rural BPL, 31 per cent are agricultural laborers, 26 per cent are marginal farmers and 22 per cent small farmers. The extent of rural poverty is clearly very serious in the state and we have large sections of the population living in very poor conditions.

Regionally, there is less rural poverty in the Gwalior region (and the Chambal region) and western Bundelkhand, and around Bhopal. There are relatively moderate levels of poverty in parts of the Malwa region, with some bad districts on the western side. Great poverty is seen in parts of Baghelkhand and the Chattisgarh regions. Districts such as Indore and Jabalpur, which are considered well off by general standards, seem to have considerable rural poverty.

Urban poverty surveys are still underway (being conducted by DUDA) in the state and need finalisation. The provisional data available from 42 districts gives some indication of the level of urban poverty. Overall, the state appears to have urban poverty of 17.3 per cent (calculated for 42 districts excluding Indore, Jabalpur and Bastar). Damoh has the highest urban poverty of 36 per cent followed by Sehore, Chhindwara, West Nimar (Khargone), Sarna and Vidisha, all of whom have urban poverty over 25 per cent. On the other side, districts with the lowest urban poverty are Gwalior, Shivpuri and Ujjain with lower then 10 per cent. Preliminary data from Indore and Jabalpur also shows low urban poverty, under 10 per cent.

Taking rural and urban poverty together, 4 districts have over two-thirds of its people under the poverty line, namely Narsimhapur, Seoni, Surguja and Jhabua. Fifteen districts, comprising Bilaspur, Dhar, Shajapur, Balaghat, Sidhi, Mandla, Rajnandgaon, Sagar, Raigarh, Rewa and Rajgarh, and the districts above, have over half their population below the poverty line.

Data for land distribution in the state shows high levels of inequality. Overall in the state, 36 per cent of land owners own up to 1 hectare of land, corresponding to only 5.5 per cent of total area. On the other side, 4.9 per cent of land owners own 28.2 per cent of land. The distribution of land in the state is given in Table 5-4.

The graph that follows shows the distribution of land ownership in the state. The straight line shows the line of equality. The curved line (Lorenz curve) shows the percentage of land owners to total land owners in the state plotted against land owned by them as a percentage of total land (cumulative totals). The curvature of the curve exhibits the extent of inequality of land ownership in the state.

**.TABLE 5.3**
**FAMILIES LIVING BELOW POVERTY LINE FOR THE EIGHTH PLAN 1992-97, MADHYA PRADESH**

| District | Rural Population Census 91 | Total No. of Rural Families B.P.L | Pov. Rate | No. of Rural Families Below Poverty Line Income Groups | | | | Average B.P.L. INC |
|---|---|---|---|---|---|---|---|---|
| | | | | 0-4000 | 4001-6000 | 6001-8500 | 8500-11000 | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Narsimhapur | 667788 | 115342 | 95.00% | 42915 | 34954 | 24079 | 13394 | 4905 |
| Jabalpur | 1440780 | 220147 | 84.00% | 96502 | 70971 | 37894 | 14780 | 4391 |
| Seoni | 905187 | 134348 | 81.60% | 53069 | 42279 | 24720 | 14280 | 4734 |
| Surguja | 1832117 | 270487 | 81.20% | 142234 | 75812 | 34966 | 17475 | 4020 |
| Sagar | 1165105 | 166395 | 78.50% | 65349 | 56541 | 29101 | 15404 | 4655 |
| Bilaspur | 3148029 | 449228 | 78.50% | 179213 | 139801 | 85956 | 44258 | 4702 |
| Shajapur | 849793 | 117149 | 75.80% | 46872 | 33905 | 21725 | 14647 | 4811 |
| Jhabua | 1031639 | 141040 | 75.20% | 64901 | 42273 | 22561 | 11305 | 4360 |
| Dhar | 1187091 | 155710 | 72.10% | 45932 | 59009 | 34051 | 16718 | 5117 |
| Balaghat | 1232984 | 153562 | 68.50% | 46678 | 68085 | 28178 | 10621 | 4829 |
| Ujjain | 835524 | 103988 | 68.50% | 49090 | 29293 | 15165 | 10440 | 4389 |
| Rajnandgaon | 1212733 | 150130 | 68.10% | 66319 | 48602 | 22930 | 12279 | 4407 |
| Sidhi | 1283161 | 150633 | 64.60% | 35834 | 45887 | 36891 | 32021 | 5847 |
| Mandla | 1192288 | 137005 | 63.20% | 68259 | 42629 | 19058 | 7059 | 4063 |
| Khandwa | 1038672 | 119271 | 63.20% | 56814 | 35458 | 16645 | 10354 | 4297 |
| Rajgarh | 825506 | 94603 | 63.00% | 23632 | 37824 | 22474 | 10673 | 5321 |
| Rewa | 1313437 | 149905 | 62.80% | 68317 | 42507 | 25134 | 13947 | 4452 |
| Ratlam | 661640 | 75196 | 62.50% | 27972 | 22145 | 14765 | 10314 | 4977 |
| Durg | 1550037 | 175871 | 62.40% | 80648 | 53247 | 26824 | 15152 | 4377 |
| Raigarh | 1559063 | 173553 | 61.20% | 90902 | 47031 | 23709 | 11911 | 4062 |
| Shahdol | 1374923 | 146817 | 58.70% | 66908 | 43261 | 23757 | 12891 | 4414 |
| Tikamgarh | 781650 | 82885 | 58.30% | 23565 | 24055 | 19180 | 16085 | 5590 |
| Betul | 959636 | 100959 | 57.90% | 43906 | 31994 | 16293 | 8766 | 4471 |
| Raisen | 738061 | 76786 | 57.20% | 21895 | 35086 | 13563 | 6242 | 4928 |
| Indore | 561789 | 57651 | 56.40% | 14324 | 17637 | 14342 | 11348 | 5749 |
| Satna | 1173570 | 118363 | 55.50% | 52209 | 37456 | 18676 | 10022 | 4434 |
| Mandsaur | 1196412 | 120381 | 55.30% | 42216 | 40085 | 24718 | 13362 | 4937 |
| Khargone | 1721080 | 172009 | 55.00% | 63894 | 57728 | 32811 | 17576 | 4800 |
| Hoshangabad | 918614 | 90402 | 54.10% | 32276 | 31397 | 17049 | 9680 | 4862 |
| Dewas | 765552 | 73038 | 52.50% | 26065 | 25864 | 13652 | 7457 | 4835 |
| Bastar | 2108630 | 198995 | 51.90% | 89580 | 70361 | 28317 | 10737 | 4226 |
| Damoh | 734634 | 68061 | 51.00% | 10047 | 29542 | 17430 | 11042 | 5904 |
| Raipur | 3132028 | 288142 | 50.60% | 114605 | 103619 | 49023 | 20895 | 4534 |
| Datia | 307751 | 27424 | 49.00% | 7413 | 8080 | 6067 | 5864 | 5703 |
| Shivpuri | 959876 | 84585 | 48.50% | 22523 | 23802 | 21406 | 16854 | 5717 |
| Vidisha | 776085 | 67803 | 48.10% | 40195 | 19861 | 5432 | 2315 | 3564 |
| Panna | 595245 | 52001 | 48.00% | 17483 | 19017 | 10012 | 5489 | 4926 |
| Chhindwara | 1201000 | 99857 | 45.70% | 29102 | 40153 | 21538 | 9064 | 5042 |
| Guna | 1054005 | 76175 | 39.70% | 40886 | 20962 | 10095 | 4232 | 3952 |
| Bhopal | 268750 | 19351 | 39.60% | 11885 | 4916 | 1780 | 770 | 3553 |
| Sehore | 689140 | 48766 | 38.90% | 14148 | 20206 | 10454 | 3958 | 4997 |
| Morena | 1356909 | 95884 | 38.90% | 42228 | 33286 | 13539 | 6831 | 4335 |
| Gwalior | 580951 | 34476 | 32.60% | 9833 | 9136 | 9176 | 6831 | 5615 |
| Chhatarpur | 935471 | 50607 | 29.80% | 16939 | 16059 | 11177 | 6432 | 5096 |
| Bhind | 963482 | 45776 | 26.10% | 20618 | 14550 | 7267 | 3341 | 4353 |
| Madhya Pradesh | 50787815 | 5550757 | 60.10% | 2226195 | 1806366 | 983580 | 534616 | 4653.002 |

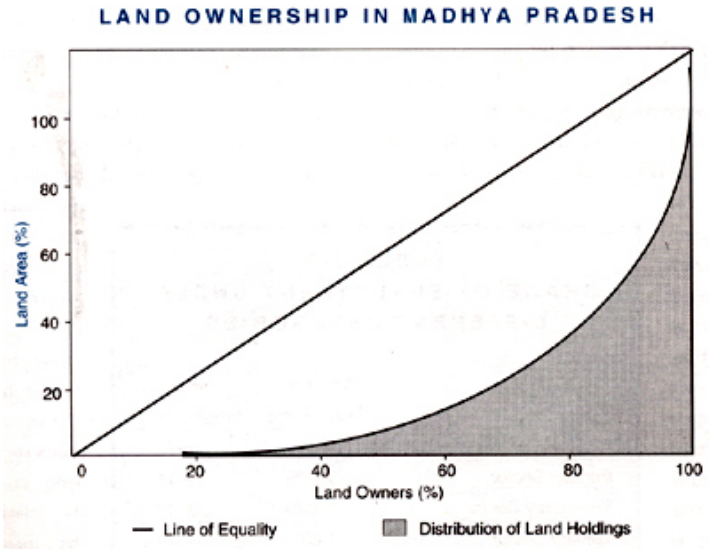
**TABLE 5.3 (contd.)**
**FAMILIES LIVING BELOW POVERTY LINE FOR THE EIGHTH PLAN 1992-97, MADHYA PRADESH**

| District | Small Farmer | Marginal Farmers | Classification of Families | | | | Total |
|---|---|---|---|---|---|---|---|
| | | | Agr. Labourer | Non-Agr Labourer | Rural Artisans | Others | |
| 1 | 9 | 10 | 12 | 13 | 14 | 15 | |
| Narsimhapur | 15975 | 18033 | 39625 | 31103 | 5541 | 5065 | 115342 |
| Jabalpur | 27768 | 42233 | 66528 | 66686 | 7190 | 9742 | 220147 |
| Seoni | 28336 | 26630 | 34913 | 28864 | 8480 | 7125 | 134348 |
| Surguja | 77351 | 84307 | 60608 | 28577 | 3976 | 15668 | 270847 |
| Sagar | 38245 | 40418 | 38144 | 44663 | 1457 | 3468 | 166395 |
| Bilaspur | 37948 | 176826 | 109567 | 51871 | 13016 | 0 | 449228 |
| Shajapur | 21407 | 29696 | 45326 | 9253 | 7014 | 4453 | 117149 |
| Jhabua | 38355 | 37867 | 39730 | 15786 | 4201 | 5101 | 141040 |
| Dhar | 31459 | 29679 | 67871 | 1115 | 5695 | 9855 | 155710 |
| Balaghat | 28959 | 46075 | 42096 | 25227 | 3286 | 7919 | 153562 |
| Ujjain | 16553 | 29008 | 42187 | 8806 | 2282 | 5152 | 103988 |
| Rajnandgaon | 44890 | 41822 | 24768 | 12271 | 3252 | 23127 | 150130 |
| Sidhi | 28865 | 34527 | 43387 | 26065 | 6960 | 10829 | 150633 |
| Mandla | 26903 | 30222 | 42295 | 33368 | 4217 | 0 | 137005 |
| Khandwa | 27020 | 12599 | 64596 | 0 | 10253 | 4803 | 119271 |
| Rajgarh | 28273 | 28475 | 23645 | 9357 | 2766 | 2087 | 94603 |
| Rewa | 17919 | 30198 | 57664 | 28818 | 8861 | 6445 | 149905 |
| Ratlam | 21294 | 29149 | 15247 | 2729 | 1616 | 5161 | 75196 |
| Durg | 43129 | 72432 | 42008 | 10166 | 3806 | 4330 | 175871 |
| Raigarh | 47086 | 46890 | 49666 | 18570 | 8419 | 2922 | 173553 |
| Shahdol | 26914 | 34386 | 48154 | 27217 | 6294 | 3852 | 146817 |
| Tikamgarh | 26136 | 28090 | 11730 | 13045 | 2844 | 1040 | 82885 |
| Betul | 30441 | 17444 | 35028 | 12621 | 2991 | 2434 | 100959 |
| Raisen | 11056 | 10230 | 32356 | 17709 | 3328 | 2107 | 76786 |
| Indore | 6962 | 9790 | 24162 | 12504 | 1363 | 2870 | 57651 |
| Satna | 14905 | 20329 | 33205 | 34335 | 7781 | 7808 | 118363 |
| Mandsaur | 22164 | 31848 | 47320 | 14066 | 3510 | 1473 | 120381 |
| Khargone | 34803 | 29731 | 78697 | 15845 | 5325 | 7608 | 172009 |
| Hoshangabad | 11964 | 10977 | 43076 | 14072 | 5186 | 5127 | 90402 |
| Dewas | 22374 | 25245 | 17094 | 2907 | 2527 | 2891 | 73038 |
| Bastar | 65831 | 50140 | 46170 | 28311 | 8543 | 0 | 198995 |
| Damoh | 8829 | 13653 | 20596 | 23536 | 1447 | 0 | 68061 |
| Raipur | 64009 | 101005 | 90996 | 24664 | 5523 | 1945 | 288142 |
| Datia | 7858 | 8903 | 3820 | 3733 | 1097 | 2013 | 27424 |
| Shivpuri | 22767 | 21290 | 16724 | 14414 | 2988 | 6402 | 84585 |
| Vidisha | 13185 | 10100 | 28818 | 12195 | 1720 | 1785 | 67803 |
| Panna | 8848 | 11279 | 16976 | 12015 | 1454 | 1429 | 52001 |
| Chhindwara | 18078 | 14818 | 44941 | 14707 | 3870 | 3443 | 99857 |
| Guna | 21914 | 18427 | 26825 | 5831 | 1346 | 1832 | 76715 |
| Bhopal | 2558 | 2155 | 7620 | 4414 | 344 | 2260 | 19351 |
| Sehore | 6415 | 5025 | 31653 | 105 | 964 | 1604 | 48766 |
| Morena | 19230 | 38423 | 23217 | 14373 | 455 | 186 | 95884 |
| Gwalior | 9572 | 9976 | 2791 | 11410 | 236 | 491 | 34476 |
| Chhatarpur | 6390 | 6830 | 9277 | 14712 | 12785 | 613 | 50607 |
| Bhind | 9620 | 18055 | 10857 | 6009 | 1131 | 104 | 45776 |
| Madhya Pradesh | 1200558 | 1435235 | 1701974 | 821081 | 197340 | 194569 | 5550757 |

**TABLE 5.4**
**LAND DISTRIBUTION IN MADHYA PRADESH – 1985-86**

| | *Scheduled Castes* | | *Scheduled Castes* | | *Others* | | | *Total* | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *Share of Land Owners* | *Share of Area* | *Share of Land Owners* | *Share of Area* | *Share of Land Owners* | *Share of Area* | *Land Owners* | *Share of Land Owners* | *Area* | *Share of Area* |
| Below 0.02 Ha | 0.22% | 0.00% | 0.23% | 0.00% | 0.74% | 0.00% | 90240 | 1.19% | 1397 | 0.01% |
| 0.02 to 0.5 Ha | 3.10% | 0.27% | 4.41% | 0.38% | 11.98% | 1.06% | 1481816 | 19.49% | 379326 | 1.71% |
| 0.5 to 1.0 Ha | 2.48% | 0.61% | 3.44% | 0.86% | 9.35% | 2.29% | 1160868 | 15.27% | 833474 | 3.76% |
| **Marginal up to 1 Ha** | **5.80%** | **0.88%** | **8.08%** | **1.24%** | **22.06%** | **3.36%** | **2732924** | **35.94%** | **1214197** | **5.48%** |
| 1.0 to 2.0 Ha | 3.09% | 1.51% | 5.16% | 2.59% | 12.96% | 6.52% | 1612622 | 21.21% | 2352791 | 10.62% |
| 2.0 to 3.0 Ha | 1.60% | 1.31% | 3.79% | 3.09% | 7.88% | 6.56% | 1009597 | 13.28% | 2429196 | 10.96% |
| 3.0 to 4.00 Ha | 0.78% | 0.93% | 2.01% | 2.40% | 4.87% | 5.80% | 582940 | 7.67% | 2020506 | 9.12% |
| **Semi Medium 1-4 Ha** | **2.39%** | **2.24%** | **5.81%** | **5.49%** | **12.75%** | **12.36%** | **1592537** | **20.95%** | **4449702** | **20.08%** |
| 4.0 to 5.0 Ha | 0.57% | 0.87% | 1.53% | 2.34% | 3.57% | 5.46% | 431233 | 5.67% | 1921487 | 8.67% |
| 5.0 to 7.5 Ha | 0.54% | 1.13% | 2.01% | 4.21% | 4.96% | 10.39% | 571222 | 7.51% | 3485582 | 15.73% |
| 7.5 to 10 Ha | 0.20% | 0.59% | 1.01% | 2.95% | 2.59% | 7.65% | 289362 | 3.81% | 2478419 | 11.19% |
| **Medium Size 4-10 Ha** | **1.32%** | **2.58%** | **4.56%** | **9.51%** | **11.11%** | **23.50%** | **1291817** | **16.99%** | **7885488** | **35.59%** |
| 10 to 20 Ha | 0.14% | 0.62% | 0.97% | 4.42% | 2.88% | 13.40% | 303606 | 3.99% | 4085817 | 18.44% |
| 20 to 30 Ha | 0.01% | 0.11% | 0.13% | 1.09% | 0.48% | 3.88% | 47354 | 0.62% | 1125559 | 5.08% |
| 30 to 40 Ha | 0.00% | 0.03% | 0.03% | 0.35% | 0.13% | 1.54% | 12547 | 0.17% | 427124 | 1.93% |
| 40 to 50 Ha | 0.00% | 0.01% | 0.01% | 0.17% | 0.05% | 0.76% | 4715 | 0.06% | 208240 | 0.94% |
| 50 and above | 0.00% | 0.03% | 0.01% | 0.32% | 0.05% | 1.49% | 5022 | 0.07% | 406384 | 1.83% |
| **Size Large** | **0.16%** | **0.80%** | **1.15%** | **6.34%** | **3.60%** | **21.08%** | **373244** | **4.91%** | **6253124** | **28.22%** |
| All Total | 12.75% | 8.01% | 24.77% | 25.17% | 62.49% | 66.82% | 7603144 | 100.00% | 22155302 | 100.00% |
| Share of Total | | 8.01% | | 25.17% | | 66.82% | | | | |

Source: Agricultural Statistics, Directorate of Agriculture, Madhya Pradesh (1990-91) (data from Agriculture Census 1985-86).




The levels of inequality may differ from district to district, but all districts show high inequalities in land ownership

## *EMPLOYMENT*

The NSS 43rd Round (Madhya Pradesh State Report), shows that agricultural production provides employment to nearly 72 per cent of people working in the primary status. Over 82 per cent of rural workers in Madhya Pradesh are in agricultural production, followed by agricultural services, and construction. Urban Madhya Pradesh has a more varied employment scenario, and public administration with 12 per cent and agricultural production with 11 per cent are the major employers. Apart from agriculture, manufacturing or production does nor occupy an important position in employment in the state.

The NSS Survey estimates the share of workers in the principal status in rural Madhya Pradesh in non-farm employment to be around 7.3 per cent. According to the 1991 Census, in terms of share of non-farm employment in rural areas, Madhya Pradesh comes last in the country, with only 10.7 per cent employed in this sector, compared to the national share of 17.7 per cent. Consequently, the rural non-farm sector has been identified as a priority focus for the state, and there is a special emphasis on promoting rural non-farm employment under the Rajiv Gandhi Missions.

The Census of 1991 gives a worker participation rate (WPR) of 42.8 per cent for the state, compared to the national average of 37.5 per cent. In the decade 1981 to 1991, the main workers in the state grew slower than the rise in population, at 2.2 per cent per annum, compared to the population growth of 2.4 per cent. Only 2 districts had a growth of main workers greater than the rate of growth of population.

Sidhi recorded 1 per cent lower growth in workers per annum to rise of popular ion. The districts where rate of growth of workers was high were Bhopal, Shivpuri, Indore and Ratlam. The districts with lowest employment growth rates were Balaghat, Raigarh, Mandla,)Jabalpur, Seoni and Narsimhapur. The entire belt of Baghelkhand and Chattisgarh recorded lower rates of increase in workers to increase in population. If we rake rural main workers only, they grew overall in the state by 1.9 per cent per annum, though the population grew at 2.4 per cent per annum in rural Madhya Pradesh. Urban population in the state grew at 3.78 per cent per annum, and main workers at 3.76 percent per annum. This points towards growing rural unemployment in the stare, and a growing tendency towards urban migration.

**TABLE 5.5**
**SHARE OF EMPLOYMENT UNDER DIFFERENT CATEGORIES**

| Category | Share in Employme nt 1981 | Share in Employme nt 1991 |
|---|---|---|
| Primary Sector | 79.10 % | 77.54 % |
| Secondary Sector | 9.43 % | 8.37 % |
| Tertiary Sector | 11.49 % | 14.09 % |
| Cultivators | 51.96 % | 51.75 % |
| Agricultural Labourers | 24.24 % | 23.51 % |
| Agriculture Allied | 1.89 % | 1.39 % |
| Mining and Quarrying | 1.01 % | 0.89 % |
| Manufacturing-Household | 3.52 % | 2.41 % |
| Manufacturing-Non Household | 4.33 % | 4.40 % |
| Construction | 1.58 % | 1.56 % |
| Trade and Commerce | 3.87 % | 4.77 % |
| Transport, Storage and Communicatic n | 1.63 % | 1.70 % |
| Other Services | 5.99 % | 7.62 % |

Source: Primary Census Abstract – 1981 and 1991

Amongst the major employment categories, according to the 1991 Census, cultivators constitute 51.8 per cent of all main workers and agricultural labourers 23.5 per cent, accounting for around three fourths involved in agricultural operations. Cultivators are higher in Madhya Pradesh compared to the national average of 38. 7, though the state has lesser agricultural labourers compared to the national average of 26.1 per cent.

In non-household manufacturing the stare lags behind at 4.4 per cent of employment compared to the national figure of 7.6 per cent. Household manufacturing, 'on the other hand, employs only 2.4 per cent of the employed, and declined over the decade 1981 to 1991 by 1.6 per cent per annum, in keeping with the decline in this category, all over the country. This exhibits the extent of dependence on agriculture and the relatively small role than manufacturing plays in the stare as far as employment is concerned.

The other major employer was 'Other Services' with 7.6 per cent employment, and Trade, etc.' with 4.8 per cent, much less than the national shares of 10.3 and 7.4 per cent respectively. Higher share of employment in the tertiary sector exhibits a changing economy from farm-based to manufacturing and non farm-based employment, which is not the case in Madhya Pradesh.

There is also little change in the profile of employment between 1981 to 1991 by way of share of employment of different categories. The primary sector employed 79 per cent in 1981 and this dropped only slightly to 77.5 per cent in 1991 (see Table 5- 5). There was little increase in tertiary sector employment, from 11.5 per cent to 14.1 per cent. The secondary sector remained stagnant. Increase in the service sector is seen mainly due to

other Services which usually include personal services, public administration, and other 'institutional' employment. Employment in 'entrepreneurial' areas such as manufacturing, trade, storage, transport, etc. witnessed very little growth. It is clear that employment still exhibits a traditionally agrarian dominated employment structure, where there is little sign of change. This has significance for policy and for development measures, both for what they need to focus on for employment improvement and to create sustainable employment opportunities.

The 1981 Census gives the break-up of employment in Madhya Pradesh under separate activities. If we take the percentage of employment under different activities (excluding cultivators and agricultural labourers), public administration gave maximum employment. This was followed by retail trade in food, food articles, ete., construction, educational and scientific services, and manufacture of beverages, tobacco and tobacco products. Major employment in rural Madhya Pradesh was provided in livestock production, manufacture of beverages, tobacco and tobacco products, construction, educational services, retail trade in food and food articles, beverages, tobacco and intoxicants, and manufacture of wood products. Under the NIC three digit classification, the major employer in Madhya Pradesh in 1981; excluding cultivators and agricultural labourers, was the manufacture of bidi. This activity was the highest employer in rural areas, followed by cattle and goat breeding and milk production, educational services and employment in the state government. Wood work, pottery and manufacturing garments and wearing apparel were the other main rural employers in manufacturing activities. Manufacture of bidi employed a substantial number of female workers (19 per cent of main workers excluding cultivators and agricultural labourers).

## *INCOME*

The Rural Poverty Survey conducted by the state recently in 1991-92 gives us estimates of income for the rural poor below the poverty line. However, it is very difficult to estimate general per capita income levels for districts, due to non-availability of data disaggregated at the district level. Using the net state domestic product (NSDP), estimates of share of districts under different contributors to the NSDP gave us some indications as to district per capita incomes. Data for the NSDP was available for 16 major categories under which it is calculated, but was not available for any further level of disaggregation. Due to this, some of these categories had to be left out, and indirect methods of estimating districts' shares in the different categories had to be used.

Raisen district has the highest per capita income in the state (see Table 5-6) according to our estimates based upon available information. The calculation of per capita income discussed in this section is calculated from the net state domestic product (see note on HDI Methodology). Although this district does not do well in most indicators, is behind in many economic activities, and is popularly perceived to be a backward district, the vast industrial strength of Mandideep area, adjacent to Bhopal, and the fall-out of services, trade and transport from this area and regions adjoining Bhopal, raises its income. The same is the case with a district like Dhar, which gets a lot of the industries aimed for Indore in the Pithampura industrial estate,

**TABLE 5-6**
**PER CAPITA INCOME FROM NSDP AND POVERTY RATES IN MADYA PRADESH**

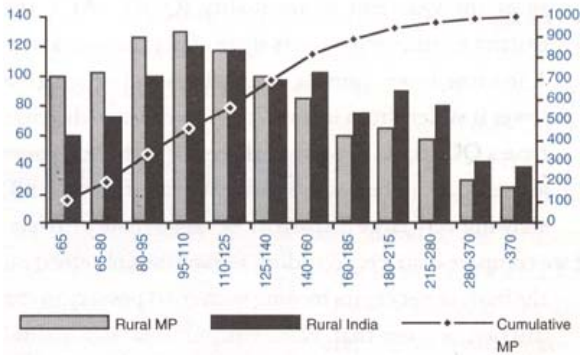
| S.N | District | Per capita Income | Adjusted Income | Adjusted Income IOD | Quotient of Inequality(QOI | Rate of Rura Poverty |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Raisen | 72( | 19: | 0.0( | 2.: | 57.2 |
| 2 | Indore | 45( | 18 | 0.4 | 1.- | 56.4 |
| 3 | Bhopal | 44{ | 18 | 0.4: | 1.: | 39.6 |
| 4 | Narsimhapur | 41: | 18 | 0.4: | 1.: | 95.0 |
| 5 | Hoshangabad | 39{ | 18 | 0.4{ | 1.: | 54.1 |
| 6 | Chhindwara | 39- | 18 | 0.4{ | 1.: | 45.7 |
| 7 | Shajapur | 39 | 18 | 0.4{ | 1.: | 75.8 |
| 8 | Dhar | 38{ | 18 | 0.4{ | 1.: | 72.1 |
| 9 | Ujjain | 38; | 18( | 0.4{ | 1.: | 68.5 |
| 10 | Mandsaur | 38- | 18 | 0.4 | 1. | 55.3 |
| 11 | Durg | 38: | 18( | 0.4{ | 1. | 62.4 |
| 12 | Dewas | 37{ | 18( | 0.4{ | 1. | 52.5 |
| 13 | Ratlam | 37- | 18( | 0.5( | 1. | 62.5 |
| 14 | Vidisha | 37: | 18( | 0.4{ | 1. | 48.1 |
| 15 | Sehore | 37: | 18( | 0.4{ | 1. | 38.9 |
| 16 | Damoh | 36{ | 18( | 0.4{ | 1. | 51.0 |
| 17 | Sidhi | 36( | 18( | 0.4{ | 1. | 64.6 |
| 18 | Raipur | 34( | 18- | 0.6- | 1.( | 50.6 |
| 19 | Sagar | 33{ | 18- | 0.6: | 1.( | 78.5 |
| 20 | Bilaspur | 33( | 18- | 0.6( | 1.( | 78.5 |
| 21 | Bhind | 32- | 18- | 0.6{ | 1.( | 26.1 |
| 22 | Datia | 32: | 18- | 0.6{ | 1.( | 49.0 |
| 23 | Surguja | 31{ | 18- | 0.6{ | 0.{ | 81.2 |
| 24 | Betul | 31 | 18{ | 0.7: | 0.{ | 57.9 |
| 25 | Morena | 30{ | 18{ | 0.7: | 0.{ | 38.9 |
| 26 | Gwalior | 30- | 19: | 0.7{ | 0.{ | 32.6 |
| 27 | Raigarh | 29- | 18{ | 0.7{ | 0.{ | 61.2 |
| 28 | Bastar | 28: | 18{ | 0.7( | 0.8 | 51.9 |
| 29 | Satna | 28( | 18{ | 0.7{ | 0.8 | 55.5 |
| 30 | Seoni | 27{ | 18{ | 0.8( | 0.8 | 81.6 |
| 31 | Shahdol | 26{ | 18{ | 0.8{ | 0.8 | 58.7 |
| 32 | Balaghat | 25{ | 18{ | 0.8- | 0.8 | 68.5 |
| 33 | Shivpuri | 25( | 18{ | 0.8{ | 0.8 | 48.5 |
| 34 | Jabalpur | 24: | 18 | 0.9 | 0. | 84.0 |
| 35 | Rajgarh | 24- | 18 | 0.8{ | 0. | 63.0 |
| 36 | Panna | 24{ | 18 | 0.8{ | 0. | 48.0 |
| 37 | Tikamgarh | 24: | 18 | 0.9( | 0. | 58.3 |
| 38 | Rajnandgaon | 24: | 18 | 0.9( | 0. | 68.1 |
| 39 | East Nimar | 23{ | 18 | 0.9- | 0. | 63.2 |
| 40 | Mandla | 22( | 18 | 0.9- | 0. | 63.2 |
| 41 | Chhatarpur | 22( | 18 | 0.9( | 0. | 29.8 |
| 42 | Jhabua | 22{ | 18 | 0.9- | 0. | 75.2 |
| 43 | Guna | 22: | 18( | 0.9 | 0.( | 39.7 |
| 44 | Rewa | 21( | 18( | 0.9{ | 0.( | 62.8 |
| 45 | West Nimar | 21- | 18( | 1.0( | 0.( | 55.0 |

and Malanpur industrial estate in Bhind, which is actually the industrial belt for Gwalior. Following Raisen are Indore, Bhopal, Narsimhapur, Hoshangabad and Chhindwara. The district lowest in per capita income is West Nimar (Khargone), and then in ascending order are Rewa, Guna, Jhabua, Chhatarpur and Mandla. The per capita incomes calculated from 74.4 per cent of NSDP are Rs. 7,201 for Raisen and Rs. 2,149 for Khargone or West Nimar exhibiting the range of disparity between districts. Four districts have per capita incomes (calculated from 74.4 percent NSDP) over Rs. 4,000,22 have per capita incomes between Rs. 3,000 to Rs 4,000, and 19 districts have a per capita income below Rs. 3,000 per annum.

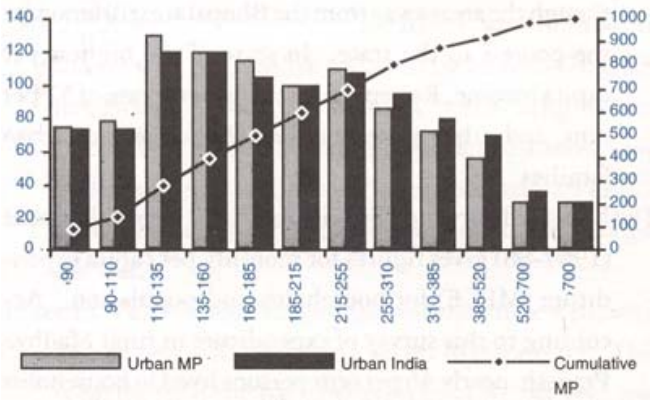
These results seem to reinforce the perception of the inadequacy of income alone as a criterion for assessing the backwardness of districts. Income has not been able to properly capture the picture of districts, in terms of intra-district inequalities and intra-district variations in development, poverty status of districts, etc. Since the overall volume of district incomes is small, the impact of certain well developed and prosperous zones (such as industrial estates and agriculturally rich belts) can have an inordinately high impact on the overall income profile of a district. In fact, if we remove registered manufacturing from district per capita income calculations undertaken for calculating an income index for this report, some districts have a sharp drop in their ranks in income, specially those around the large towns of the state (rajbhogi towns). Durg, neighbouring Raipur drops 21 ranks, Dhar, neighbouring Indore drops 19 ranks, Dewas, neighbouring Indore drops 11 ranks, and Bhind, neighbouring Gwalior drops 8 ranks. The ratio of per capita income of the highest to the lowest per district also drops from 3.4 to 2.2 times.

Only 16 districts come below 0.50 in the income index of

**Per1000 Distribution of Population by monthly per capita expenditure class Madhya Pradesh and India(Rural) 1987-88**




**Per1000 Distribution of Population by monthly per capita expenditure class Madhya Pradesh and India(Urban) 1987-88**



deprivation, showing the large inequalities existing in districts, and the poor state of most districts. Sixteen districts or 40 per cent of coral districts have an income index of deprivation above 0.80. If we divide the share of NSDP to share of population we get a figure we refer to as the Quotient of Inequality (QOI). At 1 the district earns as much as its share of population, above 1 it earns more, causing inequality, and at a figure lower it suffers from inequality. Twenty-two districts have a QOI equal to or more than 1.0,9 districts come above 1.20, whereas 18 districts fall below 0.80, showing very large disparities between these districts.

If we compare districts according to rankings obtained on the basis of per capita income with rural poverty in the district, we see that Narsimhapur that has a rural poverty of 95 per cent (IRDP Rural Poverty Survey 1992) is also high on the per capita income list (rank of 4) signifying large inequalities in the district. The cases of Shajapur (income rank of 7 and rural poverty of 76 per cent), Dhar (income rank of 8 and rural poverty of 7.2 per. Cent), Ujjain (income rank of9 and rural poverty of 69 per cent), and, Durg (income rank of 11 and rural poverty of 62 pet cent), are similar. Raisen is another district where the areas adjacent to Bhopal have turned relatively prosperous and provided much employment and income to the district, though the areas away from the Bhopal are still amongst the poorest in the state. In spite of the highest per capita income, Raisen has a rural poverty rate of 57 per cent, and urban poverty afflicts 22 per cent of urban families.

The NSS 43rd Survey on Employment and Unemployment 0987 –88) gives figures for monthly per capita expenditure (MPCE) for households and population. According to this survey of expenditure in rural Madhya Pradesh, nearly 46 per cent persons lived in households with MPCE expenditure less than Rs. 110 per month, and more than 20 per cent lived with MPCE less than Rs. 80. The levels of deprivation in rural Madhya Pradesh are clearly high.

A perusal of the two graphs on the previous page shows the distribution of people in different expenditure classes for rural and urban Madhya Pradesh and the same figures for India. The bars exhibiting Madhya Pradesh figures shows the larger number of people in the state surviving at lower expenditure levels than the national figures. This is specially true in rural areas. The roughly concave shape of the line showing the cumulative figures for population under the expenditure classes gives a further idea of the level of inequality

## *INFRASTRUCTURE*

Infrastructure for various developments needs have been in a poor condition in the state. The large land mass and relatively sparse population, sometimes found in concentration such as in Indore and Bhopal, and sometimes in sparsely populated and far spread regions such as in Chattisgarh, has made it very difficult for the state to effectively and efficiently spread an infrastructure network in the state. Even historically, at the time the state came into its existence as Madhya Pradesh in 1956, the state inherited a poor infrastructure.

The state had less than 30,000 primary schools and the coral roads in the state were a little over 26,000 kilometres. There was very little irrigated land, though the state boasted of a vast and rich forest cover. All these indicators have seen a significant increase. Schools have increased by nearly 3 times, net irrigated area has increased by 5.2 times, and the road length in the state went up by 2.8 times in the period from 1958 to 1993-94. These statistics show a growth pattern in the state, with infrastructure more than doubling in all areas. The

levels of human development, literacy, health indicators and income have also seen a significant growth in this period, but the extent of their development compared to other states in India, is not enough. We now take a look at some comparisons between Madhya Pradesh, other states, and India, and within districts. The attempt is to look at provision of infrastructure and services, and wherever available, data indicating the benefit of such facilities to people.

In terms of land classification, Madhya Pradesh has a large forest cover with 31.2 per cent under forest in 1986-87 compared to the national figure of 21.9 percent. It was second only to Orissa in share of forest cover to total area.

In 1986-87, the state had 17.5 per cent of cultivated area under irrigation, far behind the national average of 30.7 per cent in the same year. Amongst the states only Kerala, Karnataka and Maharashtra were worse off. For a state with a large dependence in employment on agriculture, poor irrigation is a critical infrastructure problem. The use of fertilizer is also poor in the state, further weakening its agricultural sector. In 1989-90, compared to a national average of 66.9 kilogram use of fertilizer per hectare, Madhya Pradesh stood twelfth amongst 15 major states, with 29.7 kilograms of fertilizer used per hectare. The average production of Madhya Pradesh is compared to other states of the country and all-India in Table 5 – 7. Apart from gram and groundnut, in all other major crops, the state lags behind other states and the all-India averages in productivity per hectare.

Net irrigated area as a percentage of net sown area was 27.1 per cent in 1994. Within districts, Hoshangabad has the highest figure at 66 pet cent irrigated area, followed by Tikamgarh and Morena, the other two districts with over 50 per cent area irrigated.

**TABLE 5-7**
**AVERAGE PRODUCTION PER HECTARE OF SELECTED CROPS**
**1988-89**

| Year | State Budget | Health Budget | Per cent |
|---|---|---|---|
| 1990-91 | 73350 6 | 3141 5 | 4.28 % |
| 1991-92 | 79555 7 | 3524 6 | 4.43 % |
| 1992-93 | 87629 6 | 3811 4 | 4.35 % |
| 1993-94 | 91874 5 | 4060 3 | 4.42 % |

Source: Department of Health, Government of Madhya Pradesh

Twenty-four districts have the share of net irrigated area to net sown area less than 30 per cent. Gwalior and Bundelkhand have a better network of irrigation facilities, followed by Bhopal and then the Malwa region. Baghelkhand and Chattisgarh do poorly in irrigation.

By 1993 the use of fertilizer in Madhya Pradesh had gone up to 35.4 kilograms per hectare. District wise the use of fertilizer was highest in Indore with 98.3 kg/ha, followed by Morena (76.2 kg/ ha), Hoshangabad (73.8 kg/ha), Dhar(67.8 kg/ha) and Bhopal (65.1 kg/ha). Only 11 districts use more than 50 kg/ha, with 12 districts using less than 20 kg/ha. Bastar, Mandla, Shahdol, Seoni and Sidhi come amongst the last.

In terms of electrified villages, the state has done well, with 84 per cent villages having access to electricity. This is better than the national average of 81 per cent and

is fourth best in the country amongst 15 major states. In average per capita consumption, the state goes down with 182.2 Kwh per person, compared to the national figures of 214.3 Kwh per person, ninth amongst 15 states. In 1989,8 districts reportedly had all villages electrified, namely Bhind, Gwalior, Datia, Shivpuri, Mandsaur, Ujjain, Indore and Bhopal. On the other hand, the districts with lower share of villages with electricity are Bastar, Rewa, Shahdol, Raigarh, Panna, Vidisha and Surguja-all with less than 70 per cent villages with electricity.

In terms of rural households with electricity connections, the average for Madhya Pradesh is 37.5 per cent rural households, and Mandsaur has the highest with over 79 percent of rural households with electricity connections. Other districts with over 50 per cent rural households with electricity connections are Sehore and Ujjain (over 70 pet cent); Dewas, West Nimar (Khargone), Dhar and Datia (between 60 and 70 per cent); Chhindwara, Ratlam, Gwalior, Bhopal, Rajgarh, East Nimar (Khandwa), Hoshangabad, Narsimhapur and Shajapur (between 50 and 60 per cent). Twenty nine districts have less than 50 per cent rural households with electricity.

For a large state such as Madhya Pradesh, communications and transport are critical to access regions, to carry delivery of services and facilities to people and to give access to services and facilities to people. Madhya Pradesh has a low per 100 sq. km. Length of roads of 28.37 in 1988, compared to a national average of 57.45, which is also the lowest amongst states. The state also lags behind in pucca roads, with 16.11 kilometres of pucca road per 100 sq. km area, as against India's 27.69 kilometres per 100 sq. km. Land area in 1988. Only 23.4 per cent of villages were connected by all-weather roads by 1987-88,as against 41 percent for all-India in the same year.

## *FOCUS ON INCOME, POVERTY AND DEVELOPMENT*

There has been a strong focus on income, income generation and income supplication efforts by all concerned with poverty/poverty alleviation and general development. With income are linked the important problems of employment, of providing the basics of shelter, sanitation and nutrition.

The focus of most programmes has been skill upgradation of the poor (through training, design and product development, programmes such as TRYSEM and special programmes in agriculture, sericulture, poultry development, fisheries, etc.); asset development (IRDP); provision of essentials for production (like credit, raw materials); employment generation and employment support (through public works in JRY, NRY, etc.); social intervention (forming cooperatives and societies); and direct assistance in economic function like marketing.

These efforts have been directed on the side of the government through a network or schemes, that have historically progressed from the community development programmes of early years of independent India, including infrastructure development, to individual and group focus. The scale of the efforts can be gauged by the fact that IRDP is the world's largest rural development programme. The state on its own has a multitude of programmes, implemented as schemes with multi-departments, multi-organisations and multi-focused approaches to tackle the problems of severe poverty, infrastructure development, employment and backward communities. The non-governmental agencies which have emerged as key partners in the development implementation role in the last two decades have also largely centre around the same set of approaches and programmes. There are examples of

## ASHA NAGAR LEPER RESETTLEMENT COLONY

In the late 80s, an effort was made by the District Administration for comprehensive development and welfare of the lepers of Rajnandgaon. They were given group housing under the Indira Awas Yojana, comprehensive medical facilities, self-employment opportunities through government schemes, and infrastructure was developed for self sustaining socio-economic development. A sericulture station was developed, mulberry plantation was taken up, a small river was dammed for irrigation and fisheries, looms were distributed with marketing facilities for the thread, a 'tatpatti' centre was opened, and settlers were directly financed for piggery, poultry, dairy, etc. A school, health centre and sources of drinking water were provided for. This multi-pronged endeavor involved the participation of several departments, besides the direct involvement of the District Collector. The initial success of the project is borne out by the fact that riot a single leper was seen begging anywhere in the town, and spinning and 'tatpatti' did well due to assured purchase by the school education department and the Collector's patronage.

Problems began with the breach of the barrage and the dam collapsed, resulting in the failure of the mulberry plantation and fisheries. Looms and the 'tatpatti' centre closed due to shifts in market demand, and discontinuation of the assured purchase by the school education department and the Collector's patronage. Non-repayment of initial loans led to blockade of further monetary assistance from government, resulting in the closure of the piggery and poultry units. The school. Was not formally recognised and upgraded and the single deputed teacher returned to his earlier posting. Thus, what began initially as a well-formulated and well executed scheme, collapsed for want of initiative in the target group and/or the continued patronage of the Collector and other district officials, besides lack of coordination between various departments.

The case of Asha Nagar highlights the need for a cohesive, multi-dimensional and well-thought out effort in dealing with the complexities that go with any participatory human development venture. In spite of abundant funds, a well ,conceived and executed scheme can collapse due to certain intractable issues in the long run. The experiment opens up a number of vital questions. In the absence of preparedness of the target group, programmes lack timely transferability and sustainable community involvement cannot be ensured. Since funding and management of such projects is governmental, change in priorities and lack of continuity have been impediments in their success and sustainability. With the target group below/the poverty line, can self-employment programmes by asset endowment really succeed? Should subsidy be given at the time of asset delivery or upon the successful utilisation of the finances? Above all, can easy availability of government money be a substitute to efficient internal management? (Based on a case study by District Collector, Rajnandgaon)

## RIGHTS TO MINOR FOREST PRODUCE

The Government of Madhya Pradesh restored tribals' rights to minor forest produce, especially the tendu leaf, eliminating the middlemen. This is reported to have led to an increase in the earnings of tribal families involved in this work of up to Rs. 4,000 to 5,000 per month during the tendu harvesting season.

## ROLE OF NON-GOVERNMENT ORGANISATIONS AND VOLUNTARY EFFORT

NGOs have a generally positive impact due to their basically humane and sensitive approach and sincerity and dedication to work. Most of them have to work within the limitations of a small spread, and relatively small area of operation. However, NGOs can be of immense strength when tackling very poor and marginalised groups, destitutes and people in need of dedicated and direct benefits, a situation that exists in large parts of the state. Madhya Pradesh historically does not have a vibrant and widespread NGO scene. The state now sees NGOs as partners and collaborators in development with the state and the people, and seeks to encourage their constructive work.

Success, and notable examples in government and many more in NGOs, but the scale of the problem overshadows the efforts and the successes.

With the programmes are a number of legal initiatives taken by government to safeguard against exploitation, ensure minimum rights of the destitute, the worker and the poor, such as acts on labour rights and disputes, on wages and working conditions in factories, on facilities for women workers and children of workers, on child labour, on working conditions in factories, etc. There has been legislative action on the socially desirable needs of pollution control and sound environment management, promoting group and cooperative action by reservation of benefits and areas of operation for them, of preserving and ensuring livelihoods of the tiny and household producer by reserving sections of production for them and building a series of organisations and measures to protect and develop them like the Khadi and Village Industries Commission and Board, and so on.

Government has also directly intervened in improving the economic and income status of people. The most important measures have been the impact on wages through Minimum Wages and support prices for agriculture, easier credit rates for the poor and small and tiny producers, and ensuring availability of credit for priority sectors, provision of subsidies co make assets and other development needs affordable for people.

In spite of all these actions, the poor have not benefited to the targeted extent. Inequalities have been rising. As economic surveys indicate, there has been high price rise in. the last few years, and ever increasing rural urban imbalance of prices and flow of capital.
Unlike most services, the development sector has not developed a tradition of the rights of the

**LITERACY AS A MOVEMENT FOR PEOPLE'S EMPOWERMENT**

In most parts of the world, the poor have little real control over how they are governed. Our politic al systems vest the poor with formal authority over governance through the free right to select the ir representatives to parliament and the legislatives. However the aspirations, traditional,wisdom, actu al needs and real interests of the underprivileged masses do not find genuine, sustained and centr al reflection in the way policies are framed and implemented.

Policy pronouncements and plan documents therefore, underline the critical need for decentralisation of political power to the local people. This is the central theme of the Eighth Plan document. The panchaya ti raj framework developed by Madhya Pradesh is a step in the commitment of the state towards suc h devolution of' political power. To lead this change towards participation of the underprivileged, th e inarticulate and weak a shift is required from a representative democracy, working through politic al representatives and a neutral bureaucracy, to participatory democracy, acting through organisations of th e underprivileged.

The National Literacy Mission (NLM) is the first programme "that attempts to achieve a paramount soci al objective, not primarily through the agency of the bureaucracy, but through massive mobilisation of voluntary leadership from among the people themselves. The literacy campaign is implemented in distric s through a voluntary organisation under the chairmanship of the District Collector, comprising both offici al and non-official members. In its first phase, the aim is to create an environment supportive of litera y throughout the district, through a multi-media campaign relying heavily on folk art forms, primarily villa e theatre and songs. In Raigarl1 district, as many as 50 jathas or folk art troupes were constituted of volunteers and traditional artists, performing to emphasise the importance of literacy in the life of th e underprivileged. In the 2,200 villages visited by the jathas, the response of the target group was u n precedented. Having been duly trained in the modern pedagogy of adult literacy, unpaid volunta y teachers lived for six months in forest! Tribal villages to conquer the darkness of illiteracy.

The critical dependence on the leadership and supportive role of the bureaucracy, particularly th e Collector, has been one of the most vulnerable aspects of the NLM. Divested of bureaucratic authori y and controls, he/ she has to summon mass support from the people based on motivation, mutual trust ar d mutual respect. In some districts, the mass campaign for literacy has consciously been entwined wi h other social objectives, especially health awareness and even social consciousness, such as in Durg.

Though, the vulnerability of this mass campaign directly, funded by government is obvious and i s autonomy and spread is limited, the feasibility of such an option is to be fully explored. There is no reas n why this mass campaign empowerment approach cannot be adapted to other social sectors like prima y education, health, agricultural extension, soil conservation and water, etc. We can think of applying th s approach to the implementation of social justice legislation, such as that relating to minimum wages, lan d rights and untouchability. It is possible to conceive of a local leadership empowered with legal literac r, spreading the light of information to oppressed groups backed by their own organisation and legal aid o motivate and support the determined resolution of such disputes through the courts. (Based on an artic e by Harsh Mander)

consumer. Especially because they are the weak, poor, oppressed and silent, development does not give them any rights of demand, of complaint and of redressal for wrong, inadequate or harmful delivery. This separation has caused a lack of people's involvement in development.

Efforts are being made in Madhya Pradesh to address this basic weakness in development by empowering the people through the Panchayat system, creating social awareness, encouraging involvement of non-governmental organisation in programme design and delivery of benefits.

All these initiatives taken together, the increasing social awareness and responsiveness of the state, the encouragement of non-government organisation, and the efforts for sincere devolution of political and economic power to elected village-level bodies hold out the promise of eventually generating mass popular involvement in development.

Such mass popular involvement is the only way to effectively pass on the benefits of development programmes to the poor on a sustainable basis.

## NOTES

1.Such issues, we hope, will be addressed in future Human Development Reports on the scare.

2.This list is not exhaustive bur only indicative, and we hope thatmore and more issues will be identified and couched upon by ocher reports.

# Gender Issues and Empowerment of Women

*"Ramchandrao phlltbari mein aadmi Janda mati re "*

(In Lord Ramchandra's garden, the man's stick is our gardener)

-from a Bhattara women's folk song

" . . . *Women hold up half the sky."*

-Confucius

(commenting upon on the Mandarin ideograph for household).

Human development as an objective is meant to embrace all sections of society. Indeed, the logic for going beyond income parameters in the notion of human development was based on an appreciation of the fact that income was not reflective of differential social access. This is especially true of gender. Women's work has historically been excluded from the accounting schemes of male-dominated production processes and male-constructed development discourse. While we need not hold forth here about the exclusion and marginalisation of women and their work, it must be noted that human development as a concept is incomplete without an understanding of the way in which 'situations are gendered-whether at home, in schools, in the work place or in the public sphere. If we are to present a balance-sheet of human development in Madhya Pradesh, we must, therefore, state the scenario of gender differentials in Madhya Pradesh.

In 1995, twenty years after the Report of the National Commission on the Status of Women in India and in the year of the Beijing Summit, no discussion of human development can afford exclusion of the gender issues. Today, more than ever, the 'Women's Question' looms large on our intellectual, social and political horizons. The state of Madhya Pradesh has taken several steps forward in the direction of empowerment of women. Also, several people's initiatives, notably in Jhabua, Gwalior, Mandsaur, Hoshangabad and Raipur districts, have been success stories which show both the cruciality and the feasibility of women's empowerment through education, health support, income generation and enterprise development. The state government is, in the light of these, preparing a Women's Policy, emulating and learning from the experiences of earlier efforts.

The empowerment of women has been a stated objective of planners since the formulation of the Sixth Plan. If we draw upon the corpus of work on the Women's Question, Indian and international, the convergence of opinion seems to be around the empowerment of women in both their private/domestic and public / work place spheres. Perspective works such as those by Kali for Women and Centre for Women's Development Studies (CWDS) as well as local, single-issue studies such as those of the women workers in hazardous industries in Indore, Mandsaur, Betul, Shahdol, Sidhi, Bilaspur, Chhindwara, etc., and indeed in most other districts of Madhya Pradesh, point to the fact that ensuring an autonomous yet mainstream women's sphere can only come through ensuring their security, whether in terms of life-chances, access to education and property resources, or in terms of guaranteeing them representation in self-governance and protection from violence (domestic and otherwise).

This chapter is an attempt to take stock of actual achievement of security for women in its different facets in Madhya Pradesh, and can be read both as a status study and as a backdrop for action strategies. The women of Madhya Pradesh have a need for several kinds of security-security against fear, against want, and against discrimination. We can analyse the factual situation and achievements in these regards under several heads, viz.:

- Physical security, health and survival issues
- Economic security and livelihood issues
- Political security and participation in civil life.

These areas of discussion are separately addressed below.

## WOMEN'S PHYSICAL SECURITY, HEALTH AND SURVIVAL

The first parameter of physical security is that of demography. Survival rates for women in Madhya Pradesh have historically been low. To take the most recent figures, the expectancy of life at birch for females in 1986-91 is 54.7 years as against the male figure of 56.2 years. The national figures in this respect are 59.1 and 58.1 respectively, and in keeping with the international trend of a higher overall life expectancy for females. The higher risk of death for women in the state becomes clearer when we analyse the sex ratio figures.

The gender/sex ratio, or the number of females in a given population per 1000 males, is affected by sex selective death rates and migration patterns. In Madhya Pradesh, in the absence of known sex selective patterns of migration it can be assumed that the sex ratio is affected by sex selective loss due to death. In 1991, Madhya Pradesh had a gender/sex ratio of 931 females to 1000 males, the national figure being 929 females per thousand males. In 1901, at the beginning of the century, the sex ratio in the territories that-later went on to constitute Madhya Pradesh was 990.2 This means that the state has lost 69 women in every 1000 population since the beginning of the century. Even in the decade 1981 to 1991, the gender ratio went down from 941 to 931.

There is, however, a significant regional variation in the sex ratio among the districts of the state. The lowest figures are recorded in the northern districts such as Bhind and Morena. However, Bastar 0002), Rajnandgaon (1012) and Balaghat (1002) have sex ratio figures above parity (1000). Districts in the north, in the Gwalior and Chambal regions, have very low gender ratio, Bhind is the lowest with a gender ratioof816, followed by Morena (826), Gwalior(833), Datia (847) and Shivpuri (849). In all, 15 districts:. Have a gender ratio below 900. Very broadly we can say that the state can be divided into two parts along the Maikal-Satpura range and the Narmada valley as far as women's survival is concerned. The area of a disturbingly low sex ratio lies to the north of this divide, and that of better female survival lies to the south.

Between 1901 and 1991, six districts, viz. Jabalpur (112), Narsimhapur (127), Durg (128), Sarna (121), Raisen (110) and Hoshangabad (105) suffered a loss of over 100 points in their recorded sex ratio figures. The state-level figure declined by 58 points, and 25 districts our of 45 registered a decline of over 50 points. The rural gender ratio of Madhya Pradesh was 943 in 1991, higher than the urban gender ratio of 893. Although in all districts rural gender ratios are higher than urban gender ratios, except for the Gwalior and Chambal districts, there has been an increase in the ratio in urban areas between 1981 to 1991. On the other hand, in rural areas, apart from Mandsaur, Ratlam and Gwalior, all districts witness a decline.

Low gender ratios in the state are found in districts that have a social character of discrimination against women, and a high degree of male domination, while better ratios are seen in districts with a high population of tribals. Gender in the state in 1991 amongst tribals was 985, amongst the Scheduled Castes it was 915, and amongst non-SC and non-ST it was 916, almost the same as Scheduled Castes.

Low gender rations in the northern districts of the state have social consequences, apart from the reasons for low gender ratio itself, that reflect the health status of women, and the status of the girl child in the family. Low gender ratio has an impact on marriage, fertility rates, and gives rise to social and family tensions.

Table 6-1 indicates the variation in sex ratios across districts, and the changes in sex ration between the 1981 and the 1991 Censuses. Similar to infant mortality, at the district level, it is difficult to arrive at reliable estimates of maternal . According to survey estimates by the National Family Health Survey 1992, the levels of infant and child mortality rate for the state are 85 and 130 respectively. Since the levels of morbidity and mortality are closely linked with the health status of expectant and lactating mothers, it is safe to assume that maternal mortality rates are also higher than the national average, analogous to the levels of infant and child mortality. Here the crucial role is that of service provision and coverage through immunization and nutrition support initiatives. At state, institutional and local levels these become quite critical in determining the health status of Madhya Pradesh's women, especially during the 'pregnancy window' (15-45 years of age)

Gender Ratios in Madhya Pradesh

| | All | hedulec Caste | hedulec Caste | Others |
|---|---|---|---|---|
| ral | 94 3 | 91 9 | 98 9 | 92 7 |
| ban | 89 3 | 90 0 | 90 2 | 89 1 |
| al | 93 1 | 91 5 | 98 5 | 91 6 |

rce: Primary Census Abstract, 1991

Table 6.2 indicates inter-district comparisons of fertility rates (as against the national objective of a net reproductive ratio of 1) across the districts of Madhya Pradesh. The fertility rate for 1984-90 shows a low of 3.6 for Indore, followed by Bhopal (3.8). The highest fertility rates are in Morena, Sehore, Chhatarpur and Tikamgarh, all with gender ratios below 900, and Sidhi and Jhabua. Twenty-six districts had a fertility rate between 5 and 6. The high fertility rate for the state shows the distance the state needs to cover in this very important indicator. The National Family Health Survey 1992,estimated the fertility rate of the state at 3.9 compared to the desired fertility rate of for the state of 3.1, estimated by the same survey, it indicates the existing space for family planning and health services.

In a sprawling state like Madhya Pradesh, health facilities far from adequate in terms of per capita availability. While the issue of access to health services and health infrastructure has been dealt with elsewhere in this Report, the following figures portray the magnitude of the problem. In Madhya Pradesh there is one doctor for a population of 7,829 as against the national average of 2,393. The per capita expenditure on public health is Rs. 19.25 as against the national average of Rs. 32.85. The low density of population as well as dispersed patterns of settlement mean that a health worker in Madhya Pradesh is required to cover an area of 33.5 km to take care of the needs of a population of 5,000 (load on one PHC according to national norms) as against the national average of 18.5 sq. km.

**TABLE 6.1**
**GENDER RATIO, 1981 AND 1991**

| District | Gender Ratio 1981 Total | Gender Ratio 1991 Total | Decline in Total | Gender Ratio 1981 Rural | Gender Ratio 1991 Rural | Decline in Ratio Rural | Gender Ratio 1981 Urban | Gender Ratio 1991 Urban | Decline Urban |
|---|---|---|---|---|---|---|---|---|---|
| Morena | 834 | 826 | -8 | 835 | 826 | -9 | 827 | 826 | -1 |
| Bhind | 827 | 816 | -11 | 829 | 813 | -16 | 820 | 827 | 7 |
| Gwalior | 845 | 833 | -12 | 818 | 818 | 0 | 867 | 843 | -24 |
| Datia | 853 | 847 | -6 | 848 | 840 | -8 | 876 | 873 | -2 |
| Shivpuri | 855 | 849 | -6 | 856 | 848 | -8 | 848 | 853 | 4 |
| Guna | 882 | 875 | -7 | 882 | 875 | -7 | 882 | 876 | -7 |
| Tikamgarh | 883 | 871 | -11 | 882 | 868 | -14 | 886 | 887 | 0 |
| Chhatarpur | 864 | 856 | -8 | 866 | 855 | -11 | 854 | 862 | 8 |
| Panna | 913 | 897 | -17 | 918 | 901 | -17 | 858 | 869 | 11 |
| Sagar | 891 | 881 | -11 | 899 | 884 | -16 | 871 | 874 | 3 |
| Damoh | 925 | 905 | -20 | 931 | 908 | -23 | 894 | 895 | 1 |
| Satna | 936 | 918 | -18 | 953 | 929 | -24 | 853 | 875 | 22 |
| Rewa | 969 | 932 | -38 | 992 | 946 | -46 | 833 | 858 | 25 |
| Shahdol | 948 | 940 | -8 | 969 | 9961 | -8 | 858 | 868 | 10 |
| Sidhi | 951 | 922 | -29 | 956 | 934 | -22 | 738 | 767 | 29 |
| Mandsaur | 941 | 945 | 5 | 947 | 951 | 4 | 917 | 928 | 11 |
| Ratlam | 948 | 948 | 1 | 956 | 956 | 0 | 928 | 932 | 3 |
| Ujjain | 926 | 929 | 3 | 941 | 936 | -5 | 902 | 918 | 16 |
| Shajapur | 929 | 918 | -11 | 934 | 920 | -14 | 904 | 910 | 6 |
| Dewas | 929 | 924 | -5 | 936 | 933 | -4 | 897 | 899 | 1 |
| Jhabua | 985 | 977 | -8 | 994 | 983 | -11 | 893 | 920 | 1 |
| Dhar | 966 | 951 | -16 | 974 | 960 | -14 | 915 | 892 | -23 |
| Indore | 898 | 906 | 7 | 930 | 919 | -10 | 883 | 900 | 17 |
| West Nimar | 954 | 950 | -4 | 962 | 956 | -6 | 907 | 917 | 9 |
| East Nimar | 939 | 938 | -2 | 943 | 940 | -3 | 928 | 931 | 3 |
| Rajgarh | 931 | 923 | -8 | 935 | 927 | -8 | 908 | 906 | -2 |
| Vidisha | 881 | 874 | -7 | 883 | 872 | -11 | 869 | 881 | 12 |
| Bhopal | 874 | 889 | 16 | 886 | 873 | -13 | 870 | 894 | 24 |
| Sehore | 907 | 898 | -9 | 913 | 901 | -12 | 871 | 884 | 13 |
| Raisen | 908 | 879 | -28 | 912 | 884 | -29 | 866 | 855 | -11 |
| Betul | 873 | 966 | -7 | 996 | 981 | -115 | 855 | 903 | 48 |
| Hoshangabad | 908 | 899 | -9 | 921 | 904 | -17 | 869 | 885 | 17 |
| Jabalpur | 914 | 915 | 2 | 963 | 939 | -25 | 856 | 888 | 32 |
| Narsimhapur | 930 | 913 | -18 | 935 | 915 | -20 | 898 | 897 | -1 |
| Mandla | 1003 | 988 | -15 | 1009 | 993 | -16 | 927 | 930 | 3 |
| Chhindwara | 965 | 953 | -12 | 984 | 967 | -17 | 899 | 906 | 8 |
| Seoni | 982 | 974 | -9 | 990 | 980 | -10 | 899 | 920 | 22 |
| Balaghat | 1006 | 1002 | -4 | 1015 | 1009 | -6 | 917 | 937 | 20 |
| Sarguja | 962 | 956 | -6 | 973 | 969 | -3 | 862 | 865 | 3 |
| Bilaspur | 993 | 978 | -14 | 1006 | 990 | -15 | 915 | 922 | 7 |
| Raigarh | 1006 | 1000 | -5 | 1016 | 1009 | -7 | 899 | 919 | 20 |
| Rajnandgaon | 1020 | 1012 | -8 | 1031 | 11021 | -10 | 945 | 966 | 22 |
| Durg | 980 | 967 | -13 | 11029 | 1010 | -18 | 883 | 891 | 9 |
| Raipur | 1009 | 993 | -16 | 1025 | 1007 | -18 | 937 | 941 | 4 |
| Bastar | 1002 | 1002 | 0 | 1009 | 1007 | -1 | 910 | 938 | 27 |

**TABLE 6.2**
**FERTILITY RATE IN DISTRICTS OF MADHYA PRADESH**

| District | 1981 | 1981 Ranks | Total Fertility Rate 1984-90 | 1990 Ranks |
|---|---|---|---|---|
| Morena | 6.8 | 43 | 6 | 39 |
| Bhind | 6.1 | 32 | 5.8 | 34 |
| Gwalior | 5.8 | 26 | 4.7 | 12 |
| Datia | 6.1 | 32 | 5.8 | 34 |
| Shivpuri | 6.4 | 38 | 6.3 | 42 |
| Guna | 6.3 | 36 | 5.9 | 37 |
| Tikamgarh | 7 | 45 | 6.1 | 41 |
| Chhatarpur | 6.8 | 43 | 6.6 | 43 |
| Panna | 6.7 | 42 | 5.9 | 37 |
| Sagar | 6.4 | 38 | 5.5 | 30 |
| Damoh | 6.2 | 34 | 5.3 | 22 |
| Satna | 5.9 | 28 | 5.7 | 33 |
| Rewa | 5.8 | 26 | 5.8 | 34 |
| Shahdol | 4.9 | 10 | 5.3 | 22 |
| Sidhi | 5.7 | 21 | 6.7 | 44 |
| Mandsaur | 5.3 | 15 | 4.1 | 3 |
| Ratlam | 5.3 | 15 | 4.6 | 9 |
| Ujjain | 5.3 | 15 | 4.2 | 4 |
| Shajapur | 5.7 | 21 | 5.1 | 19 |
| Dewas | 5.5 | 19 | 5 | 13 |
| Jhabua | 6.3 | 36 | 7 | 45 |
| Dhar | 5.7 | 21 | 5.1 | 19 |
| Indore | 4.5 | 3 | 3.6 | 1 |
| West Nimar | 5.9 | 28 | 5.3 | 22 |
| East Nimar | 5.7 | 21 | 5.2 | 21 |
| Rajgarh | 5.7 | 21 | 5.3 | 22 |
| Vidisha | 6.5 | 41 | 5.6 | 31 |
| Bhopal | 5.1 | 13 | 3.8 | 2 |
| Sehore | 6.2 | 34 | 6 | 39 |
| Raisen | 6.4 | 38 | 5.3 | 22 |
| Betul | 6 | 30 | 5.6 | 31 |
| Hoshangabad | 6 | 30 | 5.4 | 29 |
| Jabalpur | 5.3 | 15 | 4.2 | 4 |
| Narsimhapur | 5.5 | 19 | 4.6 | 9 |
| Mandla | 4.5 | 3 | 5 | 13 |
| Chhindwara | 5.2 | 14 | 5.3 | 22 |
| Seoni | 5 | 11 | 5 | 13 |
| Balaghat | 4.6 | 6 | 4.2 | 4 |
| Surguja | 4.4 | 2 | 5.3 | 22 |
| Bilaspur | 4.7 | 7 | 5 | 13 |
| Raigarh | 3.8 | 1 | 4.3 | 8 |
| Rajnandgaon | 5 | 11 | 5 | 13 |
| Durg | 4.5 | 3 | 4.2 | 4 |
| Raipur | 4.7 | 7 | 4.6 | 9 |
| Bastar | 4.7 | 7 | 5 | 13 |

Source: For 1981: Fertility and Child Mortality Estimates of Madhya Pradesh, Occasional Paper No 7, 1987, RGI, New Delhi
For 1984-90 : Contours of Fertility Decline in India, P M Mari Bhat 1995

**TABLE 6.3 FEMALE AND MALE LITERACY IN MADHYA PRADESH**

| District | Literacy Rate | | | Female Literacy | | | Male Literacy | | | Gap in Male and Female Literacy | | | Ratio of Male to Female Literacy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | Rural | Urban | All | Rural | Urban | All | Rural | Urban | All | Rural | Urban | |
| Morena | 41.30% | 36.10% | 61.00% | 20.80% | 14.90% | 43.20% | 58.00% | 53.40% | 75.40% | 37.20% | 38.50% | 32.20% | 2.8 |
| Bhind | 49.20% | 45.70% | 62.70% | 28.20% | 23.50% | 45.70% | 66.20% | 63.50% | 76.60% | 38.00% | 39.90% | 30.90% | 2.3 |
| Gwalior | 57.70% | 37.90% | 71.00% | 41.70% | 16.50% | 58.40% | 70.80% | 55.10% | 81.60% | 29.10% | 38.60% | 23.30% | 1.7 |
| Datia | 43.60% | 37.90% | 63.00% | 23.70% | 16.10% | 49.00% | 60.20% | 55.90% | 75.20% | 36.50% | 39.80% | 26.20% | 2.5 |
| Shivpuri | 33.00% | 27.10% | 65.10% | 15.60% | 9.40% | 49.60% | 47.50% | 41.90% | 78.10% | 31.90% | 32.50% | 28.50% | 3.0 |
| Guna | 34.60% | 27.20% | 64.10% | 18.00% | 10.10% | 49.60% | 48.90% | 41.90% | 76.60% | 30.90% | 31.80% | 27.00% | 2.7 |
| Tikamgarh | 34.80% | 30.60% | 55.40% | 20.00% | 15.40% | 41.90% | 47.50% | 43.50% | 67.20% | 27.60% | 28.10% | 25.40% | 2.4 |
| Chhatarpur | 35.20% | 28.30% | 63.40% | 21.30% | 14.10% | 50.50% | 46.90% | 40.10% | 74.50% | 25.50% | 26.00% | 24.00% | 2.2 |
| Panna | 33.70% | 29.30% | 62.30% | 19.40% | 14.90% | 49.70% | 46.30% | 42.10% | 73.10% | 26.90% | 27.20% | 23.50% | 2.4 |
| Sagar | 53.40% | 44.00% | 75.50% | 37.80% | 26.80% | 63.50% | 67.00% | 59.00% | 85.80% | 29.20% | 32.10% | 22.20% | 1.8 |
| Damoh | 46.30% | 40.00% | 73.80% | 30.50% | 23.50% | 61.30% | 60.50% | 54.90% | 84.80% | 30.00% | 31.40% | 23.60% | 2.0 |
| Satna | 44.70% | 39.50% | 65.00% | 27.80% | 22.20% | 50.90% | 60.00% | 55.50% | 77.30% | 32.20% | 33.40% | 26.40% | 2.2 |
| Rewa | 44.40% | 40.50% | 65.00% | 26.90% | 22.80% | 50.10% | 60.70% | 57.30% | 77.50% | 33.80% | 34.50% | 27.40% | 2.3 |
| Shahdol | 34.80% | 27.20% | 62.70% | 20.10% | 12.90% | 48.50% | 48.40% | 40.90% | 74.70% | 28.30% | 28.10% | 26.20% | 2.4 |
| Sidhi | 29.10% | 26.50% | 66.40% | 13.60% | 11.40% | 49.60% | 43.20% | 40.50% | 78.60% | 29.60% | 29.10% | 29.10% | 3.2 |
| Mandsaur | 48.70% | 41.90% | 70.80% | 28.30% | 19.90% | 56.20% | 67.90% | 62.80% | 84.40% | 39.60% | 42.90% | 28.10% | 2.4 |
| Ratlam | 44.20% | 30.60% | 72.10% | 29.10% | 13.90% | 60.80% | 58.40% | 46.40% | 82.60% | 29.20% | 32.50% | 21.80% | 2.0 |
| Ujjain | 49.10% | 33.50% | 72.10% | 32.60% | 13.80% | 60.90% | 64.30% | 51.90% | 82.40% | 31.60% | 38.10% | 21.50% | 2.0 |
| Shajapur | 39.20% | 33.70% | 64.40% | 19.80% | 13.60% | 48.40% | 57.00% | 52.20% | 78.80% | 37.20% | 38.60% | 30.40% | 2.9 |
| Dewas | 44.10% | 35.90% | 67.00% | 25.60% | 16.20% | 52.50% | 61.10% | 54.30% | 80.00% | 35.60% | 38.10% | 27.50% | 2.4 |
| Jhabua | 19.00% | 13.70% | 70.00% | 11.50% | 6.80% | 58.40% | 26.30% | 20.50% | 80.70% | 14.80% | 13.70% | 22.30% | 2.3 |
| Dhar | 34.50% | 29.40% | 67.40% | 20.70% | 15.60% | 54.30% | 47.60% | 42.50% | 78.90% | 26.90% | 26.80% | 24.60% | 2.3 |
| Indore | 66.30% | 43.70% | 75.90% | 53.30% | 22.50% | 66.60% | 78.00% | 63.00% | 84.30% | 24.60% | 40.50% | 17.70% | 1.5 |
| West Nimar | 36.00% | 30.10% | 66.90% | 23.20% | 17.60% | 53.90% | 48.00% | 42.10% | 78.60% | 24.80% | 24.50% | 24.70% | 2.1 |
| East Nimar | 45.50% | 36.40% | 68.40% | 31.50% | 21.00% | 58.10% | 58.50% | 50.80% | 77.90% | 27.00% | 29.80% | 19.80% | 1.9 |
| Rajgarh | 31.80% | 25.70% | 62.00% | 15.60% | 9.50% | 46.30% | 46.70% | 40.60% | 76.10% | 31.10% | 31.20% | 29.90% | 3.0 |
| Vidisha | 44.10% | 37.20% | 70.20% | 27.80% | 19.50% | 59.10% | 58.00% | 52.30% | 80.00% | 30.20% | 32.80% | 20.90% | 2.1 |
| Bhopal | 64.30% | 33.10% | 71.50% | 54.20% | 15.20% | 63.10% | 73.10% | 48.50% | 79.00% | 19.00% | 33.40% | 15.80% | 1.4 |
| Sehore | 40.40% | 34.70% | 65.80% | 22.00% | 15.10% | 53.20% | 56.90% | 52.40% | 76.70% | 34.90% | 37.30% | 23.40% | 2.6 |
| Raisen | 40.80% | 36.10% | 65.10% | 25.50% | 20.50% | 52.40% | 54.00% | 49.80% | 75.80% | 28.60% | 29.40% | 23.30% | 2.1 |
| Betul | 45.90% | 38.80% | 76.30% | 33.90% | 26.70% | 66.20% | 57.40% | 50.60% | 85.20% | 23.50% | 23.90% | 19.00% | 1.7 |
| Hoshangabad | 52.50% | 42.50% | 78.00% | 37.60% | 26.30% | 66.70% | 65.80% | 57.10% | 87.80% | 28.20% | 30.70% | 21.10% | 1.7 |
| Jabalpur | 59.10% | 43.60% | 76.80% | 45.00% | 26.10% | 67.40% | 71.90% | 60.00% | 85.00% | 26.90% | 34.00% | 17.60% | 1.6 |
| Narsimhapur | 55.60% | 51.40% | 79.30% | 41.60% | 36.30% | 69.70% | 68.40% | 64.90% | 87.90% | 26.90% | 28.30% | 18.10% | 1.6 |
| Mandla | 37.30% | 33.80% | 76.90% | 22.20% | 18.60% | 65.90% | 52.20% | 49.10% | 87.00% | 30.00% | 30.50% | 21.20% | 2.3 |
| Chhindwara | 44.90% | 36.20% | 72.50% | 32.50% | 23.60% | 62.00% | 56.60% | 48.50% | 81.80% | 24.10% | 24.90% | 19.80% | 1.7 |
| Seoni | 44.50% | 40.80% | 78.70% | 31.10% | 27.10% | 69.10% | 57.50% | 54.10% | 87.40% | 26.40% | 27.00% | 18.30% | 1.8 |
| Balaghat | 53.20% | 50.80% | 75.70% | 38.90% | 36.30% | 64.80% | 67.60% | 65.60% | 85.90% | 28.70% | 29.30% | 21.10% | 1.7 |
| Surguja | 30.10% | 24.90% | 67.20% | 17.40% | 12.50% | 54.80% | 42.10% | 36.80% | 77.80% | 24.70% | 24.30% | 23.00% | 2.4 |
| Bilaspur | 45.30% | 39.70% | 71.60% | 27.30% | 20.90% | 58.40% | 62.90% | 58.30% | 83.70% | 35.60% | 37.40% | 25.20% | 2.3 |
| Raigarh | 41.20% | 38.20% | 70.00% | 26.50% | 23.50% | 56.30% | 56.00% | 53.10% | 82.40% | 29.60% | 29.60% | 26.10% | 2.1 |
| Rajnandgaon | 44.40% | 39.30% | 70.70% | 27.80% | 22.20% | 57.50% | 61.30% | 56.80% | 83.50% | 33.40% | 34.60% | 26.00% | 2.2 |
| Durg | 58.70% | 50.40% | 73.50% | 42.80% | 33.00% | 61.50% | 74.10% | 68.00% | 84.10% | 31.30% | 35.00% | 22.60% | 1.7 |
| Raipur | 48.10% | 42.40% | 70.60% | 31.00% | 24.40% | 58.40% | 65.10% | 60.60% | 82.00% | 34.00% | 36.20% | 23.60% | 2.1 |
| Bastar | 24.90% | 21.10% | 71.30% | 15.30% | 11.80% | 60.60% | 34.50% | 30.60% | 81.30% | 19.20% | 18.80% | 20.70% | 2.3 |
| Madhya Pradesh | 44.20% | 35.90% | 70.80% | 28.80% | 19.70% | 58.90% | 58.40% | 51.00% | 81.30% | 29.60% | 31.30% | 22.40% | 2.0 |

This has direct implications for gender equity in access to health. The physical distance of the target populace from the service facility means that the matrix of social inequality determines access. Just as in education, here too women and the girl child tend to get marginalized due to their lower visibility for the agencies providing for the service and due to the fact that women's health issues tend to be confined within the domestic sphere. Diagnostic and curative facilities acquire a gender bias in terms of use.

Expansion of infrastructure is thus an area for immediate priority action. However, the question of gender bias in mortality needs to be addressed specifically and separately.

Available data indicate that two most vulnerable periods for female well-being are the child-bearing ages. Analysis of age specific sex ratio data indicates that sex ratio is lowest in late childhood, early adolescence and in the post- reproductive ages. These are the age groups in which we need to concentrate our resources, care and concern, if the survival and well-being of women is to change significantly for the better. Census age-specific sex ratios reflect the mortality that may have occurred in particular cohorts, and a secular study of district-level age-specific sex ratio data indicates that sex ratios are lowest in the late adolescence and middle adult age groups. These reflect the heavy female mortality of girl children and mothers.

TABLE 6-4
EDUCATIONAL PARTICIPATION IN MADHYA PRADESH 1989-90

| Students | Primary | Middle | Secondary | Higher |
|---|---|---|---|---|
| Girls | 2.96 | 0.76 | 0.25 | 0.07 |
| Boys | 4.79 | 1.76 | 0.76 | 0.16 |
| Total | 7.75 | 2.52 | 1.01 | 0.23 |

TABLE 6-5
School Drop Out Rates in Madhya Pradesh

| | Primary in 1988-89 | Middle in 1988-89 |
|---|---|---|
| Girls | 42.64 | 69.79 |
| Boys | 39.32 | 51.77 |
| Total | 40.62 | 58.07 |

In terms of educational participation, as elsewhere, gender inequalities persist. A comparison between male and female literacy in Table 6-3 indicates the gaps between male and female literacy in the districts of Madhya Pradesh. Female literacy is at the low figure of 28.8 percent, with female literacy in rural area at 19.7 per cent. Male literacy is nearly double female literacy for the state. Lowest female literacy is found in the districts of Rajgarh, Bastar, Surguja, Jhabua, Sidhi and Shivpuri. Except for Bhopal and Indore, the ratio of male literacy to female literacy is over 1.5.

Figures for school enrolment and enrolment in higher education are given in Table 6-4. It is obvious that girls have a long way to go to achieve equitable participation. Girls also have a much higher drop-out rate at each stage than boys. This can be seen from Table 6-5.

Gender discrimination in its various facets is at work in pulling girls out of school well before they are due to leave. The balance-sheet of the girl child is in the

deficit right from the outset, from the primary level onwards. The gender differences in drop-out and attrition figures are obvious from the Madhya Pradesh data in the Fifth and Sixth All-India Education Surveys. This relative deprivation is a blockage for women's access to human development in three ways, apart from the obvious one of hindering educational progress.

Firstly, the high attrition rates for girl students mean that their representation at the higher levels of education, especially in technical and research institutions, is automatically curtailed. As a result, women's access to employment tends to be limited and biased. Gender stereotyping of office work is reinforced. Moreover, the systemic constraints on women's access to education means that, in the urban and quasi-urban contexts, the pressure on even educated women to become housewives increases. The walls of domesticity prevent women from more actively entering the work force. 4 The issue of women in the work force and economic security for Madhya Pradesh's women is addressed in subsequent sections of this chapter.

The second impact of female attrition in access to education is the lowering of the levels of `awareness' on issues such as better health strategies, better reproductive and child care methods and of the importance of education itself as a tool of empowerment and better livelihood for women. Women constitute an important audience for the provision of most human development strategies, especially the service strategies. Denial of access to education to them means a closure of this channel of communication.

Finally, gender attrition in education has implications for women's awareness of their legal and political rights. In terms of political empowerment, the awareness that women constitute a focus area for representation, as decreed in, for instance the Panchayati Raj legislation, is critical for women's active participation in the political process. Also critical is the fact that education is necessary for women to be aware of their legal rights (both as women and as important cornerstones of their households). Women's awareness of their and their household's legal rights in terms of property, access to produce and common lands and as consumers is shored up by education.

Both the state and people's initiatives in Madhya Pradesh need to seriously address the issue of ensuring that awareness through education (basic education and the school system) empowers women to breach the confines of the domestic sphere, and even within it, to be better equipped to take care of themselves and their families.

### *Women and Violence*

Violence against women is as common in Madhya Pradesh as it is in other states and indeed in other societies. Women are the victims of domestic violence, as well as of violence from outside the family, suffering from physical brutalisation as well as economic insecurity. Apart from such violence faced by women from within the family and from criminal elements, many women in Madhya Pradesh are victims of systemic violence from within their own communities. Instances include the prostitution of single women as witches (dakin/tonhi) in Jhabua and Chattisgarh, and the Nathra practice in Rajgarh. Similarly, several witch-hunting incidents in the past have given clear evidence that women in Chattisgarh are persecuted as tonhis by unscrupulous people who are interested in grabbing the property hysteria by taking advantage of the backward value system which suppose that women can access supernatural powers for inflicting evil against victims of disease or distress.

Many of our customary practices and belief systems have

## IN BONDAGE TO CASTE

A form of ritually sanctioned caste-based prostitution is practised in several parts of rural Madhya Pradesh. The Bancharas and Bedias are the principal castes(Scheduled Castes) among whom such prostitution is widely prevalent. The woman is the principal earner of the family ,whereas males either solicit client for their daughters ,sisters, mothers, or engage in petty criminal activities or remain idle.

The mother of any girl has to declare her childhood itself in the presence of the village deity 'Narisma'(folk form of Durga)whether she will introduce her daughter into prostitution or give her in marriage. The initiation of a daughter into prostitution is an occasion for celebration. It is a mandatory caste rule that at least one daughter in each family be reserved for prostitution. A married woman is fully debarred from having sexual relations with anyone of the community. All these castes rules believed to have divine sanction ,and their contravention invites severe caste penalties and social boycott.

The 1981 Census showed that 47 per cent of the Banchara women and 44 per cent of the Bedia women are unmarried .This can be presumed to be roughly the proportion of women engaged in prostitution in these two castes. Marriage is an extremely difficult problem for Banchara and Bedia men, and they have to seek out girls of other communities or orphaned and abandoned girls. The census of a Bedia settlement in Jabalpur at the turn of this century reports that only 8 marriages took place in the last fifty years ,among the entire settlement of 60 families . The 1981 Census showed that 53 percent of Bedia men and 49 per cent of Banchara men remain unmarried .In both communities the practice of giving very high bride price is prevalent ,due to shortage of brides ,reinforcing the system of prostitution .This is because the families which have withdrawn from prostitution usually can no longer afford the bride ,whereas those still in the trade are economically much more sound and can afford the bride price to bring home the most eligible brides.

It is difficult to generalise about the economic status of the Bancharas and Bedias .They span much of the economic spectrum, ranging from those engaged in urban prostitution ,with high income and a visible upper middle class consumerist life-style , to the very poor ,landless ,highway rural prostitutes .There are several instances of women being purchased for red-light areas in the metropolises , or as mistress .In some cases ,group of Bedia women have even travel abroad for prostitution and have returned with very substantial incomes .Bedia families in Morena for instance possess expansive consumer durables like cars, VCRs refrigerators, etc. Women adopted as mistresses by the rural rich enjoy greater economic security ,but this practice is becoming rare and is being replaced by casual prostitution .On the other extreme, there are rural settlements of such prostitutes who live in very sparse hutments , with few household goods , little economic security and can barely sustain their families.

The social status of the woman within the family is complex .There is no doubt that because that woman is the principal bread-winner ,she enjoys a degree of independence and control within her family and social set-up that is not found in other caste groups. There being no taboo against prostitution , the social status of women practising prostitution is often higher than that of married women.

The stirrings of change among the two communities , which subsist in the shadow of rural society in several regions and even in some of towns ,are still not strong enough to develop into a convincing movement for the transition of these communities into the national mainstream ,However ,efforts to join the mainstream are harshly repulsed by the society outside because of extreme social ostracism . . . All Bancharas and Bedias are regarded as illegitimate children of prostitutes and are , therefore , despised .Yet there are visible impulses for change from within the two communities .With education the aspiration to join the mainstream has come up . This exposure is sowing the first seeds of rebellion among the youth against a social system that sanctions caste and family based prostitution .It will be no doubt be a long and painful struggle for the Banchara and Bedia women to break out of their bondage to a profession determined by their birth and caste .But in the voices of the young ,one can already hear the breaking of chains.

(Based on a case study by Harsh Mander)

negative and unacceptable elements, that directly or indirectly support gender discrimination and violence against women. We need to examine these belief systems, encourage and promote the positive elements, and carry out a strong and sustained campaign on elements that degrade women. This attack can take the form of analysis, exposure, education and penal action.

## ECONOMIC SECURITY FOR WOMEN AND LIVELIHOOD ISSUES

The importance of women's economic independence for their overall dignity and even survival is brought out in the fact that there is a startling correlation between the sex ration figures and the figures for women's work participation ( a positive correlation of 0.87). This implies a linkage between the physical survival of women have to work in order to survive physically. The 'double burden' of combining labour in the work place with labour in the home is an obvious dysfunction of women's entry into the work force. However, the above correlation does indicate that strategies towards ensuring a better female work participation ratio (FWPR) may improve the survival rates of women as far as demographic indicators such as the sex ratio are concerned.

Table 6-6 indicates the female work force participation ratios in the districts of Madhya Pradesh. For the entire state, as well as for the larger number of districts, FWPR figures have improved in 1991 from their levels in 1981.5 The FWPR according to the Census of 1991 was 32.7 per cent, which is higher than the all-India average of 22.3 per cent. FWPR is 39.3 per cent in rural areas, and drops to 10.2 per cent for urban areas. The FWPR rates are considerably lower to the north of the Satpura-Narmada divide, and much higher to the south. The lowest rates are found in Bhind ( 4.2 per cent), Morena (14.6 per cent), Gwalior ( 18.6 per cent), and Guna (24.4 per cent). The highest rates are recorded in the rice-growing regions of Chhattisgarh, and in other tribal districts (Jhabua—52 per cent, Rajnandgaon—50 per cent, Bastar—49 per cent and Mandla—47 per cent). These are also districts with a relatively high proportion of Scheduled Tribes in the population. Scheduled Tribe women form 68 per cent of all women in Bastar, 86 per cent of all women in Bastar, 86 per cent in Jhabua, and 26 per cent in Rajnandgaon.

In general, the gender ratios and FWPR are lowest in the northern districts, and higher in the tribal dominated southern and south-eastern districts. There are also regional variations in this overall conformity between districts trends in sex ratios and the rates of women's participation in the work force.

A deterministic hypotheses would be that the females are undervalued by society in the northern districts because they are not economically productive, hence they face neglect, and hence their mortality rates are higher than males. The enumeration of women as main workers in the census reflected in FWPR indicates the level of women's employment in more formal or more visible activities. The positive correlation between FWPR and gender ratios supports the above hypothesis. However, a more realistic position could be that the low sex ratio and the low FWPR of a district like Bhind are both manifestations of the same set of values regarding women.

The 1991 Census reveals that 33 percent of all women in the state are workers', i.e. are formally recognized as contributing to the public production process ( and 22.8 per cent of all females are main workers) Of the women employed as main workers, over 88 per cent are in the agricultural sector, 51 percent are cultivators ( or

**TABLE 6.6**

WORKFORCE PARTICIPATION RATIO (WPR) IN MADHYA PRADESH

| | Female Main Workers 1991 | | | Female Marginal Workers 1991 | | | Worker Participation Ratio Females 1991 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| District | All | Rural | Urban | All | Rural | Urban | All | Rural | Urban | Rank by All |
| Morena | 53075 | 49164 | 3911 | 42645 | 40753 | 1892 | 12.40% | 14.60% | 3.70% | 43 |
| Bhind | 12116 | 9446 | 2670 | 10692 | 10062 | 630 | 4.20% | 4.50% | 2.90% | 45 |
| Gwalior | 40871 | 21077 | 19794 | 29825 | 27743 | 2082 | 11.00% | 18.60% | 5.80% | 44 |
| Datia | 17879 | 15881 | 1998 | 19284 | 18352 | 932 | 20.40% | 24.40% | 7.10% | 40 |
| Shivpuri | 80029 | 76052 | 3977 | 77955 | 76264 | 1691 | 30.40% | 34.50% | 7.20% | 25 |
| Guna | 58200 | 49570 | 8630 | 67234 | 65737 | 1497 | 20.50% | 23.40% | 8.50% | 39 |
| Tikamgarh | 76628 | 68137 | 8491 | 67991 | 65410 | 2581 | 33.00% | 36.80% | 14.80% | 22 |
| Chhatarpur | 80903 | 71531 | 9372 | 71851 | 68440 | 3411 | 28.60% | 32.50% | 12.40% | 29 |
| Panna | 53173 | 49357 | 3816 | 40054 | 38634 | 1420 | 28.70% | 31.00% | 12.60% | 28 |
| Sagar | 134246 | 104100 | 30146 | 68192 | 61097 | 7095 | 26.20% | 30.20% | 16.60% | 33 |
| Damoh | 77687 | 67985 | 9702 | 42513 | 39571 | 2942 | 28.20% | 30.70% | 16.40% | 31 |
| Satna | 152207 | 136151 | 16056 | 57951 | 54343 | 3608 | 30.00% | 33.60% | 14.60% | 27 |
| Rewa | 159091 | 146219 | 12872 | 54728 | 51870 | 2858 | 28.50% | 30.90% | 14.40% | 30 |
| Shahdol | 180467 | 169930 | 10537 | 94609 | 90751 | 3858 | 32.50% | 38.70% | 8.40% | 23 |
| Sidhi | 134564 | 132478 | 2086 | 87889 | 87715 | 174 | 33.80% | 35.50% | 5.90% | 20 |
| Mandsaur | 222021 | 202024 | 19997 | 67126 | 62957 | 4169 | 38.30% | 45.50% | 14.00% | 13 |
| Ratlam | 118230 | 105184 | 13046 | 55034 | 52228 | 2806 | 36.60% | 48.60% | 10.60% | 17 |
| Ujjain | 130906 | 109886 | 21020 | 43865 | 41873 | 1992 | 26.20% | 37.50% | 8.80% | 32 |
| Shajapur | 110879 | 102387 | 8492 | 60854 | 58618 | 2236 | 34.70% | 39.50% | 12.30% | 18 |
| Dewas | 108241 | 96716 | 11525 | 42096 | 39335 | 2761 | 30.30% | 36.80% | 11.30% | 26 |
| Jhabua | 137810 | 132920 | 4890 | 151542 | 148720 | 2822 | 51.80% | 55.00% | 16.40% | 1 |
| Dhar | 199316 | 188697 | 10619 | 69042 | 67795 | 1247 | 40.30% | 44.10% | 14.00% | 9 |
| Indore | 120497 | 72314 | 48183 | 20330 | 17460 | 2870 | 16.10% | 33.40% | 8.50% | 41 |
| West Nimar | 273800 | 257780 | 16020 | 111745 | 109852 | 1893 | 39.00% | 43.70% | 12.30% | 11 |
| East Nimar | 181573 | 165975 | 15598 | 51931 | 49832 | 2099 | 33.70% | 42.90% | 9.30% | 21 |
| Rajgarh | 90045 | 82769 | 7276 | 92584 | 90877 | 1707 | 38.30% | 43.70% | 11.30% | 12 |
| Vidisha | 55922 | 50138 | 5784 | 38209 | 37172 | 1037 | 20.80% | 24.20% | 7.50% | 38 |
| Bhopal | 66281 | 23072 | 43209 | 19618 | 17015 | 2603 | 13.50% | 31.80% | 9.00% | 42 |
| Sehore | 84354 | 78640 | 5714 | 44524 | 43528 | 996 | 32.40% | 37.40% | 9.50% | 24 |
| Raisen | 60404 | 54760 | 5644 | 29757 | 28785 | 972 | 22.00% | 24.10% | 10.40% | 37 |
| Betul | 181110 | 174230 | 6880 | 50169 | 49515 | 654 | 39.80% | 47.00% | 7.20% | 10 |
| Hoshangabad | 60625 | 80940 | 9685 | 44821 | 43346 | 1475 | 22.60% | 28.40% | 6.90% | 36 |
| Jabalpur | 213256 | 170751 | 42505 | 78409 | 72052 | 6357 | 23.00% | 34.70% | 8.60% | 35 |
| Narsimhapur | 70368 | 65828 | 4540 | 25018 | 24391 | 627 | 25.40% | 28.20% | 9.40% | 34 |
| Mandla | 245246 | 239936 | 5310 | 56283 | 55392 | 891 | 47.00% | 49.70% | 13.00% | 4 |
| Chhindwara | 173050 | 157668 | 15382 | 88621 | 85856 | 2765 | 34.20% | 41.10% | 10.50% | 19 |
| Seoni | 143541 | 140117 | 3424 | 73244 | 72442 | 802 | 43.90% | 47.40% | 9.30% | 6 |
| Balaghat | 223049 | 215575 | 7474 | 87702 | 86582 | 1120 | 45.50% | 48.70% | 13.70% | 5 |
| Surguja | 155390 | 150345 | 5045 | 228769 | 227743 | 1026 | 37.70% | 41.90% | 5.20% | 14 |
| Bilaspur | 567223 | 533701 | 33522 | 136288 | 131733 | 4555 | 37.50% | 42.50% | 12.30% | 15 |
| Raigarh | 194376 | 186964 | 7412 | 154777 | 152706 | 2071 | 40.50% | 43.40% | 12.10% | 8 |
| Rajnandgaon | 326724 | 307260 | 19464 | 35871 | 33912 | 1959 | 50.10% | 55.70% | 19.20% | 2 |
| Durg | 403352 | 364592 | 38760 | 31233 | 27270 | 3963 | 36.90% | 50.20% | 10.70% | 16 |
| Raipur | 679033 | 630082 | 48951 | 116973 | 112669 | 4304 | 40.90% | 47.20% | 14.20% | 7 |
| Bastar | 345599 | 336642 | 8957 | 207685 | 206304 | 1381 | 48.70% | 51.30% | 13.20% | 3 |
| Madhya Pradesh | 7283357 | 6644971 | 638386 | 3147533 | 3044702 | 102831 | 32.70% | 39.30% | 10.20% | |

workers on family farms) and 37 per cent are agricultural labourers. Other major categories employing women in Madhya Pradesh in 1991 were other services (4.3 per cent) and household manufacturing (3 per cent). The high dependence on agriculture and household manufacturing shows both the very traditional forms of female employment and lack of any variety in their employment.

Within agriculture, there is sex-specific stereotyping of jobs, with women's roles being concentrated in harvest and post-harvest operations, although in certain tribal areas like Abujhmar in Bastar, women are known to plough, an operation that is taboo to women in many other places. It must be pointed out that women-specific jobs in agriculture like weeding, harvesting, cleaning and storing grain are among the most arduous and the least affected by technological improvements. Whatever technological improvements have entered the agricultural sector, have been for the male-specific jobs.

In Madhya Pradesh, as elsewhere in the country, the most important factor affecting women's situation in agriculture is the gender gap in command over property. Few women own land and fewer still control it. Since land is the most important collateral in securing productive loans, this affects women's access to credit as well. The Women's Policy being enunciated by the state government is addressing this issue.

Apart from the issues of women's entry into the work force, as workers and as entrepreneurs, we need to consider a specific aspect of women's work in Madhya Pradesh, viz., women as migrant workers. In areas of high male migration, women often take over the jobs and roles performed by their men folk. In many parts of the state, most notably in the Chhattisgarh region, chronic seasonal out-migration of poor people from the rural areas is a major problem. Migrant workers travel to far-flung areas, work under contractors without any regulations or social security measures, and are recruited through a complex arrangement that often bypasses visible state machinery.6 Although the hardships caused by this process affect men, women and children, it is important to draw attention to the special problems of women migrants separately. This is for the following reasons. Migrant women form a large proportion of the total number of workers who migrate, yet their specific needs, concerns and resources are largely neglected. Migrant women are often important, and sometimes the only providers for their families, and need to be given recognition in their own right as well as the opportunity to gain financial independence. They offer vital resources contributing to the stability of the migrant community in general and to the physical and social nurturing of the next generation of an important segment of the working people in India.

However, migrant women are subjected to violence and intimidation before, during and after their actual migration. Within their own communities, and outside, migrant women suffer different kinds of oppression based on their gender identity. These women are rarely provided equal opportunities to work and wages, and are systematically denied equal access to food, health, education and training opportunities.

In the urban areas, the majority of women who work are concentrated in the urban non-formal sector. Although we lack systematic data on the conditions of work and wages in these sectors, periodic and special surveys, although limited in scope, give us valuable insight about women in these sectors. A survey conducted by Self Employed Women's Association (SEWA), Indore, casts light on the condition of women in the beedi-rolling, papad-making, and smocking industries around Indore. Women in all these sectors

work 10 to 12 hours a day, seven days a week, and are dependent on the middleman for the supply of raw material and the lifting of finished goods. In the internationally renowned smocking industry in Indore and Mhow towns, women do not make more than Rs.300 per month after such arduous work. The smocking industry also places great stress on the eyes of its workers, and they begin to have ophthalmic problems after they have been working for six years or more.[7]

Access to water for drinking, washing and sanitation is a major concern in the everyday lives of women. According to the 1981 Census, only 20 per cent households in the state had adequate access to safe drinking water. The district-wise position varies widely, from 4.7 per cent in Sidhi to 69 per cent in Bhopal. According to the Hunger Project data, out of the 71,526 inhabited villages in the state, 67,044 were identified as problem villages as far as drinking water facility was concerned; of these, 61,647 villages had been provided with hand-pumps in the ratio of 1:250 persons as on 1.4.93. This shortfall in drinking water and sanitation increases the scale and volume of women's unpaid domestic work, and consequently hinders their paid participation in the work force. As in other parts of the country, in Madhya Pradesh too, women are unequally burdened with the primary responsibility for household maintenance and child care. In the fulfillment of these duties, the accelerating environmental crisis makes the collection of fuel, fodder and water more difficult every day.

While women are vital and productive workers in the state's economy, this is largely unrecognized and unrewarded. The poorer the family, the greater its dependence on women's economic productivity. Women's earnings not only increase the aggregate income levels of these poor households but Indian women contribute a much larger share of their earnings to basic family maintenance than do men. In spite of this, women lack access to the resources which could increase their productivity and they receive a smaller share of what society produces. Women are less endowed than men with education, health care and productive assets that could increase their returns to labour. The disparity between male and female literacy and enrolment rates is vast. More than 90 per cent of rural women workers in Madhya Pradesh are unskilled. Social attitudes, which always view women as only supplementary income earners even when they contribute 50-100 per cent of the family income, restrict them to low paid occupations. Around 90 per cent of women workers are engaged in the non-formal unorganized sector and of these around 80 per cent are in agriculture. Wage rates in agriculture are on average 30-50 per cent less than for men. Women also generally lack the bureaucratic know-how that most men are able to acquire to make the system work for them. Women have little access to land and other productive assets. Lack of land as collateral largely excludes them from institutional credit, rendering them unable to secure capital and tools for self-employment.

## *POLITICAL SECURITY AND PARTICIPATION IN CIVIL LIFE*

Madhya Pradesh has the unique distinction of already having implemented the 73rd and 74th Amendments to the Constitution and conducted elections to the three-tier Panchayati Raj institutions and municipalities. Since August 1994, the rights and duties of the newly elected Panchayati Raj members with reference to 23 government departments have been handed over the Panchayats.

The elections to the Panchayati Raj Institutions with a 30

per cent reservation for women constitutes a revolutionary step towards the restructuring of power structures at the village level. Nineteen of the Zilla Panchayat Adhyakshas in the state are women, and there are a total of 1,84,000 women members of Panchayati Raj Institutions in the state today. Though there are many teething problems such as lack of acceptance by men, male relatives (usually husbands who are then called panch/sarpanch pati, or sons) playing the defacto role of the Panchayat member rather than the elected women, women feeling diffident dealing with government officials, and so on, there are indications of a growing consciousness amongst women of their role as Panchayat members, and as representatives of women.

While a significant step has been taken, many tasks still remain incomplete in the handing over of effective political power to women, due to the abovementioned problems. For one thing, many of our women, unused to a decision-making role, still face considerable difficulty in carrying out their newly assumed responsibilities. To overcome this shortcoming, the government intends to carry out training programmes for women members of the Panchayati Raj Institutions that are both extensive and intensive. Government officers too need greater orientation and sensation in dealing with women Panchayat members.

At the level of parliamentary and legislative representation the role played by women is still small. Only 5 out of 41 Members of Parliament (Lok Sabha) and 10 out 316 Members of Vidhan Sabha are women.

The increased participation of women in the public sphere as far as political representation is concerned, depends upon the progress made in economic and domestic spheres. The state can only provide legislative and legal underpinnings to the empowerment of women. A beginning has been made in the right direction, which is likely to be the precursor of major changes to follow.

## *SUMMARY: WOMEN'S STATUS VIS-À-VIS HUMAN DEVELOPMENT IN MADHYA PRDESH*

Although women are major contributors to the survival of the family, providing more than 50 per cent of the total labour required for food production, in addition to shouldering the entire household activities and child care responsibilities, social conventions and gender ideology largely deprive them of a share in ownership of land and other assets, of control over the fruits of their labour spent on the family assets, and of a place in decision-making in the home or the village. Socially they are conditioned to a life of dependency. This is as true in Madhya Pradesh as elsewhere, except for the difficulties in the coverage of the population by service infrastructure, means that women and girl children tend to get further marginalized.

An assessment of demographic and education data for Madhya Pradesh indicates that the devaluation of women commences at birth with the preference for male offspring as sons `who are needed for salvation in the next world,' and economic viability and continuity in this one. It continues through a childhood of conditioning to the submissive, subservient role required of them in the marital home. A woman is never viewed as a person in her own right but always a someone's daughter, wife or mother. As a daughter she is under the surveillance of her father, as a wife of her husband, and as a widow of her son. From birth women are discriminated against in access to the basic necessities of life-nutrition, health care and education. Malnutrition and mortality rates for female infants are significantly higher than amongst

males. Even as adults, women frequently do not have equal access to food, but share what is left after the men have eaten, with consequent repercussions on their health and strength. Despite women's higher morbidity, associated with their inferior nutritional status, far fewer women than men use institutional health services.

Adolescent girls are one of the most neglected groups in Madhya Pradesh (as elsewhere). Their needs and their economic contribution has remained totally invisible. Because of their requirement to participate in domestic work and paid economic activities from an early age to supplement the family income, school enrolment rates among them are lower and drop-out rates higher at all educational levels. Around 20 per cent of female workers are under 20 years of age and in Madhya Pradesh, 70 per cent of the employees in the match industry are girls below 14 years of age. The number of female child labourers has been going up over recent years whilst the number of male child labourers has been declining.

On practically all fronts, the socio-economic gap between men and women in Madhya Pradesh is wide a feature it shares with other states in the country), notwithstanding the fact that the Indian Constitution ensures equal rights for men and women and government policies in general are non-discriminatory on gender grounds. Many significant laws positively affecting the status of women exist in the statute books but the record of implementation of these laws has been poor partly due to lack of knowledge about the laws and partly due to entrenched traditional attitudes towards women. The disturbing fact is that despite such legal provisions, crimes against women have been rising and the rates and incidence of dowry have been going up. All this is a clear demonstration of the fact that mere enactment of laws does not change attitudes, and the views of society towards the position of women have changed little over the years.

The position of women varies across regional and according to the economic status of the household and its place in the caste hierarchy. Although both the northern and southern regions of Madhya Pradesh are dominated by the strongly patrilineal ideology, on the whole the position of women is more constrained in the north (covering Malwa and Vindhyachal regions) than in the south (including Bastar).

But these regional differences are further modified by caste and economic circumstances. Constraints on women are stronger among caste Hindus than among Scheduled Tribes and Castes and stronger among landowning cultivators than among landless labourers or marginal farm families. Among the poor who cannot afford female seclusion, women have always entered the labour force when they could find work, but symbolic boundaries still remain, so that whilst a middle-aged woman may vend her vegetables in the market, a young bride doing the same would bring shame on herself and her husband's family.

Development programmes have largely not achieved the anticipated impact on the status of women as policy makers and implementers have not been able to liberate themselves from the traditional image of a woman as a reproductive agent and a home-bound wife and mother. Programmes directed towards employment and income-generating activities for women continue to emphasise the traditional female activities such as animal husbandry, tailoring, papad-making, handicrafts etc. These are low-skilled, low-paid occupations without opportunities for growth of income or status and with shrinking markets.

In addition, the focus under development programmes on women providing an additional economic activity in addition to women's unpaid work on the

family farm or tending the family livestock, tacitly establishes that women have no claim over the fruits of their labour spent on family-owned assets, such as land or cattle, and that only men have control over the fruits of their combined efforts. This approach on the one hand increases women's burdens, whilst on the other it accepts the inequitable gender-based power relation-ships within the household. Furthermore, whilst women take on added economic responsibilities alongside regular household economic activities, men enjoy the fruits of enhanced family incomes without sharing any of the household responsibilities.

Against this background, development programmes for women need to recognize that women are already generating income and should have some control over the family's combined income. There is a substantial number of women farmers in Madhya Pradesh, and their income needs to be enhanced through better access to extension and training in farming practices. Income-generating activities for women should have potential for rising incomes which will only be possible if non-conventional skills are imparted to women and marketing information and outlets are provided.

Undoubtedly, Indian culture is very resistant to change and hence policy-makers and implementers face an uphill task, The task is magnified by the fact that women of all castes, as a result of age-old socialization practices which moulded them into submissive, passive, non-persons, are conditioned to support the existing male/female relationships. The poor, however, are more inclined to accept change than the rich, since the poor have less at stake.

Madhya Pradesh is on the wake of releasing a Policy on Women, shortly. The main points of the Madhya Pradesh Policy on Women are going to be the attempt to promote the increase of women's control over land, property and other common resources; women-headed households will be recognized and supported; steps to increase women's employment in development and social

**HIGHLIGHTS OF THE PROPOSED MADHYA PRADESH POLICY ON WOMEN**

- Increase women's control over land and oth er common resources. Amend laws to extend th ir names in future mutations as Bhoomi Swamis n land records.
- Village common lands will be vested in the jo nt control of al adult women residents of a village, a d managed on their behalf and under their decisio s by the panchayat.
- Increase participation of women in decision-maki g bodies, committees, etc. on common prope y resources. Increase women's membership of c o- operative societies in activities in which they a e involved, like Minor Forest Produce Cooperati e Societies, WATSAN Committees and committees n drinking water, etc. Ensure equal partnerships n `tree patta' and Joint Forest Manageme nt Programmes.
- Ensure that all girl children are in school or N n Formal Education by 1998. Free textbooks for ll girls up to class VIII
- Increase government jobs for women by reservi g 30 per cent seats for them, and recommend th at there be no age bar in social and developme nt sectors. Re-orient agricultural and animal husbanc y staff of government to cater to women's needs, a d increase women staff in agriculture, fisheries, s patwaris, etc.
- Ensure that women get the wages of tendu le af collection.
- Visibility of women in data collection and statistic al record-keeping.
- Training programmes for women members of PRIs
- Increase credit access to women, and set up a Mahila Bank in the state. Preferential access to s ft credit, and infrastructural facilities for wom n entrepreneurs.
- Extend ICDs to every district by 2000 AD, strength n health care delivery system especially n reproductive health, and launch safe motherho d and `dai' training programmes on a massive scale.
- Provide legal literacy to women through `jag ti shivris'.
- Set up a State Commission on Women to overs e the permeation of all programmes of governme nt with a holistic gender approach.

sectors; to ensure women's visibility in data collection and statistical records; attempt to reduce Female mortality; increased representative of women in government bodies; more avenues for credit for women; and greater focus on reduction of crime against women. The state policy also proposes setting up of a Women's Commission in the state.

By way of conclusion, it is only fair to say that at present the status of women in Madhya Pradesh needs substantial and resources relevant to human development. Much of this results from implicit strategies of male domination traditionally prevalent in our country, and Madhya Pradesh is no exception to the rule of patriarchy. The inadequacy of infrastructural support is felt even more by women and children, as they are at the bottom of the matrix of inequality. The physical distance between people and services means that women and girl children are the first to be excluded in access to human development. This scenario gives a sense that for the present the dead weight of history lies heavy on the women of Madhya Pradesh.

In this background, there are signs and voices of change, political, social and institutional. The state is experiencing changes through the very recognition of the question of gender, and its articulation, the growing sensitivity of the state government to the issue of women's and children's development, the Policy on Women focusing equality in property and ownership, equal access to service, and ensuring dignity and protection, and the participation of women in Panchayat bodies in a revolutionary manner.

These changes will set the base on which the political and economic empowerment of women may become a reality, so that the future may shine equally on the woman and the man.

## NOTES

1 The phrase was coined by Natalie Zemon Davis. All versions of `feminism' today seem to converge on stating the specificity of women's position in a plethora of situation, private, public, sexual and medical, domestic and economic.
2 For pre-1961 Census years, standardized data for area and population has been taken from Mitra (1978).
3 Sandal (1993).
4 It is necessary to note that `work force' here means the paid workforce. `Woman's work', especially domestic chores, has not been factored into this notion of `productive employment'. UNDP's 1995 HDR has focused extensively on the `monetary' value of otherwise unpaid women's work.
5 In interpreting inter-censual changes in FWPR, allowance must be made for changes in definition and recall period between the two censuses.
6 See Sen (1995).
7 SEWA (1995).

# Information Base and Human Development Concepts

Districts and development blocks are the primary level of development action in India. They are also a primary source of development information and data. For baseline information on indicators of human development, district administrations are supposed to be the fount of all data. However, the notion of human development as a technical concept has not yet filtered down to the state level in India, let alone districts. There is a considerable gap between the theoretical and highly aggregated concepts of human development and the reality of data collection, generation and provision at the level of the district.

It is instructive to look at the concepts and indicators of human development `from below', as it were, from the perspective of those who generate or gather the data on which the national statistics (and the state statistics) are based. This chapter attempts to juxtapose the reality of data generation at the field level by the patwari, the kotwar and the Panchayat with the concept of human development as conceived and discussed by planners and economists.1 Here we try to sketch the structure of information on `human development' and its sub-parameters, from the viewpoint of its functioning in a particular district, in this case, Raisen district.

In Madhya Pradesh, the district is important not only as an administrative unit but also as a reporting unit. An intensive study was conducted of Raisen district, to understand the process of data generation and reporting within a district. Raisen was selected for intensive study since it has a combination of developed areas as well as backward areas, it was accessible to the project headquarters and most programmes of the government are currently running in this district.

The following sections are not an analysis of human development in Raisen district. Here we attempt to understand the issues relating to the operationalisation of human development concepts in terms of district data, and to spell our possible strategies to ensure better provision of data pertaining to human development, given the criticisms and constraints of the existing setup.

The broad findings of the Raisen study can be summarized as follows:

- Although human development is an integrated notion, the provision of data relevant for it is organized departmentally. There is, therefore, considerable `fracture' and double counting in data provided for this purpose.
- Data on the internationally standard indicators such as mean years of schooling, life expectancy and per capita income (with or without `purchasing power parity') are not feasibly retrievable or available at the district level. Proxies or surrogate measures have to be employed.
- Data on physical infrastructure and on personnel in departments covered under the categories of human development are readily available at the district and block levels.
- Data on outcomes and on the quality of the infrastructure and services is not available at the district level.

Human development data does exist at the local levels in the district, except for vital statistics. Even outcome data such as school drop-out information is available at the local level (at the school level). This data is however not reported since the reporting proformas have no place r them. The bridging of this gap through more sensitive reporting formats can be a useful starting point in the attempt to collect better and more relevant data on human development..

The order of analysis followed in this section is as follows:

- Reporting of human development parameters in the districts.
- Salient issues in the structure of information in the districts.
- Strategies for improvement.

## HUMAN DEVELOPMENT PARAMETERS AND DISTRICTS

The notion of human development is built upon a range of indicators pertaining to education, health and lively-hoods/income. These concepts are quantified to enable comparison and to provide a `measuring scheme' for planners and decision-makers. Quantification involves selection of measures for various parameters of human development. Mean years of schooling and drop-out rates are used as measures for quantifying attainments in education. Life expectancy (at birth or at age 5) is one measure for attainments in health. Per capita income (now adjusted according to `purchasing power parity') is the measure used for quantifying outcomes relating to livelihood.

These indicators, at the district level and at levels subordinate to the district, are derived from land records, revenue data, education data and vital statistics (birth and death rates), etc. It will be useful now to study the human development parameters in terms of collection and retrieval of information pertaining to each parameter will be identified, the sections will also suggest areas where reporting was found deficient and suggest measures for improvement.

At the very outset, however, it is necessary to point out that while human development is a concept, the data for it is provided by departments. Thus while the concept is holistic, the data is segmented according to government agency or department. This has important implications for the inter-section between activities of human development.

### *Education*

The District Education Officer is the nodal source of programme implementation and monitoring in the district with regard to all government-sponsored education initiatives. The block level staff, mainly inspectors and supervisors who go about verifying school records, infrastructure conditions, supplies etc. in various schools run or accredited by the government, report to the Deputy Director Education (DDE), who in turn reports to the Department of Public Instruction in the state capital.

In Raisen district, the Rajiv Gandhi Mission on Basic Education is a high priority activity with the objective of improving access to basic education not only through the school system but through literacy campaigns and awareness initiatives. The District Collector has identified increasing social awareness as a catalyst for human development in Raisen (which has a historical legacy of feudalistic landlordism, inherited from the administrative structure of the kingdom of Bhopal whose military commanders had been given rights on land in the Raisen region). As a result of the emphasis placed by the state government and its execution by the District Collector, the reporting and monitoring of education-related initiatives have received considerable impetus.

Table 7-1 at the end of this chapter indicates the reporting of infrastructure and outcomes related to education in Raisen district. From the Table we see that at the district level, information on infrastructure, student enrolment, teacher recruitment, etc., is quite good, partly because budgetary allocations are required for them. On the other hand, information on outcomes such as mean years of schooling, drop-out rates, etc., is quite poor. Most data is not consolidated at aggregate district or block level, though it is available individually in schools or colleges. Some aggregation of figures is done by the district education office, and district data is also consolidated district-wise at the state level by the Departments of Education, but these pertain mainly to programme target achievements like enrollment, buildings constructed, teachers in a district, etc.

### *Health and Vital Statistics*

Raisen's data administration with regard to health infra-structure and health-related outcomes (vital statistics) is headed by the Chief Medical Officer who presides over a large cadre of health officials and workers in the district. All hospitals and medical institutions report to the Chief Health and Medical Officer (CHMO). In Raisen, as elsewhere in Madhya Pradesh, birth-death registration arrangements have been made in the municipality/Municipal corporation for urban areas and the thana (police station) in rural areas. For urban areas, the Chief Municipal Officer/Health Officer and for rural areas the Thana In-charge, is declared as the Registrar for the areas under their jurisdiction. The District Statistical Officer is the District Registrar, whose responsibility it is to provide the district's birth-death statistics to the Chief Registrar of Births and Deaths.

For a better perspective on the generation of vital statistics, a look at the state-wide picture is in order.2 Today, Madhya Pradesh has 1,395 registration units, including 979 rural and 416 urban units. To facilitate registration in the forest areas, Forest Rangers have been appointed Registrars in 28 forest units. In the state, 165 police chowkis have been declared as Sub-Registration Centres so that rural residents and respondents do not have to cover long distances for registration. The Kotwar in villages, the Forest Guard in forests and the Ward Daroga in urban areas are the providers of information. At the divisional level, the Deputy Director, Divisional Statistical Office is the Divisional Registrar. At the state level, the Director of Economics and Statistics is the Chief Registrar and the Deputy Director of Vital Statistics is the Deputy Chief Registrar of Birth and Deaths.

Madhya Pradesh is a large state where there are several problems in the systematic management of the birth-death registration system. Despite all efforts, there is little quantum progress in registration because 76.8 per cent of population is non-urban, and there are several difficulties in improving registration in these areas. In rural areas, the Kotwar is the reporting officer. However, today, out of a total 71,526 inhabited villages in Madhya Pradesh, only 51,635 villages have a Kotwar. The remaining 19,891 inhabited villages have no Kotwar, and therefore their birth-death information goes unreported.3 The civil registration system (CRS), therefore, is subject to extremely heavy degrees of under-reporting. The sample registration system (SRS) provides more reliable data, but its coverage of districts is not statistically significant and therefore, its data cannot be used for inter-district comparisons of vital statistics.

Reporting of outcomes and infrastructure relating to health in Raisen district are outlined in Table 7-2 at the end of this chapter. Here we see that at the district level, the information on infrastructure is quite good. Information on outcomes, such as life expectancy, is non-existent. Information on crude birth and death rates, infant mortality, etc., is available but statistically unacceptable.

### *Livelihoods*

Unlike health and education, livelihoods or income is a synthetic concept, not confined to any primary department. This is indicated by the large number of sources and organizations which have to be involved in the provision of data pertaining to livelihoods and income in a district.

Sectors comprising `income' and the sources for data on them in Raisen district are given in Table 7-3 at the end of this chapter. A look at this Table indicates that there is a sizeable contingent of data providers with regard to income and livelihood parameters of human development. In addition, there are the surveys of IRDP to measure and enumerate rural poverty; groundwater and resource mapping to generate information on the resource endowment of the districts. However, due to the departmental segmentation of these heads of information and the uneven quality and availability of information for these heads, computation of livelihood indices or measures of `district income' is fraught with problems, both in terms of logic and in terms of practicability.

The flow and sources of data on all three parameters of human development indicate that while data is avail-able at some level, and in some form, it is not generally relevant to outcomes and it is not uniform or singular, since it is provided by a variety of departments and functionaries. Thus, an `integration' of data provision from nodal officers is necessary for more efficient `human development' data reporting at the district level. However, even this integration is not sufficient to provide all the data, especially outcome-related data required for our purposes. Moreover, the streamlining of departments or officers providing this data and the increment of their skills and resources can only be undertaken in the light of the everyday reality of their functioning and of the use of data in districts and at super ordinate levels.

## SALIENT ISSUES FOR THE STRUCTURE OF INFORMATION IN THE DISTRICTS

We now analyse data administration in Raisen district and the manner in which the government and people collecting data handle and perceive data. Although this analysis is based primarily on an intensive study of Raisen, some observations are drawn from the fieldwork conducted in the other districts of Madhya Pradesh.

The state government is the single largest unit administering human development in the state, both in implementing programmes and schemes relating to development. It also generates data pertaining to human development issues and conducts surveys, making estimates and assessments on indicators of human development. The state government at the apex level gets information form all sources on all development activities under its preview, for monitoring and for accounting. Except for some categories, all information is arranged either district wise or is available at the level of the state. In some cases like forests, the reporting unit for data and for accounting are regions different from districts.

Though the state government is the final reservoir of all data, at the districts, it is the office of the Collector where all data flows, and under whose instructions all data is collated and reported. The District

Collector is the main revenue and development head of the district. It falls upon the Collector's office to implement and monitor all programmes, schemes and missions. This is done directly as well as through other departments represented in the district such as the DRDA, the Forest Department, and the Agriculture Department. Drawing on its central and critical position in government in the district, data and information also gets focused in the Collectorate. Since all department and programme heads in a district ultimately report to the District Collector directly or indirectly, the Collectorate is the repository and suppository of all data and information. Apart from its administrative position, the Collectorate is also the office that coordinates all departments, and is finally responsible for virtually everything in the district. This further increases the Collectorate's need to have all data concerned with the government in any manner.

In a way, it is this centralized nature of collection of all data in a district in one office, that causes some of the problems concerned with data. There are various sources from which data is generated, and they in turn report directly to the collectorate and its offices, in prescribed formats, which are often developed in keeping in mind programme details, and department and accounting needs. Secondly, there is very little sharing of and use of data from other departments or programmes, which does cause duplication of data, multiple assessment of similar data, and problems of cross-referencing and correlating data from different sources.

Information flow is a one-way process without much top to down interaction in discussing data, in verification and in utilization of most of the data. The information flow has created platforms in the data system. First comes the gatherer or generator, who is the person who collects the primary data or is responsible for generating it. Then comes the first level of reporting where primary data sheets are maintained. This is followed by the block, tehsil or directly the district level, where primary sheets are turned into aggregated figures for the area. It is at this level that most data gets the shape in which it is then sent to the state level, and it is in this shape that it is used and interpreted, or analysed.

A major lacuna of data administration in India is that the person who actually collects the data does not know the purpose for its use. All data collection is generally a passive exercise in response to a fiat from the BDO, the Collector or the state government. Moreover, the efficiency of techniques also varies from the provider to the user. While the users in planning bodies, academic institutes and think-tanks run sophisticated statistical operations on high-tech machines, the providers of data often do not even possess calculators or the training to use computers. In Raisen district, the District Centre of the NIC was the sole node of government computerization. Computer literacy, computer use and the computer culture is yet to take root among the statistical officers, the departments in the Collectorate, the BDOs and the extension officers.

The platforms between the gatherer and end-users, have also separated the gatherer from the user of data. Those who are collecting data have rarely been a part of those who analyse data, and are not in the know of what the data is used for. This sense of separation from the data that primary data-gatherers feel, builds an alienation from data, and the process becomes target-oriented, where collection of data is more important than the validity and authenticity of data. 4 It is not that the data collected and reported by government departments is not always authentic, but the main focus in on being able to collect the data and present it in the manner necessary. Data collection becomes an end itself separate from all demonstration of practical use. This ritualisation

degrades the importance of data collection and provision .

Practices adopted to report data often distort the actual picture. Often corrections are made to data in order to see that totals match, and in cases where data is not available standard multipliers are applied to previous years or earlier available data to portray current figures. Another critical problem with the data systems is that the officers putting the data together and reporting it are not responsible for its authenticity, only for its proper presentation which is mathematically correct (proper totals and correlation with other reported data); and similarly those who generate or collect data are not responsible for its proper mathematical correctness, thus data is at times unrelated, there are problem of totals mismatch, lack of relationship across data and with previous years and so on. The lack of understanding of the purpose of the data and its utility leads to most of the problems associated with data

There are many other compelling reasons for which data gets changed or is made to reflect certain conclusions, such as conditions drought, growth in employment or generation of employment under programmes, reduction in poverty due to IRDP, etc. A related concern with data is that many activities of the government are reported in a manner that exhibits achievement of the targets and goals of government and the data that represents this information does not therefore, often reflect the actual status, but only the target status. For example, in school enrolment, the figures reflect the students who got enrolled anyhow in the school. The data does not show regularity in attendance, let alone quality of learning. Similarly, immunization figures may represent the number of vaccines given rather than child or mother-wise achievement of full immunization.

Most data that the government reports is quantitative data, and shows the quantum of work undertaken, infrastructure built, targets achieved, etc. There is very little data that shows a qualitative trend, such as utilization of infrastructure, access to infrastructure, quality of schools, level of education of children, and so on, and in this there is dependence on studies and surveys undertaken by central agencies or other quasi-government and funding bodies.

Another interesting aspect is that the government does not generally use data and information that is not released by an agency connected with the government. 5 Individual cases exist and often such data find their way into government through the use of experts and resource persons in government, but there is little official acceptance of such data, however definite, significant and scientifically valid they may be.

### *Sources of Demand for Data*

There are certain standard sources of demand for data. These are related to programme monitoring, programme planning and target setting, as well as resource allocation and development planning. There is also a large demand segment of accounts-related reporting, which is usually the most carefully done data base as it can have a negative bearing on a person's career and future. Demand from these sources for data comes from various administrative levels both within and outside the district. 6 First, is the block, where development related information is needed for planning and reporting. Similarly at the district level there is reporting from all departments so that district plans can be made, reporting of programme achievements are done district-wise, and indicators of essential information are collected and sent up to the state level, so that the exercise of planning and resource allocation can be undertaken. These demands are standard, met under standard data formats.

Demand for data contained in standard reporting formats is rare. Furthermore, data administration is restricted to collecting and reporting data, and occasionally analyzing some of the data for district-level publications by the Collectorate. A more sensitive and detailed analysis of data in the district for wider planning purposes is yet to emerge from the Collectorate, given the passive, unilateral nature of the demand for data.

*Data bases and Surveys*

Apart from department-related data, there are also consolidated data bases developed in the state, the most important amongst them being the land records (now computerized), and the village and district-level querying systems developed by the National Informatics Centre (NIC). Other major data bases used by the district and even village-level information on a host of parameters.

The computerized land records are available in the districts, and have gone a long way to ensure a faster retrieval and data base management system of land records. However, in the absence of legislative sanction for land records computerization (and the fact that total coverage is not yet achieved throughout Madhya Pradesh), the land records data base is not being used by the land revenue administration, or by the law courts (which are themselves inadequately computerized), or even by the people.

The Computerised Rural Information Systems Project (CRISP) was developed as a data base for rural development monitoring, following the model set by Uttara Kannada district in Karnataka. This programme is provided by the NIC to the DRDAs in the district. However, the package is not used anywhere in Madhya Pradesh, let alone Raisen district. Apart from the cumbersome format and unfriendly user interface, the poor state of DRDA computerization is responsible for the non-use of CRISP in Raisen, as elsewhere in Madhya Pradesh.

NIC has created district data bases and village-wise querying systems, namely DISPLAN and the Village Information System (VIS) ----a village-level data base which provides information on infrastructure, employment, health and education services and facilities, etc., at the village block and district levels. In Raisen, though these data bases were available and indeed were demonstrated to the project team, the district administration rarely, if ever, used them in decision-making. The reasons for this are as follows:

- Indifference of staff in providing current data
- Doubts about the veracity of the data itself
- The disclaimer of all responsibility for its use by all concerned.

The district's sole comprehensive data base, it appeared, is an orphan. It is caught in a vicious circle where it is not used because it is not credible and it can never be credible because no one has ever used it.

What is interesting about the NIC data base is its owner-ship. NIC claims to have no responsibility towards its authenticity, and provides it on an `as is where is' basis, somewhat similar to the sale of used cars. Yet its retrieval is hardly an easy task for the computer illiterate or the lay government functionary, let alone private citizens. Further, since it is an NIC data base set in a centralized format, the utilization of this data base is scarce in the state government. Thus it lies idle as a data base without any value addition to the district administration. NIC claims knowledge of creating a data base but its personnel are ill equipped to understand and handle statistics and data analysis. On the other hand, the computerization and the esoteric nature of electronic data bases, the cultural and educational problems of computes, make the

data base virtually useless for most government functionaries in the districts.The disclaimer regarding the authenticity of data further puts the data base in a `fluid situation'. No one is comfortable using data which is not supported even by its managers and providers.

The one lesson from the experience of NIC in the district is the necessity of data training for data base managers and electronic data base utilization training for those who intend to use data bases. In the absence of this interface which will bring the data base managers and users together and make each responsive to the other, electronic data bases are nothing more than faster retrieval systems. Moreover, at the state level, NIC should be able to deliver their data bases to the state government departments on demand. Thus far, the NIC has been rather tardy in online provision of data to state government departments.7 The use of NIC data bases by state governments on a regular basis will provide an incentive to district administration to ensure greater validity and availability of current data in the NIC data bases.

The other significant source of information is the Census. The government prepares District Census Handbooks from the Census data, and all state-level publications contain data district-wise. However, except for the DSO, no one in the Raisen district administration knew the variety of information contained in the Census, and what could be done with this information.8 For example, an agency needing data on employment in `wood and leather' did not know that Census Economic Tables have these figures. District census tables are used mainly for population figures since they are benchmarks for allocation and monitoring of development schemes like JRY. The delay in the provision of the 1991 Census Economic, Household and Social Cultural and other Tables shows the basic lack of accountability of larger data base handlers, at all levels.9 In fact, the Census makes itself irrelevant for practical use by the inordinate delays in publishing data. The Registrar General and Census Commissioner has little accountability to the states, and the states in turn then rarely depend on them for information. This lack of availability leading to lack of use is even more acute in the districts. This `scarcity-based separation' of the data provider and user is symptomatic of data administration's malaise at every level.

The case of surveys with regard to states and districts is equally dismal. NSS national level surveys have nothing to offer to districts, and in Madhya Pradesh the state NSS has not been collated and published for the past fifteen years. In any case, access to NSS data is impossible for the ordinary citizen. A system of data provision that works only upon `orders from above' is either an excuse for idleness or allegedly a mechanism of `patronage for a select few economics' seeking to build up their publishing records.

In this scenario of non-use, officials in Raisen's development administration (and voluntary workers in NGOs such as RDSS Silwani) were not aware of the very existence of a state NSS. The state NSS did not appear concerned over this problem, citing unavailability of infrastructure for not working on state-level NSS surveys. The Economic Census of 1990 for Madhya Pradesh too has not been officially released five years after the Census was conducted. This delay evokes a similar response of cynicism and lack of utility by the district administration. The end result of the lack of surveys and the lack of any receptivity and importance attached to district-level data by survey agencies and by government is that the district administration sees data collection and collation as a low priority exercise.

### *Issues in Handling District-Level Data*

- There is continuity of data across departments and across districts, that has built a very large volume of data, in time series. The compatibility of most data across districts and over time enables data analysis and gives comprehensive and in-depth information on districts.
- This data has the sanctity of the government and thus becomes an aid and a tool for planning, monitoring and assessing districts.
- There is continuity in data formats, ensuring that all departments collect standard data in standard formats.

In spite of these advantages, the data exercise has certain concerns that need to be addressed:

- There are questions of the validity and currency of data. This question of validity is not one reflecting the intentions or nature of the statistical administration, but shows the problems of data that is generated from different programmes with it. Most of the problems emanate from a lack of appreciation of what data is.
- There is a problem of compatibility between data bases, and the definitions of data and data heads under which information is collected. The wide variations between data make it impossible for most district officials to use it; they neither have the time nor the inclination to look at these data bases and spend time understanding the definitions to use these data bases. There is a lack of training in understanding data bases and in understanding definitions and categories of socio-economic surveys, the Census, etc.
- All government data is collected uniformly across districts, or across programmes. Due to this, the specificity of districts on certain issues often gets obliterated, and data specific to special categories of geography, small economies and social groupings get lost. Further, special characteristics or the uniqueness of districts are never exhibited by such data.
- The district as a unit of data collection and comprehension also poses some problems. First is the issue of further disaggregation. At the level of detail, the block is perhaps a more homogeneous unit and data representing a block is far more useful. The focus on the district has caused lack of data representing a block is far more useful.
- The focus on the district has caused lack of data at a further disaggregated level. The district is an administrative and not a natural economy level. The district is an administrative and not a natural economy unit, therefore data does not truly represent the economic characteristics of the area. Further, the dynamics of inter-district linkages is not visible, and information on commercial, social, geographic and market links as well as feeder and consumer districts is not collected. Most economic activities transcend districts, or are localized at units much smaller than districts (cluster basis); information on them is never available, except in special circumstances like industrial estates. In the same way, linkages with other states get obscured when border districts are linked with other states' border districts, and often linked to districts far away. Nevertheless, the district remains the most viable unit for data analysis below the state level, due to its institutional resources and credibility with the administration.
- Data is very weak on the informal sector and registered livelihoods. This large section of the economy and people gets left out of most data, and only estimates are available, mainly at the state level. This is one of the main limitations of state-sponsored and state-generated data.

- Data also misses out mainly visible and `invisible/ silent' issues of habitat, women's work, displacement, migration, etc. which may have been lost to the realm of data as they did not find a position amongst government criteria, and also because data collection and estimation exercises are limited and cannot assess them. Sources that address these issues are not considered relevant or acceptable to the government, which as mentioned earlier, is another limitation of the data government considers as reliable and indicative.

## CONCLUSION: STRATEGIES FOR IMPROVEMENT

While there are several lacunae and many constraints in the provision of data at the district level, our assessment of the structure of information in Raisen district is that the files and records contain much data that is both current and relevant for Human Development Reports. Due to the orientation of the demand for programme or target data, the reporting of activities takes precedence over the reporting of outcomes and quality of performance. It is this orientation which has to be modified. Moreover, there are several structural problems of data provision and data use in Raisen, as elsewhere in Madhya Pradesh. These include insufficient resources, insufficient incentives for data collectors, inadequate technology, inadequate training and inadequate participation for data providers. In these conditions, they have to cope with the requirements of large data bases and cumbersome proformas which they never see being used fruitfully and regularly. The poor quality of data provision in these circumstances is not surprising.

It is possible now to work strategies for improving the generation and provision of data at the district and other levels such that future endeavors and planning exercises can benefit from better and more relevant data at the district level. Some steps in this direction may be as follows:

*Access to information: the right to know*

The user of data is often constrained by the lack of data or even the lack of awareness of what data is available. This needs to be remedied if we are to approach the issue of better data with any seriousness. The state government can enshrine the `right to know' in its agenda for action. The state government's commitment to an `Open Government' can be actualized in this form. The vision that the truth can set us free is more than rhetoric. All public domain data should be readily available and its existence must be made publicly known. Government, its departments, institutions and the people should be able to access data on demand.

***Relevant and current data***

The data collected and provided should be relevant to the user and should be current. If data is not current it loses its relevance for practical use. The thrust should be on the validation and regular updating of data. The emphasis should be to minimize delays in the collection of data and its provision to users. The unfortunate situation of the NSS and 1991 Census data should be remedied at the earliest.

***\Methodology and design of data and information***

In spite of the vast amount of data generated by the state at all levels, the data collected has not seen

changes over the last many decades. In spite of the practical and procedural problems of much of the data collected, sustained and regular problems of validity, and lack of use of some data, they continue to be collected without much initiative to improve methodology and data not used or needed is not dropped from collection. Further there is little change towards collecting new kinds of data that address new concerns of the government and of development, principally human development. There is immediate need for an exercise in developing a new design for data collection and data formats for districts, that is sensitive and responsive to new demands from data, that reflects and contributes to new concerns, and that uses better methods of collection and calculation.

### *People's participation in data collation*

The earlier situation of passive supply of data on orders from the authorities can be remedied if the people and the users themselves are encouraged to provide information and data from their work to the data provider agencies. An interactive relationship between users and providers can be promoted by using data generated from initiatives where the government and people's initiatives work together e.g., the National Literacy Mission and TLC campaigns. Moreover, the confidence of users in the credibility of the data will be enhanced if they feel part of the process where data is generated. If this credibility is built up over time, then the frequency of use of data will increase and consequently the quality and relevance of the data will increase exponentially.

### *Better maintenance of reporting mechanisms and equipment*

Attention should be paid to the upkeep of reporting equipment and systems of reporting. While improved management of reporting mechanisms can ensure regularity in provision of data, accuracy and credibility of data depends on ensuring that equipment such as rain gauges (which are kept to measure average rainfall), weighing mechanisms at agricultural marketing yards, soil sample testing equipment, weighing equipment at PHCs, etc., are maintained with due diligence.

### *Intensified computerization: beyond the Collectorate*

The demands on data providers for regular and recent data requires a greater focus on computerization. While the NIC and the state government have taken several steps to promote computerization at the district level, now the need is to go beyond, to the block and (with the empowerment of the Panchayats) the Panchayat level. The success of land records computerization in Madhya Pradesh shows the feasibility of motivating and training village-level staff such as patwaris to accept and use computerized platforms. After all, in a system where information flows from the bottom upwards, computerization at the grassroots level can provide quicker, regular and more credible data.

### *Leaner data bases*

One lacuna of centrally prescribed and designed computer data bases is that they have too many parameters and too many fields within each parameter. Given the large number of villages, households and people in each district, data entry for these large data bases is a cumbersome task. One reason for the non-use of CRISP in Madhya Pradesh is that its parameters are too many for the single data entry operator in the DRDA to handle. DISPLAN has made slow progress in Madhya

Pradesh precisely because every District Information Officer (DIO) had to oversee the data entry over all the blocks and villages in the district. In the case of large districts such as Bastar, this is clearly a huge task, requiring resources beyond the reach of the DIO. By the time the data base is filled, data in it becomes `dead'. Problems of validation and upgradation are compounded by these large data bases. Therefore, it is necessary to prepare leaner data bases which can be filled, validated and updated regularly.

### *Simplifying reporting formats: according to outcomes not programmes or process*

Analogous to simplifying the structure of data bases, the reporting formats for the actual data collector must also be simplified. Often the reporting formats contain concepts and language which are not comprehensible to the data collector. Adequate training and motivation of the data collector and data providers is necessary here. This can be another level for people's participation in the provision and collection of data.

### *Strengthening the sample survey through more reporting units in each district*

With regard to vital statistics, fuel wood use and other information about the daily lives of people, the Sample Survey method has been found quite useful, especially in assessing the actual outcomes of target-oriented programmes. The Sample Survey at the state level needs to be enlivened to the needs of the users. While this may have the implications for the methodology of the NSS at the national level, an increase in reporting units of the NSS in each district may help provide more reliable district-level data on vital statistics, etc.

### *Strengthening the DSO*

Finally, the District Statistical Officer is a key resource person in the data administration at the district level. In most districts, however, the role of the DSO in his or her official capacity is quite marginal. Few officials and staff take the office and functions of the DSO seriously. Steps (such as compulsory training workshops) should be taken to ensure that the importance of providing data on a regular basis to the DSO is grasped by all departments and block-level officials. Better infrastructural support (including better office space, telephones, computers, etc.,) will enhance the DSO's ability to provide data promptly to decision-makers, and thus become more relevant to their requirements.

TABLE 7-1
DATA SOURCES OF EDUCATION

| *Level* | *Head* | *Source/Programme* |
|---|---|---|
| **District** | Enrollment | Primary-High Secondary-Deputy Dir. Education (DDE) |
| | | Colleges-Principal |
| | | Consolidated data available with DSO |
| | Exam performance | I-XII-DDE |
| | | College—Principal |
| | | Not available in a consolidated form in the district. |
| | Retention/drop-out | I-XII-DDE |
| | | College—Principal |
| | | Not available in a consolidated form in the district. |
| | Mean years of schooling | None |
| | Physical Infrastructure | DDE |
| | Human Infrastructure | I-VII-DDE |
| | | X-XII—School Principal |
| | | College—Principal |
| **Block** | Enrollment | I-VIII—Block Education Officer (BEO) |
| | | IX-XII—Principal |
| | | College—Principal |
| | | Consolidated data for all classes is not available at block level |
| | Exam performance | I-VIII-BEO IX-XII—Principal |
| | | College—Principal |
| | | Consolidated data is not available for any class at block level |
| | Retention/drop-out | I-VIII-BEO |
| | | IX-XII—Principal |
| | | College—Principal |
| | | This data is not consolidated for a block as a whole |
| | Mean years of schooling | None |
| | Physical Infrastructure | I-VIII-BEO |
| | | IX-XII—Principal |
| | | College—Principal |
| | Human Infrastructure | I-VIII-BEO |
| | | IX-XII—Principal |
| | | College—Principal |
| **Village/Urban Area** | Enrollment | School headmaster or Principal |
| | Retention | School headmaster or Principal |
| | Exam performance | School headmaster or Principal |
| | Mean years of schooling | None |
| | Physical infrastructure | School headmaster or Principal |
| | Human infrastructure | School headmaster or Principal |

Source:DSO Raisen, district level state government departments at Raisen and fieldwork by Project Team.

TABLE 7-2

DATA SOURCES FOR HEALTH

| *Level* | *Head* | *Source/Programme* |
|---|---|---|
| **District** | IMR | DSO (from general registration, CRS) |
| | Life expectancy | None (can be estimated from Census data, but is not available in districts) |
| | Birth and death rates | DSO (from general registration, CRS) |
| | Nutrition | Chief Medical Officer (CHMO/District Woman and Child Dev Officer (ICDS) on programme related data. Exact estimates on level of malnutrition, etc. is not available. |
| | Sanitation | Urban—Project officer DUDA |
| | | Latrine—Project Officer (DRDA) and Zilla Panchayat—mainly pertaining to data on programme targets of sanitation related programmes. |
| | | Data on rural infrastructure construction is available with PHED |
| | | No data estimating access and use of sanitation facilities is available, urban or rural |
| | Epidemiology | CHMO, District Woman and Child Dev Officer |
| | Infrastructure | PWD/Rural Engineering Service, PHE |
| **Block** | IMR | None |
| | Life expectancy | None |
| | Birth and death rates | None |
| | Nutrition | Block Medical Officer (BMO) and ICDS Project Officer on data related to programmes |
| | | Estimates on levels of malnutrition, etc, is not available |
| | Sanitation | Urban—Chief Municipal Officer |
| | | Rural—Block Development Officer or Janpad Panchayat |
| | | This data also pertains to programmes of health and estimates of targets, but little data on use, and access to sanitation facilities and status of sanitation in urban and rural areas |
| | Epidemiology | BMO and ICDS Project Officer |
| | Infrastructure | SDO PWD, BDO |
| **Village/Urban Areas** | IMR | No calculations are undertaken or possible. Registration by Kotwar; reporting unit of CRS |
| | Life expectancy | None |
| | Birth and death rates | Registration by Kotwar; reporting unit of CRS |
| | Nutrition | Panchayati Raj Institutions (PRIs), aanganwadi worker on programme data. In a village aanganwadi and other programme staff have approximate idea of nutritional status of individuals, specially mothers and children, who are programme beneficiaries |
| | Sanitation | PRIs |
| | Epidemiology | Multi Purpose Worker (MPW) |
| | Infrastructure | PRIs |

Source: DSO Raisen, district level state government departments at Raisen and fieldwork by Project Team.

**TABLE 7-3**
**DATA SOURCES ON INCOME**

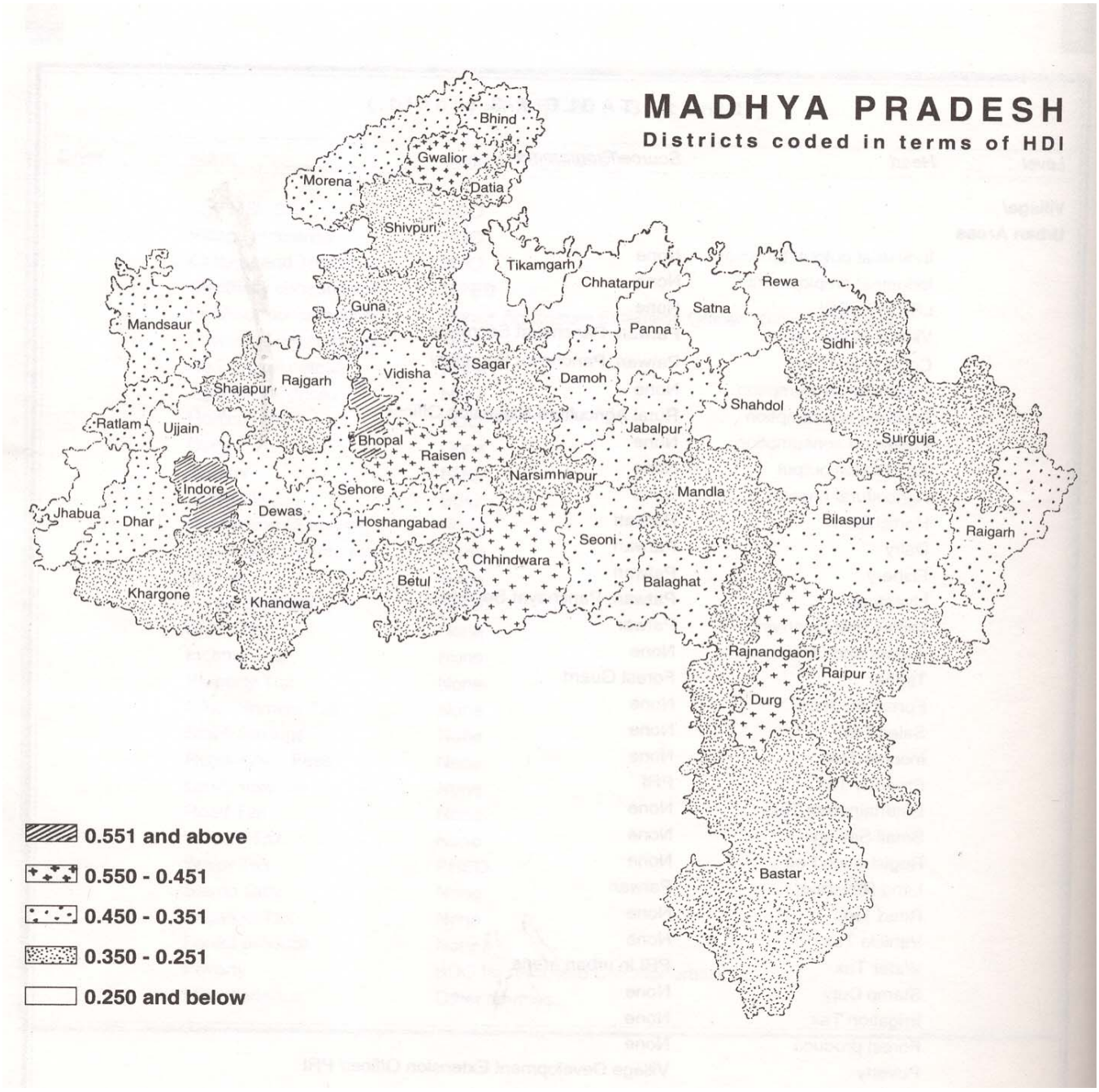
| *Level* | *Head* | *Source/Programme* |
|---|---|---|
| **District** | Industrial output/turnover | None |
| | Industrial employment | DIC |
| | LSI/MSI/SSI | DIC |
| | Village Industries | DIC, KVI Officer, Hast Shilp Nigam |
| | Cottage and Tiny | DIC, KVI Officer, Hast Shilp Nigam |
| | Electricity consumption | MPEB |
| | Fertilizer consumption | Deputy Director Agriculture (DDA)/Krishi Upaj Mandi |
| | Fuelwood | Divisional Forest Officer (DFO), Forest Department/Social Forestry |
| | | |
| | Agricultural output | Superintendent Land Records (SLR) |
| | Agricultural prices | Collector's Office |
| | Horticulture | Assistant Director, Horticulture |
| | Dairy | Deputy Director, Veterinary |
| | Fishery | Assistant Director, Fisheries |
| | Livestock | Deputy Director, Veterinary |
| | Mining and Quarrying | Mining Officer |
| | Liquor and Opium, etc. | District Excise Officer |
| | Timber | DFO |
| | Sales Tax | District Sales Tax Officer |
| | Income Tax | Income Tax Officer |
| | | This data is available circle wise, and district divisions are not made available |
| | Property Tax | District Registrar |
| | Entertainment Tax | District Excise Officer |
| | Small Savings | District Small Savings Officer |
| | Registration Fees | District Registrar |
| | Land Revenue | Collector's Office |
| | Road Tax | Transport Office |
| | Vehicle Tax | Transport Office |
| | Water Tax | PHED/Chief Municipal Officer (CMO) |
| | Stamp Duty | District Treasury Officer |
| | Irrigation Tax | Executive Engineer, Irrigation (Water Resources) |
| | Major and Minor | |
| | forest produce | DFO, Commercial Office |
| | Poverty | DRDA for rural and DUDA for urban |
| | Miscellaneous | Other sources |
| Block | Industrial output/turnover | None |
| | Industrial employment | None |

| TABLE 7-3 (contd.) | | |
|---|---|---|
| *Level* | *Head* | *Source/Programme* |
| | LSI/MSI/SSI | BDO |
| | Village Industries | BDO |
| | Cottage and Tiny | BDO |
| | Electricity consumption | MPEB |
| | Fertilizer consumption | Senior Agriculture Extension Officer/Krishi Upaj Mandi |
| | Fuelwood consumption | None |
| | Agricultural output | None |
| | Agricultural prices | None |
| | Horticulture | BDO |
| | Dairy | None |
| | Fishery | BDO |
| | Livestock | BDO |
| | Mining and Quarrying | None |
| | Liquor and Opium, etc. | None |
| | Timber | None |
| | Forest produce | None |
| | Sales Tax | None |
| | Income Tax | None |
| | Property Tax | None |
| | Entertainment Tax | None |
| | Small Savings | None |
| | Registration Fees | None |
| | Land Revenue | None |
| | Road Tax | None |
| | Vehicle Tax | None |
| | Water Tax | PHED |
| | Stamp Duty | None |
| | Irrigation Tax | None |
| | Forest produce | None |
| | Poverty | BDO for rural, and CMO for urban |
| | Miscellaneous | Other sources |

**TABLE 7-3 (contd.)**

| *Level* | *Head* | *Source/Programme* |
|---|---|---|
| **Village/Urban Areas** | Industrial output/turnover | None |
| | Industrial employment | None |
| | LSI/MSI/SSI | None |
| | Village Industries | Patwari, Panchayat Secretary |
| | Cottage and Tiny | Patwari, Panchayat Secretary |
| | Electricity consumption | None |
| | Fertilizer consumption | Rural Agriculture Extension Officer |
| | Fuelwood consumption | None |
| | Agricultural output | None |
| | Agricultural prices | None |
| | Horticulture | Patwari |
| | Dairy | Patwari |
| | Fishery | Patwari |
| | Livestock | Patwari, Panchayat Secretary |
| | Mining and Quarrying | Patwari |
| | Liquor and Opium, etc. | None |
| | Timber | Forest Guard |
| | Forest produce | None |
| | Sales Tax | None |
| | Income Tax | None |
| | Property Tax | PRI |
| | Entertainment Tax | None |
| | Small Savings | None |
| | Registration Fee | None |
| | Land Revenue | Patwari |
| | Road Tax | None |
| | Vehicle Tax | None |
| | Water Tax | PRI in urban areas |
| | Stamp Duty | None |
| | Irrigation Tax | None |
| | Forest produce | None |
| | Poverty | Village Development Extension Officer/PRI |
| | Miscellaneous | Other sources |

Source: DSO Raisen, district level state government departments at Raisen and fieldwork by Project Team


MADHYA PRADESH
Districts coded in terms of HDI
Bhind
Gwalior
Morena
Datia
Shivpuri
Tikamgarh
Chhatarpur
Rewa
Satna
Guna
Mandsaur
Panna
Sidhi
Sagar
Vidisha
Damoh
Rajgarh
Shajapur
Shahdol
Ratlam
Ujjain
Jabalpur
Bhopal
Surguja
Raisen
Narsimhapur
Indore
Sehore
Mandla
Jhabua
Dhar
Dewas
Hoshangabad
Bilaspur
Raigarh
Seoni
Chhindwara
Betul
Balaghat
Khargone
Khandwa
Rajnandgaon
Raipur
Durg
Bastar
0.551 and above
0.550 - 0.451
0.450 - 0.351
0.350 - 0.251
0.250 and below

INDEX

# The Madhya Pradesh Human Development

The Madhya Pradesh Human Development Index (MPHDI) is a combination of certain selected indicators of the education, health and income status of districts (see Note on the Human Development Index: Methodology, and Table 8-1 for data on the selected indicators). An Index of Deprivation is calculated for each of the selected indicators and an overall Index of Deprivation1 (IOD) is calculated for Education, Health and Income are combined to arrive at a combined Index of Deprivation for each district. One minus the IOD so achieved gives the MPHDI2 (see Table 8-2 for the different IODs and the Madhya Pradesh Human Development Index for the districts).

The selected indicators are:

- **Education**
  - Literacy
  - School Enrollment
- **Health**
  - Infant Mortality Rate
- **Income**
  - District Per Capita Income
  - Rural Poverty

1. Index of Deprivation is a value that ranges from 0.00 to 1.00, with 0.00 denoting the highest level of human development and 1.00 showing the maximum level of deprivation.

2. The MPHDI is a value ranging from 1.000 to 0.000, with 1.000 exhibiting the highest level of human development, and 0.000 indicating the lowest level of human development in districts.

TABLE 8-1

DISTRICT-WISE DATA FOR MADHYA PRADESH HUMAN DEVELOPMENT INDEX

| | Education | | | Health | Income | | |
|---|---|---|---|---|---|---|---|
| District | Literacy Rate | Female Literacy Rate | Child Enrollment in Schools | Infant Mortality Rate | Adjusted Per Capita Income | Level of Rural Poverty | Level of Depri-vation of Poor |
| Morena | 41.3% | 20.8% | 39.1% | 132 | 1839 | 38.9% | 60.6% |
| Bhind | 49.2% | 28.2% | 46.6% | 129 | 1843 | 26.1% | 60.4% |
| Gwalior | 57.7% | 41.7% | 55.3% | 118 | 1832 | 32.6% | 49.0% |
| Datia | 43.6% | 23.7% | 49.7% | 156 | 1842 | 49.0% | 48.2% |
| Shivpuri | 33.0% | 15.6% | 30.9% | 150 | 1823 | 48.5% | 48.0% |
| Guna | 34.6% | 18.0% | 31.0% | 150 | 1809 | 39.7% | 64.1% |
| Tikamgarh | 34.8% | 20.0% | 44.6% | 195 | 1818 | 58.3% | 49.2% |
| Chhatarpur | 35.2% | 21.3% | 42.6% | 182 | 1811 | 29.8% | 53.7% |
| Panna | 33.7% | 19.4% | 34.3% | 185 | 1819 | 48.0% | 55.2% |
| Sagar | 53.4% | 37.8% | 42.1% | 164 | 1845 | 78.5% | 57.7% |
| Damoh | 46.3% | 30.5% | 36.7% | 150 | 1867 | 51.0% | 46.3% |
| Satna | 44.7% | 27.8% | 35.0% | 181 | 1830 | 55.5% | 59.7% |
| Rewa | 44.4% | 26.9% | 43.8% | 173 | 1807 | 62.8% | 59.5% |
| Shahdol | 34.8% | 20.1% | 31.7% | 164 | 1826 | 58.7% | 59.9% |
| Sidhi’ | 29.1% | 13.6% | 27.6% | 161 | 1868 | 64.6% | 46.8% |
| Mandsaur | 48.7% | 28.3% | 39.5% | 138 | 1870 | 55.3% | 55.1% |
| Ratlam | 44.2% | 29.1% | 36.2% | 143 | 1866 | 62.5% | 54.8% |
| Ujjain | 49.1% | 32.6% | 38.4% | 106 | 1868 | 68.5% | 60.1% |
| Shajapur | 39.2% | 19.8% | 32.1% | 149 | 1872 | 75.8% | 56.3% |
| Dewas | 44.1% | 25.6% | 34.4% | 114 | 1868 | 52.5% | 56.1% |
| Jhabua | 19.0% | 11.5% | 24.0% | 119 | 1812 | 75.2% | 60.4% |
| Dhar | 34.5% | 20.7% | 30.9% | 116 | 1872 | 72.1% | 53.5% |
| Indore | 66.3% | 53.3% | 39.4% | 84 | 1876 | 56.4% | 47.7% |
| West Nimar | 36.0% | 23.2% | 29.9% | 134 | 1806 | 55.0% | 56.4% |
| East Nimar | 45.5% | 31.5% | 35.0% | 137 | 1812 | 63.2% | 60.9% |
| Rajgarh | 31.8% | 15.6% | 31.1% | 170 | 1818 | 63.0% | 51.6% |
| Vidisha | 44.1% | 27.8% | 41.5% | 144 | 1867 | 48.1% | 67.6% |
| Bhopal | 64.3% | 54.2% | 38.9% | 91 | 1875 | 39.6% | 67.7% |
| Sehore | 40.4% | 22.0% | 34.8% | 146 | 1867 | 38.9% | 54.6% |
| Raisen | 40.8% | 25.5% | 32.8% | 135 | 1926 | 57.2% | 55.2% |
| Betul | 45.9% | 33.9% | 40.2% | 158 | 1839 | 57.9% | 59.4% |
| Hoshangabad | 52.5% | 37.6% | 42.6% | 163 | 1871 | 54.1% | 55.8% |
| Jabalpur | 59.1% | 45.0% | 41.7% | 129 | 1816 | 84.0% | 60.1% |
| Narsimhapur | 55.6% | 41.6% | 44.0% | 162 | 1875 | 95.0% | 55.4% |
| Mandla | 37.3% | 22.2% | 37.5% | 115 | 1813 | 63.2% | 63.1% |
| Chhindwara | 44.9% | 32.5% | 35.2% | 118 | 1872 | 45.7% | 54.2% |
| Seoni | 44.5% | 31.1% | 50.7% | 115 | 1829 | 81.6% | 57.0% |
| Balaghat | 53.2% | 38.9% | 42.7% | 118 | 1825 | 68.5% | 56.1% |
| Surguja | 30.1% | 17.4% | 36.7% | 115 | 1842 | 81.2% | 63.5% |
| Bilaspur | 45.3% | 27.3% | 39.8% | 115 | 1846 | 78.5% | 57.3% |
| Rajgarh | 41.2% | 26.5% | 36.7% | 113 | 1836 | 61.2% | 63.1% |
| Rajnandgaon | 44.4% | 27.8% | 35.9% | 132 | 1818 | 68.1% | 59.9% |
| Durg | 58.7% | 42.8% | 46.2% | 106 | 1868 | 62.4% | 60.2% |
| Raipur | 48.1% | 31.0% | 22.7% | 141 | 1848 | 50.6% | 58.8% |
| Bastar | 24.9% | 15.3% | 28.2% | 118 | 1834 | 51.9% | 61.6% |

**TABLE 8.2**
**MADHYA PRADESH HUMAN DEVELOPMENT INDEX**

| District | Education | | | | | | Health | | |
|---|---|---|---|---|---|---|---|---|---|
| | Literacy Rate | Female Literacy Rate | Literacy | Children's Enrolment in Schools | Education | Education Development Index | Infant | Health | Health Development Index |
| | IOD A | IOD B | IOD C (2x+A+1xB) | IOD D | IOD E (2xC+1xD) | | IOD F | IOD G | |
| Indore | 0.22 | 0.39 | 0.28 | 0.78 | 0.45 | 0.55 | 0.18 | 0.18 | 0.82 |
| Bhopal | 0.26 | 0.38 | 0.30 | 0.79 | 0.46 | 0.54 | 0.23 | 0.23 | 0.77 |
| Durg | 0.35 | 0.54 | 0.41 | 0.70 | 0.51 | 0.49 | 0.34 | 0.34 | 0.66 |
| Gwalior | 0.37 | 0.56 | 0.43 | 0.58 | 0.48 | 0.52 | 0.43 | 0.43 | 0.57 |
| Ujjain | 0.51 | 0.69 | 0.57 | 0.80 | 0.64 | 0.36 | 0.34 | 0.34 | 0.66 |
| Chhindwara | 0.58 | 0.69 | 0.61 | 0.84 | 0.69 | 0.31 | 0.43 | 0.43 | 0.57 |
| Raisen | 0.64 | 0.80 | 0.69 | 0.87 | 0.75 | 0.25 | 0.56 | 0.56 | 0.44 |
| Dewas | 0.59 | 0.79 | 0.66 | 0.85 | 0.72 | 0.28 | 0.40 | 0.40 | 0.60 |
| Bhind | 0.50 | 0.76 | 0.59 | 0.69 | 0.62 | 0.38 | 0.51 | 0.51 | 0.49 |
| Mandsaur | 0.51 | 0.75 | 0.59 | 0.78 | 0.66 | 0.34 | 0.58 | 0.58 | 0.42 |
| Balaghat | 0.44 | 0.60 | 0.49 | 0.74 | 0.58 | 0.42 | 0.43 | 0.43 | 0.57 |
| Bilaspur | 0.57 | 0.77 | 0.64 | 0.78 | 0.68 | 0.32 | 0.41 | 0.41 | 0.59 |
| Dhar | 0.75 | 0.87 | 0.79 | 0.89 | 0.82 | 0.18 | 0.41 | 0.41 | 0.59 |
| Raigarh | 0.64 | 0.78 | 0.68 | 0.82 | 0.73 | 0.27 | 0.39 | 0.39 | 0.61 |
| Vidisha | 0.59 | 0.76 | 0.65 | 0.76 | 0.68 | 0.32 | 0.62 | 0.62 | 0.38 |
| Seoni | 0.58 | 0.71 | 0.63 | 0.64 | 0.63 | 0.37 | 0.41 | 0.41 | 0.59 |
| Damoh | 0.55 | 0.72 | 0.61 | 0.82 | 0.68 | 0.32 | 0.67 | 0.67 | 0.33 |
| Sehore | 0.65 | 0.85 | 0.71 | 0.84 | 0.76 | 0.24 | 0.64 | 0.64 | 0.36 |
| Hoshangabad | 0.45 | 0.62 | 0.51 | 0.74 | 0.59 | 0.41 | 0.76 | 0.76 | 0.24 |
| Morena | 0.63 | 0.86 | 0.71 | 0.79 | 0.74 | 0.26 | 0.53 | 0.53 | 0.47 |
| Ratlam | 0.59 | 0.74 | 0.64 | 0.83 | 0.70 | 0.30 | 0.61 | 0.61 | 0.39 |
| Jabalpur | 0.34 | 0.51 | 0.40 | 0.75 | 0.52 | 0.48 | 0.51 | 0.51 | 0.49 |
| Raipur | 0.52 | 0.71 | 0.59 | 1.00 | 0.72 | 0.28 | 0.60 | 0.60 | 0.40 |
| Narsimhapur | 0.40 | 0.56 | 0.45 | 0.72 | 0.54 | 0.46 | 0.76 | 0.76 | 0.24 |
| Datia | 0.60 | 0.82 | 0.67 | 0.65 | 0.67 | 0.33 | 0.71 | 0.71 | 0.29 |
| Mandla | 0.70 | 0.84 | 0.75 | 0.81 | 0.77 | 0.23 | 0.41 | 0.41 | 0.59 |
| Surguja | 0.82 | 0.91 | 0.85 | 0.82 | 0.84 | 0.16 | 0.41 | 0.41 | 0.59 |
| Bastar | 0.90 | 0.94 | 0.92 | 0.93 | 0.92 | 0.08 | 0.43 | 0.43 | 0.57 |
| Rajnandgaon | 0.58 | 0.76 | 0.64 | 0.83 | 0.71 | 0.29 | 0.53 | 0.53 | 0.47 |
| Shajapur | 0.67 | 0.88 | 0.74 | 0.88 | 0.79 | 0.21 | 0.66 | 0.66 | 0.34 |
| Betul | 0.56 | 0.67 | 0.60 | 0.77 | 0.66 | 0.34 | 0.73 | 0.73 | 0.27 |
| East Nimar | 0.57 | 0.71 | 0.61 | 0.84 | 0.69 | 0.31 | 0.57 | 0.57 | 0.43 |
| Sagar | 0.44 | 0.62 | 0.50 | 0.75 | 0.58 | 0.42 | 0.77 | 0.77 | 0.23 |
| West Nimar | 0.72 | 0.83 | 0.76 | 0.91 | 0.81 | 0.19 | 0.55 | 0.55 | 0.45 |
| Shivpuri | 0.77 | 0.94 | 0.83 | 0.89 | 0.85 | 0.15 | 0.67 | 0.67 | 0.33 |
| Sidhi | 0.83 | 0.97 | 0.88 | 0.94 | 0.90 | 0.10 | 0.75 | 0.75 | 0.25 |
| Guna | 0.74 | 0.91 | 0.80 | 0.89 | 0.83 | 0.17 | 0.67 | 0.67 | 0.33 |
| Jhabua | 1.00 | 1.00 | 1.00 | 0.98 | 0.99 | 0.01 | 0.44 | 0.44 | 0.56 |
| Satna | 0.58 | 0.76 | 0.64 | 0.84 | 0.71 | 0.29 | 0.90 | 0.90 | 0.10 |
| Shahdol | 0.74 | 0.87 | 0.79 | 0.88 | 0.82 | 0.18 | 0.77 | 0.77 | 0.23 |
| Chhatarpur | 0.73 | 0.86 | 0.78 | 0.74 | 0.76 | 0.24 | 0.90 | 0.90 | 0.10 |
| Rewa | 0.58 | 0.78 | 0.65 | 0.73 | 0.67 | 0.33 | 0.84 | 0.84 | 0.16 |
| Rajgarh | 0.79 | 0.94 | 0.84 | 0.89 | 0.86 | 0.14 | 0.81 | 0.81 | 0.19 |
| Panna | 0.76 | 0.88 | 0.80 | 0.85 | 0.82 | 0.18 | 0.93 | 0.93 | 0.07 |
| Tikamgarh | 0.74 | 0.88 | 0.79 | 0.72 | 0.76 | 0.24 | 1.00 | 1.00 | 0.00 |

**TABLE 8.2 (contd.)**
**MADHYA PRADESH HUMAN DEVELOPMENT INDEX**

| District | Education | | | | | | Health | | |
|---|---|---|---|---|---|---|---|---|---|
| | Literacy Rate<br>IOD<br>A | Female Literacy Rate<br>IOD<br>B | Literacy<br>IOD<br>C<br>(2x+A+1xB) | Children's Enrolment in Schools<br>IOD<br>D | Education<br>IOD<br>E<br>(2xC+1xD) | Education Development Index | Infant<br>IOD<br>F | Health<br>IOD<br>G | Health Development Index |
| Indore | 0.22 | 0.39 | 0.28 | 0.78 | 0.45 | 0.55 | 0.18 | 0.18 | 0.82 |
| Bhopal | 0.26 | 0.38 | 0.30 | 0.79 | 0.46 | 0.54 | 0.23 | 0.23 | 0.77 |
| Durg | 0.35 | 0.54 | 0.41 | 0.70 | 0.51 | 0.49 | 0.34 | 0.34 | 0.66 |
| Gwalior | 0.37 | 0.56 | 0.43 | 0.58 | 0.48 | 0.52 | 0.43 | 0.43 | 0.57 |
| Ujjain | 0.51 | 0.69 | 0.57 | 0.80 | 0.64 | 0.36 | 0.34 | 0.34 | 0.66 |
| Chhindwara | 0.58 | 0.69 | 0.61 | 0.84 | 0.69 | 0.31 | 0.43 | 0.43 | 0.57 |
| Raisen | 0.64 | 0.80 | 0.69 | 0.87 | 0.75 | 0.25 | 0.56 | 0.56 | 0.44 |
| Dewas | 0.59 | 0.79 | 0.66 | 0.85 | 0.72 | 0.28 | 0.40 | 0.40 | 0.60 |
| Bhind | 0.50 | 0.76 | 0.59 | 0.69 | 0.62 | 0.38 | 0.51 | 0.51 | 0.49 |
| Mandsaur | 0.51 | 0.75 | 0.59 | 0.78 | 0.66 | 0.34 | 0.58 | 0.58 | 0.42 |
| Balaghat | 0.44 | 0.60 | 0.49 | 0.74 | 0.58 | 0.42 | 0.43 | 0.43 | 0.57 |
| Bilaspur | 0.57 | 0.77 | 0.64 | 0.78 | 0.68 | 0.32 | 0.41 | 0.41 | 0.59 |
| Dhar | 0.75 | 0.87 | 0.79 | 0.89 | 0.82 | 0.18 | 0.41 | 0.41 | 0.59 |
| Raigarh | 0.64 | 0.78 | 0.68 | 0.82 | 0.73 | 0.27 | 0.39 | 0.39 | 0.61 |
| Vidisha | 0.59 | 0.76 | 0.65 | 0.76 | 0.68 | 0.32 | 0.62 | 0.62 | 0.38 |
| Seoni | 0.58 | 0.71 | 0.63 | 0.64 | 0.63 | 0.37 | 0.41 | 0.41 | 0.59 |
| Damoh | 0.55 | 0.72 | 0.61 | 0.82 | 0.68 | 0.32 | 0.67 | 0.67 | 0.33 |
| Sehore | 0.65 | 0.85 | 0.71 | 0.84 | 0.76 | 0.24 | 0.64 | 0.64 | 0.36 |
| Hoshangabad | 0.45 | 0.62 | 0.51 | 0.74 | 0.59 | 0.41 | 0.76 | 0.76 | 0.24 |
| Morena | 0.63 | 0.86 | 0.71 | 0.79 | 0.74 | 0.26 | 0.53 | 0.53 | 0.47 |
| Ratlam | 0.59 | 0.74 | 0.64 | 0.83 | 0.70 | 0.30 | 0.61 | 0.61 | 0.39 |
| Jabalpur | 0.34 | 0.51 | 0.40 | 0.75 | 0.52 | 0.48 | 0.51 | 0.51 | 0.49 |
| Raipur | 0.52 | 0.71 | 0.59 | 1.00 | 0.72 | 0.28 | 0.60 | 0.60 | 0.40 |
| Narsimhapur | 0.40 | 0.56 | 0.45 | 0.72 | 0.54 | 0.46 | 0.76 | 0.76 | 0.24 |
| Datia | 0.60 | 0.82 | 0.67 | 0.65 | 0.67 | 0.33 | 0.71 | 0.71 | 0.29 |
| Mandla | 0.70 | 0.84 | 0.75 | 0.81 | 0.77 | 0.23 | 0.41 | 0.41 | 0.59 |
| Surguja | 0.82 | 0.91 | 0.85 | 0.82 | 0.84 | 0.16 | 0.41 | 0.41 | 0.59 |
| Bastar | 0.90 | 0.94 | 0.92 | 0.93 | 0.92 | 0.08 | 0.43 | 0.43 | 0.57 |
| Rajnandgaon | 0.58 | 0.76 | 0.64 | 0.83 | 0.71 | 0.29 | 0.53 | 0.53 | 0.47 |
| Shajapur | 0.67 | 0.88 | 0.74 | 0.88 | 0.79 | 0.21 | 0.66 | 0.66 | 0.34 |
| Betul | 0.56 | 0.67 | 0.60 | 0.77 | 0.66 | 0.34 | 0.73 | 0.73 | 0.27 |
| East Nimar | 0.57 | 0.71 | 0.61 | 0.84 | 0.69 | 0.31 | 0.57 | 0.57 | 0.43 |
| Sagar | 0.44 | 0.62 | 0.50 | 0.75 | 0.58 | 0.42 | 0.77 | 0.77 | 0.23 |
| West Nimar | 0.72 | 0.83 | 0.76 | 0.91 | 0.81 | 0.19 | 0.55 | 0.55 | 0.45 |
| Shivpuri | 0.77 | 0.94 | 0.83 | 0.89 | 0.85 | 0.15 | 0.67 | 0.67 | 0.33 |
| Sidhi | 0.83 | 0.97 | 0.88 | 0.94 | 0.90 | 0.10 | 0.75 | 0.75 | 0.25 |
| Guna | 0.74 | 0.91 | 0.80 | 0.89 | 0.83 | 0.17 | 0.67 | 0.67 | 0.33 |
| Jhabua | 1.00 | 1.00 | 1.00 | 0.98 | 0.99 | 0.01 | 0.44 | 0.44 | 0.56 |
| Satna | 0.58 | 0.76 | 0.64 | 0.84 | 0.71 | 0.29 | 0.90 | 0.90 | 0.10 |
| Shahdol | 0.74 | 0.87 | 0.79 | 0.88 | 0.82 | 0.18 | 0.77 | 0.77 | 0.23 |
| Chhatarpur | 0.73 | 0.86 | 0.78 | 0.74 | 0.76 | 0.24 | 0.90 | 0.90 | 0.10 |
| Rewa | 0.58 | 0.78 | 0.65 | 0.73 | 0.67 | 0.33 | 0.84 | 0.84 | 0.16 |
| Rajgarh | 0.79 | 0.94 | 0.84 | 0.89 | 0.86 | 0.14 | 0.81 | 0.81 | 0.19 |
| Panna | 0.76 | 0.88 | 0.80 | 0.85 | 0.82 | 0.18 | 0.93 | 0.93 | 0.07 |
| Tikamgarh | 0.74 | 0.88 | 0.79 | 0.72 | 0.76 | 0.24 | 1.00 | 1.00 | 0.00 |

# State Strategies

The government of Madhya Pradesh has, in the last eighteen months, attempted a paradigm-shift in development strategies. Recognising the importance of accelerating the pace of human development in an economically and socially backward state like Madhya Pradesh, and also recognizing that the key to rapid and sustained reduction of poverty lies in such all-round human development, it has attempted to put in place a pro-poor, people-centred agenda for action, with state missions called Rajiv Gandhi Missions in the vanguard. These Missions seek to strengthen livelihood security, as well as expand access to education and basic health care for the poor in the state. The state has also adopted a model of delivery that relies on people's direct involvement and action. Direct involvement of the community has been facilitated by the constitutionally mandated Panchayati Raj which was introduced in the state last year. As a result, nearly 5, 00,000 grassroots representatives, of whom over 1,80,000 are women, have taken charge of development at the local level.

The state's strategies take into account worldwide lessons on the optimal strategies to reduce poverty. These lessons suggest that effective and sustainable poverty reduction interventions must aim at:

- Promoting productive employment generation, since labour is usually the only asset of the poor which can generate income, and
- providing basic social services to the poor, particularly in terms of access to basic education and health care. The state's Missions reflect an internalization of these lessons

## *THE STATE'S MISSIONS*

Labour supply pressures are building up in the rural areas as a consequence of population growth, at a time when the technological possibilities for productive labour absorption in agriculture are becoming increasingly limited, restricting opportunities for income growth of the rural poor. The farm sector in Madhya Pradesh has been lagging behind primarily due to lack of an extensive irrigation infrastructure, and consequently of agricultural practices such as single-cropping. A number of irrigation projects are underway, and the state government is making a concerted effort to complete these projects. These projects will mature in the medium term.

At the same time, the immediate needs of the poor for livelihood security cannot wait. There is a pressing need for more programmes of productive employment generation outside traditional agriculture in the rural areas, mainly in the rural non-farm sector. As it is, the share of rural non-farm employment to total rural employment in Madhya Pradesh is only 10.7 percent (1991 Census), Therefore, in order to strengthen livelihood security, one very high priority for the state has to be generation of rural employment, with special emphasis on non-farm employment.

Accordingly, the three Missions for livelihood security center around watershed development, development of rural industries and development of fisheries. The Mission on Watershed Development is aimed at providing livelihood security to the poor and vulnerable groups living in the drought-prone areas of the state.

It seeks to promote conservation of water sources and prevention of environmental degradation that is so central-prone regions of the state. Active association of non-governmental organizations is a part of the strategy for implementation of this Mission on Development of Rural Industries targets neglected but potentially productive groups in the rural economy, such as rural artisans and craftsmen. And the Mission of Fisheries Development aims at creating and enhancing the income-earning potential of the poor and generating productive non-farm employment opportunities in the rural areas of the state.

Madhya Pradesh also ranks very low among Indian states in social attainment indicators, particularly education, and this is a major reason behind deep-rooted patterns of poverty that transcend generations. Experience has indicated that of all the social sector interventions, the spread of education is the building block of broad-based poverty-reducing economic growth. Investment in education is the best way of helping the poor break free of the state has taken up the Mission on Basic Education, which dovetails ongoing programmes in this area, and combines the twin objectives of universalisation of primary education and literacy. This Mission has formulated a strategy to make total literacy a mass campaign by involving educated youth to voluntarily teach other youth. So far over 5.6 volunteers have been mobilized to teach about 11 million people. The momentum generated through the mass campaign for literacy has been channelised also for universal enrollment of all eligible children in schools. Panchayats provide leadership to this campaign and in the current year, through a 'School Chalo Abhiyan' , 18 lakh children were enrolled in schools.

In health care, the two Missions seek to impart a thrust on control of diarrhoea diseases and on elimination of iodine deficiency disorders. Control of diarrhoea is critical to efforts to reduce infant mortality, since it accounts for nearly 28 percent of deaths of children in the state. This is being addressed through an ORT com-Health education package, the successful implementation of which is expected to reduce infant mortality by 70 percent in the next three years. Similarly, the poor living in the tribal and remote areas of the state are more prone to iodine deficiencies that create physical and mental retardation. These deficiencies can be directly controlled and prevented through supply-side intervention for universal use of iodised salt, and through demand-side interventions by generating community awareness. This is the strategy adopted by the Mission working in this area.

The choice of the agenda for the Missions has resulted in automatically targeting development interventions towards the poor, towards vulnerable groups like the Scheduled Castes, Scheduled Tribes and women, and towards less developed areas like drought-prone and tribal areas. Thus, the Missions are self targeting. The poorest regions and the poorest section of the state's population represent its clientele.

These Mission have been successfully operationalised due to a combination of positive factors and forces.

- First and foremost was the recognition at the policy level that to effectively target the poor, attention to education and health care should go together with a focus on rural employment; taken together, these have the potential of catalyzing economic and social development of the poor in the rural areas.
- Secondly, the enactment of Panchayat Raj legislation and the rejuvenation of the local government made real the possibility of a people-centred development process in which people are seen as active agents of development instead of as objects of development.

- Thirdly, a new openness in the institutional frame work of governance enabled the state to accommodate non-governmental agencies in a cooperative effort; this opened up possibilities of multiple channels of delivery of social programmes.
- Fourthly, economic policy changes at the national level reinforced the effort, since the withdrawal of the Government of India from business and economic activity released finances to enable the state to step up its intervention in the social sectors, and provided a facilitating environment for this concerted thrust toward the social sectors at the state level.
- Fifthly, and most importantly, the commitment of the political executive to such an agenda made this thrust possible.

The Mission mode has succeeded in imparting a sense of urgency to the tasks it has taken upon itself. The development of action plans for each of the Mission areas with clearly defined goals and fast-track transparent monitoring mechanisms are beginning to make a difference in accelerating the pace of development in the rural areas of the state. The collective challenge addressed by these missions to make a significant difference to indicators relating to human development. Seen in this light, this Report acquires a special relevance for the state at this juncture.

## *DELIVERY MECHANISMS: PEOPLE'S REPRESENTATIVES*

More important, the torch-bearers of these new initiatives for poverty reduction and human development are the people of the state. Their energies, so far on hold, have found a release through Panchayati Raj. Madhya Pradesh is the one state in the country that has most aggressively implemented Panchayati Raj. It was the first state in the country to implement the 73rd Constitutional Amendment and begin the process of energizing grassroots-levels democracy and popular empowerment by (a) election of representatives to Panchayati Raj institutions at the district and village levels, and (b) delegation of substantial financial and administrative authority from the state government to the district (Zilla), block-level (Janpad) and village (gram) Panchayats.

The Missions were accordingly developed in synergy with Panchayati Raj, at around the same time. The effort has been to use the revitalization of these local institutions to build up popular enthusiasm and unleash collective action at the grassroots for achieving the objectives o the Missions. Demonstrated political commitment at the highest levels has catalysed the process and enabled the Mission objectives to be internalized and become people's movements all over the state. This has also helped in imparting a creative focus for the newly empowered popular representatives at the district and village levels.

Along with the attempt to put in place a pro-poor agenda that focuses on basic needs, improvements in the efficiency of delivery of programmes have also been sought to be addressed through effective and participative democrative decentralization. Traditional models of delivery of programmes at the state level tend to rely heavily on government personnel. Programme success has accordingly been dependent on the quality and quantity of the staff deployed, and the sustainability of the programmes has often rested on an unsteady foundation. With the state's initiative for decentralization of power to the villages, and the new methods of functioning, programme delivery will

necessarily have to be undertaken with the active participation of elected district and village-level popular representatives. The Rajiv Gandhi Missions therefore build in popular participation into their implementation framework. In addition, alternate channels of delivery through active NGOs are being consciously encouraged by the state. Much has been heard about the need for planning from below in the past; this is the first time that planning for specific activities would be bottom up, i.e., they would emanate from the panchayat decision-making structure.

Thus, the state government has set for itself an agenda for handing over the implementation of development programmes in both the economic and social sectors to these grassroots institutions. Some of the specific features of the Panchayati Raj initiative are;

- *Delegation of power:* This is the single most important step in the entire Panchayati Raj initiative. Panchayats are now involved in every level of decision-making in the districts, outside of revenue and law and order. It is for the first time that PRI members are not just involved in an advisory or passive capacity, but in an executive role.
- *Integration with the district district administration:* The Collector has been made the chief executive officer of the zilla panchayat (ZP). This integration has gone even further at the block level, with the block office merged with the janpad panchayat, and the block officials
- *Working control of government staff:* The elected panchayat bodies have been formally vested with working control of the staff in the development departments functioning in their jurisdictions. Government staff now have to respond to their directions in development planning and programme implementation.
- *Appointment of personnel in social sectors:* Many specific powers and responsibilities have been given to panchayat bodies, to enable them to relieve local staff constraints in the implementation of social sector activities that contribute to human development. Specific instances are powers of appointment of education officials, like shiksha karmis, and the equivalent of barefoot doctors.
- *Control over rural development programmes:* These have been specially put under Panchayati Raj institutions. All district, Janpad and village-level programmes for rural development and poverty alleviation are now under the direct control of panchayats. At the district level, the ZP chairman has been designated the chairman of the District Rural Development Agency, a position hitherto held by the Collector. Madhya Pradesh is the only state of make this arrangement. Thus panchayats can now plan, allocate funds, and directs the implementation of these schemes and projects.

While the 73rd and 74th amendments to the Constitution and the subsequent enactment of legislation for these local bodies has put in position the legal framework for action, the government has gone much further in its all-out implementation. It has cut through bureaucratic and administrative hurdles to make for a simpler and more responsive administration, closer to the people, that can address local issues, respond to local needs and developments aspirations.

## *LOOKING FORWARD*

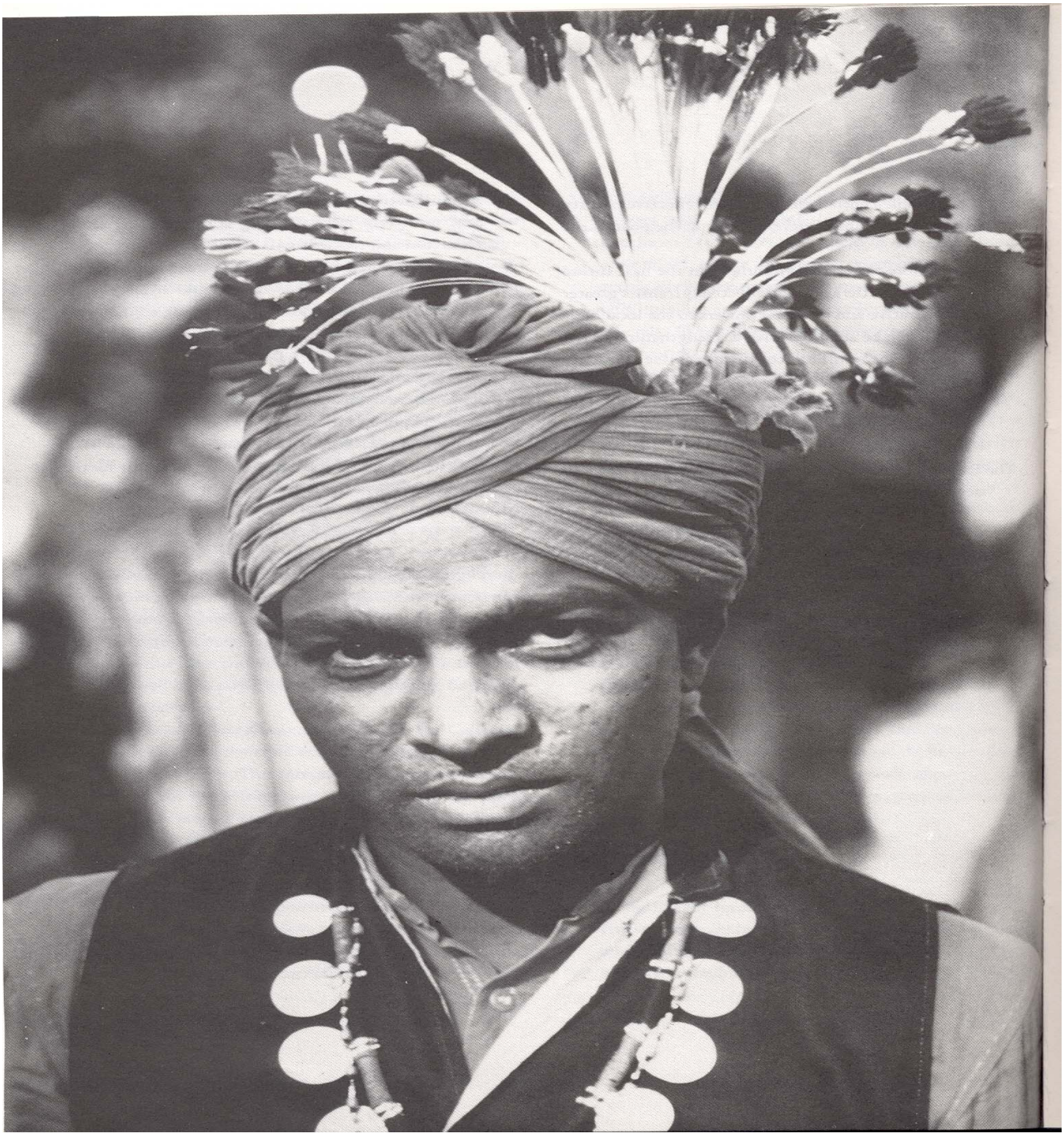
While significant inroads into cutting down administrative structures have been witnessed during the last year and a half, the agenda is yet unfinished, and the state has to travel a long way to realize its aims of bringing about people-centred governance for effective poverty reduction and human development of the poor in the state.

The tasks before the state government in the near future revolve around the agenda to effectively transfer greater administrative and financial powers to the local bodies. This can be achieved with a strengthening of the initial commitment to decentralize and its internalization in the value systems of state-level politicians and government officials from the state down to the cutting edge level. Vested interests have to be overcome.

The Panchayati Raj institutions are in a nascent stage of development. Training of elected representatives and administrative personnel will continue to be an important near-term task.

Keeping administrative structures lean and efficient will be yet another important task. The establishment of these institutions is not without financial costs, which would strain the resources of the state unless corresponding adjustments are made to effectively downsize the administrative machinery.

Despite the daunting challenges ahead, it is very likely that with continued political commitment and enthusiastic popular participation that has been a hallmark of these initiatives so far, the state's strategies will be able to deliver on its promise of a better future for the poor in Madhya Pradesh.



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# Note on the Human Development Index: Methodology

The Human Development Index was developed by the United Nations Development Programme (UNDP) in its first Human Development Report published in 1990. It is an index to measure the level of human development in countries, to arrive at some comparisons between nations, and to be able to rank countries in order of their status of human development. The UNDP index calculated human development as a measure of education, health and incomes of nations. The basic construction of the index has not changed over the last six years, though many modifications have been made to the way calculations are undertaken to make the index more reflective of human development.

Various measures have been worked on after UNDP developed its Human Development Index (HDI), bringing in modifications and changes in the way data is put together. Based upon the status of education represented by means years of schooling and literacy, health represented by life expectancy, and income based upon per capita income adjusted to poverty line, this index has been differently calculated. There have been significant suggestions to the calculation of the index, made by economists, statisticians and social scientists, notable among which in India are the works by Bhaskar Dutta, Manoj Panda and Wilima Wadhwa, under the UNDP study in India on Human Development, coordinated by T. N. Krishnan, work by NCAER, especially by S.P. Pal and G. Chakarabarty, work by K. Seeta Prabhu and Somnath Chatterjee under the Development Research Group (Department of Economic Analysis and Policy, RBI), etc.

This report looked at the HDI developed by UNDP, and various other studies on developing a human development index. The district-wise human development index developed for this report is inspired by the UNDP HDI. However, it has been modified wherever necessary, depending on availability of district-level data. The Project undertook a study of district-level data, from the process of data generation and collection to its collation, aggregation and publication, from one to many sources and from many to single sources, in the government and non-government institutions and publications. During this extensive exercise, the project was able to select data that can be utilized in spite of the problems concerning data in the districts. There is a large amount of data that is generated, but much had to be rejected due to the following reasons.

- *Differences in interpretation of data* in districts and some times within districts.
- *Accounts–led approach* to collection of much of the data, where accounting or target-filling is the prime objective rather than reporting a truer picture. This approach creates problems in health programmes like immunization, where each shot or medicine given is accounted for as one, even though the full process of medical treatment may not take place, thereby leaving a large gap between reported application of medicines and actual effect.
- *Programme target-led data collection*. As many programmes and objectives are specified in terms of targets, data collection on these programmes also becomes target oriented and tends to show target achievement. This does not indicate that data is untrue, but that it does not truly reflect the picture. For example, in school enrollment, the tendency is to show full or near enrollment by teachers (under pressure of full enrollment targets) even though the children enrolled may not attend school.

- *Benefit-led data reporting*. In data drawn from surveys, people surveyed tend to show a worse picture of themselves than actual, as it leads to benefits, such as the IRDP poverty survey. In this case functionaries conducting surveys tend to be partial towards the surveyed and there are errors on the side of over reporting of numbers and under-reporting of incomes, assets, etc.
- Lack of data across districts and during a comparable period of time. Much data is not reported for periods, and districts thus cannot be compared. For example, in the District Statistical Handbooks, data on factories was not available for some of the districts like Surguja, Bilaspur, Balaghat, etc., and data on telephones was not available for districts like Narsimhapur.
- *Differences in data between department, and district and state levels*. This occurs as departments often lack proper coordination on new data or changes in data. Thus, changes in old data are not uniformly reported and collected across districts. For example, there are different figures for number of villages, and departments often use different figures without clearly reporting the figures; this causes confusion in districts and in comparing village-level data.

Much of the good data collected and available, is not accessible, simply because the departments and agencies managing them either do not have the resources to collect, collate and publish them regularly, or just do not do it.

There is seriousness in data for state-level indicator, but not for districts, since districts presently do not allocate resources in a significant way. The Finance Department, other nodal departments and the State Planning Board are state-level decision-making bodies.

There are a lot of studies, estimates and surveys made at the national and state levels that enable many of the calculations and estimates that go into developing the state NSDP. These are absent at the district level, either totally or at the same level of detail, whereby it becomes extremely difficult to make district-level estimates of incomes, district domestic product etc.

The Madhya Pradesh Human Development Index (MPHDI) for its districts, like the HDI developed by UNDP, also looks at the status of education, health and income in each district, and then ranks them on the combined status in all these fields.

## INDEX OF DEPRIVATION

The index calculated for each criterion selected is a figure showing the level of deprivation in a criterion that a district suffers, compared to the best district in that criterion. This index is a measure of how far a district is form the achievable target

The index is calculated by the following formula:

**IOD ij (Index) = Target j– Value ij / Target j– Min j**

IOD ij = Index of deprivation for the I th district for the j th criterion.

Target j = This is the maximum achievable target for the j th criterion (for example, it is 100 percent for literacy)

Value ij = This is the value of the I th district for the j th criterion

Min j = This is the minimum value for the j th criterion amongst all the districts of Madhya Pradesh.

For example, in calculating the Index of Deprivation for literacy of Durg:

Target for literacy = 100.0 %
Minimum literacy in districts = 19.0 %
Literacy of Durg = 58.7 %

The calculation is:

100 (Target literacy) – 58.7 (Literacy in Durg) /
100 (Target literacy) – 19.0 (Minimum Literacy)

Therefore, Index of Deprivation for Durg in literacy = 0.51

The criteria used for the district HDI and the methodology applied for the Madhya Pradesh Human Development Index (MPHDI) for districts are given below. It needs to be mentioned here that the calculations for the indices and the data used for such calculations should not be used in isolation from the index, since much of the district data used is relevant in comparing districts and may not be a proper indicator in isolation from the index.

## EDUCATION

UNDP uses literacy rate and mean years of schooling .In the MPHDI, literacy rates has been used as one of the two parameters for education.

Literacy denotes the most basic and essential education criterion .Literacy levels are available for each district from the Census of India, 1991 , and these figures were used for the index on literacy . Literacy rate for population was calculated as percentage share of all literates in a district over the total population of people above 6 years of age in the district.

Literacy has also been assessed by the National Literacy Mission groups in districts .This figure ,however, was not available to us from all the districts at the time of publishing of this report.

The literacy rate for the population ,does not properly show the poor levels of female literacy .Female literacy is a critical indicator of education and of the welfare of a family and children ,and the Government of Madhya Pradesh has accorded the highest priority to female literacy .In order to make the IOD on literacy sensitive to female literacy ,the index uses female literacy with literacy of total population to get a better picture of a district's status in literacy .The total index for literacy is a combination of the two ,taking a weighted average of 2/3 for total literacy and 1/3 for female literacy.

The value of weightages given to total and female literacy to sensitise the former by the latter is value judgment may vary.

For the target maximum figure for the purpose of calculating the Index of Deprivation in literacy ,we use 80 per cent . This is drawn from the National Literacy Mission targets for literacy. The use of 80 per cent should not be seen as a target for literacy ,but only as a figure against which we compare districts. The same target maximum is used for female literacy and total literacy.

It was not possible to calculate the mean years of schooling for the districts . While enrollment data is available in blocks and districts for different classes ,longitudinal data (at least 12 years time series )from districts was not available at the time of publication of this report .Though enrollment data is available in districts ,there were problems of retrieval of data for years prior to 1990s . In its place ,we took the ratio of all children enrolled in schools upto class XII in a district , to the estimated population in the age group 6-19 years of age in the district .Since age-wise population figures for the 1991 census were not released at the

time of publication of this report ,we had to rely on estimates for population in these age groups based upon 1971 and 1981 age-wise population figures (except for Bhopal and Rajnandgaon which was created in 1972,and in their case we had to rely on 1981 data only). The basic idea of using this figure is to get an assessment of the use of the school education system and a surrogate for the level of education of the population.

There is a problem in using enrollment data ,since studies have shown that enrollment figures for lower classes are often overstated to fit the targets of enrollment figures for lower classes are often overstated to fit the targets of enrollment. Since the basic purpose of the index is comparability across districts , in the absence of other data , we used enrollment data ,assuming that the error on the side of exaggeration is basically uniform across districts.

The target maximum for this figure is difficult to assess, since the age group 6 to 19 includes ages at which many children would have passed out of school after fully completing it ,and would therefore not be counted . however , as we have no estimates to arrive at an acceptable figure for a target maximum for calculating the index of deprivation in school enrollment ,we use 100 percent as the target maximum.

The two indices were combined to get the Index of Deprivation for education. The indices were combined in a weighted average , with 2/3 for literacy and 1/3 for all children in schools .A higher weight for literacy was taken to give importance to this most essential criterion and keeping in mind the problems of data in enrollment figures.

## HEALTH

UNDP uses life expectancy as the health parameter to assess health status . Data for life expectancy is available for the period 1971 to 1981 , but as Bhopal and Rajnandgaon districts were formed only after the 1971 Census , life expectancy for these two districts was not available to us .Age-wise distribution from the 1991 Census is not available as yet , and therefore calculations of life expectancy for the period 1981 to 1991 are not yet possible.

In place of life expectancy ,we use *infant mortality rate*(IMR) . Data on IMR drawn from the 1991 Census is still not available. Data on district –wise IMR was collected from the Registrar General of India(Occasional Paper No.7,1981,Fertility and Child Mortality, Estimates of Madhya Pradesh , Registrar General of India ).Other sources for calculating IMR like the Sample Registration Scheme(SRS)give IMR data for the state but are statistically not significant and cannot be used for districts, The Civil Registration System(CRS) data records birth and deaths in districts , but is not reliable due to heavy under –reporting ,and therefore could not be used for district IMR. Further , there are no other sources for data giving IMR uniformly for all districts for recent years.

The infant mortality rate is calculated by the number of deaths of children under 1 year of age in a district by per 1,000 live births in a year in the district. IMR indicates the status and delivery of basic health services ,level of health awareness and practices , child delivery and family planning practices , and reflects on the condition of sanitation . It is thus a very critical indicator of the status of health of people in a district. For the target maximum for IMR we use the figure of 60 ,

drawing from the national goals for reducing IMR by the end of century.

## INCOME

The UNDP HDI uses 'adjusted per capita income for countries' to calculate the index , two criteria have been used .Since it is extremely difficult to assess district domestic products , and thereby come to an assessment of per capita income , we have used district incomes derived from the net state domestic product (NSDP) for our use , The other criterion applied was rural poverty rates.

### *District Incomes*

Data for calculating the district domestic product (DDP) is not available to enable a district-to-district calculation. The state domestic product is calculated under 16 categories by using sources from the state's own production and economic activities (such as for agriculture, fisheries, forest, electricity, etc.), by estimating volume of products from different sources using centrally administered surveys by CSO, ASI, etc. (for railways, industry, unregistered manufacturing, gas, water) and a mix of various sources. Unfortunately this is not available for districts, and we had to resort to other means to divide SDP district-wise, under the 16 major categories.

A note of caution is necessary here. Calculating district-level incomes is a difficult task given the lack of data at this level of aggregation. What was needed for developing an index based on income was to get district-level figures that would indicate the relative strength of districts in terms of per capita incomes drawn from estimates of share of districts to the state NSDP. Per capita incomes were calculated by dividing district shares of state NSDP by district population to arrive at comparable per capita incomes for districts. Further, the district shares of NSDP, and the per capita incomes derived from these estimates, are neither a substitute nor a surrogate for district domestic product and per capita incomes from it, but only a comparable figure for districts for this report.

The state NSDP is calculated under the 16 categories, using different methods for each category. Much of the calculations and adjustments are made on the basis of estimates and data from CSO and other studies and applied to state-level data, to arrive at state-level estimates. For example, in unregistered manufacturing, estimates of value added for unregistered manufacturing for 5-digit level of NIC is derived from the 1984-84 survey of directory manufacturing establishments (DME), non-directory establishments (NDE), and own account enterprises. The industry-wise estimates are adjusted by moving them backwards and forwards for the current year's estimates. Since district-level figures for DME and NDE are not available separately and or under 5-digit levels, we attempted to estimate district shares of unregistered manufacturing by using data on establishments and own account enterprises available district-wise (rural and urban) from the provisional results of the Economic Census 1990 (though the results of the survey are not officially released, we have used the data only for our estimates). Similarly, calculations for district shares are somewhat related to or correspond to, wherever possible, with the methodology of the NSDP.

For some categories like agriculture, industry, mining, forestry, banking and public administration fairly good district-level indicators were available that were used to distribute the domestic product of these categories along districts. Using different indicators, share of districts (in percentage) to the specific domestic product was estimated, and this

share was applied to the domestic product of that category to arrive at district-level domestic product for that category.

For example, in agriculture, using production data of major produce, and applying state-level prices of different crops to the production of each, we got a total output value of major crops for each district. The total state-level value of production for such crops was Rs,5,76,99,541 for 1991-92. The value for Morena was Rs.20,88,929 and for Panna it was Rs.5,66,753 which amounts to a share of 3.62 percent and 0.98 per cent respectively. This share was applied to agriculture domestic product value of Rs.10711.74 crore and district shares for Morena and Panna, therefore, were Rs.387.8 and Rs.105.2 crore respectively. Similarly, shares for different categories for each district were arrived at and these shares (in percentage terms) were applied to the domestic product of the category.

For other categories we used data for employment, own account enterprises and establishments, etc. to arrive at district-level shares.

The methodology used for the major categories is given below. In all, 74.4 percent of the net state domestic product for 1991-92 was allocated to districts on these lines. The share of the 16 categories of NSDP is given in what follows.

*1. Agriculture (including Animal Husbandry)*

Data was not available for agriculture, horticulture and animal husbandry separately. To estimate district shares of agriculture (including livestock production), district-wise production of all major produce such as cereals, pulses and oilseeds was taken and state's average prices for these were applied to get the district production in price for agriculture. The agriculture domestic product was then divided along districts according to the share of each district to the total production (in price) in cereals, pulses and oilseeds.

*2. Forestry and Logging*

Data for production of major and minor forest produce is available circle-wise and not district-wise, it is not easily accessible, and could not be divided into districts. This was therefore left out from our calculation.

*3. Fisheries*

Data on district-wise fish production, the value of fish, and other fishery-related data was available from the Fishery Department, and the domestic product corresponds largely to these figures. Fisheries domestic product was allocated to districts accordingly.

*4. Mining and Quarrying*

Data on production and value of production as well as royalty and cess from all major and minor minerals in the state was available district-wise. The share of each district to the total production value, and revenue from mining was taken and applied to the mining and quarrying domestic product of the state to arrive at district-wise figures.

*5. Manufacturing – Registered*

In small scale industries (SSI), we had data on district-wise number of small scale units (SSI) and investments in them to date, and current employment. The Annual Survey of Industries gave district-wise data on SSI units, employment, fixed investment, and gross and net value added. For assessing contribution of SSI per district, we did a regression analysis between net value added (dependent variable) and units of SSI and fixed investment (dependent variable) and units of SSI and fixed investment (independent variables). Using this equation, we arrived at an estimate of net value added by SSIs in each district for 1991-92, and the share of each district to this overall estimated SSI net value added was taken as the

share of district SSIs to total SSI contribution to the registered manufacturing domestic product.

Data was difficult for turnovers and outputs in the large and medium scale industries (LMI) sector. Available data gave us annual district-wise large and medium scale industry investments, with current employment. We calculated the share of each district to LMI contribution to registered manufacturing domestic product by first adjusting the total LMI investment to the price levels of 1950-51, using the wholesale price index for industrial products. This was used to measure the district-wise investment in LMI. We estimated from fieldwork, data available from surveys and regression analysis from available turnover and output data, the relative contribution of data of LMI units, employment and investment (adjusted) to total LMI sector. According to this estimate, LMI units was multiplied by a factor of 2, investment by 4 and employment by a factor of 1, and the weighted average of the total gave us a comparable column of data to calculate district-wise shares of LMI. The share of each district in this table was taken to be the share of district to LMIs share of registered manufacturing domestic product.

The SSI and LMI weighted share was taken together assigning a weight of 4 to LMI and 1 to SSI, and share of district to total states share, was applied to state domestic product in manufacturing – registered.

### *6. Manufacturing – Unregistered*

For NSDP, unregistered manufacturing is calculated by using net value added from the 1984-85 survey on directory manufacturing establishments, non-directory establishments, and own account enterprises, which gives data for digit-level under the NIC classification. District-wise distribution of DME and NDE is not available, and, data on establishments is not available below 1-digit NIC.

We took data for unregistered manufacturing from the Economic Census 1990 (provisional for Madhya Pradesh). The Economic Census gives district-wise number of own account enterprises (non-agriculture) and establishments in manufacturing. No data was available to get a share of OAE, and establishments to unregistered manufacturing. We added up the number of OAE to establishments for every district. The resultant sums were divided by the total number of OAE and establishments in the state, to get percentage shares for each district. These shares were assumed to correspond to district shares of the domestic product of manufacturing –unregistered. This share was applied to manufacturing unregistered domestic product to arrive at district shares.

### *7. Construction*

In construction district-level data was scarce, and wherever available was not consistent or available in all districts. In the absence of such figures we had to resort to the provisional data from the Economic Census, 1990.

Taking figures of own account enterprises in construction, they were added to the number of establishments in construction in each district. The sums were divided by the total number of OAE and establishments in construction in the state. The shares so arrived at were taken as its share in construction domestic product.

### *8. Electricity, Gas and Water*

No satisfactory estimates could be developed due to absence of disaggregated data, especially for gas and water, and this category was thus left out.

*9. Railways*

No data was available to estimate district-wise share in railways. Scattered data on trains, railway lines and stations were not available for most districts, disabling us from making any kind of assessment.

*10. Transport by other means and Storage*

No satisfactory data was available to assess transport by other means.

*11. Communication*

No data was available to satisfactorily assess district share in communications.

*12. Trade, Hotels and Restaurants*

No data was available to satisfactorily assess district share in trade, hotels and restaurants.

*13. Banking and Insurance*

Banking and Insurance domestic product was divided on the share of each district on the deposit and loans in each district over the last five years.

*14. Real Estate, ownership of Dwellings and Business Service*

No satisfactory data was available for this category.

*15. Public Administration*

This was based upon estimates of expenditure on Public Administration supplied by each district and allocation of other funds on the basis of the strength of the employment of state administration employees in each district, on a weighted average from Class I to temporary and daily wages.

*16. Other Services*

Figures for employment under other services were taken from the 1991 Census. The employment figures were divided by the total employment in the other services in Madhya Pradesh to arrive at district shares, and these shares were applied to domestic products from other services to arrive and district figures.

### *Adjusted Income*

Incomes so calculated were divided by the population of the district to arrive at the capita district income. These figures calculated from 74.4 percent of NSDP of the state in 1991-92 are not adjusted and can present a distorted picture of districts, especially in ranking the maximum and minimum values of districts express the range for calculation. We have used the formula used by UNDP to adjust the per capita income based upon the poverty line figure of the Planning Commission.

We calculated district-wise poverty line, by taking the poverty line developed by the Planning Commission based upon the per capita monthly expenditure separately for the rural and urban adjusted to the 1991-92 prices. This figure was multiplied by 0.744 to make it comparable with our allocation of 74.4 percent of NSDP. To arrive at district poverty line figures, we took a weighted average of rural and urban population with adjusted rural and urban poverty line figures. The per capita incomes calculated for each district were divided by the resultant poverty line for each district, the product indicating the number of times district per capita was to the poverty line. To use Atkinson's formula and derive adjusted district incomes, we need one poverty line to compare districts. To enable this, the state's poverty line based upon the Planning Commission's adjusted poverty line was used (weighed to rural and urban), and district per capita incomes were calculated on comparative score by multiplying the factor arrived earlier by the state poverty line.

Using Atkinson's methodology (based upon the principles of Marginal Utility of Income above the poverty line), per capita income above the poverty line were adjusted. Adjustments were undertaken to arrive at the figures of income that give a comparative strength of districts, not overly distorted by the range of incomes between districts. The adjusted per capita incomes appear to be brought down and the range of income reduced substantially (from a high of Rs.7,201 and a low of Rs.2,149to an adjusted high of Rs.1,926 and low of Rs.1,806). However, the adjustment is only for the basis of developing an index, and the reduced range and reduced high and low ensure that the value of the Index of Deprivation are not too skewed against districts with lower per capita incomes. There is also a positive correlation of 0.96 between the adjusted per capita income IOD and the total per capita income IOD.

### *Poverty Index*

The scale of poverty is the most important indicator of the welfare of people in the district. Data from IRDP surveys on the rural poverty (Development Commissioner, Government of Madhya Pradesh) are available for 1992, but the urban surveys are still going on and have not been  finalized. We used data on rural poverty to develop this indicator. Further, the methodology of calculating district domestic product is very subjective and not at all definite, so the importance of this figure is even greater.

Rural poverty statistics for each district were derived from the rural poverty survey. From the share of rural poor to total rural population, the index of rural poverty was developed.

The survey also provides us information on families under the four income categories under the Rs.11,000 per annum per family norm for rural poverty. Taking the weighted average of incomes of families in each category, the average income for people below poverty line was calculated. The average income was divided by the minimum expected income to raise above the poverty line of Rs.10001, and an index denoting the level of deprivation of poor was calculated.

The two indices were then combined by assigning a weight of 4 to the rural poverty index and 1 to level of deprivation of poor, to get an index of poverty. We give a very high weight to poverty, as it would otherwise reduce the impact of sheer poverty on the index for a district.

Finally the indices of poverty and income were combined as simple composite index, to arrive at the Index of Deprivation for income.

The three indices of Deprivation (IOD) for health, education and income are then combined in a simple average to get the index of Deprivation. By separating one from the IOD, the Human Development index for all the districts was calculated.

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E ---- I

LITERACY RATES IN MADHYA PRADESH

| District | Literacy Rate | | | Male Literacy | | | Female Literacy | | | Literacy | Female Literacy |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | Rural | Urban | All | Rural | Urban | All | Rural | Urban | | |
| Morena | 41.3% | 36.1% | 61.0% | 58.0% | 53.4% | 75.4% | 20.8% | 14.9% | 43.2% | 0.724 | 0.895 |
| Bhind | 49.2% | 45.7% | 62.7% | 66.2% | 63.5% | 76.6% | 28.2% | 23.5% | 45.7% | 0.627 | 0.812 |
| Gwalior | 57.7% | 37.9% | 71.0% | 70.8% | 55.1% | 81.6% | 41.7% | 16.5% | 58.4% | 0.522 | 0.659 |
| Datia | 43.6% | 37.9% | 63.0% | 60.2% | 55.9% | 75.2% | 23.7% | 16.1% | 49.0% | 0.697 | 0.863 |
| Shivpuri | 33.0% | 27.1% | 65.1% | 47.5% | 41.9% | 78.1% | 15.6% | 9.4% | 49.6% | 0.827 | 0.953 |
| Guna | 34.6% | 27.2% | 64.1% | 48.9% | 41.9% | 76.6% | 18.0% | 10.1% | 49.6% | 0.808 | 0.927 |
| Tikamgarh | 34.8% | 30.6% | 55.4% | 47.5% | 43.5% | 67.2% | 20.0% | 15.4% | 41.9% | 0.805 | 0.905 |
| Chhatarpur | 35.2% | 28.3% | 63.4% | 46.9% | 40.1% | 74.5% | 21.3% | 14.1% | 50.5% | 0.800 | 0.889 |
| Panna | 33.7% | 29.3% | 62.3% | 46.3% | 422.1% | 73.1% | 19.4% | 14.9% | 49.7% | 0.819 | 0.911 |
| Sagar | 53.4% | 44.0% | 75.5% | 67.0% | 59.0% | 85.8% | 37.8% | 26.8% | 63.5% | 0.575 | 0.703 |
| Damoh | 46.3% | 40.0% | 73.8% | 6.5% | 54.9% | 84.8% | 30.5% | 23.5% | 61.3% | 0.663 | 0.786 |
| Satna | 44.7% | 39.5% | 65.0% | 60.0% | 55.5% | 77.3% | 27.8% | 22.2% | 50.9% | 0.683 | 0.816 |
| Rewa | 44.4% | 40.5% | 65.0% | 60.7% | 57.3% | 77.5% | 26.9% | 22.8% | 50.1% | 0.687 | 0.826 |
| Shahdol | 34.8% | 27.2% | 62.7% | 48.4% | 40.9% | 74.7% | 20.1% | 12.9% | 48.5% | 0.805 | 0.903 |
| Sidhi | 28.1% | 26.5% | 66.4% | 43.2% | 40.5% | 78.6% | 13.6% | 11.4% | 49.6% | 0.875 | 0.976 |
| Mandsaur | 48.7% | 41.9% | 70.8% | 67.9% | 62.8% | 84.4% | 28.3% | 19.9% | 56.2% | 0.634 | 0.810 |
| Ratlam | 44.2% | 30.6% | 72.1% | 58.4% | 46.4% | 82.6% | 29.1% | 13.9% | 60.8% | 0.69 | 0.801 |
| Ujjain | 49.1% | 33.5% | 72.1% | 64.3% | 51.9% | 82.4% | 32.6% | 13.8% | 60.9% | 0.629 | 0.761 |
| Shajapur | 39.2% | 33.7% | 64.4% | 57.0% | 52.2% | 78.8% | 19.8% | 13.6% | 48.4% | 0.751 | 0.907 |
| Dewas | 44.1% | 35.9% | 67.0% | 61.1% | 54.3% | 80.0% | 25.6% | 16.2% | 52.5% | 0.69 | 0.841 |
| Jhabua | 19.0% | 13.7% | 70.0% | 26.3% | 20.5% | 80.7% | 11.5% | 6.8% | 58.4% | 1.000 | 1.000 |
| Dhar | 34.5% | 29.4% | 64.7% | 47.6% | 42.5% | 78.9% | 20.7% | 15.6% | 54.3% | 0.808 | 0.896 |
| Indore | 66.3% | 43.7% | 75.9% | 78.0% | 63.0% | 84.3% | 53.3% | 22.5% | 66.6% | 0.416 | 0.527 |
| West Nimar | 36.0% | 30.1% | 66.9% | 48.0% | 42.1% | 78.6% | 23.2% | 17.6% | 53.9% | 0.791 | 0.868 |
| East Nimar | 45.5% | 36.4% | 6.4% | 58.5% | 50.8% | 77.9% | 31.5% | 21.0% | 58.1% | 0.673 | 0.774 |
| Rajgarh | 31.8% | 25.7% | 62.0% | 46.7% | 40.6% | 76.1% | 15.6% | 9.5% | 46.3% | 0.842 | 0.954 |
| Vidisha | 44.1% | 37.2% | 70.2% | 58.0% | 52.3% | 80.0% | 27.8% | 19.5% | 59.1% | 0.690 | 0.816 |
| Bhopal | 64.3% | 33.1% | 71.5% | 73.1% | 48.5% | 79.0% | 54.2% | 15.2% | 63.1% | 0.441 | 0.518 |
| Sehore | 40.4% | 34.7% | 65.8% | 56.9% | 52.4% | 76.7% | 22.0% | 15.1% | 53.2% | 0.7354 | 0.882 |
| Raisen | 40.8% | 36.1% | 65.1% | 54.0% | 49.8% | 75.8% | 25.5% | 20.5% | 52.4% | 0.731 | 0.842 |
| Betul | 45.9% | 38.8% | 76.3% | 57.4% | 50.6% | 85.2% | 33.9% | 26.7% | 66.2% | 0.668 | 0.747 |
| Hoshangabad | 52.5% | 42.5% | 78.0% | 65.8% | 57.1% | 87.8% | 37.6% | 26.3% | 66.7% | 0.586 | 0.705 |
| Jabalpur | 59.1% | 43.6% | 76.8% | 71.9% | 60.0% | 85.0% | 45.0% | 26.1% | 67.4% | 0.505 | 0.621 |
| Narsimhapur | 55.6% | 51.4% | 79.3% | 68.4% | 64.9% | 87.9% | 41.6% | 36.5% | 69.7% | 0.548 | 0.66 |
| Mandla | 37.3% | 33.8% | 76.9% | 52.2% | 49.1% | 87.0% | 22.2% | 18.6% | 65.9% | 0.774 | 0.879 |
| Chhindwara | 44.9% | 36.2% | 72.5% | 56.6% | 48.5% | 81.8% | 32.5% | 23.6% | 62.0% | 0.680 | 0.763 |
| Seoni | 44.5% | 40.8% | 78.7% | 57.5% | 54.1% | 87.4% | 31.1% | 27.1% | 69.1% | 0.685 | 0.778 |
| Balaghat | 53.2% | 50.8% | 75.7% | 67.6% | 65.6% | 85.9% | 39.9% | 36.3% | 64.8% | 0.577 | 0.690 |
| Sarguja | 30.1% | 24.9% | 67.2% | 42.1% | 36.8% | 77.8% | 17.4% | 12.5% | 54.8% | 0.863 | 0.934 |
| Bilaspur | 45.3% | 39.7% | 71.6% | 62.9% | 58.3% | 83.7% | 27.3% | 20.9% | 58.4% | 0.676 | 0.822 |
| Raigarh | 41.2% | 38.2% | 70.0% | 56.0% | 53.1% | 82.4% | 26.5% | 23.5% | 56.3% | 0.726 | 0.831 |
| Rajnandgaon | 44.4% | 39.3% | 70.7% | 61.3% | 56.8% | 83.5% | 27.8% | 22.2% | 57.5% | 0.687 | 0.816 |
| Durg | 58.7% | 50.4% | 73.5% | 74.1% | 68.0% | 84.1% | 42.8% | 33.0% | 61.5% | 0.51 | 0.647 |
| Raipur | 48.1% | 42.4% | 70.6% | 65.1% | 60.6% | 82.0% | 31.0% | 24.4% | 58.4% | 0.641 | 0.779 |
| Bastar | 24.9% | 21.1% | 71.3% | 34.5% | 30.6% | 81.3% | 15.3% | 11.8% | 60.6% | 0.927 | 0.957 |
| Madhya Pradesh | 44.2% | 35.9% | 70.8% | 58.4% | 51.0% | 81.3% | 28.8% | 19.7% | 58.9% | | |

E ---- II

TEACHERS IN EDUCATIONAL INSTITUTIONS --- SEPTEMBER 1991

| District | Ucchatar Madhyamik Vidyalaya (10 + 2) | | High Class (Class 10) | | Madhyamik (Senior Basic) | | Prathmik Junior (Basic) | | Purva Prathmik Shala | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| Morena | 61 | 636 | 92 | 375 | 209 | 1828 | 709 | 5472 | 1 | |
| Bhind | 51 | 627 | 4 | 366 | 237 | 1875 | 424 | 3415 | | 10 |
| Gwalior | 225 | 546 | 2279 | 469 | 1165 | 1600 | 1670 | 2765 | 41 | 70 |
| Datia | 19 | 142 | 7 | 38 | 88 | 537 | 1667 | 1002 | | |
| Shivpuri | 45 | 250 | 23 | 139 | 262 | 977 | 546 | 3217 | 5 | |
| Guna | 66 | 304 | 10 | 70 | 212 | 924 | 710 | 2591 | 9 | 1 |
| Tikamgarh | 82 | 634 | 43 | 361 | 272 | 1155 | 347 | 1709 | 3 | |
| Chhatarpur | 224 | 810 | 81 | 419 | 479 | 1362 | 381 | 1963 | 1 | |
| Panna | 66 | 415 | 28 | 210 | 170 | 857 | 319 | 1543 | | |
| Sagar | 426 | 959 | 70 | 262 | 550 | 1116 | 1312 | 3015 | 19 | 2 |
| Damoh | 150 | 407 | 19 | 94 | 205 | 854 | 502 | 1782 | 16 | 5 |
| Satna | 313 | 1571 | 107 | 665 | 404 | 2137 | 462 | 2565 | | |
| Rewa | 142 | 1203 | 68 | 559 | 405 | 2243 | 540 | 3341 | | |
| Shahdol | 175 | 920 | 90 | 490 | 290 | 2158 | 480 | 3400 | 3 | 12 |
| Sidhi | 37 | 662 | 30 | 291 | 110 | 1094 | 162 | 2115 | 1 | |
| Mandsaur | 174 | 681 | 61 | 204 | 564 | 1940 | 1017 | 2772 | 18 | 2 |
| Ratlam | 258 | 440 | 42 | 94 | 437 | 994 | 1284 | 1977 | 46 | 11 |
| Ujjain | 384 | 601 | 1103 | 170 | 808 | 1307 | 2370 | 22701 | 285 | 44 |
| Shajapur | 119 | 400 | 8 | 96 | 135 | 934 | 389 | 2237 | 2 | |
| Dewas | 182 | 342 | 16 | 78 | 270 | 932 | 568 | 1868 | 5 | |
| Jhabua | 142 | 500 | 26 | 173 | 217 | 781 | 538 | 2317 | 5 | |
| Dhar | 227 | 801 | 24 | 190 | 513 | 1521 | 596 | 2841 | 2 | |
| Indore | 1267 | 1115 | 217 | 181 | 4152 | 2016 | 2780 | 1689 | 38 | |
| West Nimar | 225 | 1058 | 43 | 439 | 708 | 2283 | 879 | 3259 | | |
| East Nimar | 312 | 590 | 45 | 148 | 267 | 668 | 806 | 1743 | | |
| Rajgarh | 72 | 283 | 4 | 53 | 139 | 860 | 590 | 2291 | 4 | 3 |
| Vidisha | 50 | 160 | 51 | 96 | 183 | 849 | 762 | 2033 | 32 | 19 |
| Bhopal | 1072 | 585 | 315 | 252 | 1960 | 811 | 3120 | 1292 | | |
| Sehore | 79 | 282 | 39 | 120 | 211 | 740 | 643 | 1809 | | |
| Raisen | 57 | 286 | 12 | 86 | 117 | 886 | 464 | 1925 | 4 | 4 |
| Betul | 96 | 470 | 39 | 230 | 327 | 1212 | 531 | 2649 | 18 | |
| Hoshangabad | 244 | 693 | 42 | 348 | 278 | 1203 | 760 | 2272 | 42 | 3 |
| Jabalpur | 890 | 1440 | 431 | 832 | 1145 | 2240 | 3872 | 39065 | 177 | 5 |
| Narsimhapur | 163 | 540 | 17 | 123 | 250 | 699 | 431 | 1511 | 15 | |
| Mandla | 96 | 524 | 23 | 164 | 250 | 1330 | 599 | 3531 | 86 | |
| Chhindwara | 203 | 480 | 117 | 375 | 338 | 1218 | 1076 | 3296 | 4 | 48 |
| Seoni | 138 | 473 | 38 | 171 | 143 | 965 | 523 | 2718 | 46 | |
| Balaghat | 218 | 806 | 7 | 169 | 255 | 1319 | 704 | 3199 | 12 | 24 |
| Surguja | 140 | 741 | 48 | 329 | 282 | 1902 | 1000 | 5657 | 104 | 56 |
| Bilaspur | 769 | 1962 | 138 | 511 | 421 | 2655 | 1799 | 8946 | 144 | 15 |
| Raigarh | 213 | 813 | 53 | 269 | 245 | 1628 | 826 | 5096 | 36 | 10 |
| Rajnandgaon | 157 | 470 | 29 | 204 | 252 | 1302 | 837 | 3589 | 43 | 6 |
| Durg | 635 | 1517 | 91 | 402 | 598 | 2149 | 1717 | 6038 | 82 | 27 |
| Raipur | 533 | 1092 | 159 | 275 | 464 | 2431 | 1184 | 4372 | 104 | |
| Bastar | 392 | 823 | 83 | 353 | 370 | 1970 | 1374 | 6929 | 84 | 8 |

E ---- III

EDUCATIONAL INSTITUTIONS --- SEPTEMBER 1991

| District | Ucchatar Madhyamik Vidyalaya (10 + 2) | | High Class (Class 10) | | Madhyamik (Senior Basic) | | Prathmik Junior (Basic) | | Purva Prathmik Shala | | Mahavidyalaya Sansthayen |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | |
| Morena | 59 | 7 | 57 | 3 | 328 | 25 | 1741 | 118 | | 1 | 6 |
| Bhind | 37 | 7 | 67 | 2 | 387 | 22 | 1240 | 109 | 10 | | 8 |
| Gwalior | 57 | 12 | 57 | 8 | 451 | 39 | 1268 | 163 | 28 | 2 | 11 |
| Datia | 9 | 2 | 8 | 2 | 76 | 8 | 371 | 29 | | | 3 |
| Shivpuri | 22 | 5 | 21 | 2 | 219 | 14 | 1180 | 50 | 2 | | 6 |
| Guna | 16 | 8 | 24 | 1 | 228 | 21 | 1345 | 62 | 1 | | 9 |
| Tikamgarh | 39 | 3 | 46 | 6 | 159 | 8 | 726 | 60 | 1 | | 6 |
| Chhatarpur | 38 | 10 | 44 | 3 | 209 | 16 | 954 | 97 | 1 | | 6 |
| Panna | 22 | 2 | 20 | 4 | 128 | 11 | 688 | 81 | | | 8 |
| Sagar | 42 | 17 | 37 | 4 | 263 | 42 | 1317 | 79 | | 9 | 11 |
| Damoh | 29 | 5 | 21 | 2 | 160 | 16 | 800 | 41 | | 1 | 5 |
| Satna | 82 | 9 | 65 | 5 | 321 | 16 | 1292 | 84 | | | 7 |
| Rewa | 76 | 9 | 51 | 7 | 479 | 48 | 1538 | 178 | | | 10 |
| Shahdol | 52 | 10 | 52 | 6 | 359 | 36 | 1867 | 119 | 5 | | 12 |
| Sidhi | 42 | 7 | 49 | 3 | 240 | 19 | 1212 | 49 | 1 | | 10 |
| Mandsaur | 50 | 14 | 42 | 5 | 315 | 30 | 1486 | 103 | 20 | | 7 |
| Ratlam | 29 | 7 | 25 | 2 | 232 | 27 | 1011 | 98 | 11 | | 6 |
| Ujjain | 39 | 11 | 42 | 2 | 297 | 37 | 1301 | 96 | 139 | | 10 |
| Shajapur | 31 | 6 | 23 | 3 | 190 | 24 | 1056 | 83 | 1 | | 7 |
| Dewas | 25 | 7 | 19 | 5 | 175 | 18 | 916 | 64 | 3 | | 7 |
| Jhabua | 25 | 1 | 16 | 2 | 182 | 30 | 1302 | 117 | 2 | | 6 |
| Dhar | 43 | 10 | 25 | 6 | 272 | 43 | 1393 | 125 | 2 | | 8 |
| Indore | 64 | 28 | 69 | 11 | 546 | 86 | 1078 | 90 | 11 | 2 | 9 |
| West Nimar | 46 | 16 | 47 | 4 | 355 | 56 | 1622 | 209 | | | 11 |
| East Nimar | 32 | 8 | 29 | 6 | 226 | 33 | 1132 | 95 | | 51 | 4 |
| Rajgarh | 16 | 5 | 19 | 5 | 179 | 18 | 982 | 69 | 1 | | 8 |
| Vidisha | 16 | 4 | 28 | 3 | 192 | 21 | 1056 | 58 | 4 | | 5 |
| Bhopal | 59 | 20 | 68 | 2 | 363 | 28 | 699 | 42 | | | 10 |
| Sehore | 26 | 2 | 19 | 7 | 180 | 18 | 940 | 53 | | | 5 |
| Raisen | 20 | 6 | 33 | 5 | 203 | 13 | 1040 | 86 | 4 | | 8 |
| Betul | 38 | 7 | 37 | 2 | 247 | 27 | 1208 | 72 | | 3 | 7 |
| Hoshangabad | 44 | 12 | 43 | 3 | 234 | 334 | 1183 | 105 | | 27 | 11 |
| Jabalpur | 123 | 41 | 72 | 16 | 467 | 44 | 1985 | 141 | | 58 | 14 |
| Narsimhapur | 29 | 8 | 28 | 4 | 135 | 18 | 664 | 48 | | 15 | 4 |
| Mandla | 35 | 6 | 25 | 3 | 305 | 37 | 1737 | 104 | | 107 | 8 |
| Chhindwara | 43 | 8 | 71 | 3 | 325 | 52 | 1692 | 119 | | 52 | 12 |
| Seoni | 23 | 5 | 24 | 5 | 219 | 22 | 1270 | 72 | | 34 | 6 |
| Balaghat | 44 | 10 | 26 | | 281 | 35 | 1428 | 185 | 58 | | 7 |
| Surguja | 50 | 19 | 52 | 3 | 504 | 66 | 2862 | 173 | 71 | | 11 |
| Bilaspur | 140 | 22 | 105 | 11 | 731 | 399 | 3734 | 266 | 50 | | 26 |
| Raigarh | 49 | 14 | 50 | 6 | 78 | 51 | 2366 | 113 | 14 | | 8 |
| Rajnandgaon | 38 | 7 | 47 | 5 | 320 | 26 | 902 | 34 | 17 | 38 | 16 |
| Durg | 123 | 13 | 74 | 10 | 553 | 43 | 1939 | 173 | 33 | | 14 |
| Raipur | 68 | 15 | 52 | 4 | 391 | 35 | 1736 | 105 | | | 26 |
| Bastar | 54 | 12 | 68 | | 594 | 42 | 3503 | 94 | 57 | | 13 |

E ---- IV

EDUCATIONAL INSTITUTIONS --- SEPTEMBER 1991

| District | Ucchatar Madhyamik Vidyalaya (10 + 2) | | High Class (Class 10) | | Madhyamik (Senior Basic) | | Prathmik Junior (Basic) | | Purva Prathmik Shala | | Mahavidyalaya Sansthayen |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | |
| Morena | 13838 | 1750 | 10302 | 1203 | 52076 | 12010 | 157271 | 83220 | 90 | 76 | 4609 |
| Bhind | 23540 | 3504 | 12014 | 1198 | 463447 | 15355 | 103164 | 70457 | 149 | 11 | 3319 |
| Gwalior | 13842 | 6424 | 15215 | 11360 | 51517 | 21758 | 163911 | 89637 | 1163 | 955 | 10491 |
| Datia | 6617 | 1037 | 1223 | 1264 | 16866 | 8093 | 35776 | 24730 | | | 1165 |
| Shivpuri | 7918 | 2156 | 1370 | 426 | 25816 | 5812 | 86704 | 37121 | 152 | 133 | 2399 |
| Guna | 9654 | 2859 | 2324 | 357 | 27660 | 6896 | 96329 | 53338 | 58 | 28 | 3648 |
| Tikamgarh | 22258 | 3881 | 8238 | 2406 | 49023 | 19065 | 58002 | 41168 | 391 | 203 | 2495 |
| Chhatarpur | 22621 | 6213 | 8129 | 2643 | 45962 | 20257 | 86881 | 44943 | 22 | 18 | 2500 |
| Panna | 10981 | 2777 | 4727 | 1980 | 20118 | 10222 | 36578 | 26766 | | | 980 |
| Sagar | 32237 | 13577 | 7391 | 3123 | 45735 | 22066 | 116363 | 91937 | 591 | 418 | 2492 |
| Damoh | 12746 | 5988 | 1988 | 628 | 27958 | 10158 | 55504 | 44607 | 330 | 268 | 1624 |
| Satna | 14867 | 13163 | 15248 | 7647 | 56895 | 32732 | 63534 | 46482 | | | 3241 |
| Rewa | 16702 | 2301 | 27432 | 5091 | 56727 | 25905 | 126493 | 82015 | | | 4007 |
| Shahdol | 29494 | 8357 | 9150 | 3555 | 58574 | 24440 | 80795 | 51814 | 328 | 140 | 4145 |
| Sidhi | 22184 | 2786 | 7102 | 1571 | 41244 | 15826 | 69961 | 33723 | 28 | 12 | 3318 |
| Mandsaur | 18227 | 6267 | 2660 | 730 | 41807 | 15098 | 124101 | 86331 | 305 | 210 | 4045 |
| Ratlam | 10167 | 5234 | 1841 | 580 | 22100 | 9804 | 70409 | 47895 | 1596 | 856 | 3530 |
| Ujjain | 17344 | 8611 | 2584 | 934 | 34032 | 15838 | 97438 | 66267 | 5907 | 4246 | 2622 |
| Shajapur | 11541 | 2541 | 1663 | 481 | 22872 | 6270 | 71685 | 40487 | 46 | 57 | 2277 |
| Dewas | 14298 | 5604 | 34222 | 679 | 26478 | 8460 | 70340 | 44823 | 151 | 121 | 1682 |
| Jhabua | 11852 | 4142 | 3360 | 886 | 11797 | 4355 | 65504 | 36548 | 163 | 135 | 1725 |
| Dhar | 26917 | 9202 | 5413 | 2344 | 37031 | 19460 | 68884 | 46357 | 65 | 70 | 2134 |
| Indore | 46829 | 33550 | 3559 | 2260 | 11290 | 76660 | 86312 | 71308 | 627 | 510 | 8091 |
| West Nimar | 26097 | 11626 | 10138 | 3388 | 59849 | 33236 | 92242 | 71662 | | | 4409 |
| East Nimar | 11233 | 5617 | 2211 | 833 | 24168 | 12296 | 107259 | 77254 | | | 2164 |
| Rajgarh | 2581 | 657 | 7779 | 1691 | 21394 | 5483 | 66682 | 3887 | 135 | 85 | 1578 |
| Vidisha | 2178 | 1154 | 6482 | 1346 | 22853 | 8098 | 87617 | 63798 | 1005 | 795 | 611 |
| Bhopal | 6950 | 4458 | 12460 | 8029 | 34360 | 22560 | 87600 | 71400 | | | 11800 |
| Sehore | 3404 | 658 | 7980 | 1664 | 22604 | 6452 | 65904 | 33050 | | | 1636 |
| Raisen | 2475 | 658 | 8011 | 2122 | 22206 | 8182 | 56968 | 39652 | 194 | 162 | 1568 |
| Betul | 14440 | 8032 | 8780 | 5391 | 20504 | 14948 | 84792 | 69711 | 324 | 362 | 2459 |
| Hoshangabad | 18901 | 8226 | 9110 | 1632 | 30128 | 15826 | 92333 | 76393 | 1412 | 1210 | 4905 |
| Jabalpur | 64239 | 41511 | 8188 | 3488 | 72859 | 36752 | 164451 | 130261 | 4143 | 4799 | 10181 |
| Narsimhapur | 16353 | 4289 | 3415 | 788 | 23967 | 14732 | 57219 | 45875 | 372 | 322 | 1287 |
| Mandla | 6710 | 22740 | 12580 | 3190 | 34680 | 19160 | 91840 | 66010 | 2140 | 1918 | 2981 |
| Chhindwara | 15878 | 10182 | 8126 | 6119 | 25852 | 12952 | 111202 | 79497 | 1764 | 1376 | 2896 |
| Seoni | 13422 | 6207 | 3048 | 1900 | 36919 | 17457 | 100927 | 65884 | 2830 | 1957 | 2073 |
| 3Balaghat | 23677 | 12260 | 3828 | 1728 | 28043 | 20909 | 95598 | 87309 | 1067 | 712 | 3040 |
| Surguja | 19141 | 6819 | 10072 | 2652 | 41260 | 18593 | 144231 | 110294 | 1869 | 1319 | 5450 |
| Bilaspur | 75826 | 26421 | 17094 | 5787 | 84009 | 34109 | 276822 | 182722 | 4617 | 2944 | 10107 |
| Raigarh | 18165 | 7989 | 11747 | 3479 | 34251 | 19740 | 106417 | 92487 | 911 | 702 | 5141 |
| Rajnandgaon | 15143 | 5532 | 5137 | 11873 | 35008 | 16051 | 96384 | 77632 | 1404 | 1081 | 4133 |
| Durg | 47162 | 22446 | 14580 | 7413 | 73329 | 42752 | 177561 | 145509 | 1897 | 1053 | 6904 |
| Raipur | 13234 | 7808 | 17122 | 8676 | 58863 | 46265 | 157941 | 153508 | 2340 | 1796 | 11843 |
| Bastar | 20939 | 10223 | 8203 | 2467 | 30205 | 14126 | 149307 | 101515 | 2111 | 1596 | 4481 |

E ---- V

POPULATION BY EDUCATIONAL QUALIFICATIONS 1981

| | Literate Without Education Level | | | | | | Education Level | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Illiterate | | Non-Formal | | Formal | | Primary | | Middle | | Matriculation/ Secondary | |
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| Morena | 61.5% | 89.9% | 11.4% | 0.4% | 13.9% | 4.2% | 11.0% | 3.2% | 6.7% | 1.4% | 0.8% | 0.2% |
| Bhind | 54.8% | 85.3% | 1.4% | 0.5% | 14.4% | 5.8% | 13.2% | 5.2% | 8.8% | 2.1% | 1.0% | 0.2% |
| Gwalior | 48.8% | 74.0% | 1.3% | 0.7% | 14.7% | 8.0% | 12.8% | 6.5% | 9.4% | 4.5% | 1.8% | 0.8% |
| Datia | 59.1% | 87.7% | 2.5% | 0.7% | 13.3% | 4.4% | 13.0% | 4.0% | 6.8% | 1.8% | 0.7% | 0.2% |
| Shivpuri | 68.9% | 91.9% | 1.8% | 0.4% | 11.5% | 3.0% | 9.3% | 2.4% | 4.4% | 1.2% | 0.6% | 0.1% |
| Guna | 67.5% | 90.7% | 1.8% | 0.3% | 12.4% | 3.2% | 9.9% | 2.8% | 4.4% | 1.5% | 0.5% | 0.1% |
| Tikamgarh | 71.4% | 91.6% | 4.4% | 1.3% | 7.8% | 2.5% | 8.2% | 2.6% | 4.7% | 1.2% | 0.3% | 0.1% |
| Chhatarpur | 71.0% | 89.8% | 3.3% | 1.1% | 8.6% | 3.2% | 7.8% | 3.1% | 4.7% | 1.4% | 0.3% | 0.1% |
| Panna | 70.6% | 91.3% | 1.4% | 0.4% | 10.5% | 3.4% | 9.2% | 33.1% | 4.8% | 1.0% | 0.3% | 0.1% |
| Sagar | 54.0% | 78.9% | 1.3% | 0.5% | 19.2% | 9.6% | 13.1% | 6.0% | 6.3% | 2.7% | 1.9% | 0.8% |
| Damoh | 57.5% | 83.5% | 0.6% | 0.2% | 21.3% | 8.9% | 11.6% | 4.4% | 5.0% | 1.8% | 1.8% | 0.6% |
| Satna | 60.5% | 86.7% | 1.2% | 0.3% | 12.9% | 5.3% | 11.4% | 4.7% | 5.8% | 1.6% | 2.6% | 0.4% |
| Rewa | 61.4% | 88.7% | 1.6% | 0.5% | 11.4% | 4.5% | 9.6% | 3.7% | 6.3% | 1.5% | 2.8% | 0.3% |
| Shahdol | 70.4% | 91.2% | 1.2% | 0.3% | 11.0% | 3.6% | 8.6% | 2.8% | 3.7% | 1.0% | 1.7% | 0.3% |
| Sidhi | 75.4% | 95.2% | 1.4% | 0.2% | 9.3% | 2.3% | 6.4% | 1.5% | 3.1% | 0.4% | 1.5% | 0.1% |
| Mandsaur | 53.5% | 84.9% | 0.9% | 0.3% | 19.1% | 6.7% | 14.0% | 4.4% | 6.7% | 2.1% | 0.5% | 0.1% |
| Ratlam | 59.2% | 82.4% | 1.2% | 0.5% | 14.4% | 6.3% | 12.1% | 5.1% | 6.5% | 2.9% | 0.7% | 0.2% |
| Ujjain | 54.5% | 80.3% | 1.3% | 0.4% | 15.6% | 6.9% | 13.2% | 5.6% | 7.3% | 33.1% | 0.8% | 0.3% |
| Shajapur | 62.8% | 90.7% | 1.0% | 0.3% | 15.8% | 4.0% | 12.3% | 2.9% | 4.6% | 1.1% | 0.3% | 0.1% |
| Dewas | 60.5% | 87.3% | 0.7% | 0.2% | 16.3% | 5.7% | 11.9% | 3.5% | 5.7% | 1.6% | 0.4% | 0.1% |
| Jhabua | 84.1% | 93.7% | 0.3% | 0.1% | 5.9% | 2.6% | 4.4% | 1.8% | 2.5% | 1.0% | 0.2% | 0.1% |
| Dhar | 70.1% | 89.7% | 0.7% | 0.2% | 11.7% | 4.5% | 9.4% | 3.1% | 4.3% | 1.3% | 0.2% | 0.0% |
| Indore | 39.9% | 63.3% | 1.0% | 0.6% | 17.6% | 12.4% | 15.2% | 9.5% | 11.3% | 6.2% | 1.6% | 0.7% |
| West Nimar (Khargone) | 66.7% | 87.8% | 0.6% | 20.0% | 14.4% | 6.1% | 10.2% | 3.5% | 4.3% | 1.4% | 0.3% | 0.1% |
| East Nimar (Khandwa) | 58.2% | 81.1% | 0.5% | 0.2% | 19.6% | 9.0% | 11.0% | 5.2% | 5.3% | 2.3% | 1.8% | 90.0% |
| Rajgarh | 71.6% | 92.8% | 1.1% | 0.3% | 11.5% | 2.8% | 8.6% | 2.2% | 2.9% | 0.8% | 1.2% | 0.3% |
| Vidisha | 63.7% | 86.9% | 1.3% | 0.5% | 14.9% | 5.8% | 11.2% | 3.6% | 3.4% | 1.3% | 1.4% | 0.5% |
| Bhopal | 44.5% | 62.6% | 1.7% | 1.1% | 13.8% | 10.4% | 11.6% | 8.2% | 7.3% | 4.9% | 4.7% | 3.0% |
| Sehore | 64.5% | 90.2% | 1.3% | 0.4% | 14.6% | 4.3% | 11.0% | 2.7% | 3.8% | 1.0% | 1.5% | 0.3% |
| Raisen | 66.5% | 88.5% | 1.1% | 0.4% | 13.6% | 5.7% | 10.5% | 3.5% | 3.5% | 0.9% | 1.6% | 0.3% |
| Betul | 61.8% | 82.6% | 0.6% | 0.2% | 17.5% | 8.6% | 10.5% | 5.1% | 3.8% | 1.7% | 3.0% | 1.0% |
| Hoshangabad | 52.4% | 78.1% | 0.7% | 0.4% | 19.7% | 10.6% | 12.5% | 5.8% | 5.2% | 2.1% | 5.2% | 1.7% |
| Jabalpur | 47.2% | 71.9% | 0.6% | 0.3% | 18.5% | 10.8% | 13.1% | 7.6% | 7.1% | 3.7% | 6.7% | 2.8% |
| Narsimhapur | 55.7% | 78.7% | 0.8% | 0.3% | 18.0% | 9.6% | 12.5% | 7.0% | 5.5% | 2.2% | 4.4% | 1.4% |
| Mandla | 65.3% | 88.8% | 0.7% | 0.2% | 15.9% | 5.3% | 10.0% | 3.3% | 3.7% | 1.2% | 2.4% | 0.6% |
| Chhindwara | 61.4% | 82.6% | 0.6% | 0.2% | 17.3% | 8.7% | 10.0% | 4.7% | 4.4% | 1.8% | 3.7% | 1.2% |
| Seoni | 61.7% | 84.5% | 0.7% | 0.2% | 18.0% | 8.3% | 11.1% | 4.9% | 33.8% | 1.2% | 2.8% | 0.6% |
| Balaghat | 52.7% | 794.1% | 0.5% | 0.2% | 23.4% | 11.6% | 13.0% | 6.1% | 4.6% | 1.5% | 3.4% | 0.8% |
| Sarguja | 75.2% | 726.5% | 0.6% | 1.3% | 10.2% | 26.6% | 6.9% | 17.6% | 3.0% | 6.6% | 1.6% | 2.7% |
| Bilaspur | 57.3% | 17.7% | 0.8% | 0.2% | 20.0% | 7.2% | 10.6% | 4.0% | 4.5% | 1.4% | 3.7% | 0.9% |
| Raigarh | 61.7% | 85.9% | 1.0% | 0.3% | 17.6% | 7.1% | 10.4% | 4.2% | 4.2% | 1.4% | 2.6% | 0.7% |
| Rajnandgaon | 59.6% | 86.8% | 0.7% | 0.2% | 20.5% | 6.9% | 10.5% | 3.5% | 4.5% | 1.4% | 2.0% | 0.6% |
| Durg | 48.4% | 76.0% | 0.7% | 0.3% | 21.9% | 11.2% | 12.5% | 6.4% | 7.3% | 3.0% | 4.7% | 1.6% |
| Raipur | 55.1% | 83.2% | 1.4% | 0.5% | 21.2% | 8.5% | 11.2% | 4.4% | 5.5% | 1.8% | 2.5% | 0.8% |
| Bastar | 78.8% | 92.7% | 0.7% | 0.2% | 9.7% | 3.6% | 5.2% | 1.9% | 2.7% | 0.8% | 1.3% | 0.4% |
| Madhya Pradesh | 60.5% | 80.5% | 1.1% | 0.4% | 15.8% | 4.3% | 10.7% | 4.4% | 5.3% | 1.9% | 2.2% | 0.7% |

E-----V (contd.)

POPULATION BY EDUCATIONAL QUALIFICATION 1981

| District | Education Level: Higher Sec. Intermediate Univ. | | Non-Technical Diploma or Certificate not equal to Degree | | Technical Diploma or Certificate not equal to Degree | | Graduate and above | |
|---|---|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female | Male | Female |
| Morena | 3.4% | 0.5% | 0.0% | 0.0% | 0.0% | 0.0% | 1.3% | 0.2% |
| Bhind | 4.7% | 0.7% | 0.0% | 0.0% | 0.1% | 0.0% | 1.5% | 0.2% |
| Gwalior | 6.4% | 3.1% | 0.0% | 0.0% | 0.2% | 0.0% | 4.5% | 2.3% |
| Datia | 2.9% | 0.9% | 0.0% | 0.0% | 0.1% | 0.0% | 1.6% | 0.3% |
| Shivpuri | 2.3% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% | 1.2% | 0.3% |
| Guna | 2.4% | 0.9% | 0.0% | 0.0% | 0.1% | 0.0% | 1.1% | 0.3% |
| Tikamgarh | 2.3% | 0.6% | 0.0% | 0.0% | 0.1% | 0.0% | 0.9% | 0.2% |
| Chhatarpur | 2.8% | 0.8% | 0.0% | 0.0% | 0.1% | 0.0% | 1.3% | 0.4% |
| Panna | 2.3% | 0.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.9% | 0.2% |
| Sagar | 2.3% | 0.8% | 0.0% | 0.0% | 0.1% | 0.0% | 1.8% | 0.7% |
| Damoh | 1.2% | 0.3% | 0.0% | 0.0% | 0.1% | 0.0% | 1.0% | 0.3% |
| Satna | 3.9% | 0.7% | 0.0% | 0.0% | 0.1% | 0.0% | 1.6% | 0.3% |
| Rewa | 4.9% | 0.6% | 0.0% | 0.0% | 0.1% | 0.0% | 1.9% | 0.3% |
| Shahdol | 2.3% | 0.5% | 0.0% | 0.0% | 0.2% | 0.0% | 1.1% | 0.2% |
| Sidhi | 2.1% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.7% | 0.1% |
| Mandsaur | 3.4% | 1.0% | 0.0% | 0.0% | 0.1% | 0.0% | 1.7% | 0.4% |
| Ratlam | 3.4% | 1.6% | 0.0% | 0.0% | 0.2% | 0.0% | 2.3% | 0.9% |
| Ujjain | 4.2% | 2.1% | 0.0% | 0.0% | 0.2% | 0.0% | 2.8% | 1.2% |
| Shajapur | 2.0% | 0.7% | 0.0% | 0.0% | 0.1% | 0.0% | 1.2% | 0.3% |
| Dewas | 3.0% | 0.9% | 0.0% | 0.0% | 0.2% | 0.0% | 1.5% | 0.6% |
| Jhabua | 1.6% | 0.6% | 0.0% | 0.0% | 0.1% | 0.0% | 0.9% | 0.2% |
| Dhar | 2.3% | 0.8% | 0.0% | 0.0% | 0.1% | 0.0% | 1.2% | 0.3% |
| Indore | 7.4% | 4.4% | 0.0% | 0.0% | 0.3% | 0.0% | 5.7% | 2.9% |
| West Nimar (Khargone) | 2.3% | 0.7% | 0.0% | 0.0% | 0.1% | 0.0% | 1.0% | 0.2% |
| East Nimar (Khandwa) | 2.0% | 0.8% | 0.0% | 0.0% | 0.2% | 0.0% | 1.5% | 0.6% |
| Rajgarh | 2.0% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% | 1.0% | 0.3% |
| Vidisha | 2.5% | 1.0% | 0.0% | 0.0% | 0.1% | 0.0% | 1.6% | 0.5% |
| Bhopal | 8.0% | 5.5% | 0.0% | 0.0% | 1.4% | 0.0% | 6.9% | 4.1% |
| Sehore | 2.2% | 0.7% | 0.0% | 0.0% | 0.1% | 0.0% | 1.1% | 0.3% |
| Raisen | 2.3% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% | 0.8% | 0.2% |
| Betul | 1.6% | 0.4% | 0.0% | 0.0% | 0.2% | 0.0% | 1.1% | 0.3% |
| Hoshangabad | 2.0% | 0.6% | 0.0% | 0.0% | 0.2% | 0.0% | 2.0% | 0.6% |
| Jabalpur | 3.0% | 1.3% | 0.0% | 0.0% | 0.5% | 0.0% | 3.4% | 1.6% |
| Narsimhapur | 1.4% | 0.4% | 0.0% | 0.0% | 0.1% | 0.0% | 1.5% | 0.4% |
| Mandla | 1.0% | 0.3% | 0.0% | 0.0% | 0.1% | 0.0% | 1.0% | 0.2% |
| Chhindwara | 1.3% | 0.3% | 0.0% | 0.0% | 0.1% | 0.0% | 11.2% | 0.3% |
| Seoni | 1.0% | 0.2% | 0.0% | 0.0% | 0.1% | 0.0% | 0.9% | 0.2% |
| Balaghat | 1.2% | 0.2% | 0.0% | 0.0% | 0.2% | 0.0% | 1.1% | 0.2% |
| Surguja | 1.6% | 3.8% | 0.0% | 0.0% | 0.1% | 0.0% | 0.8% | 1.5% |
| Bilaspur | 1.6% | 0.3% | 0.0% | 0.0% | 0.2% | 0.0% | 1.4% | 0.4% |
| Raigarh | 1.6% | 0.3% | 0.0% | 0.0% | 0.1% | 0.0% | 0.9% | 0.2% |
| Rajnandgaon | 1.2% | 0.2% | 0.0% | 0.0% | 0.1% | 0.0% | 1.0% | 0.3% |
| Durg | 1.9% | 0.7% | 0.0% | 0.0% | 0.4% | 0.0% | 2.1% | 0.8% |
| Raipur | 1.4% | 0.4% | 0.0% | 0.0% | 0.1% | 0.0% | 1.5% | 0.4% |
| Bastar | 0.7% | 0.2% | 0.0% | 0.0% | 0.1% | 0.0% | 0.7% | 0.2% |
| Madhya Pradesh | 2.6% | 0.8% | 0.0% | 0.0% | 0.2% | 0.0% | 1.7% | 0.6% |

H --- I

ESTIMATED BIRTH RATE, DEATH RATE FOR INDIA AND MADHYA PRADESH

| Year | Estimated Birth Rate | | | | | | Estimated Death Rate | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | India | | | MP | | | India | | | MP | | |
| | All | Rural | Urban | All | Rural | Urban | All | Rural | Urban | All | Rural | Urban |
| 1911 | | | | | | | | | | 33.00 | | |
| 1921 | | | | | | | | | | 44.20 | | |
| 1931 | | | | | | | | | | 31.80 | | |
| 1941 | | | | | | | | | | 31.90 | | |
| 1950 | | | | | | | | | | 30.00 | | |
| 1981 | 33.90 | 35.60 | 27.00 | 37.60 | 38.80 | 31.40 | 12.50 | 13.70 | 7.80 | 16.60 | 18.00 | 9.30 |
| 1982 | 33.80 | 35.50 | 27.60 | 38.50 | 39.90 | 32.40 | 11.90 | 13.10 | 7.40 | 14.90 | 16.30 | 9.00 |
| 1983 | 33.70 | 35.30 | 28.30 | 38.50 | 40.10 | 32.00 | 11.90 | 13.10 | 7.90 | 14.50 | 15.90 | 8.70 |
| 1984 | 33.90 | 35.30 | 29.40 | 36.90 | 38.10 | 32.20 | 12.60 | 13.80 | 8.60 | 14.20 | 15.50 | 9.00 |
| 1985 | 32.90 | 34.30 | 28.10 | 39.40 | 41.00 | 33.00 | 11.80 | 13.00 | 7.80 | 14.20 | 15.30 | 9.40 |
| 1986 | 32.60 | 34.20 | 27.10 | 37.20 | 39.00 | 30.10 | 11.10 | 12.20 | 7.60 | 13.60 | 14.80 | 8.80 |
| 1987 | 32.20 | 33.70 | 27.40 | 36.40 | 37.50 | 31.90 | 10.90 | 12.00 | 7.40 | 13.30 | 14.60 | 8.00 |
| 1988 | 31.50 | 33.10 | 26.30 | 37.00 | 38.40 | 31.20 | 11.00 | 12.00 | 7.70 | 14.30 | 15.40 | 9.80 |
| 1989 | 30.60 | 32.20 | 25.20 | 35.50 | 36.70 | 30.30 | 10.30 | 11.10 | 7.20 | 12.90 | 13.90 | 8.60 |
| 1990 | 30.20 | 31.70 | 24.70 | 37.10 | 38.90 | 29.30 | 9.70 | 10.50 | 6.80 | 12.60 | 13.70 | 7.60 |
| 1991 | 29.50 | 30.90 | 24.30 | 35.80 | 37.30 | 29.70 | 9.80 | 10.60 | 7.10 | 13.80 | 14.90 | 9.20 |
| 1992 | 29.20 | 30.90 | 23.10 | 34.90 | 36.80 | 26.50 | 10.10 | 10.90 | 7.00 | 12.90 | 13.90 | 8.50 |
| 1993 | 28.50 | 30.30 | 23.50 | 33.40 | 35.90 | 24.30 | 9.20 | 10.50 | 5.70 | 12.60 | 13.90 | 7.60 |

Source: Sample Registration Bulletin, January 1995, Vol. XXIX, No.1, RGI.

ESTIMATED GROWTH RATE AND IMR FOR INDIA AND MADHYA PRADESH

| | Natural Growth Rate | | | | | | Estimated Infant Mortality Rate (IMR) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | India | | | MP | | | India | | | MP | | |
| | All | Rural | Urban | All | Rural | Urban | All | Rural | Urban | All | Rural | Urban |
| 1911 | | | | | | | | | | | | |
| 1921 | | | | | | | | | | | | |
| 1931 | | | | | | | | | | | | |
| 1941 | | | | | | | | | | 216 | | |
| 1950 | | | | | | | | | | 196 | | |
| 1981 | 21.4 | 21.9 | 19.2 | 21 | 20.8 | 22.1 | 110 | 119 | 62 | 142 | 152 | 80 |
| 1982 | 21.9 | 22.4 | 20.2 | 23.6 | 23.6 | 23.4 | 105 | 114 | 65 | 134 | 145 | 79 |
| 1983 | 21.8 | 22.2 | 20.4 | 24 | 24.2 | 23.3 | 105 | 114 | 66 | 125 | 135 | 76 |
| 1984 | 21.3 | 21.5 | 20.8 | 22.7 | 22.6 | 23.2 | 104 | 113 | 66 | 121 | 130 | 76 |
| 1985 | 21.1 | 21.3 | 20.3 | 25.2 | 25.7 | 23.6 | 97 | 107 | 59 | 122 | 131 | 79 |
| 1986 | 21.5 | 22 | 19.5 | 23.5 | 24.2 | 21.3 | 96 | 105 | 623 | 118 | 124 | 82 |
| 1987 | 21.3 | 21.7 | 20 | 23.1 | 22.9 | 23.9 | 95 | 104 | 61 | 120 | 128 | 81 |
| 1988 | 20.5 | 21.1 | 18.6 | 22.7 | 23 | 21.4 | 94 | 102 | 62 | 121 | 128 | 83 |
| 1989 | 20.3 | 21.1 | 18 | 22.6 | 22.8 | 21.7 | 91 | 98 | 58 | 117 | 125 | 78 |
| 1990 | 20.5 | 21.2 | 17.9 | 24.5 | 25.2 | 21.7 | 80 | 86 | 50 | 111 | 120 | 61 |
| 1991 | 19.7 | 20.3 | 17.2 | 22 | 22.4 | 20.5 | 80 | 87 | 53 | 117 | 125 | 74 |
| 1992 | 19.1 | 20 | 16.1 | 22 | 22.9 | 18 | 79 | 85 | 53 | 104 | 109 | 74 |
| 1993 | 19.3 | 19.8 | 17.8 | 20.8 | 22 | 16.7 | 74 | 82 | 45 | 106 | 113 | 68 |

Source: Sample Registration Bulletin, January 1995, Vol. XXIX, No.1, RGI.

H ------ II

LIFE EXPECTANCY, CRUDE BIRTH RATE, TOTAL FERTILITY RATE,
INFANT MORTALITY RATE FOR DISTRICTS OF MADHYA PRADESH

| District | Expectation of Life | | | | Crude Birth Rate | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1951-61 | 1961-71 | 1971-81 | 1981 Rank | 1956-61 | 1976-81 | 1981 Rank | 1984-90 | 1990 Rank |
| Maximum (Best) | 49.3 | 50.0 | 58.0 | | 40.0 | 30.3 | | 29.6 | |
| Minimum (Lowest) | 34.4 | 35.8 | 40.8 | | 58.7 | 42.8 | | 45.4 | |
| Morena | 45.5 | 45.0 | 50.0 | 19 | 50.2 | 40.6 | 4 | 41.2 | 8 |
| Bhind | 40.5 | 42.7 | 47.7 | 28 | 49.1 | 35.8 | 24 | 39.0 | 18 |
| Gwalior | 44.6 | 47.4 | 522.4 | 5 | 48.6 | 36.7 | 19 | 35.1 | 35 |
| Datia | 37.7 | 39.3 | 44.3 | 37 | 47.4 | 36.1 | 21 | 39.5 | 15 |
| Shivpuri | 37.4 | 38.7 | 44.0 | 39 | 47.3 | 39.7 | 6 | 42.6 | 3 |
| Guna | 39.5 | 41.4 | 46.4 | 31 | 51.5 | 36.8 | 17 | 41.4 | 7 |
| Tikamgarh | 34.7 | 35.8 | 40.8 | 43 | 48.0 | 40.4 | 5 | 42.1 | 6 |
| Chhatarpur | 34.4 | 36.6 | 41.6 | 441 | 48.7 | 39.7 | 6 | 42.6 | 3 |
| Panna | 35.1 | 36.7 | 41.3 | 42 | 49.1 | 39.4 | 11 | 42.2 | 5 |
| Sagar | 42.3 | 44.8 | 49.8 | 21 | 50.8 | 37.3 | 14 | 39.6 | 14 |
| Damoh | 37.6 | 39.2 | 44.2 | 38 | 49.3 | 39.7 | 6 | 40.1 | 12 |
| Satna | 37.8 | 39.5 | 44.5 | 36 | 48.4 | 37.3 | 14 | 40.7 | 11 |
| Rewa | 40.5 | 42.6 | 47.6 | 29 | 50.9 | 36.0 | 23 | 40.9 | 10 |
| Shahdol | 39.8 | 41.9 | 46.9 | 30 | 49.0 | 32.8 | 37 | 39.3 | 16 |
| Sidhi | 41.2 | 43.5 | 48.5 | 25 | 53.4 | 38.3 | 13 | 44.3 | 2 |
| Mandsaur | 42.2 | 44.7 | 49.7 | 22 | 49.6 | 36.2 | 20 | 33.5 | 40 |
| Ratlam | 44.2 | 47.0 | 52.0 | 7 | 52.1 | 36.1 | 21 | 35.2 | 34 |
| Ujjain | 46.4 | 49.6 | 54.6 | 3 | 46.1 | 34.8 | 28 | 322.1 | 44 |
| Shajapur | 38.6 | 40.4 | 45.4 | 34 | 40.0 | 34.0 | 31 | 36.6 | 29 |
| Dewas | 42.5 | 45.0 | 50.0 | 19 | 50.6 | 39.5 | 10 | 37.0 | 26 |
| Jhabua | 43.5 | 45.8 | 50.8 | 14 | 58.7 | 42.2 | 2 | 45.4 | 1 |
| Dhar | 44.0 | 46.7 | 51.7 | 9 | 56.3 | 38.9 | 12 | 37.2 | 25 |
| Indore | 49.3 | 43.0 | 58.0 | 1 | 47.3 | 33.1 | 35 | 29.6 | 45 |
| West Nimar | 43.4 | 46.0 | 51.0 | 10 | 55.4 | 41.7 | 3 | 38.4 | 21 |
| East Nimar | 43.2 | 45.9 | 50.9 | 12 | 51.1 | 37.1 | 16 | 38.5 | 20 |
| Rajgarh | 39.2 | 346.0 | 46.1 | 32 | 48.9 | 34.8 | 28 | 37.7 | 24 |
| Vidisha | 38.1 | 39.9 | 44.9 | 35 | 49.9 | 42.8 | 1 | 40.1 | 12 |
| Bhopal* | | | | | | | | 32.5 | 42 |
| Sehore | 37.4 | 39.0 | 44.0 | 39 | 50.3 | 36.8 | 17 | 41.2 | 8 |
| Raisen | 39.2 | 41.1 | 46.1 | 32 | 51.2 | 39.6 | 9 | 39.1 | 17 |
| Betul | 40.8 | 43.0 | 48.0 | 27 | 49.3 | 35.0 | 26 | 39.0 | 18 |
| Hoshangabad | 41.6 | 44.0 | 49.0 | 23 | 49.1 | 34.9 | 27 | 38.0 | 23 |
| Jabalpur | 43.3 | 45.9 | 50.9 | 12 | 48.1 | 32.3 | 40 | 34.1 | 38 |
| Narsimhapur | 41 | 43.3 | 48.3 | 26 | 50.0 | 33.9 | 32 | 34.6 | 36 |
| Mandla | 42.8 | 45.3 | 50.3 | 17 | 51.6 | 31.7 | 42 | 36.5 | 30 |
| Chhindwara | 41.5 | 43.8 | 48.8 | 24 | 50.4 | 32.5 | 38 | 37.0 | 26 |
| Seoni | 43.1 | 45.7 | 50.7 | 15 | 47.8 | 33.3 | 35 | 35.7 | 33 |
| Balaghat | 42.7 | 45.3 | 50.3 | 17 | 44.2 | 32.3 | 40 | 32.8 | 41 |
| Surguja | 44.1 | 46.9 | 51.9 | 8 | | 50.3 | 33.9 | 32.0 | 38.2 |
| Bilaspur | 43.0 | 45.6 | 50.6 | 16 | 46.8 | 34.6 | 30 | 36.7 | 28 |
| Raigarh | 43.2 | 46.0 | 51.0 | 10 | 49.3 | 30.3 | 43 | 32.5 | 42 |
| Rajnandgaon* | | | | | | | | 36.2 | 31 |
| Durg | 46.7 | 50.0 | 55.0 | 2 | 44.9 | 32.4 | 39 | 33.6 | 39 |
| Raipur | 44.4 | 47.2 | 52.2 | 6 | 46.7 | 33.4 | 34 | 34.4 | 37 |
| Bastar | 44.7 | 47.6 | 50.0 | 4 | 54.1 | 35.4 | 25 | 35.9 | 32 |

* Bhopal and Rajnandgaon were formed in 1972, carved out of Sehore and Durg districts respectively.

H ------ II (contd.)

| District | Total Fertility Rate | | | | Infant Mortality Rate | | |
|---|---|---|---|---|---|---|---|
| | 1956-61 | 1976-81 | 1981 Ranks | 1984-90 | 1990 Ranks | IMR1981 | Ranks in IMR |
| Maximum (Best) | 5.1 | 3.7 | | 3.6 | | 84.0 | |
| Minimum (Lowest) | 7.5 | 6.1 | | 7.0 | | 195.0 | |
| Morena | 6.7 | 6.0 | 2 | 6.0 | 6 | 132 | 26 |
| Bhind | 6.3 | 5.2 | 13 | 5.8 | 10 | 129 | 28 |
| Gwalior | 6.2 | 4.9 | 20 | 4.7 | 34 | 118 | 31 |
| Datia | 5.9 | 5.2 | 13 | 5.8 | 10 | 156 | 13 |
| Shivpuri | 6.1 | 5.6 | 6 | 6.3 | 4 | 150 | 14 |
| Guna | 6.6 | 5.2 | 13 | 5.9 | 8 | 150 | 14 |
| Tikamgarh | 6.5 | 5.8 | 4 | 6.1 | 5 | 195 | 1 |
| Chhatarpur | 6.0 | 6.1 | 1 | 6.6 | 3 | 182 | 3 |
| Panna | 6.2 | 5.2 | 13 | 5.9 | 8 | 185 | 2 |
| Sagar | 6.3 | 5.3 | 10 | 5.4 | 16 | 164 | 7 |
| Damoh | 6.2 | 5.3 | 10 | 5.3 | 18 | 150 | 14 |
| Satna | 5.9 | 4.9 | 20 | 5.7 | 13 | 181 | 4 |
| Rewa | 6.0 | 4.9 | 20 | 5.8 | 10 | 173 | 5 |
| Shahdol | 5.6 | 4.2 | 36 | 5.3 | 18 | 164 | 7 |
| Sidhi | 6.4 | 5.3 | 10 | 6.7 | 2 | 161 | 11 |
| Mandsaur | 6.1 | 4.7 | 28 | 4.1 | 43 | 138 | 22 |
| Ratlam | 6.6 | 4.8 | 23 | 4.6 | 35 | 143 | 20 |
| Ujjain | 6.0 | 4.7 | 28 | 4.2 | 39 | 106 | 42 |
| Shajapur | 5.9 | 4.8 | 23 | 5.1 | 26 | 149 | 17 |
| Dewas | 6.5 | 5.5 | 8 | 5.0 | 28 | 114 | 40 |
| Jhabua | 7.5 | 5.0 | 18 | 7.0 | 1 | 119 | 30 |
| Dhar | 6.6 | 5.4 | 9 | 5.1 | 26 | 116 | 35 |
| Indore | 6.2 | 4.1 | 39 | 3.6 | 45 | 84 | 45 |
| West Nimar | 7.1 | 5.8 | 4 | 5.3 | 18 | 134 | 25 |
| East Nimar | 6.4 | 5.0 | 18 | 5.2 | 25 | 137 | 23 |
| Rajgarh | 6.3 | 4.7 | 28 | 5.3 | 18 | 170 | 6 |
| Vidisha | 6.2 | 6.0 | 2 | 5.6 | 14 | 144 | 19 |
| Bhopal* | | | | 3.8 | 44 | 91 | 44 |
| Sehore | 6.3 | 5.1 | 17 | 6.0 | 6 | 146 | 18 |
| Raisen | 6.3 | 5.6 | 6 | 5.3 | 18 | 135 | 24 |
| Betul | 6.6 | 4.8 | 23 | 5.6 | 14 | 158 | 12 |
| Hoshangabad | 6.2 | 4.8 | 23 | 5.3 | 17 | 163 | 9 |
| Jabalpur | 5.9 | 4.2 | 36 | 4.2 | 39 | 129 | 28 |
| Narsimhapur | 6.6 | 4.7 | 28 | 4.6 | 35 | 162 | 10 |
| Mandla | 6.4 | 4.0 | 42 | 5.0 | 28 | 115 | 36 |
| Chhindwara | 6.2 | 4.8 | 23 | 5.3 | 18 | 118 | 31 |
| Seoni | 6.0 | 4.7 | 28 | 5.0 | 28 | 115 | 36 |
| Balaghat | 5.1 | 4.2 | 36 | 4.2 | 39 | 118 | 31 |
| Surguja | 6.0 | 4.1 | 39 | 5.3 | 18 | 115 | 36 |
| Bilaspur | 5.5 | 4.6 | 33 | 5.0 | 28 | 115 | 36 |
| Raigarh | 3.7 | 4.3 | 43 | 3.8 | 113 | 41 | |
| Rajnandgaon* | | | | 5.0 | 28 | 132 | 26 |
| Durg | 5.6 | 4.1 | 39 | 4.2 | 39 | 106 | 42 |
| Raipur | 5.5 | 4.3 | 34 | 4.6 | 35 | 141 | 21 |
| Bastar | 6.5 | 4.3 | 34 | 5.0 | 28 | 118 | 31 |

Bhopal and Rajnandgaon were formed in 1972 carved out of Sehore and Durg respectively.
Source: Census of India for data before 1981
For 1984-90: Contours of Fertility Decline in India, PM Mari Bhal, 1995

**H-III**

**HEALTH INFRASTRUCTURE IN MADHYA PRADESH**

| District | District and Civil Hospitals | | Community Health Centres | | Others Hospital | | Primary Health Centres | | | Sub Health Centres | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. | on Prop | No. | on. Pop | No. | Beds | No. | Per Rural Population | Ranks by PHC/P | No. | per Rural Population | Rank by SHC / Ru Po |
| | | 1994 | | 1994 | | 1994 | | 1994 | | | 1994 | |
| Morena | 2 | 915555 | 4 | 457778 | | | 28 | 51398 | 43 | 285 | 5050 | 33 |
| Bhind | 1 | 1289475 | 6 | 214912 | | | 20 | 51093 | 42 | 186 | 5494 | 42 |
| Gwalior | 4 | 375298 | 4 | 375298 | 8 | 1587 | 18 | 33884 | 25 | 124 | 4919 | 28 |
| Datia | 3 | 140269 | | | | | 9 | 36294 | 30 | 58 | 5632 | 44 |
| Shivpuri | 1 | 12111839 | 4 | 302960 | | | 15 | 68873 | 45 | 199 | 5191 | 35 |
| Guna | 2 | 700671 | 4 | 350336 | | | 27 | 41526 | 40 | 226 | 4961 | 31 |
| Tikamgarh | 1 | 1000130 | 3 | 333377 | | | 20 | 41364 | 39 | 156 | 5303 | 40 |
| Chhatarpur | 3 | 412714 | 1 | 1238143 | 1 | 125 | 42 | 23783 | 9 | 180 | 5549 | 43 |
| Panna | 1 | 730937 | 1 | 730937 | | | 17 | 37194 | 31 | 232 | 2725 | 1 |
| Sagar | 2 | 870372 | 4 | 435186 | 3 | 128 | 35 | 35390 | 29 | 245 | 5056 | 34 |
| Damoh | 1 | 948735 | 1 | 948735 | | | 15 | 51649 | 44 | 162 | 4782 | 22 |
| Satna | 2 | 777941 | 3 | 518627 | | | 48 | 25990 | 14 | 258 | 4835 | 24 |
| Rewa | 0 | | 3 | 552195 | 1 | 530 | 36 | 39203 | 35 | 269 | 5246 | 38 |
| Shahdol | 2 | 930483 | 7 | 265852 | | | 59 | 224897 | 11 | 372 | 3949 | 5 |
| Sidhi | 1 | 1490588 | 8 | 186324 | | | 43 | 34292 | 23 | 287 | 4868 | 25 |
| Mandsaur | 6 | 273038 | 1 | 1638226 | 5 | 50 | 48 | 26231 | 16 | 268 | 4698 | 20 |
| Ratlam | 4 | 256497 | 2 | 512995 | 1 | 66 | 27 | 26039 | 15 | 156 | 4507 | 1 |
| Ujjain | 7 | 208437 | | | 5 | 137 | 21 | 42044 | 41 | 169 | 5224 | 36 |
| Shajapur | 4 | 272030 | 2 | 544060 | 1 | 12 | 23 | 38938 | 33 | 171 | 5237 | 37 |
| Dewas | 3 | 367986 | | | | | 27 | 29858 | 17 | 180 | 4479 | 16 |
| Jhabua | 2 | 617256 | 5 | 246902 | | | 45 | 25465 | 12 | 286 | 4007 | 7 |
| Dhar | 1 | 1458288 | 8 | 182286 | | | 54 | 23711 | 8 | 303 | 4226 | 9 |
| Indore | 5 | 392301 | 2 | 980753 | 10 | 1554 | 27 | 21792 | 7 | 111 | 5301 | 39 |
| West Nimar | 5 | 428371 | 8 | 267732 | | | 91 | 20193 | 3 | 459 | 4003 | 6 |
| East Nimar | 2 | 755586 | 7 | 215882 | | | 45 | 24525 | 10 | 270 | 4087 | 8 |
| Rajgarh | 2 | 523712 | | | 1 | 34 | 34 | 25567 | 13 | 159 | 5467 | 41 |
| Vidisha | 2 | 511944 | | | | | 24 | 34056 | 26 | 143 | 5716 | 45 |
| Bhopal | 8 | 187322 | 1 | 1498580 | 5 | 1438 | 9 | 32322 | 22 | 59 | 4930 | 29 |
| Sehore | 2 | 447481 | 4 | 223741 | 1 | 40 | 18 | 40599 | 38 | 150 | 4872 | 26 |
| Raisen | 1 | 923724 | 5 | 184745 | | | 23 | 33529 | 24 | 175 | 4407 | 15 |
| Betul | 1 | 1256013 | 6 | 209336 | | | 33 | 30982 | 20 | 241 | 4242 | 10 |
| Hoshangabad | 4 | 335818 | 5 | 268654 | | | 25 | 39135 | 34 | 204 | 4796 | 23 |
| Jabalpur | 4 | 694169 | 3 | 925559 | 5 | 985 | 38 | 40069 | 37 | 354 | 4301 | 12 |
| Narsimhapur | 2 | 411734 | 2 | 411734 | | | 22 | 32018 | 21 | 144 | 4892 | 27 |
| Mandla | 1 | 1363981 | 6 | 227330 | | | 60 | 21177 | 6 | 376 | 3379 | 4 |
| Chhindwara | 2 | 833057 | 5 | 333223 | 5 | 248 | 68 | 18928 | 2 | 294 | 4378 | 14 |
| Seoni | 1 | 1055340 | 4 | 263835 | | | 32 | 30001 | 18 | 222 | 4324 | 13 |
| Balaghat | 2 | 713314 | 4 | 356657 | | | 37 | 35104 | 28 | 274 | 4740 | 21 |
| Surguja | 2 | 1106596 | 11 | 201199 | | | 94 | 20722 | 5 | 594 | 3279 | 2 |
| Bilaspur | 4 | 1009728 | 10 | 403891 | | | 111 | 30239 | 19 | 679 | 4943 | 30 |
| Raigarh | 4 | 450048 | 5 | 360038 | | | 80 | 20479 | 4 | 382 | 4289 | 11 |
| Rajnandgaon | 1 | 1517554 | 5 | 303511 | | | 33 | 38690 | 32 | 276 | 4626 | 18 |
| Durg | 3 | 847974 | 7 | 363417 | | | 47 | 34902 | 27 | 352 | 4660 | 19 |
| Raipur | 3 | 1382736 | 9 | 460912 | 6 | 1051 | 85 | 39262 | 36 | 664 | 5026 | 32 |
| Bastar | 5 | 478660 | 10 | 239330 | 2 | 40 | 128 | 17487 | 1 | 682 | 3282 | 3 |
| Madhya Pradesh | 119 | | 190 | 369771 | 140 | 15781 | 1841 | 29332 | | | | |

Source: Directorate of Health Services, Madhya Pradesh

**I-I**

**HOUSEHOLDS AND VILLAGES WITH ELECTRICITY IN MADHYA PRADESH**

| District | Households with Electricity 1981 | | | Villages with Electricity (%) 1989 | Estimated Households with Electricity: 1992 | | |
|---|---|---|---|---|---|---|---|
| | All | Rural | Urban | | All | Rural | Rank by Rural |
| Morena | 15.7 | 8.20 | 57.63 | 88.15 | 44.10% | 33.00% | 28 |
| Bhind | 14.4 | 7.26 | 45.91 | 100.00 | 34.40% | 25.60% | 34 |
| Gwalior | 43.3 | 11.77 | 67.30 | 100.00 | 76.00% | 56.70% | 10 |
| Datia | 17.2 | 9.77 | 47.98 | 100.00 | 64.60% | 61.40% | 7 |
| Shivpuri | 13.4 | 6.91 | 58.26 | 100.00 | 42.80% | 34.00% | 26 |
| Guna | 15.0 | 8.00 | 55.64 | 90.18 | 47.50% | 40.10% | 21 |
| Tikamgarh | 6.4 | 2.16 | 37.31 | 98.18 | 45.70% | 28.80% | 31 |
| Chhatarpur | 10.0 | | 42.00 | 95.82 | 25.30% | 17.30% | 43 |
| Panna | 6.0 | 2.51 | 47.05 | 68.78 | 25.60% | 19.60% | 42 |
| Sagar | 17.4 | 5.28 | 50.09 | 79.47 | 51.80% | 37.30% | 22 |
| Damoh | 12.8 | 6.71 | 50.43 | 73.27 | 44.70% | 32.00% | 29 |
| Satna | 11.3 | 4.59 | 43.52 | 73.23 | 41.50% | 22.50% | 40 |
| Rewa | 8.4 | 22.61 | 43.61 | 64.60 | 30.70% | 14.80% | 44 |
| Shahdol | 12.1 | 3.93 | 47.45 | 66.23 | 29.70% | 23.70% | 36 |
| Sidhi | 15.2 | 4.17 | 43.72 | 89.83 | 23.00% | 20.20% | 41 |
| Mandsaur | 26.7 | 17.14 | 64.82 | 100.00 | 95.10% | 79.40% | 1 |
| Ratlam | 28.0 | 9.53 | 69.42 | 85.15 | 92.40% | 58.00% | 9 |
| Ujjain | 34.5 | 11.07 | 71.93 | 100.00 | 87.00% | 75.50% | 3 |
| Shajapur | 14.8 | 7.93 | 54.47 | 95.68 | 71.30% | 50.70% | 16 |
| Dewas | 24.4 | 14.09 | 66.58 | 99.23 | 79.80% | 68.60% | 4 |
| Jhabua | 9.6 | 4.61 | 60.19 | 70.89 | 43.70% | 33.90% | 27 |
| Dhar | 18.9 | 12.82 | 58.52 | 79.31 | 67.00% | 64.00% | 6 |
| Indore | 55.0 | 23.18 | 69.96 | 100.00 | 92.50% | 24.30% | 35 |
| West Nimar | 19.9 | 13.59 | 52.90 | 79.31 | 78.90% | 64.80% | 5 |
| East Nimar | 22.9 | 11.58 | 56.03 | 90.05 | 71.50% | 52.60% | 13 |
| Rajgarh | 10.3 | 4.61 | 47.90 | 74.49 | 58.50% | 53.60% | 12 |
| Vidisha | 13.2 | 3.81 | 57.44 | 68.94 | 39.70% | 31.60% | 30 |
| Bhopal | 55.5 | 5.33 | 70.52 | 100.00 | 76.60% | 55.20% | 11 |
| Sehore | 16.5 | 9.47 | 60.87 | 94.58 | 79.40% | 77.30% | 2 |
| Raisen | 11.1 | 6.41 | 51.67 | 68.30 | 49.90% | 45.00% | 18 |
| Betul | 15.2 | 7.68 | 50.22 | 78.67 | 43.00% | 35.90% | 23 |
| Hoshangabad | 22.3 | 8.89 | 60.81 | 80.28 | 67.10% | 51.90% | 14 |
| Jabalpur | 28.4 | 4.80 | 57.88 | 70.70 | 58.90% | 34.70% | 24 |
| Narsimhapur | 17.2 | 10.73 | 56.77 | 96.16 | 64.60% | 50.90% | 15 |
| Mandla | 6.2 | 3.80 | 64.01 | 74.14 | 28.20% | 22.60% | 39 |
| Chhindwara | 24.6 | 13.29 | 65.14 | 99.95 | 77.80% | 59.00% | 8 |
| Seoni | 9.1 | 5.35 | 53.04 | 78.56 | 55.70% | 46.20% | 17 |
| Balaghat | 8.3 | 4.71 | 44.62 | 74.83 | 38.20% | 27.20% | 32 |
| Surguja | 8.4 | 3.85 | 53.35 | 69.78 | 18.00% | 14.20% | 45 |
| Bilaspur | 12.5 | 6.55 | 47.72 | 70.46 | 37.20% | 26.60% | 333 |
| Raigarh | 6.5 | 3.85 | 35.95 | 67.06 | 29.20% | 23.60% | 38 |
| Rajnandgaon | 9.4 | 4.70 | 41.94 | 71.98 | 46.00% | 41.80% | 19 |
| Durg | 20.0 | 6.35 | 45.62 | 81.56 | 45.70% | 40.70% | 20 |
| Raipur | 12.7 | 5.92 | 45.81 | 71.37 | 48.30% | 34.40% | 2 |
| Bastar | 6.5 | 3.88 | 42.00 | 53.49 | 26.70% | 23.70% | 37 |
| Madhya Pradesh | 17.1 | 6.89 | 56.42 | | 51.30% | 37.50% | |

**I-II**

**SMALL, MEDIUM AND LARGE INDUSTRIES IN MADHYA PRADESH**

| District | Small Scale Industries All India Survey of Industries 1987-88 | | | | | Small Scale Industries 1993 | | | Large and Medium Scale 1994 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit | Employment | Investment (in Rs Lakh) | Gross Value Added | Net Value Added (in Rs Lakhs) | Units | Investment (in Rs Lakhs) | Employment | Units | Investment (in) Rs Lakhs) | Employment |
| Morena | 1198 | 1279 | 440 | 4023 | 3926 | 6225 | 1869 | 18526 | 14 | 16804 | 2098 |
| Bhind | 2205 | 3116 | 547 | 924 | 898 | 9004 | 2626 | 23734 | 22 | 59991 | 3802 |
| Gwalior | 1316 | 3097 | 473 | 4068 | 3977 | 8033 | 22475 | 30778 | 13 | 8061 | 6270 |
| Datia | 681 | 677 | 57 | 404 | 395 | 2716 | 417 | 6088 | 3 | 469 | 324 |
| Shivpuri | 1370 | 1478 | 298 | 1085 | 1053 | 5115 | 946 | 1597 | 3 | 591 | 379 |
| Guna | 1496 | 1951 | 207 | 1070 | 1050 | 5761 | 816 | 15355 | 5 | 70400 | 3256 |
| Tikamgarh | 928 | 1504 | 110 | 141 | 125 | 5082 | 742 | 13011 | 4 | 517 | 361 |
| Chhatarpur | 2170 | 3141 | 334 | 377 | 351 | 6823 | 475 | 16121 | | | |
| Panna | 1072 | 1326 | 118 | 227 | 218 | 4034 | 604 | 10159 | 2 | 1121 | 401 |
| Sagar | 1453 | 3868 | 983 | 563 | 501 | 5913 | 1633 | 17506 | 6 | 573 | 565 |
| Damoh | 877 | 933 | 98 | 350 | 270 | 4045 | 787 | 10371 | 3 | 4169 | 1366 |
| Satna | 2399 | 5875 | 472 | 1194 | 1147 | 8045 | 1846 | 28452 | 8 | 11095 | 6322 |
| Rewa | 1874 | 3263 | 360 | 581 | 441 | 6133 | | 17569 | 9 | 30937 | 1827 |
| Shahdol | 1271 | 5523 | 388 | 1499 | 1454 | 5643 | 790 | 18592 | 2 | 3250 | 2169 |
| Sidhi | 607 | 817 | 118 | 368 | 354 | 3988 | 542 | 10497 | 13 | 2379 | 821 |
| Mandsaur | 2052 | 4575 | 704 | 1868 | 1760 | 7115 | 2025 | 23015 | 12 | 30957 | 3806 |
| Ratlam | 974 | 2960 | 592 | 2561 | 2483 | 4856 | 2622 | 24847 | 17 | 2514 | 6425 |
| Ujjain | 1583 | 3450 | 422 | 658 | 617 | 10541 | 2091 | 40291 | 19 | 7657 | 19373 |
| Shajapur | 1333 | 19354 | 265 | 311 | 244 | 5364 | 849 | 12524 | 10 | 61599 | 942 |
| Dewas | 1069 | 1849 | 327 | 2107 | 1999 | 5294 | 1500 | 16874 | 60 | 19344 | 15291 |
| Jhabua | 579 | 1563 | 328 | 360 | 330 | 3091 | 1600 | 9354 | 4 | 1468 | 348 |
| Dhar | 1225 | 3546 | 1588 | 4231 | 3849 | 4794 | 6541 | 22332 | 78 | 37470 | 8892 |
| Indore | 1970 | 9944 | 2733 | 5288 | 4749 | 10368 | 10096 | 99156 | 37 | 5660 | 20206 |
| West Nimar | 3336 | 4828 | 692 | 2144 | 2068 | 11974 | 2429 | 39234 | 6 | 6162 | 3536 |
| East Nimar | 1292 | 2964 | 351 | 1777 | 1753 | 9438 | 2038 | 35184 | 8 | 40004 | 8487 |
| Rajgarh | 1441 | 1855 | 271 | 373 | 350 | 5581 | 1005 | 13984 | 13 | 2794 | 1578 |
| Vidisha | 890 | 1382 | 249 | 560 | 541 | 4336 | 1069 | 14668 | 6 | 2527 | 729 |
| Bhopal | 1442 | 7462 | 1948 | 2192 | 2025 | 7268 | 3538 | 25940 | 21 | 17078 | 23429 |
| Sehore | 876 | 2134 | 2241 | 280 | 269 | 4453 | 463 | 11435 | 11 | 3045 | 714 |
| Raisen | 1132 | 22863 | 701 | 105 | 995 | 4204 | 3011 | 15627 | 48 | 30718 | 5667 |
| Betul | 1147 | 1694 | 213 | 2432 | 2404 | 5157 | 811 | 14262 | 3 | 359 | 7333 |
| Hoshangabad | 2149 | 5064 | 709 | 1102 | 1061 | 7679 | 1791 | 27236 | 14 | 3311 | 2997 |
| Jabalpur | 3196 | 10041 | 983 | 5937 | 5764 | 12003 | 3932 | 53696 | 18 | 3806 | 12146 |
| Narsimhapur | 1414 | 2001 | 215 | 586 | 546 | 4758 | 1079 | 13029 | 5 | 870 | 334 |
| Mandla | 1464 | 2348 | 299 | 765 | 739 | 7118 | 1121 | 17860 | 6 | 1159 | 624 |
| Chhindwara | 2085 | 3476 | 446 | 796 | 764 | 678 | 1838 | 20602 | 12 | 14893 | 1942 |
| Seoni | 1256 | 2398 | 23 | 204 | 186 | 6168 | 567 | 13552 | 2 | 462 | 192 |
| Balaghat | 1406 | 3589 | 376 | 2690 | 2632 | 5659 | 1317 | 18107 | 5 | 939 | 348 |
| Surguja | 2344 | 2623 | 265 | 422 | 395 | 10959 | 944 | 28760 | 0 | 0 | 0 |
| Bilaspur | 1761 | 3631 | 808 | 2598 | 2508 | 12974 | 3744 | 52454 | 17 | 39685 | 8922 |
| Raigarh | 3348 | 5287 | 362 | 693 | 659 | 13318 | 1358 | 32019 | 13 | 2794 | 1578 |
| Rajnandgaon | 1424 | 4481 | 568 | 4762 | 4722 | 6447 | 1793 | 25289 | 6 | 773 | 5060 |
| Durg | 3108 | 7193 | 1134 | 12819 | 12589 | 14611 | 3655 | 55682 | 20 | 127999 | 20 |
| Raipur | 3771 | 10019 | 2348 | 14352 | 13987 | 18137 | 8014 | 60462 | 45 | 23621 | 7203 |
| Bastar | 1908 | 3805 | 603 | 609 | 548 | 8336 | 1176 | 25220 | 4 | 605 | 286 |
| Madhya Pradesh | 73892 | 158808 | 26017 | 93446 | 89696 | 325339 | 90585 | 1114541 | 627 | 664630 | 191769 |

Source: Report on the All-India Survey of Industries (Madhya Pradesh), 1988, and Commissioner of Industries, Madhya Pradesh.

**I-III**

**SAFE DRINKING WATER AND FACILITIES IN VILLAGES**

| District Source | Households with Safe Drinking Water | | | Village identified with problems of Drinking Water - 1981 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | Rural | Urban | Problem Villages | Villages Covered | Partially Covered | Village Uncovered | Difficult Villages | Difficult Covered | Difficult Partially | Difficult Uncovered | Uncovered Villages |
| Morena | 15.19 | 4.59 | 74.21 | 809 | 169 | 115 | 525 | 70 | | | 70 | 595 |
| Bhind | 13.47 | 2.89 | 26.45 | 391 | 39 | 39 | 313 | | | | 0 | 313 |
| Gwalior | 46.69 | 8.61 | 75.63 | 405 | 194 | 20 | 191 | | | | 0 | 191 |
| Datia | 12.69 | 3.9 | 49 | 311 | 78 | 24 | 209 | 40 | 5 | 5 | 30 | 239 |
| Shivpuri | 8.73 | 3.14 | 47.23 | 352 | 203 | 65 | 84 | 84 | | 13 | 71 | 155 |
| Guna | 14.88 | 7.84 | 56.02 | 1247 | 590 | 293 | 364 | | | | 0 | 364 |
| Tikamgarh | 4.93 | 0.86 | 34.68 | 421 | 124 | 136 | 161 | 35 | | | 35 | 196 |
| Chhatarpur | 6.93 | 1.91 | | 522 | 204 | 110 | 208 | 106 | | | 106 | 314 |
| Panna | 5.36 | 2.72 | 36.39 | 472 | 333 | 13 | 126 | 60 | | 8 | 52 | 178 |
| Sagar | 17.48 | 4.94 | 51.48 | 932 | 474 | 316 | 142 | 124 | | 20 | 104 | 246 |
| Damoh | 13.05 | 4.81 | 63.61 | 837 | 468 | 76 | 293 | 49 | | | 49 | 342 |
| Satna | 11.21 | 4.43 | 43.59 | 1353 | 957 | 217 | 179 | 16 | | | 16 | 195 |
| Rewa | 7.98 | 4.84 | 39.36 | 1114 | 803 | 130 | 181 | 237 | | | 237 | 418 |
| Shahdol | 10.5 | 4.22 | 37.89 | 1705 | 1293 | 202 | 210 | 129 | | | 129 | 339 |
| Sidhi | 4.37 | 3.81 | 26.58 | 1120 | 914 | 104 | 102 | 100 | | | 100 | 202 |
| Mandsaur | 19.26 | 6.72 | 69.09 | 689 | 216 | 122 | 351 | 151 | | 18 | 133 | 484 |
| Ratlam | 35.92 | 14.01 | 84.94 | 589 | 260 | 65 | 264 | 66 | | 3 | 63 | 327 |
| Ujjain | 40.43 | 11.17 | 87.22 | 475 | 269 | 111 | 95 | 82 | | 7 | 75 | 170 |
| Shajapur | 13.89 | 4.96 | 65.12 | 463 | 157 | 105 | 201 | | | | 0 | 201 |
| Dewas | 20.48 | 7.9 | 72.15 | 401 | 220 | 70 | 111 | | | | 0 | 111 |
| Jhabua | 10.88 | 6.23 | 58.55 | 752 | 737 | 15 | 0 | 380 | 231 | 42 | 107 | 107 |
| Dhar | 20.66 | 12.2 | 76.22 | 1202 | 833 | 75 | 294 | 22 | | | 22 | 316 |
| Indore | 67.07 | 26.64 | 86.05 | 384 | 238 | 99 | 47 | 79 | 5 | 16 | 58 | 105 |
| West Nimar | 18.27 | 9.65 | 63.66 | 1094 | 720 | 370 | 4 | 323 | 5 | 42 | 276 | 280 |
| East Nimar | 27.27 | 8.24 | 83.32 | 397 | 183 | 170 | 44 | 129 | 11 | | 118 | 162 |
| Rajgarh | 11.75 | 5.91 | 50.32 | 886 | 488 | 342 | 56 | 445 | | 112 | 333 | 389 |
| Vidisha | 17.28 | 6.75 | 67.01 | 703 | 467 | 43 | 193 | | | | 0 | 193 |
| Bhopal | 68.67 | 9.54 | 86.41 | 193 | 169 | 12 | 12 | 112 | 28 | | 84 | 96 |
| Sehore | 14.13 | 9.9 | 40.95 | 739 | 392 | 107 | 240 | 177 | | 41 | 136 | 376 |
| Raisen | 17.13 | 11.7 | 64.22 | 592 | 248 | 107 | 237 | 475 | | 18 | 457 | 694 |
| Betul | 24.36 | 14.54 | 70.2 | 110 | 522 | 425 | 153 | 74 | 3 | 9 | 62 | 215 |
| Hoshangabad | 26.85 | 10.19 | 74.54 | 642 | 384 | 149 | 109 | 208 | | 17 | 191 | 300 |
| Jabalpur | 32.85 | 7.44 | 64.62 | 1658 | 719 | 512 | 427 | 114 | | 41 | 73 | 500 |
| Narsimhapur | 34.9 | 26.88 | 84.03 | 524 | 446 | 76 | 2 | 111 | | 22 | 89 | 91 |
| Mandla | 7.66 | 4.21 | 52.3 | 1307 | 545 | 70 | 692 | | | | 0 | 692 |
| Chhindwara | 16.73 | 9.18 | 43.77 | 1781 | 768 | 559 | 454 | 16 | | | 16 | 470 |
| Seoni | 13.45 | 8.41 | 71.87 | 1305 | 571 | 270 | 464 | 100 | | 29 | 71 | 535 |
| Balaghat | 5.58 | 2.83 | 33.67 | 1161 | 874 | 38 | 249 | 43 | 23 | | 20 | 269 |
| Surguja | 9.19 | 4.36 | 57.21 | 2142 | 1322 | 365 | 455 | 117 | | | 117 | 572 |
| Bilaspur | 20.05 | 13.54 | 48.8 | 3079 | 1600 | 1202 | 277 | 93 | | | 93 | 370 |
| Raigarh | 13.47 | 9.02 | 62.83 | 1643 | 1129 | 225 | 289 | 117 | | 4 | 113 | 402 |
| Rajnandgaon | 12.76 | 5.05 | 66.42 | 1191 | 877 | 111 | 203 | 346 | | 21 | 325 | 528 |
| Durg | 29.55 | 10.5 | 65.28 | 1582 | 805 | 724 | 53 | | | | 0 | 53 |
| Raipur | 20.72 | 10.75 | 69.6 | 1870 | 1346 | 225 | 299 | 1376 | 110 | 239 | 1027 | 1326 |
| Bastar | 12.72 | 11.98 | 66 | 2257 | 1859 | 290 | 108 | 1011 | | 304 | 707 | 815 |
| Madhya Pradesh | 20.17 | 8.09 | 41.23 | 44792 | 26207 | 8914 | 9671 | 7217 | 421 | 1031 | 5765 | 15436 |

**I-III (contd.)**
**SAFE DRINKING WATER AND FACILITIES IN VILLAGES**

| District Source | Share of Uncovered Villages | Partially Covered Villages | Share of Partially Covered Villages | Village identified with problems of Drinking Water - 1991 Villages | Problem Villages | Share of Problem Vill. to Total | Covered Villages | Partially Covered | Increase in Problem Villages Numbers | Growth |
|---|---|---|---|---|---|---|---|---|---|---|
| Morena | 67.70% | 115 | 13.10% | 1293 | 1249 | 96.60% | 1133 | 116 | 370 | 42% |
| Bhind | 80.10% | 39 | 10.00% | 877 | 648 | 73.90% | 476 | 172 | 257 | 66% |
| Gwalior | 47.20% | 20 | 4.90% | 706 | 602 | 85.30% | 510 | 92 | 197 | 49% |
| Datia | 68.10% | 29 | 8.30% | 402 | 355 | 88.30% | 355 | 0 | 4 | 1% |
| Shivpuri | 35.60% | 78 | 17.90% | 1326 | 1182 | 89.10% | 1138 | 44 | 746 | 171% |
| Guna | 29.20% | 293 | 23.50% | 2059 | 1868 | 90.70% | 1630 | 238 | 621 | 50% |
| Tikamgarh | 43.00% | 136 | 29.80% | 863 | 760 | 88.10% | 759 | 1 | 304 | 67% |
| Chhatarpur | 50.00% | 110 | 17.50% | 1076 | 954 | 88.70% | 813 | 141 | 326 | 52% |
| Panna | 33.50% | 21 | 3.90% | 939 | 872 | 92.90% | 872 | 0 | 340 | 64% |
| Sagar | 23.30% | 336 | 31.80% | 1868 | 1659 | 88.80% | 1343 | 316 | 603 | 57% |
| Damoh | 38.60% | 76 | 8.60% | 1205 | 1118 | 92.80% | 1111 | 7 | 232 | 26% |
| Satna | 14.20% | 217 | 15.90% | 1784 | 1626 | 91.10% | 1591 | 35 | 257 | 19% |
| Rewa | 30.90% | 130 | 9.60% | 2352 | 1743 | 74.10% | 1696 | 47 | 392 | 29% |
| Shahdol | 18.50% | 202 | 11.00% | 1977 | 1953 | 98.80% | 1953 | 0 | 119 | 6% |
| Sidhi | 16.60% | 104 | 8.50% | 1822 | 1623 | 89.10% | 1522 | 101 | 403 | 33% |
| Mandsaur | 57.60% | 140 | 16.70% | 1575 | 1548 | 98.30% | 1159 | 389 | 708 | 84% |
| Ratlam | 49.90% | 68 | 10.40% | 1051 | 1044 | 99.30% | 1044 | 0 | 389 | 59% |
| Ujjain | 30.50% | 118 | 21.20% | 1092 | 1077 | 98.60% | 912 | 165 | 520 | 93% |
| Shajapur | 43.40% | 105 | 22.70% | 1068 | 963 | 90.20% | 904 | 59 | 500 | 108% |
| Dewas | 27.70% | 70 | 17.50% | 1058 | 879 | 83.10% | 877 | 2 | 478 | 119% |
| Jhabua | 9.50% | 57 | 5.00% | 1313 | 1326 | 101.00% | 1326 | 0 | 194 | 17% |
| Dhar | 25.80% | 75 | 6.10% | 1487 | 1451 | 97.60% | 1451 | 0 | 227 | 19% |
| Indore | 22.70% | 115 | 24.80% | 624 | 618 | 99.00% | 618 | 0 | 155 | 33% |
| West Nimar | 19.80% | 412 | 29.10% | 1884 | 1700 | 90.20% | 1665 | 35 | 283 | 20% |
| East Nimar | 30.80% | 170 | 32.30% | 1060 | 970 | 91.50% | 951 | 19 | 444 | 84% |
| Rajgarh | 29.20% | 454 | 34.10% | 1664 | 1666 | 100.10% | 1666 | 0 | 335 | 25% |
| Vidisha | 27.50% | 43 | 6.10% | 1522 | 1316 | 86.50% | 1095 | 221 | 613 | 87% |
| Bhopal | 31.50% | 12 | 3.90% | 511 | 490 | 95.90% | 490 | 0 | 185 | 61% |
| Sehore | 41.00% | 148 | 16.20% | 1011 | 993 | 98.20% | 993 | 0 | 77 | 8% |
| Raisen | 65.00% | 125 | 11.70% | 1429 | 1376 | 96.30% | 1360 | 16 | 309 | 29% |
| Betul | 18.30% | 434 | 37.00% | 1328 | 1294 | 97.40% | 1236 | 58 | 120 | 10% |
| Hoshangabad | 35.30% | 166 | 19.50% | 1420 | 1290 | 90.80% | 1074 | 216 | 440 | 52% |
| Jabalpur | 28.20% | 553 | 31.20% | 2257 | 2124 | 94.10% | 2065 | 59 | 352 | 20% |
| Narsimhapur | 14.30% | 98 | 15.40% | 1040 | 976 | 93.80% | 976 | 0 | 341 | 54% |
| Mandla | 52.90% | 70 | 5.40% | 2106 | 2053 | 97.50% | 1739 | 314 | 746 | 57% |
| Chhindwara | 26.20% | 559 | 31.10% | 1903 | 1863 | 97.90% | 1713 | 150 | 66 | 4% |
| Seoni | 38.10% | 299 | 21.30% | 1585 | 1540 | 97.20% | 1440 | 100 | 135 | 10% |
| Balaghat | 22.30% | 38 | 3.20% | 1269 | 1284 | 101.20% | 1148 | 136 | 80 | 7% |
| Surguja | 25.30% | 365 | 16.20% | 2414 | 2394 | 99.20% | 2394 | 0 | 135 | 6% |
| Bilaspur | 11.70% | 1202 | 37.90% | 3501 | 3474 | 99.20% | 2810 | 664 | 302 | 10% |
| Raigarh | 22.80% | 229 | 13.00% | 2196 | 2180 | 99.30% | 2180 | 0 | 420 | 24% |
| Rajnandgaon | 34.40% | 132 | 8.60% | 2273 | 2220 | 97.70% | 1790 | 430 | 683 | 44% |
| Durg | 3.40% | 724 | 45.80% | 1803 | 1833 | 101.70% | 1690 | 143 | 251 | 16% |
| Raipur | 40.90% | 464 | 14.30% | 3863 | 3592 | 93.00% | 2781 | 811 | 346 | 11% |
| Bastar | 24.90% | 594 | 18.20% | 3670 | 3298 | 89.90% | 3198 | 100 | 30 | 1% |
| Madhya Pradesh | 29.70% | 9945 | 19.10% | 71526 | 67044 | 93.70% | 61647 | 5397 | 15035 | 29% |

**I-IV**

**ROAD, URBAN TOILETS, AND IRRIGATED AREA**

| District | Urban Households with Toilets (%) | Roads per 100 Sq Km (%) | Irrigated Area (% age) | | |
|---|---|---|---|---|---|
| | 1981 | 1989 | 1989-89 | 1993-94 | Ranks' 94 |
| Morena | 50.6 | 13.2 | 44.60% | 59.10% | 3 |
| Bhind | 44.8 | 22.1 | 31.10% | 33.50% | 18 |
| Gwalior | 59 | 18 | 40.70% | 45.90% | 6 |
| Datia | 51 | 23.7 | 29.20% | 40.70% | 8 |
| Shivpuri | 47.5 | 10.2 | 22.50% | 34.30% | 17 |
| Guna | 54.2 | 8.3 | 9.70% | 17.70% | 35 |
| Tikamgarh | 37.6 | 21.5 | 37.80% | 59.40% | 2 |
| Chhatarpur | 39.3 | 15.9 | 25.00% | 37.10% | 10 |
| Panna | 52.4 | 12.1 | 8.20% | 16% | 38 |
| Sagar | 47.1 | 15.1 | 9.80% | 21.90% | 28 |
| Damoh | 47.9 | 16.4 | 9.50% | 20.70% | 30 |
| Satna | 38.6 | 26.7 | 10.20% | 23.00% | 26 |
| Rewa | 40 | 24.5 | 10.40% | 20.40% | 32 |
| Shahdol | 35.3 | 14.7 | 3.20% | 6.80% | 42 |
| Sidhi | 25.8 | 15.3 | 5.00% | 11.30% | 40 |
| Mandsaur | 52.7 | 14.9 | 18.80% | 34.50% | 16 |
| Ratlam | 72.9 | 15.4 | 16.10% | 32% | 19 |
| Ujjain | 71.8 | 15.7 | 18.60% | 35.80% | 13 |
| Shajapur | 51.2 | 15.8 | 17.80% | 35.10% | 15 |
| Dewas | 65.6 | 11.1 | 18.00% | 30.80% | 21 |
| Jhabua | 61.5 | 23.6 | 7.20% | 16.90% | 37 |
| Dhar | 56.3 | 22.2 | 18.30% | 31.80% | 20 |
| Indore | 65.2 | 28.8 | 22.90% | 49.60% | 4 |
| West Nimar | 48.1 | 20.8 | 19.00% | 28% | 24 |
| East Nimar | 53.1 | 14.8 | 15.20% | 22.70% | 27 |
| Rajgarh | 49 | 13 | 15.10% | 27.60% | 25 |
| Vidisha | 59.1 | 10.1 | 9.10% | 20.90% | 29 |
| Bhopal | 72.7 | 24.6 | 13.60% | 35.30% | 14 |
| Sehore | 62.6 | 11.2 | 15.40% | 36.60% | 12 |
| Raisen | 55 | 9.6 | 13.00% | 28.10% | 23 |
| Betul | 45.9 | 11.9 | 12.70% | 20.90% | 31 |
| Hoshangabad | 61.7 | 11.5 | 33.90% | 66.30% | 1 |
| Jabalpur | 54 | 20.7 | 11.70% | 18.30% | 33 |
| Narsimhapur | 50.7 | 14.5 | 16.70% | 39.10% | 9 |
| Mandla | 45 | 17.3 | 2.40% | 3.50% | 44 |
| Chhindwara | 45 | 11.4 | 11.50% | 18.20% | 34 |
| Seoni | 52.4 | 14.1 | 8.90% | 17.20% | 36 |
| Balaghat | 38 | 20.7 | 36.80% | 43.90% | 7 |
| Surguja | 40.2 | 10.4 | 3.30% | 4.40% | 43 |
| Bilaspur | 43.8 | 19 | 21.80% | 29.30% | 22 |
| Raigarh | 32.4 | 13.8 | 6.00% | 7.10% | 41 |
| Rajnandgaon | 38.4 | 15.4 | 10.80% | 15.10% | 39 |
| Durg | 47.3 | 27 | 23.00% | 36.80% | 11 |
| Raipur | 41.6 | 22.1 | 31.20% | 46.10% | 5 |
| Bastar | 42.9 | 7.1 | 2.10% | 2.90% | 45 |
| Madhya Pradesh | 52.73 | | | 27.10% | 45 |

EM - I
RATE OF GROWTH OF EMPLOYMENT UNDER
DIFFERENT GROUPS - 1981 TO 1991

| | Population | | Main Workers | | Rural Prop. | | Rural Workers | | Urban Pop. | | Urban Workers | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| District | Growth | Annual | Growth | Annual | Growth | Annual | Growth | Annual | Growth | Annual | Growth | Annual |
| Morena | 31.3% | 2.76% | 30.0% | 2.65% | 1385638 | 1.9% | 21.7% | 2.0% | 96.9% | 7.01% | 91.1% | 6.69% |
| Bhind | 25.2% | 2.27% | 23.6% | 2.14% | 985536 | 1.8% | 19.3% | 1.8% | 51.1% | 4.21% | 46.7% | 3.91% |
| Gwalior | 27.5% | 2.46% | 24.8% | 2.24% | 591269 | 1.6% | 12.8% | 1.2% | 36.3% | 3.14% | 36.7% | 3.18% |
| Datia | 27.1% | 2.42% | 31.0% | 2.74% | 313653 | 2.1% | 28.8% | 2.6% | 45.9% | 3.85% | 41.7% | 3.54% |
| Shivpuri | 30.8% | 2.72% | 36.5% | 3.16% | 984390 | 2.4% | 34.6% | 3.0% | 54.8% | 4.47% | 52.9% | 4.34% |
| Guna | 30.8% | 2.72% | 26.1% | 2.35% | 1076443 | 2.1% | 18.7% | 1.7% | 80.5% | 6.08% | 81.4% | 6.14% |
| Tikamgarh | 27.7% | 2.47% | 28.8% | 2.56% | 796683 | 1.9% | 22.8% | 2.1% | 77.8% | 5.93% | 82.7% | 6.21% |
| Chhatarpur | 30.6% | 2.71% | 28.6% | 2.55% | 955521 | 2.2% | 23.7% | 2.2% | 61.9% | 4.93% | 62.4% | 4.97% |
| Panna | 27.4% | 2.45% | 24.8% | 2.24% | 609475 | 1.9% | 18.4% | 1.7% | 113.0% | 7.86% | 126.8% | 8.54% |
| Sagar | 24.5% | 2.22% | 23.7% | 2.15% | 1189969 | 2.0% | 20.0% | 1.8% | 30.6% | 2.71% | 35.4% | 3.07% |
| Damoh | 24.5% | 2.21% | 28.1% | 2.50% | 748151 | 1.8% | 23.1% | 2.1% | 56.6% | 4.59% | 65.7% | 5.18% |
| Satna | 27.1% | 2.42% | 20.3% | 1.87% | 1199528 | 2.0% | 15.7% | 1.5% | 54.9% | 4.47% | 49.9% | 4.13% |
| Rewa | 28.8% | 2.56% | 21.5% | 1.97% | 1348508 | 2.3% | 18.8% | 1.7% | 50.2% | 4.15% | 43.4% | 3.67% |
| Shahdol | 29.6% | 2.63% | 24.9% | 2.25% | 1406082 | 2.2% | 22.2% | 2.0% | 53.7% | 4.39% | 42.8% | 3.63% |
| Sidhi | 38.7% | 3.32% | 25.1% | 2.26% | 1321070 | 2.8% | 19.9% | 1.8% | 352.1% | 16.28% | 383.6% | 17.07% |
| Mandsaur | 23.1% | 2.10% | 28.8% | 2.56% | 1216625 | 1.7% | 25.1% | 2.3% | 40.4% | 3.45% | 50.4% | 4.16% |
| Ratlam | 24.2% | 2.19% | 34.1% | 2.98% | 675513 | 2.0% | 34.7% | 3.0% | 28.8% | 2.56% | 32.5% | 2.85% |
| Ujjain | 23.8% | 2.16% | 26.9% | 2.41% | 851630 | 1.8% | 23.7% | 2.2% | 30.6% | 2.70% | 34.6% | 3.02% |
| Shajapur | 23.0% | 2.09% | 29.5% | 2.62% | 865176 | 1.7% | 26.4% | 2.4% | 46.6% | 3.90% | 53.8% | 4.40% |
| Dewas | 30.0% | 2.66% | 28.4% | 2.53% | 779262 | 1.7% | 19.1% | 1.8% | 79.9% | 6.05% | 82.5% | 6.20% |
| Jhabua | 42.2% | 3.58% | 33.4% | 2.92% | 1068884 | 3.5% | 32.3% | 2.8% | 48.0% | 4.00% | 50.8% | 4.19% |
| Dhar | 29.3% | 2.60% | 28.2% | 2.51% | 1217834 | 2.5% | 26.4% | 2.4% | 35.1% | 3.06% | 46.3% | 3.88% |
| Indore | 30.3% | 2.68% | 34.4% | 3.00% | 570255 | 1.6% | 22.0% | 2.0% | 37.1% | 3.21% | 43.1% | 3.65% |
| West Nimar | 24.4% | 2.20% | 29.9% | 2.65% | 1760288 | 2.2% | 29.8% | 2.6% | 26.6% | 2.38% | 30.4% | 2.69% |
| East Nimar | 24.1% | 2.18% | 24.1% | 2.18% | 1059081 | 2.1% | 23.9% | 2.2% | 27.5% | 2.46% | 24.9% | 2.25% |
| Rajgarh | 23.9% | 2.16% | 23.3% | 2.12% | 840127 | 1.7% | 18.8% | 1.7% | 59.0% | 4.75% | 65.3% | 5.16% |
| Vidisha | 23.9% | 2.17% | 29.5% | 2.62% | 789068 | 1.8% | 26.4% | 2.4% | 46.8% | 3.91% | 47.4% | 3.96% |
| Bhopal | 51.0% | 4.21% | 49.5% | 4.11% | 277257 | 2.4% | 26.6% | 2.4% | 58.5% | 4.71% | 58.5% | 4.71% |
| Sehore | 28.0% | 2.50% | 32.8% | 2.87% | 703350 | 1.9% | 27.6% | 2.5% | 73.0% | 5.63% | 77.6% | 5.91% |
| Raisen | 23.4% | 2.12% | 22.9% | 2.08% | 749332 | 1.4% | 15.8% | 1.5% | 94.8% | 6.90% | 101.4% | 7.25% |
| Betul | 27.7% | 2.47% | 24.4% | 2.20% | 981425 | 2.1% | 22.4% | 2.0% | 55.2% | 4.49% | 41.4% | 3.53% |
| Hoshangabad | 26.2% | 2.36% | 23.9% | 2.16% | 939537 | 2.0% | 20.8% | 1.9% | 37.5% | 3.23% | 36.6% | 3.17% |
| Jabalpur | 20.5% | 1.88% | 18.8% | 1.74% | 1469412 | 1.8% | 19.7% | 1.8% | 21.8% | 1.99% | 17.3% | 1.61% |
| Narsimhapur | 20.8% | 1.90% | 19.3% | 1.78% | 680396 | 1.7% | 17.4% | 1.6% | 32.5% | 2.86% | 36.3% | 3.15% |
| Mandla | 24.5% | 2.21% | 16.4% | 1.53% | 1217788 | 2.1% | 15.6% | 1.5% | 35.4% | 3.07% | 34.7% | 3.03% |
| Chhindwara | 27.2% | 2.44% | 20.3% | 1.86% | 1232696 | 2.2% | 17.4% | 1.6% | 38.7% | 3.33% | 36.9% | 3.19% |
| Seoni | 23.6% | 2.14% | 19.0% | 1.76% | 923679 | 1.9% | 17.5% | 1.6% | 51.2% | 4.22% | 49.4% | 4.09% |
| Balaghat | 19.0% | 1.75% | 13.5% | 1.28% | 1256655 | 1.7% | 13.0% | 1.2% | 30.0% | 2.66% | 21.5% | 1.97% |
| Surguja | 27.5% | 2.46% | 20.8% | 1.91% | 1869466 | 2.1% | 17.8% | 1.6% | 76.9% | 5.87% | 65.3% | 5.15% |
| Bilaspur | 28.4% | 2.54% | 22.7% | 2.07% | 3216565 | 2.2% | 19.4% | 1.8% | 57.7% | 4.66% | 53.4% | 4.37% |
| Raigarh | 19.3% | 1.78% | 16.0% | 1.50% | 1585173 | 1.7% | 14.9% | 1.4% | 34.6% | 3.02% | 32.8% | 2.88% |
| Rajnandgaon | 23.3% | 2.12% | 20.6% | 1.89% | 1234017 | 1.7% | 16.8% | 1.6% | 57.2% | 4.63% | 66.7% | 5.25% |
| Durg | 26.8% | 2.40% | 21.9% | 2.00% | 1580744 | 1.9% | 17.8% | 1.6% | 40.6% | 3.47% | 36.5% | 3.16% |
| Raipur | 26.9% | 2.41% | 21.9% | 2.00% | 3201985 | 2.1% | 18.8% | 1.7% | 45.8% | 3.84% | 44.8% | 3.77% |
| Bastar | 23.2% | 2.11% | 22.9% | 2.08% | 2151535 | 2.0% | 22.2% | 2.0% | 44.9% | 3.78% | 37.1% | 3.20% |
| Madhya Pradesh | 26.8% | 2.41% | 24.4% | 2.21% | 22.20% | 2.0% | 20.8% | 1.9% | 44.9% | 3.78% | 44.7% | 3.76% |

| EM - I<br>RATE OF GROWTH OF EMPLOYMENT UNDER<br>DIFFERENT GROUPS - 1981 TO 1991 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| District | Male Pop. | | Workers Male | | Female Pop. | | Female Workers | | Cultivators | | Agri. Labour | |
| | Growth | Annual | Growth | Annual | Growth | Annual | Growth | Annual | Growth | Annual | Growth | Annual |
| Morena | 31.8% | 2.8% | 24.1% | 2.2% | 30.6% | 2.7% | 112.5% | 7.8% | 24.0% | 2.2% | 69.4% | 5.4% |
| Bhind | 26.0% | 2.3% | 22.0% | 2.0% | 24.2% | 2.2% | 89.9% | 6.6% | 13.0% | 1.2% | 61.5% | 4.9% |
| Gwalior | 28.3% | 2.5% | 24.6% | 2.2% | 26.5% | 2.4% | 26.0% | 2.3% | 19.0% | 1.8% | 28.0% | 2.5% |
| Datia | 27.5% | 2.5% | 26.6% | 2.4% | 26.6% | 2.4% | 65.2% | 5.2% | 29.2% | 2.6% | 32.3% | 2.8% |
| Shivpuri | 31.3% | 2.8% | 27.4% | 2.5% | 30.3% | 2.7% | 90.8% | 6.7% | 35.9% | 3.1% | 29.8% | 2.6% |
| Guna | 31.3% | 2.8% | 25.2% | 2.3% | 30.2% | 2.7% | 32.3% | 2.8% | 20.0% | 1.8% | 23.1% | 2.1% |
| Tikamgarh | 28.4% | 2.5% | 21.6% | 2.0% | 26.8% | 2.4% | 59.9% | 4.8% | 32.0% | 2.8% | 9.9% | 1.0% |
| Chhatarpur | 31.2% | 2.7% | 23.1% | 2.1% | 30.0% | 2.7% | 56.4% | 4.6% | 32.6% | 2.9% | 29.5% | 2.6% |
| Panna | 28.5% | 2.5% | 25.0% | 2.3% | 26.2% | 2.4% | 23.8% | 2.2% | 28.1% | 2.5% | 21.5% | 2.0% |
| Sagar | 25.2% | 2.3% | 21.4% | 2.0% | 23.7% | 2.2% | 31.7% | 2.8% | 12.4% | 1.2% | 53.4% | 4.4% |
| Damoh | 25.8% | 2.3% | 24.0% | 2.2% | 23.1% | 2.1% | 42.5% | 3.6% | 19.1% | 1.8% | 43.8% | 3.7% |
| Satna | 28.2% | 2.5% | 21.9% | 2.0% | 25.8% | 2.3% | 16.6% | 1.5% | 24.4% | 2.2% | 9.4% | 0.7% |
| Rewa | 31.3% | 2.8% | 22.8% | 2.1% | 26.2% | 2.4% | 18.6% | 1.7% | 17.2% | 1.6% | 16.7% | 1.6% |
| Shahdol | 30.2% | 2.7% | 24.0% | 2.2% | 29.1% | 2.6% | 27.4% | 2.5% | 34.3% | 3.0% | 13.7% | 1.3% |
| Sidhi | 40.8% | 3.5% | 30.2% | 2.7% | 36.5% | 3.2% | 13.1% | 1.2% | 26.9% | 2.4% | 8.1% | 0.8% |
| Mandsaur | 22.8% | 2.1% | 22.4% | 2.0% | 23.4% | 2.1% | 43.1% | 3.7% | 23.4% | 2.1% | 47.3% | 3.9% |
| Ratlam | 24.1% | 2.2% | 23.2% | 2.1% | 24.2% | 2.2% | 68.0% | 5.3% | 38.9% | 3.3% | 36.8% | 3.2% |
| Ujjain | 23.7% | 2.1% | 21.8% | 2.0% | 24.0% | 2.2% | 43.9% | 3.7% | 25.9% | 2.3% | 29.9% | 2.7% |
| Shajapur | 23.7% | 2.1% | 22.2% | 2.0% | 22.0% | 2.0% | 53.0% | 4.3% | 28.1% | 2.5% | 35.5% | 3.1% |
| Dewas | 30.3% | 2.7% | 24.2% | 2.2% | 29.6% | 2.6% | 40.3% | 3.4% | 20.6% | 1.9% | 37.3% | 3.2% |
| Jhabua | 42.7% | 3.6% | 37.8% | 3.3% | 41.6% | 3.5% | 24.5% | 2.2% | 35.1% | 3.1% | 11.7% | 1.1% |
| Dhar | 30.3% | 2.7% | 27.8% | 2.5% | 28.2% | 2.5% | 28.9% | 2.6% | 22.3% | 2.0% | 26.5% | 2.4% |
| Indore | 29.7% | 2.6% | 31.8% | 2.8% | 30.8% | 2.7% | 46.1% | 3.9% | 29.0% | 2.6% | 20.6% | 1.9% |
| West Nimar | 24.6% | 2.2% | 22.9% | 2.1% | 24.1% | 2.2% | 46.1% | 3.9% | 33.4% | 2.9% | 24.1% | 2.2% |
| East Nimar | 24.2% | 2.2% | 20.2% | 1.9% | 24.0% | 2.2% | 33.4% | 2.9% | 28.8% | 2.6% | 19.9% | 1.8% |
| Rajgarh | 24.4% | 2.2% | 19.8% | 1.8% | 23.3% | 2.1% | 35.8% | 3.1% | 20.2% | 1.9% | 24.0% | 2.2% |
| Vidisha | 24.4% | 2.2% | 19.9% | 1.8% | 23.4% | 2.1% | 108.6% | 7.6% | 16.8% | 1.6% | 52.8% | 4.3% |
| Bhopal | 49.8% | 4.1% | 46.2% | 3.9% | 52.5% | 4.3% | 69.6% | 5.4% | 18.4% | 1.7% | 29.1% | 2.6% |
| Sehore | 28.6% | 2.5% | 23.2% | 2.1% | 27.3% | 2.4% | 66.8% | 5.2% | 35.0% | 3.0% | 32.0% | 2.8% |
| Raisen | 25.2% | 2.3% | 19.5% | 1.8% | 21.3% | 1.9% | 37.9% | 3.3% | 16.7% | 1.6% | 21.5% | 2.0% |
| Betul | 28.1% | 2.5% | 21.7% | 2.0% | 27.2% | 2.4% | 29.3% | 2.6% | 37.4% | 3.2% | 7.1% | 0.7% |
| Hoshangabad | 26.8% | 2.4% | 23.2% | 2.1% | 25.6% | 2.3% | 26.5% | 2.4% | 30.3% | 2.7% | 23.6% | 2.1% |
| Jabalpur | 20.4% | 1.9% | 18.6% | 1.7% | 20.6% | 1.9% | 19.7% | 1.8% | 19.4% | 1.8% | 25.6% | 2.3% |
| Narsimhapur | 21.9% | 2.0% | 19.0% | 1.8% | 19.6% | 1.8% | 20.3% | 1.9% | 21.0% | 1.9% | 17.6% | 1.6% |
| Mandla | 25.4% | 2.3% | 17.9% | 1.7% | 23.5% | 2.1% | 14.3% | 1.3% | 13.8% | 1.3% | 25.0% | 2.30% |
| Chhindwara | 28.0% | 2.5% | 23.3% | 2.1% | 26.4% | 2.4% | 13.5% | 1.3% | 26.6% | 2.4% | 6.1% | 0.6% |
| Seoni | 24.1% | 2.2% | 19.8% | 1.8% | 23.0% | 2.1% | 17.5% | 1.6% | 17.6% | 1.6% | 23.0% | 2.1% |
| Balaghat | 19.3% | 1.8% | 13.8% | 1.3% | 18.7% | 1.7% | 13.1% | 1.2% | 11.3% | 1.1% | 25.7% | 2.3% |
| Surguja | 27.9% | 2.5% | 17.6% | 1.6% | 27.1% | 2.4% | 34.5% | 3.0% | 19.4% | 1.8% | 16.0% | 1.5% |
| Bilaspur | 29.4% | 2.6% | 22.6% | 2.1% | 27.5% | 2.5% | 23.0% | 2.1% | 26.3% | 2.4% | 7.2% | 0.70% |
| Raigarh | 19.6% | 1.8% | 14.1% | 1.3% | 19.0% | 1.8% | 21.3% | 2.0% | 19.6% | 1.8% | 3.3% | 0.30% |
| Rajnandgaon | 23.8% | 2.2% | 20.1% | 1.9% | 22.9% | 2.1% | 21.2% | 1.9% | 19.8% | 1.8% | 14.4% | 1.4% |
| Durg | 27.7% | 2.5% | 23.7% | 2.1% | 25.9% | 2.3% | 19.3% | 1.8% | 19.1% | 1.8% | 20.0% | 1.8% |
| Raipur | 27.9% | 2.1% | 23.5% | 2.1% | 25.9% | 2.3% | 19.5% | 1.8% | 21.1% | 1.9% | 16.7% | 1.6% |
| Bastar | 23.3% | 2.1% | 17.1% | 1.6% | 23.2% | 2.1% | 35.4% | 3.1% | 25.6% | 2.3% | 5.8% | 0.60% |
| Madhya Pradesh | 27.5% | 2.5% | 22.7% | 2.1% | 26.2% | 2.4% | 28.9% | 2.6% | 23.9% | 2.2% | 20.7% | 1.9% |

EM - I
RATE OF GROWTH OF EMPLOYMENT UNDER
DIFFERENT GROUPS - 1981 TO 1991

| District | Agri. Allied | | Mining and Quar. | | Household Manu. | | Non HH Manuf | | Construction | | Trade | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Annual | Growth | Annual | Growth | Annual | Growth | Annual | Growth | Annual | Growth | Annual |
| Morena | -25.2% | -2.9% | 44.0% | 3.7% | -28.6% | -3.3% | 40.7% | 3.5% | 56.7% | 4.6% | 31.2% | 2.7% |
| Bhind | 25.1% | 2.3% | -42.9% | -5.5% | -6.7% | -0.70% | 28.5% | 2.5% | 29.6% | 2.6% | 26.8% | 2.4% |
| Gwalior | -40.6% | -5.1% | 287.2% | 14.5% | -31.5% | -3.7% | -3.4% | -0.30% | 82.6% | 6.2% | 30.7% | 2.7% |
| Datia | -15.5% | -1.7% | -30.0% | -3.5% | -6.5% | -0.70% | -1.4% | -0.10% | 42.5% | 3.6% | 51.1% | 4.2% |
| Shivpuri | -14.0% | -1.5% | 171.7% | 10.5% | -10.5% | -1.1% | 3.3% | 0.3% | 47.9% | 4.0% | 55.3% | 4.5% |
| Guna | 6.8% | 0.7% | 190.0% | 11.2% | -8.1% | -0.80% | 72.4% | 5.6% | 62.0% | 4.9% | 31.3% | 2.8% |
| Tikamgarh | -27.5% | -3.2% | 246.7% | 113.2% | -3.7% | -0.40% | 62.9% | 5.0% | 40.7% | 3.5% | 59.7% | 4.8% |
| Chhatarpur | -11.8% | -1.2% | 94.7% | 6.9% | -9.3% | -1.0% | 20.7% | 1.9% | 19.8% | 1.8% | 50.8% | 4.2% |
| Panna | -13.0% | -1.4% | 70.8% | 5.5% | -15.8% | -1.7% | 18.2% | 1.7% | 3.8% | 0.40% | 43.2% | 3.7% |
| Sagar | 0.8% | 0.10% | 160.7% | 10.1% | 8.4% | 0.80% | 9.1% | 0.90% | 50.3% | 4.2% | 48.1% | 4.0% |
| Damoh | -10.9% | -1.1% | 137.7% | 9.0% | -0.50% | -0.1% | 193.2% | 11.4% | 18.8% | 1.7% | 32.6% | 2.9% |
| Satna | -15.4% | -1.7% | 25.6% | 2.3% | 2.4% | 0.20% | 27.6% | 2.5% | 16.2% | 1.5% | 63.8% | 5.1% |
| Rewa | 24.0% | 2.2% | 37.5% | 3.2% | -12.1% | -1.3% | 93.8% | 6.8% | -31.2% | -3.7% | 47.3% | 4.0% |
| Shahdol | -23.9% | -2.7% | 37.9% | 3.3% | -8.2% | -0.8% | 35.1% | 3.1% | -69.1% | -11.1% | 55.2% | 4.5% |
| Sidhi | -10.4% | -1.1% | 206.6% | 11.9% | -11.9% | -1.3% | 78.9% | 6.0% | -44.1% | -5.7% | 97.2% | 7.0% |
| Mandsaur | -6.9% | -0.70% | 61.4% | 4.9% | -25.7% | -2.90% | 34.8% | 3.0% | 68.2% | 5.3% | 50.2% | 4.2% |
| Ratlam | -31.6% | -3.7% | -59.0% | -8.5% | -23.8% | -2.7% | 37.1% | 3.2% | 153.7% | 9.8% | 51.7% | 4.3% |
| Ujjain | -32.2% | -3.8% | 178.1% | 10.8% | -29.5% | -3.4% | 6.0% | 0.60% | 129.3% | 8.7% | 37.7% | 3.3% |
| Shajapur | -32.6% | -3.9% | 85.7% | 6.4% | -16.8% | -1.8% | 32.7% | 2.9% | 99.8% | 7.2% | 48.0% | 4.0% |
| Dewas | -59.5% | -8.6% | 43.3% | 3.7% | -18.3% | -2.0% | 57.3% | 4.6% | 52.6% | 4.3% | 44.3% | 3.7% |
| Jhabua | -34.4% | -4.1% | 30.9% | 2.7% | -7.4% | -0.8% | 48.5% | 4.0% | 92.4% | 6.8% | 54.6% | 4.5% |
| Dhar | -16.4% | -1.8% | -42.3% | -5.4% | -34.9% | -4.2% | 230.0% | 12.7% | 183.7% | 11.0% | 52.5% | 4.3% |
| Indore | -27.2% | -3.1% | -14.8% | -1.6% | -27.7% | -3.2% | 20.6% | 1.9% | 101.3% | 7.2% | 54.2% | 4.4% |
| West Nimar | -10.5% | -1.1% | -35.7% | -4.3% | -22.8% | -2.6% | 38.8% | 3.3% | 82.5% | 6.2% | 28.0% | 2.5% |
| East Nimar | 26.5% | 2.4% | -33.1% | -3.9% | -19.1% | -2.1% | 1.3% | 0.10% | 107.9% | 7.6% | 31.0% | 2.7% |
| Rajgarh | -8.8% | -0.90% | -2.0% | -0.20% | 0.60% | 0.10% | 40.7% | 3.5% | 77.1% | 5.9% | 59.4% | 4.8% |
| Vidisha | -17.3% | -1.9% | 72.5% | 5.6% | -12.9% | -1.4% | 13.5% | 1.3% | 32.7% | 2.9% | 54.8% | 4.5% |
| Bhopal | 45.0% | 3.8% | 145.9% | 9.4% | -59.0% | -8.5% | 19.2% | 1.8% | 188.9% | 11.2% | 106.3% | 7.5% |
| Sehore | -51.7% | -7.0% | 430.8% | 18.2% | -27.0% | -3.1% | 27.6% | 2.5% | 68.4% | 5.4% | 66.9% | 5.3% |
| Raisen | -8.1% | -0.80% | 31.2% | 2.8% | -27.0% | -3.1% | 126.6% | 8.5% | 2.4% | 0.20% | 72.8% | 5.6% |
| Betul | -33.8% | -4.0% | 25.5% | 2.3% | -34.9% | -4.2% | 43.3% | 3.7% | -15.6% | -1.7% | 45.4% | 3.8% |
| Hoshangabad | -12.5% | -1.3% | 64.1% | 5.1% | -12.9% | -1.4% | 26.4% | 2.4% | -30.5% | -3.6% | 39.0% | 3.3% |
| Jabalpur | 41.3% | 3.5% | -16.2% | -1.8% | -34.7% | -4.20% | 5.9% | 0.60% | -5.6% | -0.60% | 52.8% | 4.3% |
| Narsimhapur | -18.1% | -2.0% | -18.5% | -2.0% | -5.9% | -0.6% | -3.4% | -0.30% | 4.6% | 0.40% | 33.8% | 3.0% |
| Mandla | -26.4% | -3.0% | -67.9% | -10.7% | -24.1% | -2.7% | 112.3% | 7.80% | -21.1% | -2.30% | 42.8% | 3.6% |
| Chhindwara | -33.1% | -3.9% | -10.3% | -1.1% | -16.9% | -1.8% | 16.9% | 1.6% | 82.7% | 6.20% | 49.0% | 4.1% |
| Seoni | -8.1% | -0.8% | -70.6% | -11.5% | -25.1% | -2.9% | 10.7% | 1.0% | -25.1% | -2.80% | 40.7% | 3.5% |
| Balaghat | -15.8% | -1.7% | -12.4% | -1.3% | -36.1% | -4.4% | 65.1% | 5.1% | -34.4% | -4.10% | 39.8% | 3.4% |
| Surguja | -2.9% | -0.30% | 20.9% | 1.9% | -31.6% | -3.7% | 60.3% | 4.8% | -18.5% | -2.00% | 54.9% | 4.5% |
| Bilaspur | 12.4% | 1.2% | -52.3% | -7.1% | -31.9% | -3.8% | 44.9% | 3.8% | 12.3% | 1.20% | 82.0% | 6.2% |
| Raigarh | -18.7% | -2.1% | -20.1% | -2.2% | -7.9% | -0.80% | 19.1% | 1.8% | 10.9% | 1.00% | 45.4% | 3.8% |
| Rajnandgaon | 20.3% | 1.9% | 356.0% | 16.4% | -3.8% | -0.40% | 26.8% | 2.4% | 39.8% | 3.40% | 452.3% | 9.7% |
| Durg | 17.8% | 1.7% | 37.9% | 3.3% | -24.5% | -2.8% | 14.2% | 1.3% | -10.1% | -1.10% | 65.4% | 5.2% |
| Raipur | 6.4% | 0.6% | 73.7% | 5.7% | -18.9% | -2.1% | 42.9% | 3.6% | 17.2% | 1.60% | 62.0% | 4.9% |
| Bastar | 3.9% | 0.4% | 27.4% | 2.4% | 4.5% | 0.40% | 16.8% | 1.6% | -8.0% | -0.80% | 46.8% | 3.9% |
| Madhya Pradesh | -8.9% | -0.90% | 9.3% | 0.90% | -14.8% | -1.60% | 26.3% | 2.4% | 22.8% | 2.10% | 53.3% | 4.4% |

| EM - I<br>RATE OF GROWTH OF EMPLOYMENT UNDER<br>DIFFERENT GROUPS - 1981 TO 1991 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| District | Transport etc. | | Other Services | | Marginal Workers | | Non Workers | |
| | Growth | Annual | Growth | Annual | Growth | Annual | Growth | Annual |
| Morena | 84.7% | 6.3% | 64.6% | 5.1% | 60.9% | 4.9% | 31.0% | 2.7% |
| Bhind | 38.4% | 3.3% | 81.0% | 6.1% | 37.5% | 3.2% | 25.6% | 2.3% |
| Gwalior | 19.0% | 1.8% | 78.9% | 6.0% | 51.8% | 4.3% | 28.0% | 2.5% |
| Datia | 51.3% | 4.2% | 65.1% | 5.1% | 205.6% | 11.8% | 19.3% | 1.8% |
| Shivpuri | 54.1% | 4.4% | 71.1% | 5.1% | 88.2% | 6.5% | 23.0% | 2.1% |
| Guna | 61.0% | 4.9% | 96.4% | 7.0% | 99.5% | 7.1% | 29.3% | 2.6% |
| Tikamgarh | 24.9% | 2.2% | 52.2% | 4.3% | 33.9% | 3.0% | 26.2% | 2.4% |
| Chhatarpur | 62.4% | 5.0% | 23.1% | 2.1% | 64.4% | 5.1% | 28.8% | 2.6% |
| Panna | 55.2% | 4.5% | 37.1% | 3.2% | 64.8% | 5.1% | 25.9% | 2.3% |
| Sagar | 17.8% | 1.7% | 43.4% | 3.7% | 15.7% | 1.5% | 25.7% | 2.3% |
| Damoh | 27.0% | 2.4% | 37.0% | 3.2% | 20.8% | 1.9% | 22.7% | 2.1% |
| Satna | 20.8% | 1.9% | 62.0% | 4.9% | 47.1% | 3.9% | 30.1% | 2.7% |
| Rewa | 60.6% | 4.9% | 95.1% | 6.9% | 33.1% | 2.9% | 32.8% | 2.9% |
| Shahdol | -12.2% | -1.3% | 113.9% | 7.9% | 58.0% | 4.7% | 30.5% | 2.7% |
| Sidhi | 145.8% | 9.4% | 148.9% | 9.5% | 110.8% | 7.7% | 42.5% | 3.6% |
| Mandsaur | 16.1% | 1.5% | 39.2% | 3.4% | 13.1% | 1.2% | 19.9% | 1.8% |
| Ratlam | -13.0% | -1.4% | 27.8% | 2.5% | 24.3% | 2.2% | 17.7% | 1.6% |
| Ujjain | 35.9% | 3.1% | 54.4% | 4.4% | 19.0% | 1.8% | 22.3% | 2.0% |
| Shajapur | 66.5% | 5.2% | 45.7% | 3.8% | 6.8% | 0.70% | 20.6% | 1.9% |
| Dewas | 77.7% | 5.9% | 73.8% | 5.7% | -3.7% | -0.40% | 34.5% | 3.0% |
| Jhabua | 34.9% | 3.0% | 39.3% | 3.4% | 82.3% | 6.2% | 40.2% | 3.4% |
| Dhar | 76.9% | 5.9% | 52.3% | 4.3% | 54.0% | 4.4% | 28.1% | 2.5% |
| Indore | 38.6% | 3.3% | 57.7% | 4.7% | -2.2% | -0.20% | 29.1% | 2.6% |
| West Nimar | 79.2% | 6.0% | 42.7% | 3.6% | 30.4% | 2.7% | 20.0% | 1.8% |
| East Nimar | 56.3% | 4.6% | 33.2% | 2.9% | 34.5% | 3.0% | 23.5% | 2.1% |
| Rajgarh | 88.9% | 6.6% | 47.7% | 4.0% | 87.5% | 6.5% | 16.8% | 1.6% |
| Vidisha | 34.0% | 3.0% | 34.3% | 3.0% | 51.1% | 4.2% | 19.7% | 1.8% |
| Bhopal | 63.7% | 5.0% | 63.5% | 5.0% | 75.1% | 5.8% | 51.2% | 4.2% |
| Sehore | 76.5% | 5.8% | 55.2% | 4.5% | 43.5% | 3.7% | 23.9% | 2.2% |
| Raisen | 29.7% | 2.6% | 46.1% | 3.9% | 28.6% | 2.5% | 23.3% | 2.1% |
| Betul | 3.9% | 0.4% | 56.7% | 4.6% | 12.5% | 1.2% | 32.0% | 2.8% |
| Hoshangabad | 3.7% | 0.4% | 54.3% | 4.4% | 77.5% | 5.9% | 25.3% | 2.3% |
| Jabalpur | 2.4% | 0.2% | 48.9% | 4.1% | 31.9% | 2.8% | 20.9% | 1.9% |
| Narsimhapur | 33.1% | 2.9% | 47.7% | 4.0% | 72.0% | 5.6% | 19.6% | 1.8% |
| Mandla | -13.8% | -1.5% | 47.6% | 4.0% | 40.6% | 3.5% | 31.7% | 2.8% |
| Chhindwara | 4.1% | 0.4% | 90.7% | 6.7% | 104.8% | 7.4% | 27.0% | 2.4% |
| Seoni | 33.3% | 2.9% | 42.2% | 3.6% | 48.2% | 4.0% | 24.3% | 2.2% |
| Balaghat | 11.7% | 1.1% | 39.5% | 3.4% | 16.7% | 1.6% | 24.5% | 2.2% |
| Surguja | 19.6% | 1.8% | 87.8% | 6.5% | 50.5% | 4.2% | 28.1% | 2.5% |
| Bilaspur | 24.2% | 2.2% | 70.6% | 5.5% | 53.2% | 4.4% | 31.4% | 2.8% |
| Raigarh | 18.7% | 1.7% | 68.6% | 5.4% | 41.7% | 3.5% | 18.5% | 1.7% |
| Rajnandgaon | 28.6% | 2.5% | 37.6% | 3.2% | 36.2% | 3.1% | 25.6% | 2.3% |
| Durg | 154.9% | 9.8% | 64.2% | 5.1% | 0.1% | 0.0% | 31.8% | 2.8% |
| Raipur | 21.1% | 1.9% | 39.9% | 3.4% | 18.4% | 1.7% | 32.0% | 2.8% |
| Bastar | -6.9% | -0.7% | 75.9% | 5.8% | 56.2% | 4.6% | 18.4% | 1.7% |
| Madhya Pradesh | 30.4% | 2.7% | 58.2% | 4.7% | 44.5% | 3.7% | 27.1% | 2.4% |