

HIMACHAL PRADESH HUMAN DEVELOPMENT REPORT 2002

Himachal Pradesh
Human Development Report
2002

Government of Himachal Pradesh

Shimla
2002

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MESSAGE

We would like to congratulate the Government of Himachal Pradesh on this first Human Development Report.

Himachal Pradesh is considered as a model of mountain area development, with relatively low poverty rates, high levels of school attendance and a rapid demographic transition. This is in contrast to the situation elsewhere, where mountain areas typically display high levels of poverty and deprivation. The success of Himachal Pradesh is attributable not only to a prosperous rural economy and high levels of per capita government expenditure but also to focussed public interventions, greater participation of women and strong local institutions. However a remarkable feature of this document is that it goes beyond the success story approach as it brings out problems and constraints in the relevant sectors and highlights the urgency of finding innovative solutions to further financing of human development in the state.

The areas of concern in the Report include sustainable livelihoods, strengthening local governance, addressing the challenge of HIV/AIDS and above all pro-poor fiscal reform.

This Report will also be judged by the quality of the follow-up on its recommendations by the State government. We are confident that this thought provoking and useful document will provide a roadmap for improving the quality of life of the people of Himachal.

Kamaluddin Ahmed
Member
Planning Commission

Brenda Gael McSweeney
UNDP Resident Representative &
UN Resident Coordinator

Foreword

Human Development is a continuous process known to enrich human resources in terms of enlarging people's choices which, in turn, is instrumental in enabling human resources mobilizing and allocating all other resources prudently so as to ensure development on sustainable basis. Himachal Pradesh Human Development Report takes into account only the aspects related to income, education and health, though the process of human development encompasses several other critical areas and consumes many more inputs related to various aspects of human life apart from the mentioned ones. This report is the first step in institutionalising this process and brings to fore the strengths and weaknesses of human development effort in Himachal Pradesh. I am sure that subsequent reports would attempt other aspects of human development to make the concept more comprehensive.

The report highlights the much talked about achievements the State has made especially in the fields of education, health and infrastructure-physical and social. The report is an attempt in stock-taking the factors responsible for these achievements made given the odds in terms of geomorphological and financial constraints. Inter-district and inter-regional comparisons indicate to micro-level achievements. The report also brings out the issues like disequilibria in distributive mechanism, probability of deterioration in gender parity, maintaining ecological balance and inadequate availability of infrastructure in the far flung areas, which require special attention for quick redressal. I am sure that this document will not only provide the necessary information required for understanding the trends and present status of many aspects of economic and social well-being but would also help in providing important inputs for designing future strategy.

I would like to thank the UNDP and the Planning Commission, Government of India, for all the support and assistance provided during preparation of the Himachal Pradesh Human Development Report and I am sure that this partnership would grow stronger as we follow up the HPHDR I also commend the hard work done by the Planning Department, Government of Himachal Pradesh in bringing out this document.

6 January 2003
Shimla



(Prem Kumar Dhumal)

CHIEF Minister
HIMACHAL PRADESH

Preface

The process of human development is perhaps as old as the existence of human beings itself. As civilization marched on, focused interventions started assuming importance in giving new dimensions to the process of human development in sharp contrast to the earlier practice of learning from experience. As widely accepted, the process of human development enlarges people's choices. The objective of enlarging people's choices can be achieved by making efforts to build human capabilities. The efforts required to build human capabilities enabling people to exercise their choice over increased opportunities varies with the levels of development already achieved. It also depends upon the developments taking place at the global level. Happenings at the global level become important in the face of the changes aimed at integration of world economies taking place at a rapid pace. Thus the desired level of human capabilities to be built to enlarge people's choices does vary, not only across the societies, it also varies with the changes that take place at the global, national and sub-national levels giving the process of human development a highly dynamic character.

The dynamic character of human development is also evident from the complex relationship not only between various factors instrumental in enhancing the level of human development and the process of human development but also among the factors themselves. Factors pertaining to social, cultural, political, environmental, economic and almost all other aspects of day-to-day life make contributions of varying degrees in developing human capital. In turn, human resources, depending upon the 'acquired capabilities' mobilize and allocate all other resources and hence determine the course of development. Methodological limitations have confined the scope of this report to covering the aspects related to income, education and health only in determining the achievements made related to human development. The first attempt to demonstrate that it is not only the accumulation of wealth but how well this accumulated wealth is mobilized in enlarging people's choices is really what matters, was made by the UNDP in 1990 by bringing out its first global Human Development Report. Subsequent reports attempted incorporating various other aspects of human life into the concept of human development. However the most widely accepted and used index of human development still remains the same as is used in this document, though, slight deviation in the methodology has been adopted because of serious limitations in terms of data availability at district level. The index encompasses indicators related to income, education and health only. Concerted efforts from all quarters are required to make this index more comprehensive by including indicators related to other fields also.

The need to assess the level of human development at the sub-national level has brought together the UNDP, the Planning Commission, Government of India and the State Governments to write State Human Development Reports. The UNDP and the Planning Commission, Government of India, have been providing technical and financial assistance to bring out State owned reports. The Government of Himachal Pradesh also entered into a tripartite contract with the

UNDP and the Planning Commission, Government of India to bring out the Himachal Pradesh Human Development Report.

Recognizing the need to enlarge people's choices by building human capabilities, the Government of India has been putting in efforts in terms of introducing various programmes to meet this objective from time to time. Various poverty alleviation schemes with an objective to provide income generating assets, programmes aiming at building physical and social infrastructure and programmes with an aim to provide basic minimum amenities required to live with bare minimum comfort are some of the efforts made by the Governments at the national and sub-national level in India. Not going into the question of shortcomings in the implementation of these programmes, the programmes have achieved their objectives to a large extent. After becoming a full-fledged State in 1971, Himachal Pradesh also followed the same strategy as the Government at the national level with few deviations necessitated by local needs. Heavily constrained by the geo-morphological and financial limitations and poorly developed infrastructure, Himachal Pradesh has seen tough times and has still managed to get a distinction in being compared with the most developed States of the country. The achievements in terms of high literacy rates, almost universal enrolments at primary level, availability of schooling facilities, and expansion in health care and physical infrastructure are worth mentioning. However, issues like distortions in distributive aspects, inadequate infrastructure in remote areas, indications of deterioration in sex ratio, protection of fragile ecology need immediate attention. The document attempts to list the factors responsible for these achievements and concerns. It further goes into the issue of regional disparities by comparing inter-district indicators of human development.

The Himachal Pradesh Human Development Report 2002 is the culmination of the efforts of the Government of Himachal Pradesh in documenting the achievements and concerns in the field of human development, but at the same time it has to be viewed as a beginning in the direction of achieving high levels of human development and also in attempting to cover more aspects other than income, health and education of human well-being to make the concept of human development more comprehensive. This is a report owned by the Government of Himachal Pradesh but is different from other government owned documents in the sense that it has been prepared after a lot of interaction with the academicians and NGOs and their views have been duly incorporated into this report.

(S.K. Sood)
Principal Secretary,
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Government of Himachal Pradesh

4 January 2003

Acknowledgements

The Himachal Pradesh Human Development Report 2002 has been prepared by the Government of Himachal Pradesh in collaboration with the United Nations Development Programme (UNDP) and the Planning Commission, Government of India. Preparation of the Report has been supervised by a Steering Committee under the overall direction of the Principal Secretary, Finance and Planning to the Government of Himachal Pradesh.

We wish to thank Dr Brenda Gael McSweeney, Resident Representative, and UNDP India Country Office for her consistent support to this exercise. Dr K. Seeta Prabhu and Dr Suraj Kumar from the Human Development Resource Centre (HDRC) have provided critical inputs for the preparation of this Report with the help of their team — Aparna Pande, Elena Borsatti, Meenakshi Kathel and Trishna Satpathy.

The Planning Commission, Government of India provided necessary financial assistance for preparation of the Report. The State Government is grateful to Dr Rohini Nayyar, Adviser (RD) and Mr B.N. Nanda, Director (RD), Planning Commission for their constant support in preparing the Report.

Mr D.K. Sharma, Principal Adviser-cum-Secretary (Planning) to the Government of Himachal Pradesh, on behalf of the Government of Himachal Pradesh, coordinated preparation of the Report. Mr Basu Sood, Deputy Director (Planning) along with Mr Rakesh Gautam, Mr Mehar Chand, Mr Raj Kumar, Mr Raj Mal and Ms Kalpana Kumari of the Planning Department, Himachal Pradesh assisted him in accomplishing the task. Mr Dinesh Kumar and Mr Jaisi Ram of the Planning Department provided computer related support. Thanks are also due to Ms Mahindra Malhotra, Economic Adviser, Department of Economics and Statistics, Himachal Pradesh for providing important and current statistical data and Mr B.D. Sharma, Director, Department of Information and Public Relations, Himachal Pradesh for providing necessary inputs for designing the Report. The inputs received from various consultants are also gratefully acknowledged in as much as these led to enriching the contents of the document.

Abbreviations

AIDS	:	Acquired Immuno Deficiency Syndrome
ANM	:	Auxiliary Nurse Midwife
BCG	:	Bacillus Calmetta Guerin
CBR	:	Crude Birth Rate
CDR	:	Crude Death Rate
CPR	:	Couple Protection Rate
CSSM	:	Child, Survival Safe Motherhood Programme
CSW	:	Commercial Sex Worker
DESH	:	Department of Economics and Statistics, Himachal Pradesh.
DIET	:	District Institute of Education and Training
DPT	:	Diphtheria Pertussis Tetanus
EDII	:	Equally Distributed Income-Index
GAD	:	Government Ayurvedic Dispensary
GDI	:	Gender related development index
GDP	:	Gross Domestic Product
GEM	:	Gender Empowered Measure
GER	:	Gross Enrolment Ratio
GHI	:	Gender related Health Index
GOHP	:	Government of Himachal Pradesh
HDI	:	Human Development Index
HDR	:	Human Development Report
HIV	:	Human Immuno Deficiency Virus
HMHS	:	High Mountain Horse Shoe
ICDS	:	Integrated Child Development Services
IFA	:	Iron and Folic Acid
IMR	:	Infant Mortality Rate
IRDP	:	Integrated Rural Development Programme
ISM&H	:	Indian System of Medicine and Homeopathy
LEB	:	Life expectancy at birth
LEPR	:	Labour Force Participation Rate
LHP	:	Low Hills and Plains

MMR	:	Maternal Mortality Rate
MPCC	:	Monthly Per Capita Consumption
MTA	:	Mother Teacher Association
NABARD	:	National Bank for Agriculture and Rural Development
NACO	:	National AIDS Control Organization
NCERT	:	National Council of Education Research and Training
NDP	:	Net Domestic Product
NER	:	Net Enrolment Ratio
NFHS	:	National Family Health Survey
NGO	:	Non-Government Organization
NIEPA	:	National Institute of Education, Planning and Administration
NLM	:	National Literacy Mission
NSSO	:	National Sample Survey Organization
ORS	:	Oral Re-hydration Solution
ORT	:	Oral Re-hydration Therapy
PDGOHP	:	Planning Department Government of Himachal Pradesh
PLP	:	Post Literacy Programme
PPP\$:	Purchasing Power Parity in dollars
PROBE	:	Public Report on Basic Education
PTA	:	Parents Teacher Association
RCH	:	Reproductive and Child Health Programme
REDP	:	Rural Entrepreneurship Development Programme
RIDF	:	Rural Infrastructure Development Fund
SCERT	:	State Council of Education Research and Training
SGSY	:	<i>Swaranjayanti Gram Swarozgar Yojana</i>
SRS	:	Sample Registration System
STD	:	Sexually Transmitted Disease
TFR	:	Total Fertility Rate
TLC	:	Total Literacy Campaign
TT	:	Tetanus Toxoid
UNDP	:	United Nations Development Programme
UNFPA	:	United Nations Population Fund

Contents

<i>List of Tables</i>	iv
<i>List of Charts</i>	ix
<i>List of Boxes</i>	x
<i>Foreword</i>	xi
<i>Preface</i>	xiii
<i>Acknowledgements</i>	xv
<i>Abbreviations</i>	xvii
1 Human Development: Concept Status and Trends	1
2 Historical Perspective: Administrative, Political and Socio-Cultural	41
3 Income, Employment and Poverty	75
4 The Question of Balance: Second Sex?	95
5 Health: A Critical Ingredient of Human Development	129
6 Education and Literacy	163
7 Natural Resources and Human Development	197
8 The Road Ahead	231
<i>Fact Sheets</i>	237
<i>Index: Statistical Appendices and Statistical Tables</i>	279
<i>Statistical Appendices</i>	283
<i>Statistical Tables</i>	353
<i>Technical Note</i>	371
<i>Glossary</i>	375
<i>Glossary of Local Terms</i>	378
<i>Bibliography</i>	379

List of Tables

1.1	Trends in Indicators of Human Development in Himachal Pradesh	6
1.2	Indicators of Human Development — Himachal Pradesh vis—vis All-India and Neighbouring States	8
1.3	Net State Domestic Product of Himachal Pradesh: 1950–51 to 1965–66	10
1.4	Net State Domestic Income of Himachal Pradesh: 1967–68 to 1979–80	11
1.5	Net State Domestic Product of Himachal Pradesh: 1980–81 to 2000–01	13
1.6	Plan-wise Annual Average Growth Rates (at constant prices)	14
1.7	Per Capita Income of Himachal Pradesh: 1967–68 to 1997–98	14
1.8	Per Capita Income For 16 Major States of India in 1997–98	15
1.9	Growth of Real Per Capita Income and Changes in the Production and Employment Structure of Himachal Pradesh: 1970–71 to 1988–99	16
1.10	Sectoral Percentage Contribution of State Domestic Product of Himachal Pradesh	17
1.11	Sectoral Percentage Contribution of State Domestic Product of Himachal Pradesh	17
1.12	Sectoral Percentage Contribution of State Domestic Product of Himachal Pradesh for Different Decades	17
1.13	Demographic Features of Different Regions of Himachal Pradesh	22
1.14	Health Indicators in Different Regions of Himachal Pradesh	23
1.15	Education Attainment Indices	24
1.16	Some Development Indicators of Two Regions of Himachal Pradesh	25
1.17	Infrastructure Development Indices and Socio-Economic Indices of Five States including Himachal Pradesh	30
1.18	Village Connectivity by Road	32
1.19	Infrastructure Development and Indices (1995)	32
1.20	Indicators of HD in Himachal Pradesh: Comparative Data from NCAER and Other Sources	38
1.21	Human Development Indices for the Districts of Himachal Pradesh	40
2.1	Demographic Indicators of the Kangra District in the Nineteenth Century	61
2.2	Education Levels in the Year 1951	69

2.3	Sectoral Allocations during First Three Five Year Plans	71
3.1	Growth in State Income (Net State and District Domestic Product) Sector-wise at 1990–91 Prices	79
3.2	Sectoral Contribution to Domestic Product (Net State and District Domestic product) in percentage	80
3.3	Per Capita Income at 1990–91 Prices	81
3.4	Compound Growth Rate of Main and Marginal Workers by Sex (1981–2001)	84
3.5	Growth of Main Workers during 1981–1991	85
3.6	Percentage of Main Workers Employed in Different Sectors of the Economy (1981 and 1991)	86
3.7	Income Elasticity of Employment	88
3.8	Sectoral Productivity of Main Workers (1991)	89
3.9	NSDP per Worker (1991)	89
3.10	Labour Force participation Rates – 1991 (%)	91
3.11	Head Count Ratios for Himachal Pradesh	92
3.12	Dependency Ratios in Himachal Pradesh	93
3.13	Survey on Poor Families (1998–99) – Rural	94
4.1	Gender-wise Rural-Urban Age Structure of Population by Residence	98
4.2	Sex Ratio in Himachal Pradesh	99
4.3	Sex Ratio of the Child Population in the Age Group of 0–6 Years	100
4.4	Life Expectancy at Selected Ages, 1993–1997: Himachal Pradesh and India	101
4.5	Statement showing Institutional Cases and Deaths due to Communicable Diseases in Himachal Pradesh (January–December 1999)	105
4.6	Enrolment profile and Per cent Enrolment of Girls under DPEP in Himachal Pradesh	106
4.7	Details of External Evaluation already Completed in TLC (December 2000)	107
4.8	Details of External Evaluation already Completed in PLP (December 2000)	108
4.9	Gender Segregated Index of Deprivation for Literacy: District Profile	112
4.10	District-wise Gender Profile of Main Workers Expressed as a percentage of Population in each Category	114
4.11	District-wise Gender Profile of Non-Workers Expressed as a percentage of Population in each Category	115

4.12	Self Help Groups — Target and Achievement	121
4.13	Progress Report of the State Commission for Women (upto November, 2000)	124
4.14	Gender Development Indices (GDIs) for the Districts of Himachal Pradesh	125
4.15	Ingredients of Gender Development Index (District-wise)	126
5.1	Distribution of Deaths in 1993 by Major Causes (%)	136
5.2	Blindness in Himachal Pradesh and Neighbouring States (per 1000 Persons)	137
5.3	Immunisation of Children and Pregnant Women According to mpcc Fractile Groups (percentage)	141
5.4	Trends in the Percentage of Couples Protected by Different Family Planning Methods in Himachal Pradesh: 1977–78 to 1997–98	143
5.5	Growth of Government Medical Institutions	148
5.6	Average Number of People Covered by Different Types of Medical Institutions in Himachal Pradesh	148
5.7	Medical and Ayurvedic Institutions Functioning in Tribal Areas as on 31-03-2000	149
5.8	Staff Position of Health and Family Health Welfare Department	150
5.9	Medical Personnel in Rural Areas of Himachal Pradesh	151
5.10	Trends in Medical and Public Health Expenditure, Social Service Expenditure and Developmental Expenditure as Percentages of State Government Budgets	153
5.11	Structure of Public Expenditure on Health in Himachal Pradesh	154
5.12	Distribution Percentage of Plan and Non-plan Health Services Expenditure by Systems of Medicine	154
5.13	Utilisation of Health Care Service: Public–Private Differentials in Himachal Pradesh: 1986–87 and 1995–96	156
5.14	Source of Treatment: Public–Private Differentials in Himachal Pradesh: 1995–96	156
5.15	Average Public and Private Expenditure Per Hospitalisation Case in Rural Areas: 1995–96	158
5.16	Utilisation of Health Care Services by Systems of Medicine	158
5.17	Health Indices of the Districts of Himachal Pradesh	161
6.1	Growth in Overall Literacy in Districts	167
6.2	Literacy in Rural and Urban Areas by Sex in the Districts of Himachal Pradesh	168
6.3	Growth of Literacy In Rural and Urban Areas by Sex between 1991 and 2001	169

6.4	Literacy among Scheduled Castes and Scheduled Tribes	170
6.5	Enrolment (Boys, Girls and Total) in the Districts of Himachal Pradesh (Classes I to VIII)	172
6.6	Enrolment (Boys, Girls and Total) in the Districts of Himachal Pradesh (Classes IX to XII)	173
6.7	District-wise Availability of Schooling Facilities	176
6.8	District-wise Requirement and Availability of Primary Schools according to the Population Norm	177
6.9	District-wise Distribution of Private Educational Facilities	178
6.10	District-wise Number of Teachers (Primary Level)	180
6.11	District-wise Number of Teachers (Secondary Level)	181
6.12	District-wise Teacher–Pupil Ratio in Primary Level	182
6.13	District-wise Teacher–Pupil Ratio in Secondary Level	182
6.14	DPEP Districts in Himachal Pradesh	193
6.15	Out-of-School Children	193
6.15	Improvement in Enrolment in DPEP Districts	194
6.17	Expenditure on Education	195
6.18	Allocations in Education Sector	196
7.1	Biophysical Zones of Himachal Pradesh	202
7.2	Geophysical Profile of the Districts of Himachal Pradesh	202
7.3	Land use 1997–98 (per cent of total geographical area)	204
7.4	Grazing Land and Pastures available per Livestock	205
7.5	Current Status of Forests in Himachal Pradesh	207
7.6	Distribution of Forests by Crown Density	207
7.7	Legal Status of Forests of Himachal Pradesh	208
7.8	Timber Removal from the Forests	208
7.9	‘Out turn’ of Non-timber Forest Produce (1992–93 to 1995–96)	209
7.10	Per Capita Forest availability in the Asia and Pacific Region, 1993	210
7.11	Per Capita Forest availability in Himachal Pradesh	211
7.12	Hydroelectric Potential Identified in Different River Basins	212
7.13	Hydroelectric Potential in Himachal Pradesh	213

7.14	Power Generation and Consumption in Himachal Pradesh	214
7.15	District-wise Per Capita Consumption of Electricity (1999–2000)	216
7.16	District-wise Number of Consumers and Consumption of LPG	217
7.17	Number of Consumers and Consumption of Kerosene Oil	218
7.18	Number of Consumers and Consumption of Coal/Coke	219
7.19	Biome-wise Per Capita Consumption of Fuel Wood	219
7.20	District-wise Biomass Dependency	220
7.21	District-wise Requirement of different Sources of Energy in Year 2001	222
7.22	Ground Water Availability	223
7.23	District-wise Water Sources	224
7.24	Water Demand for Himachal Pradesh	225
7.25	Water Quality at Different Sources	227
7.26	Air Quality Status	229
7.27	District-wise Ranking of Environmental Stress	230

List of Charts

1.1	Trends in NSDP	11
1.2	Trends in NSDP (Rs in Crore)	12
3.1	Sectoral Growth Rates of NDDP at 1990-91 prices (1990-91 to 1999-2000)	79
3.2	Per Capita Income of Himachal Pradesh	82
5.1	Health Sector Programmes under the Ninth Plan	145
5.2	Structure of State Health Service Delivery System	147
5.3	Health Expenditure - GSDP ratio of Himachal Pradesh, Haryana and Punjab: 1987-88 to 1997-98	152
6.1	Literacy in Himachal Pradesh	169
6.2	Education Attainment Indices in Himachal Pradesh	183
6.3	Expenditure on Education	195
6.4	Allocations in Education Sector	196
7.1	Electricity Generation and Consumption Pattern in Himachal Pradesh	215
7.2	Per Capita Electricity Consumed (kW/h)	215

List of Boxes

1.1	State Human Development Reports	4
1.2	Poverty	18
1.3	Trends in Sex Ratio	19
1.4	Demographic Indicators of Himachal Pradesh vis-à-vis its Neighbours	27
1.5	Why a 'Special Category Status' for Himachal Pradesh	33
1.6	Human Development Indices	39
2.1	A Case For Statehood	58
2.2	The Collective Action of 'Dhoom'	64
2.3	Traditional Patterns of Agriculture and Land Use	66
2.4	The Roots of Trade	68
3.1	Categories of Workers	78
3.2	District Level Changes in Income	82
3.3	Probable Reasons for the Changes in District Per Capita Income Between 1990-91 and 1999-2000	83
3.4	Critical Role of the Primary Sector	86
3.5	Inferences	87
3.6	Main Objectives of the State Government's Employment Policy	90
4.1	The Altering Sex Ratio — A Cause for Concern	99
4.2	Incentives for the Promotion of Family Welfare Programmes	103
4.3	Quality of Health Services in Himachal Pradesh	103
4.4	Initiatives by the State to Improve Enrolment and Retention of the Girl Child in the Education Mainstream	108
4.5	Girl Students Do Better than Boys	111
4.6	Self Help Groups In Himachal Pradesh	120
4.7	Individual Women Who Have Successfully Championed Causes	122
5.1	Achievements and Concerns	132
5.2	Data availability and Comparability	134

5.3	Vitamin A Deficit and the Need to Improve the Nutritional Status	138
5.4	HIV/AIDS in Himachal Pradesh	139
5.5	Health Policy and Programmes in Himachal Pradesh	144
5.6	The Norms for Health Delivery Structure	146
5.7	Promotion of Indian System of Medicine and Homeopathy — Some Steps	149
5.8	Ensuring Accountability Through Community Monitoring	151
5.9	NGOs in Health: Some Glimpses	160
6.1	Some Highlights of the Literacy Campaign in Himachal Pradesh	165
6.2	Teacher's Training in Himachal Pradesh	179
6.3	Mapping of the Institutional Framework of School Education	184
6.4	Status of Accommodation in Primary Schools as on 31 December 1998	187
6.5	<i>Saraswati Bal Vidya Sankalp Yojana (SBVSY)</i>	188
6.6	<i>Yaswant Gurukul Awas Yojana</i>	189
6.7	Integrated Education for Disabled Children (IEDC)	189
6.8	Promoting Merit: Affirmative Action for Enabling Competition	190
6.9	Promoting Female Literacy Among the Underprivileged Sections of the Society in H.P.	190
6.10	Response of Beneficiaries of Merit Scholarship Scheme	191
6.11	Scholarships	192
7.1	Himachal's Unique Forests	206
7.2	An Issue for Concern	209
7.3	Policy Interventions That Can Protect Forests	222
7.4	Glaciers — A Core Reserve	223



CHAPTER 1

**HUMAN DEVELOPMENT:
CONCEPT, STATUS AND
TRENDS**



Human Development: Concept, Status and Trends

Human Development: Concept and Reporting

Human Development has been defined as the ‘process of enlarging people’s choices’. The most critical ones are to be able to lead a long and healthy life, to be educated and to enjoy a decent standard of living. Additional choices include political freedom, guaranteed human rights and self-respect (UNDP, 1990, p. 10).

In relation to human development, the key dimensions of human rights include the promotion of gender equity and economic, social and cultural rights — particularly those pertaining to health care, food, water, education, environment and culture.

This approach is one of the attempts to formulate alternative development theories and strategies to replace the neo-classical approach whose objective is economic growth *per se* and which treats people as ‘resources’, a means to an end. In contrast, ‘human development’ denotes both the process of widening people’s choices and the level of their achieved ‘well being’. It also helps distinguish between the formation of human capabilities, such as improved health or knowledge, and the use that people make of their acquired capabilities — for both work and leisure.

The concept, messages and measures of human development were introduced and car-

ried forward in the UNDP’s Global Human Development Reports (HDRs). The first HDR was published in 1990. These HDRs, pioneered by the late Mahbub ul Haq and Amartya Sen, have stimulated world-wide discussions and have led to what is now called the ‘human development movement’. This movement includes international and national governments, policy makers, planners, opinion leaders, parliamentarians, media, NGOs and various members of civil society.

The HDRs have proposed composite indices that go beyond income based measures. The Human Development Index (HDI), the Gender Development Index (GDI), the Gender Empowerment Measure (GEM) and the Human Poverty Index (HPI) have been introduced in various HDRs since 1990. The methodology used has been evolved after taking into account the need to strike a balance between indicators that capture the complexity of human development, gender development, gender empowerment and human poverty. It avoids the inclusion of too many indicators that could produce a perplexing picture. With all the limitations that are intrinsic to simple indices and averages, these composite indices have helped in highlighting the need to remove human deprivation on a priority basis.

The HDRs have also been instrumental in the shift from advocacy to action at the national level. The preparation of National Human Development Reports in various countries of the world, has contributed to the identification and monitoring of national and sub-national human development targets, the tracking of development gaps and their impact on constituent groups — especially the vulnerable — and the articulation and assessment of viable strategies for achieving development goals. The reports are effective tools in the formulation of national development strategies and specific action plans and programmes — including those related to poverty reduction and more effective development assistance.

In India, the preparation of Human Development Reports has been pioneered at the State level (Box 1.1). The process has brought together a wide spectrum of development practitioners from government and civil society, and has helped the States that have engaged in the preparation of the State Human Development Reports (SHDRs) towards a better understanding of the social development aspects and in enhancing allocations to human development priority sectors. This has also assisted in assessing the impact of various interventions and in evaluating the road ahead.

The Himachal Pradesh Human Development Report

The Himachal Pradesh HDR attempts to assess and explain the status of human development in the State and articulate policy implications. In the light of the definition of human development itself, issues related to health, education, environment and gender have been analysed in separate chapters. Gender and people's participation

Box 1.1 —

State Human Development Reports

In a large country like India, the need to assess the status of human development at the State level has been the motivation behind the decision of the State Governments to prepare 'State Human Development Reports' (SHDRs).

The process of preparation of the State HDRs can provide disaggregated data and indicators. This permits policy makers to identify with greater precision the critical requirements that are specific to particular districts, blocks and communities. Thus, the SHDRs represent a tool for policy interventions and can help in directing and focusing public investment towards the provision of basic minimum services, and can strengthen social capital — especially in the backward States and regions.

The State Governments have been encouraged by the United Nations Development Programme (UNDP) and the Planning Commission of the Government of India, to embark on the preparation of State level HDRs. The principles followed by the UNDP and Planning Commission in their co-operation with the State governments are:

- (a) Government ownership.
- (b) The analysis and contents of the HDR should be undertaken by an independent team of experts at the behest of the State government.
- (c) Integrity and coherence in the contents of the HDRs and addition of value to its users.
- (d) Commitment to the widespread dissemination and discussion of the State HDRs making use of a variety of methods.
- (e) Cost-effectiveness in the preparation of the HDRs.

issues have been considered as cross-cutting themes. The analysis moves from the State level to the district level, highlighting issues related to data gaps, data comparability and availability. The analysis of data begins from 1971 for comparability reasons — though an attempt has been made to sketch a profile of the socio-economic conditions prevailing during the period between 1948 and 1971. The period between the formation of the State in 1948, and extending to 1966, has in fact, been characterised by the accretion of new areas and additional population. In 1971, Himachal Pradesh attained Statehood.

The structure of the report has evolved after considering the main questions raised in a consultative dialogue between various partners and after taking into account the concerns of the people of Himachal Pradesh. This document is expected to promote a deeper understanding of the challenges and opportunities for human development action in the State, and the sustainability of the challenges that have been met since its formation.

Human Development in Himachal Pradesh

The prevalent state of any society has a history of evolution behind it. The different dimensions of HD also take time in evolving and over the years, every one of them acquires a tempo of its own. In Table 1.1, data have been provided for different points of time and spans a time frame of over three decades. This displays broad trends in the changing profile of HD in the State.

The story of the evolutionary process would have been more instructive and interesting, had it been possible to start from the year 1948.

Due to several territorial changes, the situation of the socio-economic system of the pre-1966 'old' Himachal Pradesh is not comparable with what has been obtained since then. Therefore, the broad picture of changes in the profile of HD in this State has to be confined to the post-1966 period. However, pertaining to certain indicators, efforts have been made to examine data between 1948 and 2000 depending up the year of availability of data.

These changes are portrayed with the help of data in Table 1.1 in terms of the four broad categories of indicators, which are macroeconomic changes along with changes in (i) the State of income poverty, (ii) changes in the demographic profile, (iii) changes in the health status, and (iv) changes in literacy and school attendance.

Income and Production Structure

Focusing, first of all, on the broad macroeconomic changes, it will be noted from Col. 2 of Table 1.1 that the growth rate of real per capita income in the decade of the 1970s was relatively low and stood at a mere 0.44 per cent per annum. This accelerated considerably to 3.88 per cent in the decade of the 1980s and decelerated somewhat sharply to 2.27 per cent in the 1990s. It is interesting to observe what the 'old' Himachal Pradesh had to start with in the mid-1950s — when it had the third lowest per capita income in the country (after Bihar, Orissa and Manipur). The NCAER had found the economic condition within the hill areas of the Punjab, which later merged with Himachal Pradesh in 1966, to be no better in the mid-1950s. However, 'old' Himachal Pradesh, seems to have experienced a faster economic growth in the initial

TABLE 1.1: Trends in Indicators of Human Development in Himachal Pradesh

Table 1.1.a			Table 1.1.b				Table 1.1.c		
Years	Average growth rate of SDP per capita (at 1980–81 prices) (%)		Years	Sectoral shares in SDP (%)			Years	% of population below poverty line	
	Primary	Secondary		Tertiary	Planning Commission	Expert Group			
1	2		3	4	5	6	7	8	9
1970–71 to 1979–80	0.44		1966–67	60.00	8.00	32.00	1972–73	15.1	23.5 (1973–74)
1980–81 to 1989–90	3.56		1970–71	58.56	16.73	24.71	1983–84	13.5	14.1 (1983)
1990–91 to 1998–99	2.88		1980–81	47.22	19.70	33.08	1987–88	9.2	13.8
			1990–91	35.05	36.52	38.43	1993–94	28.4	30.0
			1998–99	31.98	26.36	41.66	1999–2000	7.6	–
								(30 day recall)	

Table 1.1.d		Table 1.1.e		Table 1.1.f	
Years	Decennial growth rate of population (%)	Years	Females per 1000 of male population	Years	Total Fertility Rate
10	11	12	13	14	15
1961–71	23.0	1971	958	1981	3.8
1971–81	23.7	1981	973	1991	3.2
1981–91	20.8	1991	976	1998	2.4
1991–2001	17.5 (7)*	2001	970		

Table 1.1.g				Table 1.1.h		Table 1.1.i	
Years	Life expectancy at birth (years)			Years	Infant Mortality Rate	Years	Couple Protection Rate (%)
	Male	Female	Total				
16	17	18	19	20	21	22	23
1970–75	54.8	50.9	–	1971	118	1971	8.2
1981–91	62.9	63.5	63.2	1981	71	1981	25.6
1988–92	63.5	63.0	63.3	1991	75	1990–91	52.1
1989–93	63.6	63.6	63.6	1999	62	2000–01	52.2
1993–97	64.6	65.2	65.1				

continued

Table 1.1 continued

Table 1.1.j		Table 1.1.k		Table 1.1.l			
Years	Hospital beds per lakh of population	Years	% of total public revenue expenditure allocated to public health and family welfare	Years	Literacy rate (%)		
					Male	Female	Total
24	25	26	27	28	29	30	31
1966	148.23	1965–66	7.33	1971	43.2	20.2	32.0
1971	132.64	1970–71	6.39	1981	53.2	31.5	42.5
1981	81.76	1980–81	8.24	1991	75.4	52.1	63.9
1991	87.79	1991–92	7.24	2001	86.0	68.1	77.1
2001 (March end)	144.76	1999–2000	6.48				

Table 1.1.m							Table 1.1.n	
Years	Gross Enrolment Ratios						Years	% of total public revenue expenditure on education and allied activities
	Classes I – V			Classes VI – VIII				
	Boys	Girls	Total	Boys	Girls	Total		
32	33	34	35	36	37	38	39	40
1971–72	–	–	85	–	–	55	1977–78	27.2
1985–86	111	91	100	90	60	75	1986–87	20.6
1992–93	104	94	99	91	76	84	1990–91	22.6
1997–98	104	102	103	100	90	95	1999–2000	21.5

* The figure within the parentheses is the rank of Himachal Pradesh among India's states considered from the lowest upwards.

Based on the data in website of Registrar General and Census Commission, India.

Sources:

- Col. 2: Calculated from DESHP (1999a), Table 4.1, p. 99 and latest data made available by DESHP.
- Cols. 4–6: Ibid, pp. 72–73 and latest data from DESHP.
- Cols. 8–9: *Economic and Political Weekly*, 21 August 1993, pp. 1766 and 1768; Chelliah and Sudarshan (1999), pp. 11 and 60; and website of Planning Commission.
- Cols. 11 and 13: DESHP (1999b), Part-II, Table 1, p. 2; and website of Registrar General and Census Commission, India.
- Cols. 15 and 21: Department of Health and Family Welfare, Himachal Pradesh (1997–98), pp. 30–31 and *Health at a Glance 2001* (a pamphlet).
- Cols. 17–19: Ibid. p. 34; Registrar General of India data in C.S.O. (1996 and 1997), Table 20 (b), p. 37; and ibid pamphlet.
- Col. 23: NFHS (1995a), Table 1.2, p. 8; Department of Health and Family Welfare, Himachal Pradesh (1997–98), p. 50; and ibid pamphlet.
- Col. 25: Calculated from DESHP, *Statistical Outline of Himachal Pradesh*, different issues; and ibid pamphlet.

continued

Table 1.1 continued

- Col. 27: Ravi Duggal *et al* (1995), Table 8, p. 844; calculated from DESHP (1997), pp. 142–43; and Government of Himachal Pradesh (2001), p. 7.
- Cols. 29–31: C.S.O. (1997), pp. 622–24 and website of Registrar General and Census Commissioner, India.
- Cols. 33–38: Ministry of Education and Social Welfare, Government of India (1971–72) and Planning Department, Government of Himachal Pradesh (1999–2000), p. 26.
- Col. 40: Ministry of Human Resource Development, Government of India (1987–88), p. 62; NIEPA (1993), Table 4.5, p. 5, DESHP (1997), p. 143, and Government of Himachal Pradesh (2001), p. 7.

TABLE 1.2: Indicators of Human Development –
Himachal Pradesh vis-à-vis All-India and Neighbouring States

Indicators	Year	Himachal Pradesh	Haryana	Punjab	J & K	All-India
1. Annual average growth rate of GDP/SDP per capita at 1980–81 prices (%)	1990–91 to 1996–97	2.27	2.27	2.61	1.80	3.46
2. Per capita income (at current prices) and rank among 18 Indian States (Rs)	1998–99	13,432 (10)	1949 (3)	20,463 (2)	10,272 (14)	14,682
3. Sectoral share in GDP/SDP (%)	1996–97					
(i) Primary sector		33.56	39.95	42.18	42.64	28.80
(ii) Secondary sector		26.85	27.65	22.88	8.38	28.30
(iii) Tertiary sector		39.59	32.40	32.94	48.98	42.90
4. Population below the poverty line according to Planning Commission estimate (%)	1999–2000					
(i) 30-day recall		7.63	8.74	6.16	3.48	26.10
(ii) 7-day recall		7.27	7.79	5.34	3.53	23.33
5. Decennial growth rate of population (%)	1991–2001	17.53	28.06	19.76	29.04	21.34
6. Sex Ratio:	2001					
(i) Females per 1000 of male population:		970	861	874	900	933
(ii) Age group 0–6 years		897	820	793	937	927
7. Total Fertility Rate	1992–93	2.03	3.14	2.48	2.13*	2.70
8. Female work participation rate (%)	1991	34.8	10.8	4.4	n.a.	22.3
9. Life expectancy at birth	1991–95					
Male		64.1	63.0	66.1	n.a.	59.7
Female		64.7	64.0	68.4	n.a.	60.9
Total		64.5	63.4	67.2	n.a.	60.3
10. Infant Mortality Rate	1998	64	69	54	45	72
11. Couple Protection Rate (%)	1999	51.5	55.8	73.1	15.4	48.6
	1992–93	47.0	37.9	45.9	44.5*	53.4

continued

Table 1.2 continued

<i>Indicators</i>	<i>Year</i>	<i>Himachal Pradesh</i>	<i>Haryana</i>	<i>Punjab</i>	<i>J & K</i>	<i>All-India</i>
12. % of children under age 4 who were underweight						
13. % of infants (age 12–23 months) fully vaccinated	1992–93 1998–99	62.9 83.4	53.5 62.7	61.9 72.1	65.7* 56.7	35.4 42.0
14. % of households with safe drinking water facilities	1991	77.3	74.3	92.7	n.a.	62.3
15. % of households with toilet facilities	1991	12.4	22.5	33.2	n.a.	23.7
16. Per capita expenditure on medical, public health and family welfare (Rs)	1997–98	209.9	104.0	156.1	224.7	99.1
17. Literacy Rate (%)	2001					
(i) Male		86.0	79.3	75.6	65.8	75.9
(ii) Female		68.1	56.3	63.6	41.8	54.2
(iii) Total		77.1	68.6	69.9	54.5	65.4
18. Gross Enrolment Ratios (%)	1996–97					
Classes I – V:						
(i) Boys		109.0	80.5	80.2	n.a.	98.6
(ii) Girls		101.0	79.2	81.5	n.a.	81.8
(iii) Total		105.0	79.9	80.8	n.a.	90.5
Classes VI – VIII:						
(i) Boys		100.0	64.7	64.8	n.a.	70.8
(ii) Girls		89.0	55.9	60.8	n.a.	52.8
(iii) Total		95.0	60.7	62.9	n.a.	62.3
19. Per capita public expenditure on education, sports, arts and culture (Rs)	1997–98	629.2	426.1	549.8	592.2	407.5

* Figures only for Jammu Region.

Sources:

Row numbers:

- 1 to 3 Data made available by Department of Economics and Statistics, Himachal Pradesh, from its office records.
- 4 Planning Commission's press release dated 22 July 2001, as given on the website of the Commission.
- 5–6 and 17 Website of Registrar General and Census Commissioner, India.
- 7 NFHS, *ibid*, Table 5.2, p. 94.
- 8 C.S.O., (1996–97), Table 68, p. 84.
- 9–11 C.S.O., (1999), pp. 35, 39, 45.
- 12 NFHS 1, (1995b), Table 10.10, p. 286 and NFHS 2, Table 6.11, p. 209.
- 13 *Ibid.*, Table 9.12, p. 252.
- 14 C.S.O., (1997), p. 663.
- 15 *Ibid.*, p. 666.
- 16 and 19 Public expenditure data from CMIE, (1999), pp. 446–47, and Mid-year estimates of population from C.S.O., (1996 and 1997), p. 5.
- 18 Government of India, (1997–98), p. 144; and Planning Department, Government of Himachal Pradesh, (1999–2000), p. 26.

years, and by the early 1960s, it ranked seventh in per capita income among major States of the country — a ranking which it retained to the late 1970s according to some inter-State studies. (For example, see Jaishankar Raman, 1996–97, p. 142, and Uma Datta Roy Chaudhury, 1992, p. 2651). A slower growth in the 1990s, (as shown by the per capita income figures in Col. 2 of Table 1.1), may have lowered its ranking to the tenth position in 1996–97 (as seen in row 2 of Table 1.2). This, however, does not detract from the fact that from a near-bottom rank in the 1950s, Himachal Pradesh has managed to climb the per capita income ladder and retain a middle rank in the late 1990s.

While the growth in SDP and in the per capita income before the attainment of full fledged Statehood — and in the post Statehood period — are not strictly comparable, a brief description of the trends during two periods is contained in the following text.

The Growth of Aggregate and Per Capita Output

The Net State Domestic Product (NSDP) and per capita income data have been presented in Tables 1.3, 1.4 and 1.5. The time series data in Table 1.3, covering the period 1950–51 to 1965–66, pertains to what is called ‘old’ Himachal Pradesh. The figures in this table are not comparable with those in Table 1.4 because after 1965–66, both the population and the area of Himachal Pradesh nearly doubled. This increase was a result of the reorganisation of the erstwhile Punjab State. Time-series data in Table 1.4, covering the period 1967–68 to 1979–80, pertains to the enlarged Himachal Pradesh. More recent trends in the growth of NSDP are contained in Table 1.5.

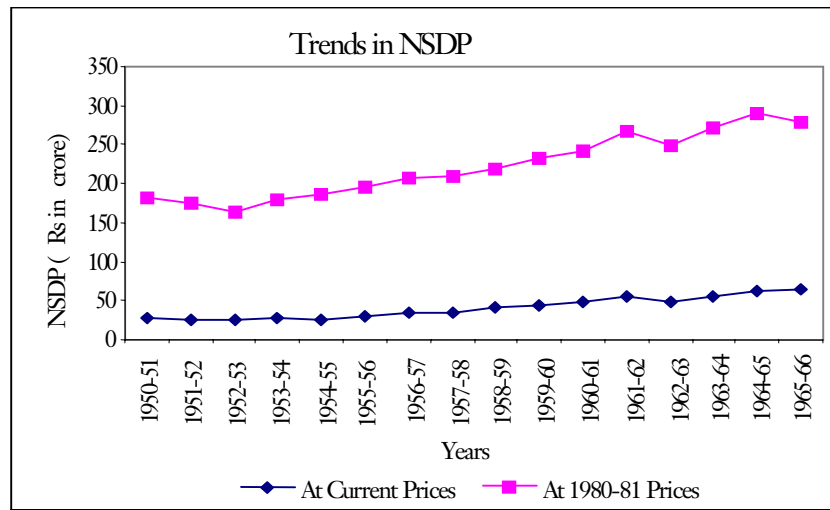
It will be noted from Table 1.3 that during the initial period of fifteen years from 1950–51 to 1965–66, Himachal’s NSDP in real terms recorded an annual compound growth rate of 2.64 per cent. The growth performance of the economy in the more recent period is shown in Table 1.4. During the fourteen-year period 1967–68 to 1979–80, the NSDP grew at an annual compound growth rate of 2.49 per cent. While analysing the growth of the NSDP during the latter period, it is noticed that there was a consistent rise and the growth rate was much higher (at about 4.3 per cent per annum) upto the year 1975–76. After this, there has been a slowdown and a lack of consistency in the growth of the domestic product.

TABLE 1.3: Net State Domestic Product of Himachal Pradesh: 1950–51 to 1965–66

Years	<i>(Rs in crores)</i>	
	<i>NSDP (at current prices)</i>	<i>NSDP (at 1980–81 prices)</i>
1950–51	26.49	182.96
1951–52	26.25	176.05
1952–53	24.23	163.05
1953–54	27.56	180.72
1954–55	26.38	186.75
1955–56	30.21	196.07
1956–57	34.14	208.12
1957–58	35.68	209.36
1958–59	40.60	219.31
1959–60	43.10	232.20
1960–61	47.81	242.80
1961–62	55.02	268.22
1962–63	48.62	249.62
1963–64	56.29	271.71
1964–65	62.71	289.73
1965–66	65.09	277.60

Source: DESHP.

CHART 1.1



Here, the growth performance of the economy in the later period may be compared with the earlier phase. The NSDP clearly grew at a higher average rate during the period between 1950–51 and 1965–66. As far as the growth of the NSDP can be correlated to the growth and pattern of planned outlays, the growth performance of the economy of ‘old’ Himachal Pradesh during the period 1950–51 to 1965–66 is more commendable for the reason that, under the first three plans, a very high proportion of the total outlays was allocated for infrastructural development, which was unlikely to make a direct contribution to the aggregate domestic product.

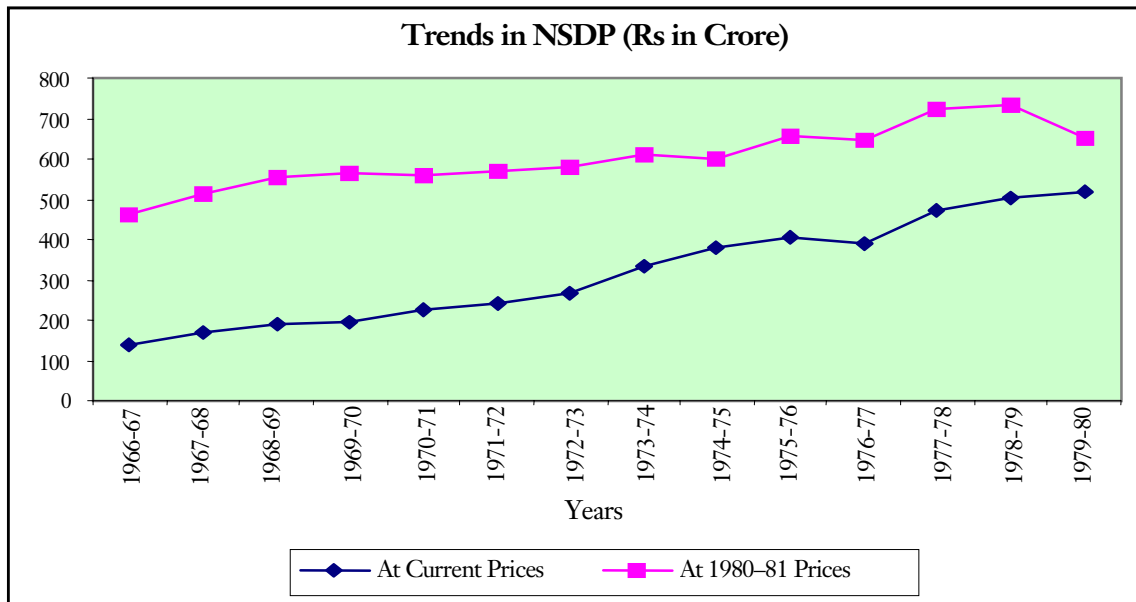
Besides, the growth of per capita income during 1950–51 to 1960–61 was much higher at one per cent per annum, as compared to the period between 1970–71 and 1981–82, when it had fallen to 0.54 per cent per annum. This happened not only due to slower growth of NSDP, but also due to a higher growth rate of population during the latter period. For the whole decade between 1960–61 and 1970–71, comparative data are not available due to territorial changes in this region.

TABLE 1.4: Net State Domestic Income of Himachal Pradesh: 1967–68 to 1979–80

Years	NSDP (Rs in crores)	
	NSDP (at current prices)	NSDP (at 1980–81 prices)
1966–67	137.88	460.05
1967–68	171.34	513.17
1968–69	189.37	551.65
1969–70	196.59	564.64
1970–71	223.24	560.52
1971–72	240.67	568.48
1972–73	266.55	578.69
1973–74	333.19	610.41
1974–75	380.21	598.83
1975–76	405.98	657.84
1976–77	391.75	647.85
1977–78	471.93	723.87
1978–79	504.49	732.54
1979–80	517.26	648.83

Source: DESHP.

CHART 1.2



Himachal after Statehood

Himachal Pradesh attained Statehood on 25 January 1971. Estimates for this period are given below. Phase-I covers the period from 1970-71 to 1979-80, and Phase-II covers this from 1980-81 to 2000-2001.

Phase-I — 1970-71 to 1979-80

The Net State Domestic Product (NSDP) at the time of Statehood was a mere Rs 223.24 crore and this rose to Rs 517.76 crore during 1979-80 at current prices as shown in Table 1.4. During the same period, the NSDP increased from Rs 460.05 crore to Rs 648.83 crore at 1980-81 prices. This registered a growth of 41.03 per cent during the decade 1970-71 to 1979-80. A study of Table 1.4 reveals that the State Income of Himachal Pradesh maintained a steady increase except for a marginal decline in the year 1976-77. This

decline was attributable to excessive rains in that period leading to decline in food-grain production.¹

Phase-II — 1980-81 to 2000-2001

The State Domestic Product of Himachal Pradesh increased from Rs 794.04 crore in 1980-81 to Rs 2521.47 crore in 1990-91 and to Rs 11,535.66 crore in the year 2000-2001 at current prices as depicted in Table 1.5. At 1980-81 prices, it increased to Rs 1150.80 crore in 1990-91 and to Rs 2306.44 crore in 2000-2001, thereby registering an average annual increase of 6.5 per cent.

During the first two years of the Sixth Plan, between 1980-81 and 1981-82, the economy achieved a laudable growth rate of 11.4 per cent and 5.9 per cent, respectively. But this

1. DESHP, *Economic Growth of Himachal Pradesh*, 2000, pp. 73-78.

remarkable performance was badly hit by the unprecedented drought conditions of 1982–83 and 1984–85, which resulted in a significant decline in the income originating from agriculture and allied sectors alone; this brought an over-all decline in the growth rate of the State. The economy of Himachal Pradesh fared well during Seventh Five Year Plan. Except for the year 1987–88, the annual growth rate during entire plan period was more than satisfactory. The systematic development of horticulture began to show results and fruit production, including apples, showed a gradual improvement and touched a record level of 4.6 lakh tonnes during 1989–90.

The economy of Himachal Pradesh which is predominately governed by the agriculture sector, showed no ups and downs during the Eighth Five Year Plan and growth remained more or less stable. The annual growth rate during the entire plan varied from 4 per cent to 7 per cent and created the average annual plan growth rate of 5.6 per cent. The total State Domestic Product during the Eighth Plan increased from Rs 3411.17 crores in 1992–93 to Rs 7806.98 crores in 1997–98, thereby registering an increase of 128.9 per cent.

The growth rate of the NSDP during the First Plan was very low for Himachal Pradesh, followed by a fairly high growth rate in the Second Plan as shown in Table 1.6. In the Third and the Fourth Plans, the growth rate was lower than in the Second Plan, but since then, there has been a consistent rise and the growth rate at 8.8 per cent per annum in the Seventh Plan was the highest recorded since the beginning of the planning era. During the Eighth Plan, the average annual growth decelerated to 5.6 per cent largely due to massive broadening of the base achieved upto the end of the Seventh Plan.

The plan-wise comparison with the growth rate of national income shows that during three plans viz., Second, Third and Seventh, the growth rate of NSDP of Himachal Pradesh was higher than that of national income and during the remaining Plans, the latter's growth rate was higher.

TABLE 1.5: Net State Domestic Product of Himachal Pradesh: 1980–81 to 2000–01

Years	State Income (in Rs Crores)	
	At Current Prices	At Constant Prices (Base-1980–81)
1	2	3
1980–81	722.82	722.82
1981–82	845.89	767.88
1982–83	897.17	741.03
1983–84	1023.24	777.02
1984–85	1030.96	733.36
1985–86	1236.69	831.33
1986–87	1363.42	891.88
1987–88	1539.12	893.82
1988–89	1932.83	1005.18
1989–90	2183.78	1123.28
1990–91	2521.47	1150.80
1991–92	2975.03	1157.18
1992–93	3411.17	1210.12
1993–94	4250.03	1426.87
1994–95	5192.46	1577.03
1995–96	5930.24	1671.52
1996–97	6802.87	1778.15
1997–98	7806.98	1897.56
1998–99	9507.46	2017.51
1999–2000	10,657.18	2130.80
2000–2001	11,535.66	2306.44

Source: DESHP.

TABLE 1.6: Plan-wise Annual Average Growth Rates (at constant prices)

<i>Period</i>	<i>Average Annual Growth rate (percentage)</i>	
	<i>Himachal Pradesh</i>	<i>All India</i>
<i>1</i>	<i>2</i>	<i>3</i>
First Plan (1951–56)	1.6	3.6
Second Plan (1956–61)	4.4	4.1
Third Plan (1961–66)	3.0	2.4
Three Annual Plans (1966–67 to 1968–69)	—	4.1
Fourth Plan (1969–74)	3.0	3.4
Fifth Plan (1974–79)	4.6	5.2
Annual Plan (1979–80)	(–) 3.6	0.2
Sixth Plan (1980–85)	3.0	5.3
Seventh Plan (1985–90)	8.8	6.0
Annual Plan (1990–91)	3.9	5.4
Annual Plan (1991–92)	0.4	0.8
Eighth Plan (1992–97)	5.6	6.2
1997–98	6.4	5.0
1998–99	7.2	6.6
1999–2000	6.1	6.4

Source: DESHP, *Economic Growth of Himachal*, 2000, p. 69.
 DESHP, *Economic Survey: Himachal Pradesh*, 2001, p. 6, Table 2.1

Per Capita Income of Himachal Pradesh

The per capita income of Himachal Pradesh has been calculated for the period 1970–71 to 1997–98 both at current prices and at 1980–81 prices as shown in Table 1.7. The per capita income increased from Rs 651 in 1970–71 to Rs 10,659 in 1997–98, thus registering an increase of 1537 per cent at current prices whereas at constant prices (1980–81), it rose from Rs 1562 to Rs 2725, thus showing an increase of 74.46 per cent. This has been due to an increase in the State Domestic Product.

The annual percentage change in per capita income at constant prices shows a rising trend with the exception of the years 1972–73, 1974–75, 1976–77, 1979–80, 1982–83, 1984–85, 1987–88, 1990–91 and 1991–92, which were drought years and agricultural production declined. The average increase in growth rate for the decade 1970–71 to 1979–80 was 0.44 per cent and this rose to 3.88 per cent for the decade 1980–81 to 1989–90. There was a slight deceleration in the average growth rate of per capita income to 2.45 per cent during the period 1990–91 to 1997–98 as is clear from Table 1.7.

TABLE 1.7: Per Capita Income of Himachal Pradesh: 1967–68 to 1997–98

<i>Years</i>	<i>(Rupees)</i>	
	<i>At Current Prices</i>	<i>At 1980–81 Prices</i>
1967–68	532	1454
1968–69	576	1534
1969–70	586	1534
1970–71	651	1562
1971–72	688	1570
1972–73	746	1531
1973–74	913	1610
1974–75	1020	1546
1975–76	1067	1721
1976–77	1009	1606
1977–78	1191	1759
1978–79	1249	1774
1979–80	1258	1567
1980–81	1704	1704
1981–82	1953	1773
1982–83	2032	1678
1983–84	2273	1726
1984–85	2249	1599
1985–86	2649	1781

continued

Table 1.7 continued

Years	(Rupees)	
	At Current Prices	At 1980–81 Prices
1986–87	2870	1877
1987–88	3185	1850
1988–89	3934	2046
1989–90	4375	2250
1990–91	4910	2241
1991–92	5691	2213
1992–93	6390	2267
1993–94	6896	2315
1994–95	8067	2461
1995–96	8842	2562
1996–97	9737	2628
1997–98	10659	2725

Source: DESHP, *Economic Growth of Himachal*, 2000, p. 99

According to an estimate, in 1955–56, only three States and Union Territories in the country, viz., Bihar, Orissa and Manipur had a per capita income lower than that of Himachal Pradesh.² During the thirty years of the formation of Himachal as a State, there has been a sea change in its economy which can be visualised by comparing its per capita income with that of the other States of India. Ranking of the States on the basis of per capita income indices shows that Himachal moved to the eighth rank with a per capita index of 0.244. Seven States stood above Himachal Pradesh namely, Maharashtra (0.474), the Punjab (0.436), Haryana (0.394), Gujarat (0.391), West Bengal (0.293), Tamil Nadu (0.285) and Karnataka (0.257). States like Kerala and Andhra Pradesh come after Himachal Pradesh in terms of per capita income indices.

2. Bose, S.K., *Some Aspects of Indian Economic Development*, Volume I, Ranjit.

TABLE 1.8: Per Capita Income for Sixteen Major States of India in 1997–98

Sl. No.	States	Per Capita Net State Domestic Product (1997–98)		Per Capita Income Index	Rank
		At Current Prices (in Rs)	At Constant Prices (1980–81) (in Rs)		
1.	Andhra Pradesh	10,590	2413	0.234	10
2.	Assam	7335	1673	0.159	15
3.	Bihar	4654	1073	0.098	16
4.	Gujarat	16,251	3976	0.391	04
5.	Haryana	17,626	3997	0.394	03
6.	Himachal Pradesh	8747	2518	0.244	08
7.	Karnataka	10,279	2641	0.257	07
8.	Kerala	11,936	2444	0.237	09
9.	Madhya Pradesh	8114	1961	0.188	12
10.	Maharashtra	18,365	4791	0.474	01
11.	Orissa	6767	1688	0.160	14
12.	Punjab	19,500	4416	0.436	02
13.	Rajasthan	9215	2215	0.214	11
14.	Tamil Nadu	11,708	2918	0.285	06
15.	Uttar Pradesh	7263	1757	0.167	13
16.	West Bengal	10,636	3002	0.293	05

Source: DES, Government of Orissa, *Economic Survey 1999–2000*, Annexure 21.2.

Production Structure

The structure of production changes inexorably with economic growth. In Himachal Pradesh too, as shown in Table 1.9, the production structure was drastically transformed over time, with the share of the Primary Sector in the SDP

nearly halving between 1966 and 1998 and the share of the nascent Secondary Sector nearly quadrupling during the period. However, although the share of the Tertiary Sector did rise, as elsewhere in the country, this rise has been inconsistent and rather slow. The tardy growth of this sector has implications for employment generation, because the sector has the reputation of being a relatively labour-intensive one.

TABLE 1.9: Growth of Real Per Capita Income and Changes in the Production and Employment Structure of Himachal Pradesh: 1970–71 to 1998–99

	1970– 71	1980– 81	1990– 91	1998– 99
1. Per capita income at constant (1980–81) prices	1562	1704	2241	2757
2. Index number of per capita income	100.00	109.10	143.50	176.50
3. % share of:				
a. Primary sector				
(i) In SDP	58.56	47.22	35.05	31.98
(ii) In total employment	77.50	78.08	74.80	
b. Secondary sector				
(i) In SDP	16.73	19.70	26.52	26.36
(ii) In total employment	12.00	9.02	8.37	
c. Tertiary sector				
(i) In SDP	24.71	33.08	38.43	41.66
(ii) In total employment	10.50	12.90	16.83	

Sources: DESHP, (1999a), p. 69 and Table 4.1, p. 99, and latest data made available by DESHP, Department of Planning, Himachal Pradesh, 1999–2000, Table 3, p. 71.
A. Chander Sekhar, 1971, pp. 14–17.

During the three decades between 1950–51 and 1982–83, the structure of production has undergone a change, with the share of the agricultural sector falling to less than half of the total at 43.4 per cent in 1982–83, while more than half, 56.6 per cent was accounted for by the non-agricultural sectors. Thus, the production structure of the State economy in terms of this index has undergone a substantial change during the period. This is evident from Tables 1.10 and 1.11. In 1950–51, the production structure of the national economy was much more balanced, with the national agricultural economy contributing 51.3 per cent to the Net National Product, and the non-agricultural sectors accounting for the remaining 48.7 per cent. Compared to the national economy, Himachal Pradesh had a highly unbalanced production structure. In 1982–83, the share of agriculture in the net national product had further fallen to 44 per cent and that of the non-agricultural sectors correspondingly rose to 56 per cent as shown in Tables 1.10 and 1.11.

During 1980–81 and 1981–82, which were the first two years of the Sixth Plan, the economy achieved a considerable growth rate. The share of the Primary Sector increased from 47 per cent to 49 per cent and the share of the Secondary and Tertiary Sectors declined from 20 per cent to 19 per cent and 33 per cent to 32 per cent, respectively. But this remarkable performance was badly hit by the unprecedented drought conditions of 1982–83 and 1984–85, which resulted in a significant decline in the share of agriculture and allied sectors. Meanwhile, the other sectors showed a constantly increasing trend. From 1980–81 to 1996–97, the growth in all sectors revealed a steady trend except for very negligible fluctuations in some minor sectors. In 1996–97, the sectoral contribution of the Primary, Secondary, Tertiary Sectors was 34 per cent, 27 per

cent and 39 per cent, respectively. Thus, relative to the national economy, the production structure of Himachal Pradesh had been changing faster during this period. (See Sharma, 1987, pp. 90–92.)

TABLE 1.10 — Sectoral Percentage Contribution of State Domestic Product of Himachal Pradesh

Years	Sectoral Percentage Contribution (Base 1970–71)		
	Primary	Secondary	Tertiary
1970–71	58	17	25
1971–72	58	18	24
1972–73	56	19	25
1973–74	60	17	23
1974–75	60	16	24
1975–76	58	17	25
1976–77	51	20	29
1977–78	53	20	27
1978–79	53	18	29
1979–80	47	20	33

Source: DESHP, *Economic Growth of Himachal*, 2000, p. 73.

TABLE 1.11: Sectoral Percentage Contribution of State Domestic Product of Himachal Pradesh

Years	Sectoral Percentage Contribution (Base 1980–81)		
	Primary	Secondary	Tertiary
1980–81	47	20	33
1981–82	49	19	32
1982–83	44	21	35
1983–84	46	20	34
1984–85	43	20	37
1985–86	42	23	35

continued

Table 1.11 continued

Years	Sectoral Percentage Contribution (Base 1980–81)		
	Primary	Secondary	Tertiary
1986–87	41	22	37
1987–88	37	24	39
1988–89	36	26	38
1989–90	37	23	40
1990–91	35	27	38
1991–92	38	25	37
1992–93	36	27	37
1993–94	35	26	39
1994–95	36	27	37
1995–96	34	27	39
1996–97	34	27	39

Source: DESHP, *Economic Growth of Himachal*, 2000, p. 75.

TABLE 1.12: Sectoral Percentage Contribution of State Domestic Product of Himachal Pradesh for Different Decades

Sectors	1950–51	1960–61	1970–71	1980–81	1990–91	1997–98
	1	2	3	4	5	6
1. Primary	71.01	63.14	58.56	47.22	35.05	31.92
2. Secondary	9.50	9.71	16.73	19.70	26.52	30.40
3. Tertiary	19.49	27.15	24.71	33.08	38.43	37.68

Source: DESHP, *Economic Growth of Himachal*, 2000, p. 69.

The sectoral distribution of the total State Domestic Product during the beginning of each decade as shown in Table 1.12, highlights that the dependence of the economy on the Primary Sector declined whereas on the Secondary and Tertiary Sectors, this increased — and this is a major indicator of economic development of Himachal Pradesh. This is also evident from the

Box 1.2 — Poverty

Poverty ratios, in the form of headcount ratios, have been estimated by the Planning Commission since the early 1970s. The latest of these estimates are for the year 1999–2000. The Planning Commission estimates have, however, attracted wide-ranging criticism and even an expert group appointed by the Commission itself has questioned the Commission's methodology. The latter has come up with its own estimates for different years. Estimates of the proportion of the population below the poverty line in Himachal Pradesh in different years are given in columns 7–9 of Table 1.1. These estimates are both of the Planning Commission as well as of the Expert Group for the period 1972–73 to 1993–94. Neither of these estimates shows a definite trend in poverty incidence in the State. When the estimates are considered inter-temporally and in an inter-State setting, four facts and hypotheses emerge from the examination of the available data and related studies on the subject.

First, in all the years for which data are available, the incidence of income poverty in the State turns out to be much lower than the national average. Secondly, Himachal Pradesh also figures among the States with the lowest poverty ratios. Even in 1993–94, the poverty ratio for the State is the seventh lowest among 16 States. (Planning Commission, 1998, p. 48). Thirdly, the poverty situation in the State in 1993–94 was worse than in any of the earlier years for which data have been given in Table 1.1. B.S. Minhas *et al* have, in fact, ranked Himachal Pradesh among the States with poor performance in poverty alleviation insofar as the absolute number of the poor in the State has been seen to rise over the 1970–71 to 1987–88 period. Fourthly, and this supports the preceding point, in the 1983 to 1993–94 period, the poverty ratio in Himachal Pradesh rose by an annual average rate of 5.66 per cent. (See row 4-ii in Table 1.1). It is thus seen that around the mid-1990s, the dynamics of socio-economic forces and public policy had still left a little under one-third of the people of the State suffering from absolute poverty.

fact that the per capita income of the State, which at current prices was Rs 240 in 1950–51, increased to Rs 10,659 in 1997–98.

Demographic Changes

Certain trends can be observed in the important demographic characteristics of the State and in columns 10–15 of Table 1.1, data have been provided in respect of trends in population growth rate, sex ratio and the total fertility rate. It is evident from these data that, first of all, the decennial growth rate of population in the State marginally increased from 23 per cent in 1961–71 to 23.7 per cent in the next decade,

but declined to 20.8 per cent in 1981–91 and declined further to 17.5 per cent in 1991–2001. Correspondingly, the average annual exponential growth rate of population of the State has also come down from 2.2 per cent in 1971–81 to 1.9 per cent in 1981–91, the latter being lower than the average of 2.14 per cent for the country as a whole. (Ministry of Health and Family Welfare, Government of India, 1994–95, p. 22). The population growth rate is crucially impacted by the fertility rate. The total fertility rate data given in Table 1.1 shows a consistent decline in this rate over the 1971–94 period. The NFHS had studied in detail the fertility behaviour of married females in different States, including Himachal Pradesh. It had

compared current fertility, measured by total fertility rate, for the three years prior to the survey (i.e. for 1990–92) with cohort fertility which measures the mean number of children ever born to women aged 40–49 years at the time of the survey. Since the NFHS found the current fertility (i.e. total fertility) rate to be lower than the cohort fertility rate, it concluded that ‘a substantial fertility decline has taken place in Himachal Pradesh’. (NFHS, 1995a, p. 60). As per NFHS-2, the State had the lowest TFR in the Northern Region and the third lowest in the whole country.³ As elsewhere in India, in Himachal Pradesh the TFR has been lower in urban areas than in rural areas at all relevant ages.

The decrease in TFR may be explained by the fact that more than half of the married couples are effectively protected against unwanted pregnancies through the use of various family planning methods. According to NFHS -2, the State has the highest percentage of married women covered by any contraceptive method (67.7 per cent) and any modern method (60.8 per cent). These proportions are higher than the national averages, at 48.2 per cent for any contraceptive method and 42.8 per cent for any modern method. This is due to various family planning interventions in the State where in 1971 only 8.2 per cent of families were using any family planning method.

Over all, the demographic trends in Himachal Pradesh are fairly encouraging with the population growth rate decelerating due to an observed fertility decline, coupled with an improving sex ratio.

3. All the States neighbouring Himachal Pradesh, are included in the Northern Region. Their respective TFR in 1998–99 are 2.88, 2.21 and 2.71, while that of India is 2.85.

Box. 1.3 — Trends in Sex Ratio

The trends in sex ratio, as emerging from the population census data, reflect in a substantial way the changes that could be occurring in attitudes towards the girl child and general biases towards the females and their empowerment. The successive population censuses since 1971, show a consistent improvement in the sex ratio in Himachal Pradesh, which has risen from 958 in 1971 to 976 in 1991. As noted in Section I, the NFHS (1992) has estimated a sex ratio of 1063 for Himachal Pradesh, which according to the survey was the highest for any State in the country. The NFHS wondered if this discrepancy between its own estimate of sex ratio and that of the 1991 census could be attributed to ‘underenumeration of females in the 1991 census’ (NFHS, 1995a, pp. 26–27) and this discrepancy is confirmed by the Provisional Population Figure for the year 2001 which put the sex ratio at 970 and is a matter of serious concern.

Health and Medical Facilities

The trends in the profile of health and medical facilities, as shown in columns 16–27 of Table 1.1, are in respect of life expectancy at birth, infant mortality rate, couple protection rate, hospital beds per lakh population, and proportion of total public revenue expenditure allocated to public health and medical facilities. Life expectancy data since 1981 are available for overlapping periods. These estimates do not seem to be very reliable and credible since different sources provide contradictory figures even for the same period. According to these estimates, life expectancy at birth rose quite sharply between the 1970s and the 1980s, but

there was hardly a change during the 1981–93 period. Over time, these figures also do not bring out any improvement in the life expectancy of females vis-à-vis that of males, but there has been slight improvement in life expectancy of both males and females during 1993–97.

The infant mortality rate (IMR), has fallen from 118 in 1971 to 62 in 1999 — which is almost half. Some sources also provide sex-wise data on the IMR for a relatively recent period which brings out a welcome trend of the female IMR having fallen from 92 in 1985 to 53 in 1993, with the male IMR declining only marginally during this period (Ministry of Health and Family Welfare, Government of India, 1994–95, p. 46). It is difficult to say how far the Sample Registration System, the source of this data has brought out these trends reliably.

The couple protection rate, showing the proportion of married couples effectively protected against unwanted pregnancies through the use of contraception, provides one of the links between the health care system and the demographic trends. Data for the period between 1971–2001, shows a rise in couple protection rate that rose from a mere 8.2 per cent to 52.2 per cent. At the same time, these figures also show that in the 1990s, there was a slowing down in the growth of contraceptive use, and even at end of the period, a little under half the married couples still remained unprotected against unwanted pregnancies.

The number of hospital beds per lakh population may be taken as an index of medical facilities available. Data in Table 1.1 shows that in 2001, this was not very different from 1966. In between, there has been a decline in the value of this index. The relative inadequacy of the health care system in the State is clearly brought

out by these data. This is also reflected in the share of public health expenditure in the total revenue expenditure, which has averaged about 7 per cent over the period and has not shown a rising trend.

An increase in outlay was — and is — necessary to cope with the needs of a rising population and for improving the quality of public health services. However, two somewhat redeeming features in this respect may be noted. In the first place, the above-mentioned proportion of public health expenditure has consistently remained above the national average over the years and secondly, there has been a rapid rise in per capita public expenditure on health since 1970–71. (Ravi Duggal *et al*, 1995, p. 844.)

Trends in Literacy Ratios

In the matter of literacy, Himachal Pradesh seems to have started from a situation in the early 1950s which may well be termed as dismal. In the ‘old’ Himachal Pradesh, the 1951 population census revealed an over all literacy ratio of just 4.8 per cent and the female literacy ratio stood at a mere 2 per cent. The former figure then was the lowest among all the States and Union Territories of the country. (L.C. Vashishta, 1951; pp. 130–31, and Ministry of Education, Government of India, 1950–51, p. 155). The trends in the growth of literacy, as shown in Table 1.3, make it clear that even in 1971, the total literacy ratio was only 32 per cent and at that time, just about a fifth of the females were literate. Two decades later, in 1991, the total literacy ratio had climbed to 63.9 per cent, with even the female literacy rate having made a significant gain and rising to 52.1 per cent. It is noteworthy that in this respect the

State rose from the bottom of the pile, to emerge as the fifth most literate State of the Indian Union by 1991. The PROBE report speaks of the 'schooling revolution in Himachal Pradesh'. The growth of primary education in the State has come to be especially commended in an inter-State context (see Jean Drèze and Haris Gazdar in Drèze and Amartya Sen, 1996, p. 93). The situation has further improved during the decade of the 1990s as is evident from the literacy rates reported in the Provisional Population Figures of Census 2001.

The growth of literacy has obviously been boosted by the rising enrolment ratios of both boys and girls. It is clear from figures in Table 1.1 that the gross enrolment ratio among boys at the elementary level was already high even in late 1970s — and the girls did not lag behind. But the total — including girls — enrolment ratios were still low at the middle school level. Significant gains were recorded in this respect in the 1980s, with universal enrolment among both boys and girls having been attained at the primary level. Similar gains, though somewhat less striking, were made in these ratios at the next higher middle level. During the 1990s, these gains have been further consolidated, with enrolment ratios even at the middle level approaching 100 per cent and more significant increases in enrolment being achieved in the case of girls.

The role of the public sector in general and that of budgetary allocations in promoting education in the State has been well recognised. The PROBE report, for example, notes that 'Development planning in Himachal Pradesh has included a consistent emphasis on developing the rural infrastructure, with roads and schools receiving high priority' (PROBE Report, 1999, p. 123). This is brought out by data

in Table 1.1 where it is clear that education has claimed nearly one-fifth of total public revenue expenditure in most years. However, there is a suggestion in these data that there has been a slight decline in this share of expenditure over time, and it has come down from a healthy 27.2 per cent in 1977–78 to 18.6 per cent in the mid-1990s.

Regional Imbalances within the State

In the foregoing section, an attempt was made to observe the changes in the behaviour of the more important components of Human Development in Himachal Pradesh over a period of approximately two and a half decades. Having thus seen how the HD profile has evolved over this period, it is now time to view the current status of HD in this State in an intra-regional perspective by looking at where Himachal Pradesh now stands vis-à-vis its neighbours in north-western region of India. Besides, the State's current HD status may also be viewed from an all-India perspective. Before doing that, it will be useful to examine regional imbalances within the State in terms of demographic and other development indicators.

Himachal Pradesh can be broadly divided into two distinct regions based on geo-morphological and climatic features. Seven districts namely: Chamba, Lahaul & Spiti, Kinnaur, Shimla, Sirmour, Kullu and Mandi are characterised by high mountains of the relatively younger Himalayan Range — though a few parts of Kullu, Mandi and Sirmour districts have valleys and broad ridges. The climate in these districts ranges from temperate in the valleys, lower hills and ridges, to arctic in the higher mountains. This second region has plains, wide

valleys and low hills and comprises of the districts of Bilaspur, Hamirpur, Kangra, Solan and Una. The climate in this region varies from the tropical to the sub-tropical. These districts are quite close to the relatively developed urban centres of Punjab and Haryana and the population of this region is exposed to the dynamics of a fast changing society and an altering economic environment. Noticeably, the geographical features have had far reaching economic implications. In the geography, one can trace the origin of inter- and intra-regional inequalities.

The region with higher mountains is termed as the 'High Mountain Horse Shoe' (HMHS)

— this term is derived from the horseshoe shape it forms; and the other region is referred to as the 'Low Hills and Plains' (LHP). The demographic features of the two regions have been illustrated in Table 1.13. The HMHS is a relatively thinly populated area as compared to the LHP, which has population density that is more than the State's average. The decadal growth rate of population between 1991–2001 was also higher for the HMHS, except in Lahaul & Spiti where the population density is just two persons per square kilometre. A relatively lower sex ratio in the HMHS districts indicates to a greater gender disparity as compared to that in LHP districts. In general, the LHP districts have higher sex ratios than the State's average.

TABLE 1.13: Demographic Features of Different Regions of Himachal Pradesh

<i>Sl. No.</i>	<i>District/Region/State</i>	<i>Area (sq km)</i>	<i>Population</i>	<i>Decadal growth rate of population (1991–2001)</i>	<i>Density of population</i>	<i>Sex Ratio</i>	<i>Percentage urban population</i>
1	2	3	4	5	6	7	8
<i>A</i>	<i>High Mountain Horse Shoe (HMHS)</i>						
1.	Chamba	6528	4,60,499	17.09	71	961	7.50
2.	Kinnaur	6401	83,950	17.99	13	851	Nil
3.	Kullu	5503	3,79,865	25.66	69	928	7.92
4.	Lahaul & Spiti	13835	33,224	6.17	2	804	Nil
5.	Shimla	5131	7,21,745	16.90	141	898	23.12
6.	Sirmaur	2825	4,58,351	20.72	162	901	10.38
7.	Mandi	3950	9,00,987	16.05	228	1014	6.70
<i>B</i>	<i>Low Hills and Plains (LHP)</i>						
1.	Bilaspur	1167	3,40,375	15.35	295	992	9.79
2.	Hamirpur	1118	4,12,009	11.62	369	1102	7.32
3.	Kangra	5739	13,38,536	14.01	233	1027	5.39
4.	Solan	1936	4,99,380	30.64	258	853	18.26
5.	Una	1540	4,47,967	18.43	291	997	8.80
<i>C</i>	<i>Himachal Pradesh</i>	<i>55673</i>	<i>60,77,248</i>	<i>17.53</i>	<i>109</i>	<i>970</i>	<i>9.79</i>

Source: Provisional Population Tables, 2001, Directorate of Census Operations, Himachal Pradesh.

The status of reproductive health and health facilities available in terms of the number of hospital beds available per 1,00,000 people in the two regions has been compared in Table 1.14. Relatively lower CBRs, IMRs, GFRs and TFRs as indicators of the status of reproductive health, score better in LHP districts over the HMHS districts. Although the number of hospital beds available per 1,00,000 people in HMHS districts is generally higher than the LHP districts, it is a necessity in mountains where the population is sparsely dispersed and the means of communication like roads are not well developed. Table 1.16 makes it amply clear that the length of *pucca*

roads per square kilometre is lower than in the HMHS districts. Moreover, these roads remain closed for large periods of the year because of heavy snow and frequent slips and landslides.

The education attainment indices of the districts of the two regions are exhibited in Table 1.15. It is evident that the HMHS districts have relatively lower education attainment indices in comparison with those of the LHP districts. The education attainment index has been worked out by incorporating the literacy rate and combined enrolment ratios for the primary and secondary levels of education.

TABLE 1.14: Health Indicators in Different Regions of Himachal Pradesh

Sl. No.	District/Region/State	CBR 1991	IMR 1991	No. of hospital beds per 1,00,000 persons 2001	GFR 1991	TFR 1991	CPR March 1999
1	2	3	4	5	6	7	8
<i>A</i>	<i>High Mountain Horse Shoe (HMHS)</i>						
1.	Chamba	35.18	104	132.68	148	4.48	37.48
2.	Kinnaur	30.52	123	245.38	136	4.00	49.68
3.	Kullu	32.63	102	105.83	137	4.04	58.58
4.	Lahaul & Spiti	28.14	59	409.34	122	3.77	47.76
5.	Shimla	28.92	104	290.55	119	3.47	55.90
6.	Sirmaur	34.25	94	138.32	150	4.49	45.22
7.	Mandi	30.12	69	126.53	119	3.48	58.69
<i>B</i>	<i>Low Hills and Plains (LHP)</i>						
1.	Bilaspur	27.89	71	112.99	112	3.37	68.29
2.	Hamirpur	25.36	65	105.83	97	3.00	60.68
3.	Kangra	28.21	77	105.49	109	3.42	48.38
4.	Solan	29.81	84	184.43	122	3.51	57.16
5.	Una	29.37	82	143.93	118	3.50	43.27

Source: Cols. 5 and 8 Department of Health and Family Welfare, Government of Himachal Pradesh.
Cols. 3, 4, 6, 7 Occasional Paper No. 1 of 1997, titled 'District level estimates fertility and child mortality for 1991 and their inter-relations with other variables', by the RGI of India.

TABLE 1.15: Education Attainment Indices

<i>Sl. No.</i>	<i>District/Region</i>	<i>Education Attainment Index</i>
1	2	3
<i>A</i>	<i>High Mountain Horse Shoe (HMHS)</i>	
1.	Chamba	0.510
2.	Kinnaur	0.663
3.	Kullu	0.626
4.	Lahaul & Spiti	0.675
5.	Shimla	0.681
6.	Sirmaur	0.571
7.	Mandi	0.711
<i>B</i>	<i>Low Hills and Plains (LHP)</i>	
1.	Bilaspur	0.748
2.	Hamirpur	0.810
3.	Kangra	0.753
4.	Solan	0.677
5.	Una	0.759

Source: Computed by Planning Department, Government of Himachal Pradesh.

A few development indicators as exhibited in Table 1.16, are sufficient to infer that the HMHS districts are not as developed as the LHP districts are. The incidence of rural poverty is much higher in the HMHS districts than in the LHP districts as indicated by the percentage of rural households living below the poverty line given in Table 1.16. The major contribution of the total food-grain production in the State also comes from the LHP districts. The industrial backwardness of the HMHS districts can be judged from the lower number of factories registered in them. Industrial backwardness in this region is also inextricably linked to the remoteness and comparatively poorer infrastructure. An issue that needs an in-depth analysis is whether higher number of crimes and atrocities against women can be linked to a

greater exposure to an 'outside culture' and frequent interaction with the population of the urban centres of the Punjab and Haryana. A lower number of habitations with access to safe drinking water in the HMHS districts is another indicator of backwardness.

The above analysis clearly brings out the inequalities existing between the two regions. The development process in the HMHS districts seems to have been hampered by daunting geomorphological features and difficult climatic conditions. These factors not only prolong the execution period of development works, but also escalate their cost. The exposure of the population living in the LHP districts to the environment prevailing in the relatively busy markets of the neighbouring States can be a reason for their assuming a more outward looking attitude — this issue needs detailed examination.

Human Development in Himachal Pradesh vis-à-vis Neighbouring States and All-India.

The status of HD in Himachal Pradesh in the mid and late 1990s is compared with that of the neighbouring States of Punjab, Haryana and Jammu and Kashmir as well as that of all-India in Table 1.2. Besides, the comparison being made in terms of indicators already taken in this chapter, some additional indicators relating to child health, and those having an indirect bearing on sanitation and public health have also been used for this purpose.

Per Capita Income

Between 1990–91 and 1996–97, the average growth rate of per capita income in Himachal

TABLE 1.16: Some Development Indicators of Two Regions of Himachal Pradesh

<i>Sl. No.</i>	<i>District/Region</i>	<i>% rural households living below poverty line 1998</i>	<i>Average size of land holdings (hect) 1995–96</i>	<i>Total food grain production (000 MT) 1996–97</i>	<i>No. of registered factories 1998</i>	<i>% villages having banks within a distance of one km</i>	<i>% villages having post offices within a distance of one km</i>	<i>Crimes/atrocities against women</i>	<i>Pucca roads per sq. km.</i>	<i>% habitations with safe drinking water</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
<i>A</i>	<i>High Mountain Horse Shoe (HMHS)</i>									
1.	Chamba	61.72	0.88	110.3	61	3.00	55.00	71	7.16	98.13
2.	Kinnaur	26.57	1.48	5.7	11	8.00	32.00	24	4.45	100.00
3.	Kullu	19.30	0.78	84.5	157	20.93	87.20	35	7.31	97.70
4.	Lahaul & Spiti	37.93	1.62	1.3	–	11.40	37.40	2	1.97	100.00
5.	Shimla	33.67	1.40	104.9	147	18.79	48.51	141	20.15	92.04
6.	Sirmaur	22.89	2.28	94.9	96	6.82	17.36	91	2.39	88.70
7.	Mandi								24.73	98.47
<i>B</i>	<i>Low Hills and Plains (LHP)</i>									
1.	Bilaspur	26.62	1.08	77.7	90	24.00	60.63	62	46.70	100.00
2.	Hamirpur	24.17	1.11	98.1	162	6.55	26.55	2	46.51	100.00
3.	Kangra	24.07	0.93	272.4	219	24.19	70.82	139	31.57	97.03
4.	Solan	27.44	1.85	82.9	569	11.71	35.99	83	35.85	95.86
5.	Una	19.06	1.39	121.6	80	13.04	11.65	41	47.34	100.00

Source: Col. 3 Department of RD & PR, Government of Himachal Pradesh.

Cols. 4 to 11 *Statistical Outline 1998*, Department of Economics and Statistics, Government of Himachal Pradesh.

Pradesh at 1980–81 prices was 2.27 per cent per annum. This was much lower than the average for the country as a whole, slightly lower than that of Punjab, identical with that of Haryana, but higher than that of Jammu & Kashmir. The

data relating to economic growth and the structural features of the States' macroeconomies are displayed in rows 1–4 of Table 1.2. This comparison brings out the somewhat slow economic growth of Himachal Pradesh and calls for its

acceleration. This is all the more necessary because a slower comparative economic growth of the State is a handicap in ensuring improved standards of living for the local people. It will also keep its economy dwarfed in the looming presence of its giant prosperous neighbour, Punjab, and to an extent, Haryana. These two neighbours enjoyed the second and fourth ranks in terms of per capita income in 1996–97 amongst the 21 States of the country, as shown in row 2 of Table 1.2.

Structural Features

Looking at rows 3 (i)-(iii) of Table 1.2, one notices the nature of the production structures of the country as a whole and of the four States of the north-western region in the year 1996–97. It is obvious that the data in the Table portrays India as a typical example of an economy in transition — from that of being a primary producing to one having non-farm production as the predominant component of the GDP. Primary production has now fallen to close to one-fourth of the GDP. Himachal Pradesh, interestingly, is not far behind in this structural transformation, with primary production accounting for one-third of the SDP and the remaining two-thirds comprising the secondary and tertiary components of output. However, Punjab and Jammu & Kashmir and to an extent, Haryana, continue to have a heavy weightage of primary production in their respective SDPs. The relatively prosperous States of Punjab and Haryana have come to specialise in commercialised farm production which accounts for an unusually high proportion of primary production in their SDP. In the case of Jammu & Kashmir, the explanation of that phenomenon lies in its economic backwardness in comparison with its other neighbours, as clearly brought out by its low ranking in India in terms

of per capita income shown in row 2 of Table 1.2. Himachal Pradesh's production structure seems to be inexorably moving away from mostly farm-based production in view of its hilly terrain and harsh climate, the latter being inimical to multiple cropping in the higher hills. Such a structural change is a welcome augury because the fragile ecosystem of the mountainous regions is ill-suited to provide food and fodder for rising human and cattle populations.

Another structural feature of the States considered here is the proportion of their population below the poverty line; data in respect of this appear in rows 4 (i) and (ii) of Table 1.2. The poverty ratio estimates are for the year 1999–2000. These show that nearly 36 per cent of India's population was below the poverty line. In comparison, Himachal Pradesh had 28.4 per cent of its population below the poverty line. This contrasts sharply with the incidence of poverty in Punjab, where this percentage was only 11.8, and even Haryana and Jammu & Kashmir, where these ratios were almost identical, had a lower incidence of poverty than Himachal Pradesh.

Chelliah and Sudarshan have calculated the annual rate of reduction in the poverty ratio between 1983 and 1993–94 for different States of the country. (Chelliah and Sudarshan, 1999, pp. 10–11). This is shown in Table 1.2 for all-India, Himachal Pradesh and its three neighbours. The performance of Himachal Pradesh in this respect turns out to be highly negative to that of India as a whole; Himachal's neighbour, Punjab managed to have the incidence of poverty reduced during the period (a negative sign in row 4 (ii) indicates a reduction). Himachal Pradesh, on the other hand, saw a deterioration in poverty situation. The growth of its poverty ratio, being the worst among the eighteen States considered

by Chelliah and Sudarshan, is thus more than that of Haryana and Jammu & Kashmir too.

Demographic Comparison and Gender Parity

In row 8 of Table 1.2, comparative data on the female work participation rate, as revealed by the 1991 census, have been given. The consideration of this rate is considered important in any study of HD, insofar as it significantly impacts on such crucial indicators of HD as the gender bias and its various manifestations as well as the fertility rate. The figures in Table 1.2 show quite a high work participation rate for Himachal Pradesh compared to its neighbouring States and even higher than the average for the country as a whole. The sex ratio and the female work participation rate have been found to be closely related variables. In a district-level econometric analysis of mortality, fertility and gender bias in India (which, unfortunately, excludes the districts of Himachal Pradesh from analysis) Mamta Murthi *et al* observe that, 'Higher female labour-force participation reduces the extent of gender bias in child survival, and this effect is statistically significant'. This study parenthetically notes that, unlike other north Indian States but similar to southern ones, Himachal Pradesh has a female mortality rate lower than the male rate in the 0–4 year age group. (Mamta Murthi *et al* in Jean Drèze and Amartya Sen, 1996, p. 384 and *fn.* 15). A higher female work participation rate, combined with a relatively high female literacy rate (to be considered below) may well have together produced a high sex ratio in this State as shown by the NFHS results.

Another related demographic indicator is the Total Fertility Rate (TFR). Comparative

data on this, sourced from the NFHS for the year 1992–93, are given in row 7 of Table 1.2. The TFR for Himachal Pradesh is lower than that for its neighbouring States and the country as a whole. This indicates that a demographic transition in the former is taking place at a faster pace than among the latter. This is a welcome development in view of the hill State's relatively meagre resource potential as well as its seemingly lower population carrying capacity which is a result of its fragile physical environment.

Box 1.4 — Demographic Indicators of Himachal Pradesh vis-à-vis its Neighbours

How do the demographic indicators of Himachal Pradesh compare with the all-India position and those of its neighbours? The data given in Table 1.2 (rows 5 to 8), partly from the population census of 2001 and partly from the NFHS, are in respect of the population growth rate, sex ratio, total fertility rate and female work participation rate. The decennial growth rate of population (1991–2001) of Himachal Pradesh was identical to that of Punjab (i.e. 20.8 per cent) but it was lower than the national average and much lower compared to that of Haryana and Jammu & Kashmir. For the last-mentioned State, since no population census was conducted there, the growth rate shown in Table 1.2 is only a projection. The sex ratio of Himachal Pradesh is higher than the all India average and also above that of the neighbouring States. What should really concern planners of the State is that the sex ratio has declined from what it was in the year 1991. Also, the sex ratio in the age group of 0–6 years has been lower than the all India average.

Health

Comparative data on the indicators of the health profile and medical facilities, have been provided in rows 9–16 of Table 1.2. Data on total life expectancy at birth in Himachal Pradesh for the early 1990s reveal that it was only lower than in Punjab, but female life expectancy, though marginally higher than that of Haryana, was substantially lower than that of Punjab. The comparative estimates of female life expectancy, if correct, do not tally with other indices of gender bias considered in here, in respect of which, as already noted, Himachal Pradesh scores handsomely over its neighbours and the country as a whole.

The infant mortality rate in Himachal Pradesh in 1998 was higher than in Punjab and in Jammu & Kashmir, but lower than in Haryana and the country as a whole. A similar comparative picture emerges regarding the couple protection rate, where only Punjab scores over Himachal Pradesh.

Besides these indicators of health, the NFHS comparative data have also been provided in Table 1.2 on two indices of child health — the proportion of children under the age of four who were underweight and the proportion of infants aged between 12 and 23 months who were reported to be fully vaccinated. These data are for 1992–93 and these show that the percentage of underweight children was the highest (47 per cent) in Himachal Pradesh compared to its neighbouring States, but it was lower than in the country as a whole. By contrast, the proportion of infants fully vaccinated in Himachal Pradesh was higher than in the neighbouring States of Punjab and Haryana and much higher than in the country as a whole.

This proportion in Himachal Pradesh was, however, lower than in the Jammu region of Jammu & Kashmir which alone was covered under the NFHS. These comparisons thus bring out a mixed picture of child health in Himachal Pradesh.

Other Amenities as Indices

Supplementary indices on sanitation and public health — the proportion of households enjoying the benefit of safe drinking water and that of toilets, have also been provided in Table 1.2. These data, derived from the population census 1991, show that 77.3 per cent households had the facility of safe drinking water. Here, Himachal Pradesh was only worse off compared to Punjab, but was somewhat better off than Haryana — and was much better off in comparison to the all-India position. In terms of the proportion of households with toilet facilities, Himachal Pradesh comes out very poorly both in absolute and relative terms. Only about one-eighth of the households had this facility; and in comparison to its neighbours and the country as a whole, Himachal was much worse off in this respect.

In a country where State agencies are the chief providers of medical and health facilities, the quality of these ultimately depends on the expenditure incurred on them, relative to the population to be served. In this regard, per capita public expenditure on medical, public health and family welfare services in Himachal Pradesh, the neighbouring States and the average for the country as a whole, for the year 1997–98, are given in row 16 of Table 1.2. It is seen that in this respect Himachal Pradesh fared worse only in comparison to Jammu & Kashmir, but did better than both Punjab and Haryana.

In comparison to the average per capita public expenditure on these services in the country as a whole, Himachal Pradesh was providing well over double.

Education

Finally, the performance of Himachal Pradesh in terms of the education indicators of HD, compared to that of its neighbours and the average all India position may be evaluated with the help of data given in rows 17–19 of Table 1.2. Here, the two well-known indicators of education — the literacy rates and the enrolment ratios are further supplemented with comparative data on per capita public expenditure on education and allied activities. Regarding literacy, the 2001 population census data (provisional) show that in terms of total literacy rate and its two components, the male and female ratios, Himachal Pradesh stands out in comparison to Punjab and Haryana, and does well in comparison to the all-India figure.

It may be seen in Table 1.2 that the gross enrolment ratios for the year 1996–97 in Himachal Pradesh are uniformly higher than in Punjab, Haryana and the country as a whole. This is so at the primary as well as middle level of classes and in respect of both boys and girls, as well as all pupils being clubbed together. It is also significant to note that the data given in Table 1.2 bring out the near-achievement of the goal of universal elementary education only in case of Himachal Pradesh. In narrowing the gender disparity in enrolment, only Punjab excels Himachal Pradesh.

The comparatively better performance of Himachal Pradesh in matters of spread of literacy and near-universal school enrolment at the

primary level is no doubt the result of the State Government according a high priority to education — as has already been noted. This in fact translates into relatively large allocations of budgetary resources to this sector. Figures in row 19 of Table 1.2 clearly testify to this fact. In 1997–98, the per capita public expenditure on education and allied activities in Himachal Pradesh worked out to Rs 629.2, which was higher than that of the neighbouring States and much higher than the national average. This higher allocation of public funds to education seems to have paid off, and Himachal Pradesh is now counted as amongst the most progressive States of the country in this respect.

Some Infrastructural Indices of Himachal Pradesh in comparison with Neighbouring and Relatively Developed States

Having discussed in the preceding three sections the current status of HD in Himachal Pradesh as well as comparing it with the neighbouring States and the country as a whole — and inter-temporal trends in the same — it is now time to round off this discussion by drawing important conclusions from the foregoing analysis. In particular, it will be useful to pinpoint the dimensions of HD where Himachal Pradesh has performed well, and those where it seems to be lagging behind and, therefore, may need extra policy initiatives. Besides these, two other things need to be focused on in this concluding part. These are, the extent of gender bias in Himachal Pradesh, and secondly, a brief comparison between the current status of HD in Himachal Pradesh that has been inferred from the data used in this chapter and that which can be deduced from the data of the recent NCAER report on the subject.

It is desirable at this stage to make a comparison of Himachal Pradesh with some States of the Union of India for getting an idea about the comparative disadvantages, which are inherent to the economic history of the State. The States selected for comparison with Himachal Pradesh, are Punjab, Haryana, Goa and Kerala. The reason for selecting Punjab and Haryana is that these two States also came into existence round about the same time as Himachal Pradesh and have followed their own chosen path of development. Goa is a new and much smaller State and still has the distinction of being called as one of the 'developed States' of India. Kerala too is one of the most developed States of the Union of India when we talk about human development.

The reason for not making any comparison with the North-eastern States — while they have similar features to those of Himachal Pradesh, with slight variations — is that they already have a 'special category status'. These States also face the peculiar problem of insurgency and a sense of alienation seems to exist at various levels. Thus, they may not be strictly

comparable with Himachal Pradesh in terms of developmental indices. Moreover, it is not the purpose here to compare 'Special Category States' or to try and justify the 'Special Category Status' of Himachal Pradesh but to stress upon the factors responsible for making the development process difficult in the State.

Himachal has indeed done well in terms of per capita availability of health and education facilities, but an important factor which is not taken into account while evaluating these two facilities is the actual distance a person has to cover to avail of them. An aerial distance of one kilometre in actual terms means much more as a result of the topography. Expectedly, the peculiarities of the terrain and climate advocate for the adoption of separate norms for establishing the infrastructural indices for hill States. The indices worked out for hill States by various agencies cannot be strictly compared with those of other States. High values of indices of the availability of health and education facilities have weighed heavily in the overall 'infrastructure development index' and

TABLE 1.17: Infrastructure Development Indices and Socio-economic Indices of Five States including Himachal Pradesh

State	Infrastructure development index	Value of agricultural produce (Rs per capita)	Employment in industrial sector (nos.)	Primary health centres (per lakh of population)	Hospital and dispensary beds (per lakh of population)	Primary schools (per lakh of population)	Middle/Higher schools (per lakh of population)
1	2	3	4	5	6	7	8
Himachal Pradesh	113.88	1187	43,783	5.00	165.69	138.65	18.60
Punjab	171.92	5248	4,17,998	2.04	138.80	57.18	11.20
Haryana	133.12	4455	3,71,290	2.19	62.34	30.41	7.74
Goa	171.52	4312	22,582	1.74	n.a.	85.58	n.a.
Kerala	162.42	6629	n.a.	3.03	134.30	21.91	9.77

Source: Compiled from *Profile of Districts*, CMIE, October 2000. Mumbai.

yet, the true picture of the problems of the hill States is not revealed.

Although climatic conditions and geo-morphology seem to favour agriculture in the State, Table 1.17 clearly shows the lowest per capita value of the agricultural produce in Himachal Pradesh among the five States. This is because of the low productivity in agriculture, which can be attributed to the high costs of inputs caused by relatively higher transportation costs and a near total dependence on the rains besides the intrinsic character of marginality of land resource in the mountain regions at large. Himachal Pradesh does not lag very much behind other States in terms of the Infrastructure Development Index but then, this is biased heavily with the large values of indices regarding the availability of health and educational facilities.

Table 1.18 establishes the backwardness of Himachal Pradesh in terms of village connectivity by road. It is revealed from the Table that about 90 per cent of the villages of the State are with a population of less than 1000 and only 43.63 per cent of these villages are connected by road. A critical fact, which is not revealed from the Table, is that most of the roads connecting small villages are not all-weather roads. Loose strata of the relatively younger Himalayas, is hardly able to sustain even the slightest of rains and frequent slips — along with the snow during winters — make these roads usable only for a limited period of the year. Table 1.19 exhibits a few more infrastructure development indices. Almost all the villages in Himachal Pradesh have been electrified. The high number of post offices available per lakh population is inevitable in the hill States. The development of railways is a difficult task because of extremely high costs involved.

Developmental Constraints in Himachal Pradesh

Himachal Pradesh is largely a mountainous State and the altitude varies between 350 metres in the plains bordering neighbouring States of Punjab and Haryana, to 6975 metres above mean sea level in the alpine zone of the Himalayas. No uniform development norms can be adopted for these immensely varied topographic conditions. Rugged undulations and tough terrain in the higher Himalayas with a low population density — as in the district of Lahaul & Spiti — makes the formulation of a development strategy a truly Herculean task. Climatic variations at different altitudes which range from very high precipitation in the Kangra valley to desert like conditions in the Spiti sub-division of Lahaul & Spiti and in the Pooch sub-division of Kinnaur district, put considerable constraints on resource planning. The Spiti and Pooch subdivisions of Lahaul & Spiti and Kinnaur, receive very little precipitation and that too only in winter in the form of snow. This is in sharp contrast with the Kangra valley which receives 1941.7 mm annually causing flash floods, soil erosion, land slides and slips inflicting extensive damage to physical infrastructure and live stock.

Himachal's rugged topography and challenging climatic conditions make the cost of the creation and maintenance of infrastructure extremely high. The cost of construction is escalated not only because of high transportation expenses of construction material, but also due to the non-availability of local skilled and unskilled manpower. Road blockages caused by frequent slips and slides also result in an unwarranted delay in execution of works.

Himachal Pradesh has been bestowed with

TABLE 1.18: Village Connectivity by Road

(as on 31 March, 1995)

State	With population <1000*		With population 1000–1500		With population >1500	
	Villages connected	as % of total villages	Villages connected	as % of total villages	Villages connected	as % of total villages
1	2	3	4	5	6	7
Himachal Pradesh	7133	43.63	249	94.68	526	92.77
Punjab	8779	99.29	1657	100.00	1689	100.00
Haryana	3229	98.60	1159	99.91	2309	99.96
Goa	172	100.00	1001	100.00	123	100.00
Kerala	6	100.00	10	100.00	1292	100.00

* figures pertain to 31 March 1994.

Source: Compiled from *Infrastructure*, CMIE, January 2001, Mumbai.

TABLE 1.19: Infrastructure Development and Indices (1995)

State	Villages electrified as % of total villages	Road length per 100 sq. km	Railway route length per 100 sq. km	Post offices per lakh population	Telephone connections per 100 persons	National Highways (km)*	State Highways (km)*
	2	3	4	5	6	7	8
Himachal Pradesh	99.73	53.78	0.48	49.35	1.44	733	3682
Punjab	100.00	113.26	4.21	17.17	4.59	1198	2166
Haryana	96.52	61.48	3.28	14.35	1.33	656	3135
Goa	97.67	197.38	2.14	n.a.	n.a.	225	235
Kerala	100.00	358.52	2.71	16.42	2.10	1011	3769

* figures pertain to the year 1996–97.

Source: Compiled from *Profile of Districts*, CMIE, October 2000 and *Infrastructure*, CMIE, January 2001 Mumbai.

five mighty rivers — the Beas, the Chenab (Chander-Bhaga), the Ravi, the Satluj and the Yamuna. These are perennial in nature and yet, steep gradients limit the scope of flow irrigation. This leaves no option except to adopt lift irrigation, which is relatively expensive, and the maintenance costs are high because of frequent landslips and channel blockages. Agriculture is largely dependent on the North-west monsoons and the

Western disturbances, which are known for their uncertain character. The perennial nature of the five rivers ensures a vast potential for hydropower generation but huge capital requirements and high ecological and rehabilitation costs are again an impediment. Constrained with the availability of resources, Himachal Pradesh has already started encouraging private participation for harnessing an estimated potential of 20,000 MW of

Box 1.5 — Why a ‘Special Category Status’ for Himachal Pradesh

The decision of the Government of India to create Himachal Pradesh as a separate administrative unit was largely influenced by the sentiments of the local people. The financial ramifications were kept out of this decision. While the process of political and administrative democratisation set in with the emergence of the State, no heed was paid to assess the financial resources of the State. Budgetary and financial controls rested with the Central Government till Himachal attained the status of a full-fledged State of the Indian Union.

It was natural for Himachal Pradesh to rely almost entirely on the Central Government for financial support mainly because of two reasons. First, it was necessary to maintain the administrative set up and the wage structure of the employees at the level that existed at the time, and secondly, the State had a poor resource endowment as compared to other States. In Himachal Pradesh, the Government of India did not hesitate in accepting the level of services and wages at the level prevailing in the neighbouring State of Punjab. This was done without going into the imbalances in terms of resource availability in the two States. Hence, Himachal Pradesh inherited a heavy financial burden in terms of huge spending on maintaining the infrastructure left by the Central Government at the time of getting full-fledged Statehood. There was no resource availability commensurate with the inherited liabilities or of their future implications — both political as well as administrative.

It may have given an impression of reasonable level of comfort, in the first instance, in running affairs of an independent administrative unit with a small population of 34.60 lakhs and a total area of 55,673 square kilometres. It was soon realised that the financial resources of the State were too meagre to meet the developmental needs and the people’s expectations. In fact, Himachal has always looked towards to the Central Government for financial assistance ever since its inception. There are several geomorphological, climatic, social and economic factors, which have limited the capacity to mobilise additional resources — and this is the case not only of Himachal Pradesh but also of other hill States, which have a similar topography. Economic constraints have been perpetuated by natural constraints, which, in turn have been vitiated by economic constraints.

hydel power. Returns on investment made on the hydel power projects have not started flowing in because of the long gestation periods and even when the returns start flowing in, they may not be adequate in the near future or with a medium term perspective. By then, expenditure requirements both on revenue and capital account will have climbed to much higher levels. If both ecological and rehabilitation costs are also taken into account, there will be a further alteration in the cost benefit ratio.

Historically, the important source of non-tax revenue forests can no more be relied upon for additional resource generation because of ecological concerns and there is also the fact that the regeneration of flora at higher altitudes has a relatively lower success rate. The State of Forest Report, 1997 classifies 63.6 per cent of the total area of the State as forest area, but the effective forest cover is only 12,521 sq. km. (22.5 per cent) as large areas are either covered by alpine meadows or lie above the tree line.

The survival rate for the plantation of coniferous trees is extremely low as these trees are not known to be particularly amenable to regeneration by human efforts and the maturity periods range from 150–250 years. The State Government has already banned the commercial felling of trees and the only means of extraction of trees from the forests is either by way of ‘timber distribution rights’ to the people or by salvage extraction. The deteriorating ecology of the already fragile Himalayas may leave the State with limited options on revenue generating activities related to the forests.

The absence of a sizeable market for finished and intermediate products, and low endowments of industrial raw materials are factors responsible for slow industrial growth. The State has to rely upon external markets for the import of raw materials and for the disposal of finished goods. Distant markets result in high transportation costs and hence there is a high cost of production. These high costs involved in the production of goods take away the competitive edge, if any, from the local entrepreneurs and narrow down the scope for the development of medium and large-scale industries in the State. The mentioned factors have resulted in the confinement of industrial activities to pockets that border the neighbouring States of Punjab, Haryana and Uttar Pradesh — which have large markets for both procuring raw materials and for disposing off finished products.

Human Development in Himachal Pradesh — Conclusions on its Current Status and Trends

Over the last half a century, in terms of different indices of HD, the life of the people of Himachal Pradesh has improved considerably and

the processes of economic growth and the changes in the production structure have had a significant effect on the living standards of the hill people. Forces have been set into motion that help them enjoy the benefits of longer and healthier lives. They are also becoming more knowledgeable through the spread of literacy and formal education. A silent demographic transition also seems to be underway.

That the different processes of transformation of the lives of the people do not operate in a uniform manner is to state the obvious. In the case of some dimensions of HD, the people of Himachal Pradesh may have benefited more than in others. Where has the State performed better and given the benchmarks of its neighbours and the hindsight of time, where has it faltered?

Based on the foregoing analysis we look at these two aspects of status and of the trends of HD in Himachal Pradesh below.

Indices of Relatively Better Human Development Status and Performance

The discussion in the foregoing sections brings out the following dimensions of HD in terms of which Himachal Pradesh’s performance has been relatively better and more satisfactory:

- i. Economic growth, as measured by the growth of real per capita income, has been fairly rapid over time. This has enabled the State to hold its own among the middle income States of the country. It has risen from the ranks of the poorest States and has managed to prevent a

relapse. But compared to its more prosperous neighbours, especially Punjab, the growth of per capita income in Himachal Pradesh has been rather slow.

- ii. Among the more positive trends in the State and its improving status in comparison to other States, can be counted the demographic transition that has been underway in recent decades. Quantitatively, the transition manifests itself in the form of declining population growth rate and the TFR, and qualitatively, in the improving sex ratio, which according to the NFHS estimate is the highest in the country. This is an unmistakable sign of that transition.
- iii. The rapid growth of literacy, both male and female, and the spread of elementary education which has just about become universal in the 6–14 age group, are among the most encouraging aspects of HD in this State. Independent researchers like the PROBE Team have not only referenced to the ‘schooling revolution’ in the State but have also lauded its achievements in qualitative terms in this sector in comparison to the lesser performing States. This performance has been deservedly ascribed to the State Government’s support to the sector in the form of budgetary support and provision of educational infrastructure.
- iv. In the area of public health and medical facilities, even though performance in the State has been rather mixed, some indicators like the reduction of the I.M.R. over time, covering of quite a large proportion of infants under the immunisation programme, and provision of safe drinking water to the people, do

point to a much better level of attainment, especially in comparison to that of the neighbouring States and to the all-India position.

Indices of Relatively Poor Human Development Status and Performance

The discussion in the first three sections of this chapter also bring out several areas in respect of which the current status of HD and performance over time have been somewhat poor. These are the following:

- i. Perhaps the most worrying aspect of HD in the State is the relatively high incidence of poverty. In 1993–94, a little under one-third of the population was estimated to be still living below the poverty line. During the decade of nineties, there has been a deterioration in this respect — and among the major States of the country, the rate of deterioration was found to be the highest. This has, unfortunately, distorted the over-all HD profile of this State.
- ii. In terms of indicators of health status and medical facilities, the performance has been somewhat unsatisfactory. These include critical indices like life expectancy at birth which for over a decade or so seems to have remained almost stagnant, medical facilities like hospital beds in relation to the population which have not shown a rising trend and the couple protection rate which still leaves a little under half of the married couples unprotected against unwanted pregnancies. A better performance in the last-

mentioned index of medical facilities, would have certainly helped in hastening the demographic transition in the State.

- iii. The relatively slower progress in the important health sector can be primarily ascribed to the low proportion of public expenditure being allocated to it. Even though on a per capita basis, the public expenditure on medical facilities is currently quite high, especially if considered in an inter-State perspective, yet due to (i) the rising costs of health infrastructure and medicines, (ii) presumably the higher building and maintenance costs of such infrastructure in the hills, and (iii) perhaps the relative inefficiency in the provision of public health services, the per capita public health expenditure advantage has not commensurately translated into better service delivery.

Status of Gender Disparity

So far, the vital issue of gender bias or disparity has not been focused on. This stands alone here in order to explore the question separately and in greater detail.

In general, the world over, the female component of population has been discriminated against, oppressed and exploited. In India too, the unfortunate phenomenon of gender disparity is quite widespread, though its extent varies from one region to the other. In Himachal Pradesh, some positive features of social life and customs make for less gender discrimination, though it would be too simplistic to gloss over its presence. A significant characteristic is the absence of the pernicious 'purdah' system in most parts of the State. The PROBE

Team, during its study of elementary education, also recorded some of these positive features of gender relations in Himachal Pradesh and noted that the ' . . . patriarchal relations here leave more scope for female independence. One major consideration is that Himachali women have a high involvement in work outside the home. This contributes to their economic independence, freedom of movement, decision-making power, and social recognition. Women's autonomy has been reinforced by local kinship practices (involving, for instance, enduring links between parents and married daughters), and by high rates of male out-migration. Following on this, gender discrimination is less common in Himachal Pradesh than elsewhere in north India.' (PROBE report, p. 125.)

Our indicators of HD on gender bias lead to the following conclusions:

- i. In terms of what are called the indices of female disadvantage in survival, the indicators in Himachal Pradesh were quite favourable till 1991. These include — (i) an improving sex ratio over time, (ii) a slowly rising longevity of life of females according to some estimates, and (iii) some — though scanty — evidence on sex-wise I.M.R. pointing to a sharper decline in female I.M.R. than the male I.M.R. However, the provisional figures of the Census 2001 indicate to a considerable decline in the sex ratio particularly, in the age group of 0–6 years.
- ii. The changes observed in reproductive behaviour, in the form of a rising couple protection rate and a corresponding decline in the T.F.R., show that female empowerment in Himachal Pradesh is slowly taking shape, insofar as these offer

them choices of when to have a baby, or to have one at all.

- iii. In the important area of literacy and school enrolment, the female literacy rate has risen more than 2.5 times in two decades (1971–91), though this has not helped to narrow the gender gap in literacy, the gap (male literacy minus female literacy rate being equal to 23.3 in 1991) remained practically unchanged during this period; and a low gender bias in school enrolment clearly emerged, especially in the case of the disadvantaged SC/ST classes in the educationally backward districts, where data are available.
- iv. The female work participation rate in the State is higher than in the neighbouring States and compared to the country as a whole. This, along with more than half the female population of the State enjoying the benefit of literacy may have contributed to a lower female child survival disadvantage, thus giving a relatively high and rising sex ratio.

Thus, most indices of gender disparity are favourable in this State, especially in comparison with other States of the country. These, combined with some benign features of gender relations referred to earlier, may have produced an overall milieu which makes for relatively low gender disparity in the State.

Status of Human Development in Himachal Pradesh — A Comparison between NCAER and Other Sources of Data

In this concluding section, we compare some of the data used in this chapter with that which was

provided on Himachal Pradesh in the comprehensive 'India: Human Development Report' (1999) by the National Council of Applied Economic Research (NCAER). While making this comparison, some special features of the NCAER Report must be kept in mind. These are — (i) the Report is based on its own data generated through a survey conducted in 1994, (ii) it primarily refers to India's rural sector, (iii) it uses some indices of well-being of the people which are different from those used by the UNDP in its annual HDRs and, (iv) the NCAER Report does not attempt to calculate the composite human development indices of Indian States on the pattern of those provided by the UNDP reports for different countries. For Himachal Pradesh, the NCAER collected data from 1225 sample households.

The data for Himachal Pradesh from the NCAER Report for 1994 and that mainly contained in Table 1.2 for the early or mid-1990s in respect of some of the indicators of HD considered earlier in this chapter are shown in a comparative form in Table 1.20 below.

In some indices, both sets of data bring out a similar picture of the status of HD in the State, like (i) literacy ratios are high including those of the females (ii) the gross enrolment ratios in classes I–VIII too are high and these indicate only a minor degree of gender disparity, (iii) the female work participation rate is satisfactory by Indian norms, (iv) the fertility rate is low, (v) the couple protection rate and proportion of fully immunised infants (aged 12–23 months) are not low — though not very impressive either, and (vi) the two facilities within the household impinging on health and hygiene — which are the availability of protected water and toilets do not portray a very satisfactory picture, especially the latter facility and calls for further improvement.

TABLE 1.20: Indicators of HD in Himachal Pradesh:
Comparative Data from NCAER and Other Sources

<i>Sl. No.</i>	<i>Indicator</i>	<i>NCAER (1994)</i>	<i>Other sources</i>	<i>Latest figures from different sources</i>
1	2	3	4	5
1.	Per capita income (Rs)	4168 (12)*	7935 (1994–95) (8)*	18,920 (2000–01)
2.	Population below the poverty line: (HCR %)	45	28.4 (1993–94) 30.0	7.63 (1999–2000)
3.	Literacy rate (7+ years) %			
	Total	68.2	63.9	75.91
	Male	79.4	75.4	84.57
	Female	57.0	52.1	67.08
			(1991)	(2001)
4.	Female work participation rate (%)	37.7	34.8 (1991)	n.a.
5.	Gross enrolment ratio (6–14 years)			
	Total	92.7	–	n.a.
	Male	95.5	97.0	
	Female	90.0	95.0	
			(1996)	
6.	Total fertility rate	2.7	2.9 (1994)	2.14 (1998–99)
7.	Couple protection rate (%)	55.9	56.9 (1994)	52.99 (1999)
8.	Infants (aged 12–23 months) fully immunised (%)	57.2	62.9 (1992–93)	83.40 (1998–99)
9.	% of households with protected water facility	73.9	77.3 (1991)	n.a.
10.	% of households having a toilet	16.2	12.4 (1991)	43.22 (1997)

* Indicates rank among the States considered by the NCAER, 1999.

n.a. Not available.

Sources:

Col. (3) NCAER, 1999.

Col. (4) Row Nos.:

- 1 DESHP, 1997, p. 216.
- 2 Same as in Table 1.1, columns 8–9.
- 3 Same as in Table 1.1, columns 29–31.
- 4 Same as in Table 1.1, row 8.
- 5 PROBE Report, 1999, p. 116.
- 6 Department of Health and Family Welfare, Himachal Pradesh (1997–98), p. 31.
- 7 Ibid., p. 51.
- 8 NFHS, 1995 a, Table 9.9, p. 159.
- 9–10 Same as in Table 1.2, rows 14–15.

Col. (5) Row Nos:

- 1 DESHP, 2002, p. 7.
- 2 Planning Commission, Government of India.
- 3 Census data, 2001.
- 6 NFHS 2.
- 7 Department of Health and Family Welfare, Himachal Pradesh.
- 8 NFHS 2.
- 10 NHDR 2001, Table 3.4, p. 171.

In these respects, therefore, the status of HD in the State is shown to be nearly identical by the two sets of data and in the bargain, each reinforces the confidence level of the authenticity of the other.

However, in respect of indicators 1 and 2 in Table 1.20, there are wide differences in the data from these alternative sources. In case of per capita income, the figure under column 4 of the Table is nearly 53 per cent higher than the

NCAER estimate. The latter also places the State at the twelfth rank in this respect compared to the former's eighth among the identical States of the country.

There is a wide gap between poverty estimates (the head-count ratio) of the two sources. The NCAER estimate ranks Himachal Pradesh as the State with the third highest poverty ratio in contrast to the alternative source which rank the State somewhere in the middle among the same States as considered by the former. The NCAER ranks Himachal Pradesh only above Orissa and West Bengal. This issue is taken up in greater detail in Appendix 1.

Box 1.6 Human Development Indices

Slight variations in calculating Human Development Indices have been made from the standard methodology as prescribed by the UNDP for incorporating the former into the SHDR's. District level data on the Life Expectancy at Birth have not been made available by any of the agencies. It was also not possible to construct life tables from the Census data as district wise population figures by single year of age have not been made available in any of the Census reports. Hence, Infant Mortality Rate (IMR), in place of Life Expectancy at Birth have been used to arrive at Health/Life Index (refer to Technical Note for details). Health Indices hence arrived at — along with the Income Indices and Educational Attainment Indices — have been incorporated into the Human Development Indices. Methodology adopted for calculating other two Indices has been standard. Human Development Indices and other constituent Indices (Health Index) calculated by following deviations are not strictly comparable with those for the districts of other States because of obvious reasons. However, these indices give a fair idea about the inter district variations in the levels of human development.

Table 1.21 contains the district wise Human Development Indices and constituent indices i.e. Income Indices, Educational Attainment Indices and Health Indices. The Human Development Index for Himachal Pradesh has been worked out as 0.433 (the comparison with other States is not possible because of methodological differences). The district of Kullu tops in Human Development as it has the highest HDI. Shimla, Kinnaur, Lahaul & Spiti and Solan are the other districts which have higher Human Development Indices than the State as a whole, and these districts have second, third, fourth and fifth ranks, respectively. All other districts have a lower Human Development Index than that for the State — with Mandi district at the bottom (0.390). Both Bilaspur and Chamba hold the seventh rank with the HDI at 0.423. Una, Hamirpur and Sirmour are the districts with tenth, ninth and eighth ranks, respectively.

The ranks of various districts in terms of the Human Development Index do not co-vary with those in terms of other constituent indices. For example, Kullu despite being ranked first in terms of Human Development Index has

TABLE 1.21: Human Development Indices for the Districts of Himachal Pradesh

<i>Districts/ State</i>	<i>Income Index</i>	<i>Rank</i>	<i>Educational Attainment</i>		<i>Health/Life</i>		<i>Human Development</i>	
			<i>Index</i>	<i>Rank</i>	<i>Index</i>	<i>Rank</i>	<i>Index</i>	<i>Rank</i>
Bilaspur	0.183	7	0.747	4	0.340	7	0.423	7
Chamba	0.191	6	0.510	12	0.569	2	0.423	7
Hamirpur	0.103	11	0.810	1	0.299	9	0.404	9
Kangra	0.163	8	0.752	3	0.382	10	0.432	6
Kinnaur	0.349	2	0.626	10	0.556	3	0.510	3
Kullu	0.238	5	0.663	9	0.701	1	0.534	1
Lahaul & Spiti	0.471	1	0.678	7	0.257	11	0.469	4
Mandi	0.132	10	0.711	5	0.326	8	0.390	11
Shimla	0.304	3	0.681	6	0.569	2	0.518	2
Sirmaur	0.155	9	0.571	11	0.500	4	0.409	8
Solan	0.255	4	0.676	8	0.431	6	0.454	5
Una	0.090	12	0.759	2	0.347	5	0.399	10
Himachal Pradesh	0.184		0.697		0.417		0.433	

Source: Computed by the Department of Planning, Government of Himachal Pradesh.

managed to get the ninth rank in terms of Educational Attainment Index. Similarly, Una has got second rank in terms of Educational Attainment Index but has been ranked tenth in terms of HDI. A cursory look at Table 1.21 reveals that the Human Development Indices alone do not reflect the levels of development in the fields of health and education and in terms of per capita income. Also, the proxies used to capture human 'well being' do not cover all aspects of

human development; hence these Gender Development Indices may be used with a little caution. The selected variables may also not be appropriate for different reasons having different geo-climatic, socio-cultural, economic and environmental conditions. Notwithstanding the limitations in using the Human Development Index, its importance in giving a broad idea about the level of human development cannot be undermined.

CHAPTER 2



**HISTORICAL PERSPECTIVE:
ADMINISTRATIVE,
POLITICAL AND SOCIO-CULTURAL**



Historical Perspective: Administrative, Political and Socio-Cultural

Ruled by feudal rulers — titled Rajas or Ranas — some thirty hill states¹ or ‘Protected Hill States’ as they were euphemistically called by the British administrators, integrated to form a centrally administered Chief Commissioner’s province. Following in the footsteps of India’s independence, this epoch making day was 15 April 1948 and is celebrated every year as Himachal Day. With unification, the new era witnessed the ‘subjects’ of the former princes enter the portals of mainstream democracy. In their political life, a giant leap that spanned over a century and a quarter had been taken. At the end of the British-Nepalese war (1814–15), the ‘Simla Hill States’, which constituted a majority of the merging units, came under British suzerainty and became insulated from the ideas and political movements spreading across British Indian provinces. The sudden transition from feudal to democratic norms with little or no previous traditions or working experience of democratic institutions, tended to create a dichotomy between the ‘structure’ and the ‘style’ of politics.

1. Including Mandi state, which merged on 23 July 1949 (Cf: Ministry of States’ Notification 256-IB of even date). Initially constituted as a centrally administered province Bilaspur merged on 1 July 1954. Nalagarh, another hilly state affiliated with Phulkian state’s union became part of Punjab in 1956 and from 1 November 1966 on the re-organisation of Punjab, was transferred to Himachal Pradesh.

The bonding together set into motion various social, economic and political forces — which singly or in combination, whipped up the winds of change. The formation of the Pradesh as the first entirely hill province inculcated in the *paharias* (of the mountains), a term used to be employed pejoratively for hillmen by the people of the plains, a sense of distinct personality and identity. Besides this great gain, the political awakening found a matching beat in the economic and social cultures as well. Of substance, however, the democratisation of administration was missing. It was this lack of administrative control over their own affairs, which unquestionably spurred them on to achieve the ultimate goal of statehood.

At the time of its birth, this Centrally Administered Province extended over an area of 10,600 square miles (25839 square kilometres). The exchange of a few enclaves was notified on 15 January 1950, mainly to straighten out the irritating angularities in the border with the neighbouring provinces of the East Punjab, the United Provinces, and PEPSU. These did not add much to its size. But with amalgamation of Bilaspur in July, 1954, the girth of the State expanded to 28,192 sq. km. The State of the Punjab was re-organised in 1966 and while giving birth to the entirely new State of Haryana, the Punjab

Re-organisation Act, 1966, transferred to Himachal Pradesh a territorial area of 27,263 sq. km. This comprised of Shimla, Kangra, Kullu and Lahaul & Spiti. It also merged parts of the districts of Ambala, Hoshiarpur and Gurdaspur in the adjacent districts of Himachal Pradesh — which now came to possess a geographical area of 55,673 sq. km. Today, Himachal Pradesh constitutes 1.69 per cent of the total area of the country and in size ranks fourteenth amongst India's States and Union Territories.

Administratively, the Pradesh was initially divided into the four districts of Chamba, Mahasu, Mandi and Sirmaur. The number rose to five with the amalgamation of Bilaspur. In consideration of strategic compulsions, on 1 May 1960, the new border district of Kinnaur was carved out of the then Mahasu district. In 1966, to the six districts of the time, were added the four additional districts of Kangra, Shimla, Kullu and Lahaul & Spiti. After the attainment of Statehood, the Government undertook a re-organisation of the districts. From 1 September 1972, Una and Hamirpur were created out of the Kangra district and by re-drawing the boundaries of Mahasu and Shimla districts, the new district of Solan was created. In the process, the Mahasu district was completely wiped out. From that date on, Himachal Pradesh has had the unchanged number of twelve districts.

According to the Census of 1961, the State had 23 tehsils and five sub-tehsils. The number of these basic functional units of administration kept on increasing. It rose from 53 in 1966 to 73 in 1981, and to 103 in 1991. Today, there are 52 subdivisions, 75 tehsils and 34 sub-tehsils.² The number of inhabited villages rose from

11,133 in 1951 to 13,060 in 1961; to 16,916 in 1971; to 16,997 in 1991 and in 2001 the number stood at 20,118. A majority of the villages have a population of less than 200 persons.

In all, there were 11 'statutory towns' in 1951; 13 in 1961; 35 in 1971; 46 in 1981; and 58 in 1991 and by 2001, the number rose to 56. Shimla is the only town classified as a Class I town (with a population of one lakh and above). The rest are categorised as either Class III or IV.

As the area of the State has remained unchanged since 1971, it is convenient to study the pattern of households for the period 1971 to 1991. According to the 1971 Census, there were 6,25,512 occupied residential houses and 6,54,157 households. The number increased to 7,71,573 and 7,83,798, respectively in 1981, and to 9,59,453 and 9,69,018 in 1991. The percentage of occupied houses used for residential purpose worked out to 72.09 in 1971 and to 52.5 in 1991. The decline in percentage reflects a shift of residential houses to economic use activities. More than 30 per cent are occupied by their owners, a figure that is above the national average. A majority of households, occupy two or more rooms and the number of *pucca* houses far exceeds the *kucha* ones. Drinking water from taps is available to more than 60 per cent of the households and electricity to many more. The position in regard to toilets within the premises, however, leaves a lot to be desired. At 82.3 per cent, wood is the major source of fuel and kerosene, at the second highest, is used only by 9.29 per cent of the households.

The very first Assembly of Himachal Pradesh as a Part 'C' State (1952–56) had 36 Territorial Constituencies and eight seats were reserved for the Scheduled Castes and Tribes; the number increased to 41 when Bilaspur

2. For demographic data of the latest Census see *Census of India 2001 Series-3* – Himachal Pradesh, Paper 1 of 2001 — Provisional Population Tables.

joined the State in 1954. The State's Re-organisation Act of 1956 reduced the State's status to a Union territory and in consequence, the entire democratic edifice was held in abeyance. It revived in 1963 by virtue of the Union Territories Act, 1963. Section 3 *ibid* fixed 'the total number of seats in the Legislative Assembly . . . to be filled by persons chosen by direct election' at 40. In addition, the Act empowered the Central government to nominate 'not more than three persons, not being persons in the service of Government to be members' of the Assembly. With its enlarged area and population, the representation in the Legislative Assembly in terms of Punjab Re-organisation Act rose to 56. Since 1971, the State Legislative Assembly has 68 members all of whom are elected and the figure remains unchanged to date. In the Lok Sabha, the State has four members and in the Rajya Sabha, it has three.

Territory

Located in the north of the country, Himachal Pradesh lies between latitude 30° 22' 40" to 30° 12' 40" N and longitude 75° 47' 55" to 79° 04' 20" E. It is bounded on the north by the picturesque valley of Kashmir; on the south by the fertile plains of Punjab and Uttar Pradesh; on the west by the districts of Ambala (Haryana) and Hoshiarpur (Punjab); and finally on the north-east by Tibet. The region is veiled from Punjab plains by the Shivalik hills. It is a tract with altitudes that range from about 350 metres to 6500 metres above mean sea level. This presents an intricate mosaic of mountain ranges, hills and valleys: the white snow-clad peaks, its most prominent landmark. The Dhauladhar range looks on with supreme majesty over the Kangra valley, while the Pir Panjal, the Great Himalayan and the Zaskar ranges stand guard

over Chamba, Lahaul & Spiti, Kullu and Kinnaur. The mountain slopes are covered with forests and meadows. The peaceful valleys are interspersed with numerous streams, fields and homesteads. The rolling downs are strewn with boulders. Seen from a vantage point, the lower hills appear like ripples on the sea that have suddenly been arrested and frozen into stone. No scenery presents such sublime and delightful contrasts — and perhaps, nowhere in the world are the natural regions more sharply separated.

The four important rivers that flow through the State, form its valley system. The watershed of the river Satluj, fans out over the districts of Kinnaur, Shimla and Bilaspur. Kullu and Mandi districts lie in the valley formed by the Beas, which has its source near Manali in Kullu district. The Ravi, rising from the slopes of the Bara Bhangal range, forms its watershed in the Chamba region, the Chandrabhaga flows out of Lahaul and Pangi and the Spiti river comes from the valley of the same name. Hundreds of streams and rivulets drain through the Kangra district and pour their waters into the Beas. The fifth river, the Yamuna flows along the border of Himachal Pradesh with Uttar Pradesh and its three major tributaries, the Pabbar, the Tons and the Giri run through the lands of Shimla and Sirmaur districts.

Climate

The wide range of altitude results in marked variations in climatic conditions. The climate is tropical and sub-tropical in the lower areas, temperate in major portions and arctic in the high mountains which are perpetually covered by snow. During winter it snows down to an elevation of 1500 metres but at altitudes below 2000 metres, this does not last long. At elevations of



MAP 1: Himachal Pradesh: Administrative 1961



BASED UPON SURVEY OF INDIA MAP WITH THE PERMISSION OF THE SURVEYOR GENERAL OF INDIA

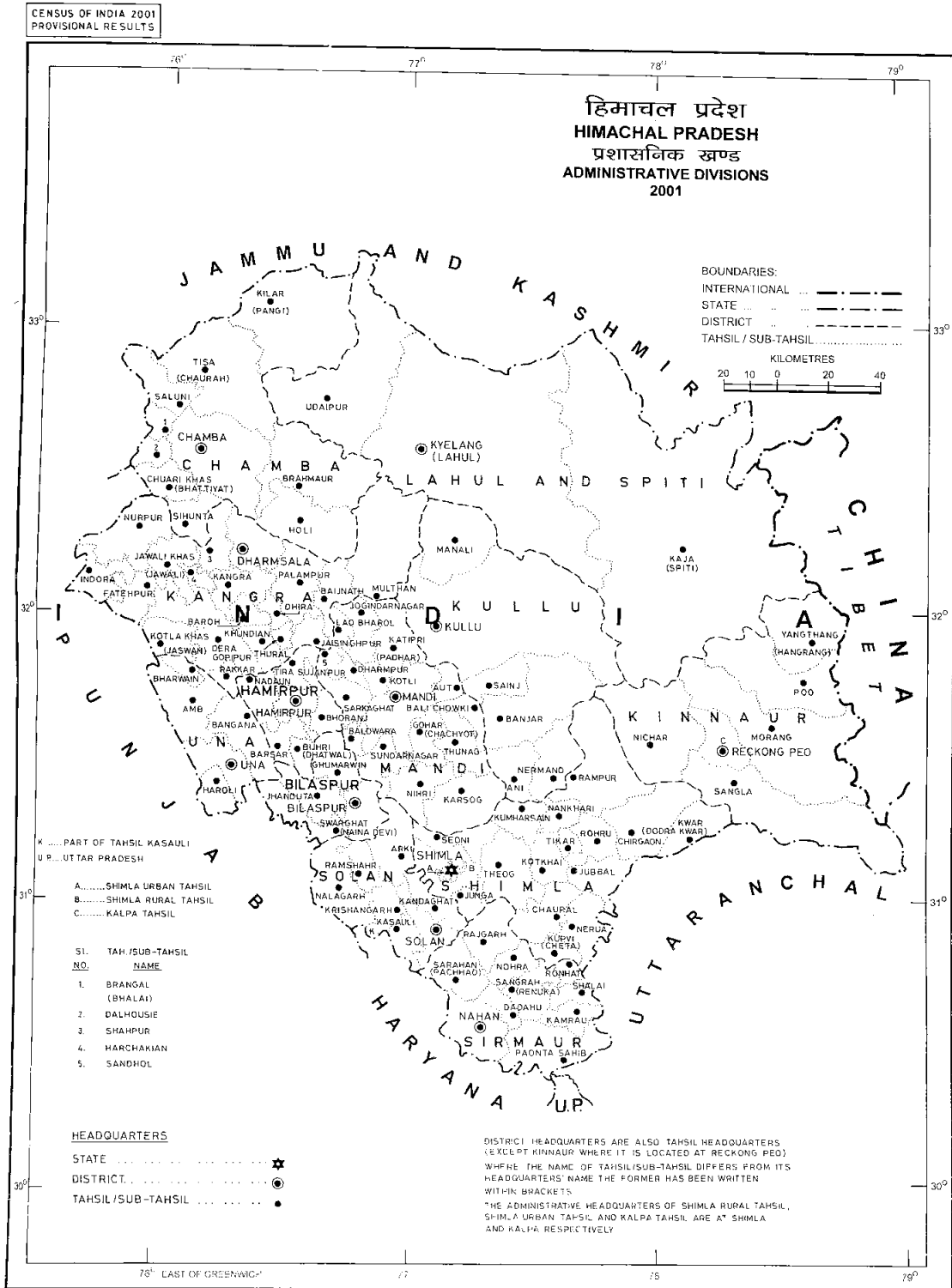
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MAP 2: Himachal Pradesh: Administrative Divisions 1971

HIMACHAL PRADESH ADMINISTRATIVE CHANGES — (1948 - 1971)



MAP 3: Himachal Pradesh: Administrative Changes (1948-1971)



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MAP 4: Himachal Pradesh: Administrative Divisions 2001

3000 metres, the average snowfall is about 3 metres during the months of December to March. Mountains above an elevation of 4500 metres wear a perpetual white mantle. Rainfall varies from district to district and year to year; the State average being 150 cm.³ The maximum rainfall is received by Kangra district (2416 mm in 1998) and the lowest in Lahaul & Spiti (683 mm in 1998 and 243 mm during 1997). Kinnaur district also receives scanty rainfall (816.4 mm in 1998 and 612.7 in 1997).

Flora and Fauna

Owing to the wide variation in altitudes and climatic conditions, the State has diverse flora that ranges from that of the Himalayan meadows and high level birch and rhododendron, down to the tropical scrub and bamboo forests of the low foothills. The tree line is reached at about 3950 metres beyond which lie the Himalayan meadows. The State's forests are not uniformly distributed. They are mostly confined to the higher hills and interior valleys — in the lower and more accessible areas these have been cleared to make room for cultivation and settlements. The coniferous forests comprise of chir, deodar, kail, spruce, silver fir and the chigoza pine. Broad-leafed forests include sal, ban oak, mohru oak, kharsu oak, walnut, maple, bird cherry, horse chestnut, poplar, alder, semal, tune and shisham.

The State represents the Western Himalayan eco-system replete with tremendous biological diversity from small animals and plants, to the majestic leopard and the lofty trees. The spectrum of life consists mainly of plant and

animal types representative of the sub-tropical Oriental, endemic Himalayan and the arid Himalayan regions. The bird species characteristic of the Shivalik zone are the grey partridge, red jungle fowl, fly catcher, thrush, sparrow, myna, lark, wagtail, warbler, cuckoo, and owl. Birds like the cheer pheasant, kalij pheasant, black partridge, monal, western tragopan and woodland birds like barbet, jay, minivet, tree pie, laughing thrush, bulbul, magpie, woodpecker, vultures, eagles and other raptors are found in the Himalayan zone. The Monal is the State bird. The western tragopan and the cheer pheasant are endangered species. The arid Himalayan zone is home to snow cock, chukor, finches, accentors, grandalas, red starts, pipits, wagtail and chough. The variety of wildlife includes animals like leopard or the panther, the brown and black bears, hyena, ibex, jackal, wild dog, yellow jungle cat, fox, wolf and the marmot. The cheetal prefers sal forests, the chausingha likes open grassy glades and the sambar lives in the low hills. The ghural is found at precipices and the barking deer keeps to the forests in high hills in summer and to the lower hills in winter. Elephants and tigers, which once were plentiful, are now almost extinct.

Geomorphology

Himachal Pradesh covers a considerable portion of the Western Himalayas and its physiographic features vary in the extreme. Aligned in a general NW-SE direction, geographers have grouped it into four longitudinal belts of varying widths each possessing distinct physiography. These are:

- i. Designated as the Outer or Sub-Himalayan zone, and also known as the Shivalik or the foothill zone, this is

3. *Statistical Out-line of Himachal Pradesh 1998*, Department of Economics and Statistics, Government of Himachal Pradesh, Shimla 2000.

composed almost entirely of tertiary and upper tertiary sedimentary river deposits. On palaeontological grounds, geologists have further sub-divided the Shivaliks into upper, middle and lower groups.

- ii. North of the Shivaliks, the Lower Himalayan Zone lies, between the 'main boundary' and the 'central Himalayan' thrusts. Most of this zone consists of granite and other crystalline rocks of unfossiliferous sediments.
- iii. The Higher Himalayan Zone is recognised in the eastern section of the State and covers the southern part of Spiti. The rocks lack fossils.
- iv. The Spiti (Tibetan) or Tethys Himalayan zone covering the Spiti valley is composed of continuous series of highly fossiliferous marine sedimentary rocks ranging in age from the earliest palaeozoic to the eocene age. Though it remains largely unstudied by the geologists, its richness in fossils and the nearly continuous well exposed sections have made Spiti a world famous region.

Topographically, the State consists of five distinct sub-regions. These are (i) valley areas with elevations upto 1000 metres, (ii) low hills, between 1000 and 2000 metres, (iii) high hills which lie between 2000 and 3500 metres, (iv) the alpine zone with altitudes above 3500 metres, and (v) the land of the perpetual snows. Climatically, the zones identified are the Outer Himalayas, the Inner Himalayas and the Alpine.

Historical Past

The ancient history of the area is screened behind

a veil of obscurity. Fragmentary light thrown by recent explorations and researches traces habitation to the later stages of Palaeolithic period. Stone tools and flakes have been discovered in various places in the State like in the Shivalik foothills; at Guler, Dehra, Dhaliara and Kangra in the Beas valley; Bilaspur and Nalagarh in the Sirsa-Satluj valley and in Suketi area of the Markanda valley of Sirmaur. Traces of settled life have also been found at Ror in Kangra — and these show that human settlements had spread all over the region and supported a people who reared domestic animals, bred livestock and had taken to farming and allied agricultural activities.⁴

The Indus valley civilisation that flourished between 3000–1750 BC in an area extending from Arabian Sea to the Gangetic valley covered the whole of Punjab upto the Himalayan foothills. According to historians, the spread of this civilisation resulted in the Munda speaking Kalorian people being pushed into the Himalayas — including present-day Himachal Pradesh.⁵ They were perhaps the earliest settlers of the Himachal hills. Possibly the *Kolis*, *Halis*, *Dums* and *Chanals* of the Western Himalayas, as well as the Chamang and Damang of Kinnaur are descendants of that ancient race. Later, the people called the Bhotas and the Kiratas are believed to have made the region their home. Presently, their descendants are found mostly in and around Kinnaur and Lahaul & Spiti.

'The Khasha, the dominant caste,' says Oakley (1905:87) 'represents a great martial race which once extended from Kashmir to Nepal.' Earlier, Cunningham (1871–87, Vol. IV; 14–16) had come to similar conclusions. 'Prior to Aryan immigration, Khasha *kanets* occupied

4. Ahluwalia, M.S., *History of Himachal Pradesh*, 1988.

5. Govardhan Singh Mian, *Himachal Pradesh—History, Culture & Economy*, Shimla, 1992.

the Himalayas'. Indeed a sizeable section of scholars have veered round to the proposition that the Khasha were aborigines — and they themselves claim to be the sons of the Himalayas, ethnically, culturally and historically. History bears testimony to the existence of thousands of Khasha settlements in Central and Western Himalayas.

In the Shimla hills many such *khunds*, which are pockets within informal local identity, are still active in the social and cultural fields — Ghund, Tharoch, Kumharsain and Kotkhai once comprised of a number of *khunds*. They most probably began as a distinct identity governed by *garbmat* (consensus). With the passage of time leaders sprang up within the *khunds* in the person of *murwana* or *marwi*. The *murwanas* were very often at war with each other gaining or losing their principalities. When a *murwana* succeeded in extending his sway over a number of *khunds*, he took the title of *thakur* or *rana* and his principality came to be known as *thakurai* or *rabun*. Occasionally, these petty units would disintegrate giving birth to some other bigger conglomeration. The process of fusion, fission, expansion and contraction continued till the *murwanas*, *thakurs* and the *ranas* were overthrown as effective rulers by the Brahmanas and Kashtriyas and driven out from various parts of India.

Numerous tribal *janapads* (republics) and *ekarajyas* (monarchies) which in time came to occupy the Central and Western Himalayas have played a crucial role in shaping the region's history. They are believed to have faded from the political map of Northern India sometime before 350 AD. A few principalities in the hills were tributaries of Yaudheyas, who were overrun by Samudra Gupta in the fourth century AD. The Audumbaras flourished in the Kangra region

and so did Trigarta, though at different periods. The Kulutas had their capital at Naggar in Kullu and the influence of the Kunindas extended over areas lying in the foothills of Shivalik between Satluj and Yamuna covering Shimla, Sirmaur and Kinnaur.

The history of the State finds some base only from Nanda-Maurya period (fourth-third century BC). On the basis of Jain literary sources it may well be said that the hill regions of present-day Himachal Pradesh and Garhwal formed a part of Chandragupta's empire. From inscriptions found at Dehradun and Topra, it will not be unreasonable to surmise that during the reign of Asoka, the Mauryan Empire had extended further into the region. The presence in Chamba, Kangra and Hamirpur of Greco-Bactrians is evidenced from the coins found in the area at no fewer than five places. It was on the decline of Apollodotus (115–95 BC), one of their latter rulers, that the Kunindas, Audumbras and other nearby tribal republics or states occupied the centre stage. Around the end of the fifth or the beginning of sixth century AD, the Hunas, a nomadic tribe, came to occupy the areas of Uttar Pradesh, Rajasthan and Kashmir. In course of their expansionist drive they are assumed to have advanced into Himachal Pradesh. The Huna occupation of the Chamba area is supported by numismatic evidence.⁶ In an inscription of the later Gupta dynasty of Magdha, it is stated that the Mukharis had defeated the Hunas. The former's suzerainty over the Himalayan region may be specifically inferred from the travel accounts of Chinese traveler, Yuan-Chwang. From the accounts left by Hieun Tsang (629 AD) it appears that Kullu, Surghna, Brahmapura and the Kumaon region

6. Gupta, Parmeshwari Lal, *Numismatic History of Himachal Pradesh*, Delhi, 1988.

— which he traveled through — were fully under the control of Emperor Harsha Vardhan. This finds corroboration in the historical account, the *Rajatarangani*.

After the collapse of the Vardhan Empire, northern India became congeries of small states. In the cis-Himalaya, between the rivers Ravi and Yamuna, petty chiefs known as *ranas* or *thakurs* mushroomed everywhere. As their thumb-sized units were constantly engaged in internecine warfare, all of them succumbed to Rajput adventurers who founded powerful principalities. The important Rajput states which were thus born may be named: Trigarta (comprising almost the entire area between the Satluj and Ravi in the outer hills except Kullu and the Jalandhar *doab* in the plains), Jaswan, Guler, Siba and Datarpur, Nurpur, Chamba, Kullu, Suket, Mandi, Bilaspur (Kahlur), Nalagarh (Hindur), Kutlehar and Baghal. Most of the territory between, Satluj and Yamuna was parceled out between the chiefs of Bushahr and Sirmaur. The rest of the area was occupied by numerous petty chieftains of the *Bara* and *Athara Thakurais*.

The hill region did not undergo any material political change in the whirlwind invasions of foreign raiders or during the reigns of early Mohammedan rulers. The situation, however, underwent radical change under the Mughals. The Kangra fort was conquered by Jahangir and its entire territory was annexed. Although the hill rajas had to pay a tribute and a fee of investiture to the Emperor, and were sometimes required to send their sons to the court as hostages, there was little direct interference in their internal affairs. The large states of Kangra, Chamba and Sirmaur were Mughal tributaries — as were the smaller hill states.

After the death of Aurangzeb, the Mughal

hold slackened, and gave an opportunity to the Katoch ruler, Ghammand Chand to reoccupy his ancestral kingdom and to extend his hold over the adjoining areas. The turbulence of the times helped him to make hay while the sun shone. By the third quarter of the eighteenth century AD, Sansar Chand, his grandson, had overrun all the areas from Chamba to Mandi and Kullu. His over-ambitious nature, however, brought him into fatal collusion with the Gurkhas, whose armies routed him in May 1806, and laid siege to the strategic fort, Kot Kangra. Trapped, Sansar Chand frantically sought the assistance of Punjab's Maharaja Ranjit Singh, whose army did intercede, but ousted both the warring factions and established their own control.

That the hill states were able to maintain their political identity for a long period of time, was in great measure due to their isolated position and the inaccessible character of the country. It is however improbable that politically they were ever independent and they formed part, at least nominally, of the great empires of the Mauryas, Kushanas and Guptas etc., (Vogel: 1933:71) — or of whichever dynasty happened to occupy the neighbouring tracts. One beneficial effect of interaction on the social and cultural life of the area is manifest in the fine specimens of art and architecture, sculptures, carvings and paintings occurring at various places in the State.

Thwarted in their designs on Kot Kangra and banished beyond Satluj, the Gurkhas turned to the hill princes and within a short span of one year, the entire country lying between the Yamuna and Satluj had capitulated. When war between the British and Nepal was declared on 1 November 1814, 'it was resolved to expel the Gurkhas from the hill territories they had conquered.' With the full cooperation of the local rulers and their armies, the British succeeded in

defeating the Gurkha General, Amar Singh Thapa. By the treaty of Sagauli of 28 November 1815, the Gurkhas left the hill country from Kali to the Satluj in the hands of the British.

The possessions of many chiefs were restored in full but such 'portions of the country as appeared best adapted for military positions and also calculated to indemnify the Government for the expenses of the military force⁷ were retained by the British. The *samads* conditionally restoring their rule, made the grantees subject to British overlordship. The states of Suket, Mandi and Bilaspur were granted *samads* on the conclusion of the treaty with the Sikh *darbar* (1846). By the Treaty of Amritsar signed on 16 March 1846, Maharaja Gulab Singh was put in possession of the entire hill country and the British dependencies between Ravi and Indus including Chamba. However, by an arrangement worked out by Col. Lawrence, Chamba relinquished claim to Bhadrwah and in exchange, retained the territory on both sides of Ravi under the suzerainty of the British government.

With the transfer of power from the East India Company to the British Crown in 1859, the 'Punjab Hill States', like the rest of the princely order, came under the protection of the Crown of England 'who stood forward as the unquestioned and paramount power in all India and was for the first time brought face to face with the feudatories.' Initially, the political relationship with Punjab states was regulated through the provincial government of Punjab. Subsequently, on the creation of Political Department, the Punjab States Agency was created in November, 1921. The states of

Mandi, Sirmaur, Bilaspur, Chamba and Suket were placed in direct relationship with the Government of India through the Agent to Governor General. The 'Simla Hill States', however, remained the political charge of the Punjab Government and were controlled through the Superintendent, Hill States. In 1936, the Simla Hill States also entered a direct relationship with the Government of India, and in consequence, a subordinate political agency, the Punjab Hill States Agency was constituted — with its charge covering the states of Sirmaur and Bilaspur as well.

At the time of Independence, Mandi, Chamba and Suket reported to the Resident, Punjab States while the Punjab Hill States' Political Agency looked after Sirmaur, Bilaspur, Bushahr (with its feudatories Khaneti and Delath), Hindur (Nalagarh), Keonthal (with its feudatories, Koti, Theog, Madhan, Ghund and Ratesh), Baghal, Jubbal (with its feudatories Ravingarh and Dhadi), Baghat, Kumharsain, Bhajji, Mahlog, Balsan, Dhami, Kuthar, Kunihar, Mangal, Bija, Darkoti, Tharoch and Sangri.

Political Undercurrents around the time of Independence, and the formation of Himachal Pradesh

The constraints that prevented the Congress party to be drawn directly into their grievances, impelled the people of princely states to think in terms of a forum of their own. The birth of All India States' People's Conference in 1927, was the manifestation of this need. With the background thoughtfully laid out, the Conference had its first session on 27 December that year and focused to demand responsible government and popular assemblies formed on an elective basis alongwith guaranteed civil liberties. In

7. Government of Punjab, *Punjab District Gazetteers—Shimla District, 1904*; Lahore, 1908.

concord, the Congress in its Madras session, also adopted a resolution supporting the demand of the States' people for responsible government.

Assured of moral support from the Congress, fires of freedom broke out in Punjab and Shimla Hill States, a few during the 1930s, but mostly in the mid-1940s. The Praja Mandal Movement began spearheading the nationalist aspirations of the people of Himachal Pradesh. Earlier, there had been uprisings, demonstrations and agrarian troubles. But for the most part, these eruptions were in protest against the high-handedness of a ruler or for reasons of maladministration. With the independence of the country hovering on the horizon, a definite change of climate surfaced. The people started thinking seriously of grappling not with the symptoms of the evil but with what lay at their root. Having come to realise that their emancipation lay in replacing the autocratic rule by popular administration they began to demand a share in governance. The years 1947 and 1948 witnessed installation of responsible governments (*sham*) in many princely states and a few of them installed so-called representative legislatures and popular ministries; however, the association of popular elements remained confined to their own henchmen and faithful 'subjects'.

On 18 June 1947, the Indian Independence Bill became law. As for princely states, the Act provided that paramountcy would lapse from the date of transfer of power which was 15 August 1947, and with it would come to an end all treaties and agreements with the Crown.

Independence now inspired the people of the Hill States to work for freedom from feudal administration. The urge set in motion a process of conflict with the Praja Mandals versus the

rulers. While the former organised agitation against the authoritarian rule, the later set afoot a plan of forming a state's union in order to survive in the emerging order. Popular movements started in Arki, Bilaspur, Chamba, Mandi, Mahlog, Suket and Sirmaur and at a few other places.

Giving voice and leadership to the democratic forces, Dr Y. S. Parmar — who went on to become the first Chief Minister of Himachal Pradesh — demanded on 26 July 1948, the 'merger of all hill states and their integration into a centrally administered area, in due course to be given a legislature and a Lieutenant-Governor.'

Meanwhile, 26 princely rulers created a 'Hill States Union' to preserve their own way of life. Expectedly, this archaic amalgamation was a failure and these states ceded to the Dominion Government full and extensive authority, jurisdiction and powers, and they agreed to transfer to it the administration of their states. On 15 April 1948, Himachal Pradesh was born as a Centrally Administered Area. A Chief Commissioner was appointed at the head of the administration and invested with the power to appoint judges and officers. Finally, it sought to maintain *status quo* pending appointments, enactment of laws by a competent legislature or authority and making of provisions respecting taxes, cesses or fees. Virtually on the ashes of Shimla Political Agency, the Chief Commissioner commenced functioning in the same building that once housed it. Mr N.C. Mehta was the Chief Commissioner and his Deputy was E. Penderal Moon.

In the discharge of the Chief Commissioner's administrative functions, an Advisory Council comprising of two former rulers and five public representatives was constituted on

30 September 1948.⁸ Its functions were purely advisory and all its Members were nominated.

Induction of Popular Government

With the inauguration of the Constitution of India on 26 January 1950, Himachal Pradesh became a Part 'C' State. This naturally rekindled hope for the people of Himachal Pradesh who had so far been denied a democratically elected popular Government. But as the expected change did not materialise even after the adoption of the Constitution, sentiments burst out at the political conference held at Mandi during June, 1950, where speaker after speaker took strong objection to the continuance of the undemocratic Chief Commissioner's regime. Henceforth, expressions of anguish, and resentment became the central theme of all political conclaves.

The enactment of the Part C States Act, 1951, constitutes a landmark towards the attainment of a full-fledged representative government. It breached a long-entrenched bureaucratic citadel. In the Government of India's perspective, the move was a step forward to gradually meet the popular aspirations for a responsible government. Its immediate objective was to give a necessary grounding to the local political leaders so that in course of time, they could acquire the requisite competence to manage a fully responsible government.

In Himachal Pradesh, the first General Elections under the Constitution were held in November 1951. As soon as the results came in, the House was duly constituted under the law and stage was set to usher in the elected government.

Major-General Himmat Singh (Retd) assumed the office of Lieutenant-Governor on 1 March 1952. Twenty-fourth March 1952 marks the beginning of a history-making epoch when the State's elected legislature commenced its first session. After a prolonged political struggle, it was a joyous occasion for the chosen representatives to commit themselves to the progress of the State and its people. The same day, Dr Y.S. Parmar, Chief Minister, and his three-member Council of Ministers took the oath of office and secrecy and pledged themselves to give the people a government, in all meanings, their own.

The grant of responsible government brought about a new awakening. A new day had dawned and the people looked forward to a prosperous State. Between 1952 and 1956, the achievements of the first elected Government were truly heartwarming. If one visualises the Himachal of 1948, the picture is one of stark under-development and poverty. There were no roads worth the name — except the two that linked the plains with the hill stations of Shimla and Dalhousie. Illiteracy was widespread. Except for potatoes, ginger and opium, little else was grown for export. Then, steadily a network of roads snaked its way through the hills opening up the interiors to the wide world outside. A great change in the economic condition of the people was visible. Education came within easy reach of the common man. The interest generated in horticulture started paying dividends. Venereal diseases and tuberculosis, once endemic in major parts of the State had been brought under control.

Amalgamation of Bilaspur

Historically, geographically, culturally, linguistically, and economically, Bilaspur formed an

8. Government of India, Ministry of States Notification 309-p(a) dated 30 September 1948 and 336-IC dated 4 November 1948.

inseparable part of the hill region which found its future as Himachal Pradesh. Raja Anand Chand of Bilaspur held out over the signing of the Merger Agreement. Eventually after a prolonged dialogue, he succeeded in gaining two concessions — Bilaspur retained its separate identity as a Part 'C' State, and for himself, he wrested a hand in the administration of the State; both lasted for only a brief spell. After a protracted battle of sorts, Bilaspur was finally merged with Himachal Pradesh in July 1954.

States' Re-organisation and the Political Interlude

A step back in the democratic process and in Himachal's distinct identity came on 14 October 1956 when the States Re-organisation came into effect in the country and Himachal Pradesh stood down-graded to a Centrally Administered Territory on the 1 November 1956. A death knell seemed to have been sounded for both the legislature and Dr Parmar's Council of Ministers.

The States' Re-organisation Commission had *inter-alia* gone into the question of providing appropriate political set-up for the centrally administered territories. 'Democracy in these areas', the Commission suggested, 'should take the form of the people being associated with the administration in advisory bodies suitable to their requirements', with representation given only in the Union legislature. Following this, on 15 August 1957, the Territorial Council was inaugurated.

Composed of 41 members chosen by direct election on the basis of adult suffrage from 29 territorial constituencies — twelve plural members, each electing two, one Scheduled Caste and the other, a general candidate — the Himachal

Pradesh Territorial Council in addition had two members nominated by the Central government. The normal term of elected members was fixed at five years though the Central government could extend it by a period not exceeding one year. Unlike a legislature, the Council was not subject to dissolution. On the other hand, the Central Government had retained power to supersede it if they found that it was 'either not competent to perform, or had persistently defaulted in the performance of its duties or exceeded or abused its power'. As a democratic institution, the powers with the Council were close to negligible and its responsibility was enormous.

This novel experiment has often been likened to dyarchy which appeared on the Indian constitutional firmament as the Montague-Chelmsford Reforms of 1919. The word 'dyarchy' literally means 'government by two rulers.' In its fresh form in Himachal Pradesh, the Territorial Council suffered from all the ills the system was heir to. The regime was a queerly improvised system; a clumsy admixture of various ingredients unsuccessfully experimented by the British. Though Delhi claimed the measure a positive step forward in meeting the aspirations of the people, in truth the medicine was no more than a placebo. In spite of appurtenances of an elected body the Council had no real authority to meet them.

Re-instatement of the Democratic Set-up

The Council, in every respect, fell far below the expectations of the people. Despite its shortcomings, those elected, set out sincerely to work the system. 'Not even our worst critics can assert that we did not do our best to work it within

the framework of its scheme' earnestly claimed⁹ Satya Vati Dang, the provincial Congress President, and one of the nominated members. For the next few years, behind a seeming wall of inactivity, there was hectic political action taking place behind the scenes. For one, the Government of India, under various pressures, was re-assessing its position as far as popular, responsible governments in the states were concerned. At the same time, the division of powers within the State was a less than successful experiment and Himachal's political leadership was pressing for a return to a responsible, democratic government. Finally, on 1 July 1963 a three member ministry under the Chief Ministership of Dr Y.S. Parmar took the oath of office and secrecy.

Even then, the Act of 1963 was badly hampered by numerous limitations. Not to speak of matters of policy, the Government did not have free hand even in small and routine matters of governance, such as, financial sanctions, appointments, regulating terms and conditions of services, and so on and so forth. The 'special responsibilities' of the Lt. Governor, left very little scope for the exercise of power by the popular ministers.

Punjab Re-organisation and the Expansion of Himachal

Perhaps no other State of India has suffered as many territorial and political changes in recent times as Punjab. In the partition of the country it was left with comparatively backward areas. PEPSU, a political unit comprising of Punjab's princely states, merged into Punjab as a sequel

to the Re-organisation of States in 1956. Exactly ten years later, Punjab was once again vivisected, this time on linguistic grounds, into Punjabi speaking state of Punjab and the Hindi speaking state of Haryana. On the 23 April 1966, the constitution of Punjab Boundary Commission was announced. In its report, the Commission recommended the merger of the following districts and areas of Punjab with Himachal Pradesh.¹⁰

- i. The districts of Shimla, Kullu, Kangra, Lahaul & Spiti;
- ii. The development blocks of Gagret, Amb and Una (excluding certain specific villages);
- iii. The enclaves of Dalhousie, Balun and Bukloh in the Chamba district.

The Punjab Re-organisation Act, 1966 (Act No. 31 of 1966), gave birth to Haryana and transferred to Himachal Pradesh the above recommended territories. Finally after more than two decades of struggle, Himachal Pradesh, grew in size to gain its present shape.

Box 2.1 — A Case For Statehood

'(Himachal Pradesh) had a precarious childhood to be followed by a shaky adolescence, as being always a special ward of the Centre, its gains were outmatched by its lack of confidence and capacity to take decisions, and in the absence of peoples association, its resources, such as hydel potential, were taken by neighbouring States for development and benefits, with its future insecure its destiny was made dependent on doles, which were also used as a lever to suppress its legitimate aspirations.'

— Extract from *A Case For Statehood* by Dr Y.S. Parmar.

9. Himachal Pradesh Territorial Council Debate on the Resolution for Restoration of Democratic Set-up Himachal Pradesh; Shimla, 1961.

10. Government of India: Punjab Boundary Commission Report Delhi, 1966.

Towards Statehood

‘Democracy like peace is indivisible and any composite area of the country having more or less similar dimensions cannot be treated invidiously in matter of government and franchise’, wrote Dr Parmar in an article which appeared in *The Tribune* of 26 January 1968. In it he expounded at some length how his Government found its hands tied and how economic compulsions warranted immediate elevation of the Pradesh. Support came from all quarters and the Pradesh’s representatives in the Rajya Sabha and Lok Sabha were as seriously affected and enthusiastic as the local leadership was. Credit goes to their ingenuity and resoluteness that the issue, in one form or the other, kept cropping up in Parliament from time to time.

Thirty-first July 1970 proved to be Himachal’s lucky day and Indira Gandhi, the Prime Minister, made the long-awaited announcement of the Government’s decision ‘to give Statehood to Himachal Pradesh’. No one in the Pradesh Government or in State politics had expected this and they were taken by surprise by its suddenness. It had an electrifying effect on the people and their joy was boundless. A Bill was introduced to provide for the establishment of State of Himachal Pradesh in the Lok Sabha soon after the twelfth session had opened. It was one of those few Bills which received universal support. The peaceful way the people of Himachal Pradesh had achieved their objective in a most democratic and constitutional manner received accolade from the whole House. In the Rajya Sabha too it had equally calm passage. On being presented, the President was pleased to record his assent on 25 December 1970 and the Central Government to notify 25 January 1971, as ‘the appointed day’ for the purpose of the Act (No. 53 of 1971).

The first person to be sworn in on the morning of 25 January 1971, was the first Governor of the State, Shri S. Chakravarti. The oath was administered by the Chief Justice, Mirza Hamidullah Beg in a simple and solemn ceremony held in Raj Bhavan. In the afternoon Dr Y.S. Parmar, who had been appointed Chief Minister, was administered the oath of office and secrecy on the Ridge *maidan* in the presence of Shrimati Indira Gandhi soon after she had inaugurated the new State amidst a flurry of snow.

Society and Economy in the Pre-statehood Period

Phase-I—Prior to the integration of the Punjab Hill States

Human Settlements—Hamlets and Villages: The structure of human habitations in the Pradesh may be best viewed in the backdrop of several features — the environment, topography, the river system, altitude, aspect and geology. The imperatives of political exigencies, agriculture, trade, defence, religious sentiments, all have contributed in varying degrees to the location and size of settlements. From the present picture of the countryside, one can safely deduce that the indigenous settlements were mostly sited in the fertile valley areas where sufficient arable land was available for cultivation and grass lands for grazing. Scattered in pleasant and picturesque locations, sited amidst fertile tracts, every man resided upon his own farm, in a cottage built in some selected spot, open as a rule to the sun, and yet sheltered from the wind. On their own holdings, dwellings were scattered over the country. Every husbandman had, besides his cultivation, a considerable area of grassland. As time passed, isolated habitations grew

into conglomerates of hamlets and revenue villages. As a rule the villages were always small; larger in the bottom of the valleys than on the slopes where the soil was poor and less productive. Each village stood in the midst of its own area of cultivation. In the flat lands, the houses were generally on the same level, but higher up, they stood arranged in tiers — one above another. The distribution of settlements as also the density of population was invariably governed by agricultural productivity — high in larger tracts of arable land along the valley floors which diminished to sparse and scattered clusters in the Tethys Himalayas.

The Census of 1911 reported that the Kangra valley, one of the most fertile tracts, was dotted with villages with a density of 81 persons per square mile. Lahaul & Spiti, on the contrary, could not support more than 2.4 persons per square mile on an area twice the size of Kangra. Today, close to a century after this observation was made, the situation is similar.¹¹

Urbanisation: A typical hill town was dominated by a fortified palace, a temple or several of them, a *bazaar* and a *maidan*. The first was an attribute of political authority; the second provided religious support and legitimisation. The *bazaar* and the *maidan* specially signaled commercial activity. A peep into the urbanisation pattern of the eighteenth and early nineteenth century reveals that the capitals of the hill states formed the principal towns. Between the Yamuna and the Satluj, there were some thirty princely states. Of these, four had emerged as dominant units: Sirmaur in the west; Hindur, partly in the hills and partly in the plains; Bilaspur on both banks

of the Satluj; and finally, Bushahr whose territories extended upto Kinnaur bordering Tibet. Nahan, Nalagarh, Bilaspur and Rampur, their capitals, formed significant towns in the region. The founding of Rampur may be further linked to the emergence of the Bushahr as leading chiefship towards the end of the seventeenth century — partly because of the lucrative trade with Tibet.

Some capitals owed their economic relevance to the trans-Himalayan trade and to the goods, which transhumant shepherds brought with them. Rampur in Bushahr and Sultanpur, the capital of Kullu, are two examples. Pilgrim centres like Naina Devi and Jwalamukhi in Kangra, tended to evolve into permanent urban complexes because of economic activity revolving around land and other endowments. Some hill towns gained prominence as manufacturing centres — Nurpur in Kangra was famous for the high quality of its Kashmiri weaves. Commanding over the principal trade routes to the plains, Nadaun and Mandi excelled in commerce. It has been estimated that the urban population in Punjab hills may have been seven to eight per cent of the total, and it was mainly accounted for by the capitals, and other towns which owed their size and importance as entrepôts. Even today, the same ratio holds good.

Fresh elements in the urban patterns of the hills emerged in the nineteenth century when the British established the 'hill stations' like Shimla (earlier spelt, Simla), Dharamsala, Dalhousie and Kasauli. Additional pockets rose as cantonments — like Dagshai, Balun, Jutogh and Subathu. Palampur became a focus after tea plantation was introduced in the area in 1849. While the character of these towns was essentially colonial, yet the bulk of their population was Indian which migrated to them for large

11. For the latest figures of population density see Paper I of 2001; Series 3, Himachal Pradesh; *Census of India, 2001*; Shimla, 2001.

portions of the year, in search of employment or for business, for example, the ‘summer census’ of 1921 placed the population of Shimla at 43,333 with 4803 Europeans and 38,530 Indians.¹² These towns remained largely depopulated during the winter months.

Demography: In the eighteenth and nineteenth centuries there were some forty princely states in the region that constitutes present-day Himachal Pradesh.

The area between the Ravi and the Beas held eleven states — Chamba, Suket, Mandi and Kullu were the largest. The others lay in the Kangra valley and included Nurpur, Kangra, Guler, Kuthlehr, Siba, Datarpur and Jaswan, which by the middle of nineteenth century, had been annexed to form the Kangra district of Punjab.

Between the Yamuna and the Satluj, there were some thirty states. Of these Sirmaur, Hindur, Bilaspur and Bushahr stood high in the political hierarchy. The smaller states, the *barah thakurais*, or twelve states were spread across the lower Shimla hills. The *atharab thakurais*, the eighteen states, lay in the upper hill valleys of the Satluj, Pabar and Tons rivers. The total population of the Hill States in the early nineteenth century is not known and it may not be correct to hazard a guess.

The earliest enumeration for which select figures of some parts are available relate to the Census held in 1855. A summary of such of the demographic features as may be conveniently culled from the respective District Gazetteers¹³ of the time are as under:

12. This figure included domestic staff, visitors, etc. The ‘regular’ Census placed the figure at 26, 149.

13. i) *Gazetteer of the Kangra District*, 1883–84; Reprint Delhi, 1994.

Kangra District: The population figures of Kangra district (including Kullu and Lahaul & Spiti), as it stood at the three enumerations are exhibited in Table 2.1.

TABLE 2.1: Demographic Indicators of the Kangra District in the Nineteenth Century

<i>Enumeration</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Density per sq mile</i>
1855	7,18,955	3,91,389	3,27,566	79
1868	7,53,882	3,93,571	3,50,311	82
1881	7,30,845	3,80,867	3,49,978	81

Source: *Gazetteer of the Kangra district*, 1883–84; Reprint Delhi, 1994.

The pressure on the cultivated area in the Kangra valley exceeded the rate in Jullundur — which was regarded as the most densely cultivated district in Punjab. 96.65 per cent of the population was rural. Polyandry was not practiced except in Seraj in Kullu; polygamy was considered allowable.

Shimla (earlier spelt Simla) District: The population of the district in 1868 was estimated at 27,169 persons. This rose by 32.9 per cent between 1868 and 1881 — the increase was exclusively attributed to Shimla town, which on 1 March 1901, had grown into a bustling township of 13,960 residents. Setting aside the urban population of Kasumpti (170) and four cantonments of Sabathu, Dagshai, Jutog, and Solan (4772), the rural population stood at 24,089 and the total population at 40,351. This was slightly

13. (continued)

ii) *Gazetteer of Simla District*, 1904, Lahore, 1908.

iii) *Gazetteer of the Chamba State*, 1904, Reprint Delhi.

iv) *Gazetteer of the Mandi State*, 1920, Reprint Delhi, 1996.

v) *Gazetteer of the Sirmur State*, 1934, Lahore, 1939.

vi) *Gazetteer of the Suket State*, 1927; Reprint Delhi, 1997.

short of one-half of the whole district's population residing in 45 villages — a 'village' resembling a fiscal (revenue) unit in Kangra. The pressure of rural population was 429 persons to the square mile of culturable, and 1430 on cultivated land.

Simla Hill States: Including Bilaspur and Nalagarh, these accounted for a total population of 3,37,998 in 1881, 3,70,200 in 1891 and 3,89,399 in 1901 registering an increase of 9.4 per cent over the former decade and 5.2 per cent over the next. The average population of the 1,527 villages was 249. Only two per cent of the population lived in the three towns. Polygamy was common as was polyandry especially among the *Kanets* of Bushahr (Kinnaur).

Chamba: With 49.9 persons to the square mile, the state of Chamba — which was one of the largest 'native states' in Punjab — had the lowest density. On the cultivated area, however, the density worked out to 789. In 1881, when a *paragana* was taken an equivalent to a village, the number was 335, while in 1891 and 1901, when every hamlet was treated as a village, the number came to 1670. The population viz. 1,15,773 in 1881, and 1,24,032 in 1891 went up to 1,27,834 in 1901 registering increases of 7.1 per cent and three per cent in the respective decades. The state capital was the only town with five per cent of the total population as its residents. Migration resulted in a net gain of 3579 persons — the immigration was almost wholly periodic — with the Gaddis of the higher ranges moving down into the Kangra and Gurdaspur plains for winter grazing.

Mandi: The population of Mandi altered in the following manner — in 1881 this was 1,47,017; in 1891, the figure was 1,66,923; in 1901 it rose to 1,74,045, and the 1911 enumeration placed

the figure at 1,81,110. In between 1891 and 1901, there was a rise of 4.2 per cent and between 1901 and 1911 further increase of 4 per cent. The state capital was the only town and had a population of 7,896. In all, there were 3,857 villages with an average population of 47. No accurate idea of the extent and nature of migration was reflected by the census figures. Males were in excess of females, the proportion being 52 to 48 — and this despite the fact that more girls were born than boys. Female infanticide undoubtedly prevailed on a considerable scale among the 'higher' clans of Rajputs and amongst certain urban classes.¹⁴ Another cause attributed to greater female mortality was the comparative neglect of the girl child. Polyandry was found to limited extent in the highlands of Seraj.

Sirmaur: At the three enumerations of 1901, 1911 and 1921 the population was returned as 1,35,687, 1,38,520, and 1,40,448. The actual increase between 1891 and 1931 was 20 per cent. This was partly due to immigration for permanent settlement on the newly reclaimed Paonta valley and partly to the 'prolific nature of the inhabitants of Trans-Giri area'.¹⁵

The density per square mile on total area in 1931, was computed at 130 persons, with 938 persons on cultivated area. The state had one town, Nahan with a population of 7808 and 962 villages with an average population of 146. The rural population was 95 per cent. Both polygamy and polyandry were prevalent.

Suket: Its population rose from 52,484 in 1881; to 54,676 in 1901, and to 54,928 in 1911. Between 1881 and 1891, it decreased by 0.15 per

14. *Gazetteer of the Mandi State*, 1920, pp. 62.

15. *Sirmur State Gazetteer* (Part A), 1934; Lahore, 1939.

cent: this subsequently recouped with an increase of 4.19 per cent. Between 1901 and 1911, a further increase of 0.46 per cent was observed. The density of population per square mile of area was 129. There was only one town and within its boundaries, lived 2554 persons; the rest of the population inhabited 284 rural settlements, each averaging around 193 persons. The sex ratio in 1921 was 85 women to 100 males. Married women were found in excess of married men due to polygamy. Polyandry was uncommon and existed only in the upper hills of Chawasi and its suburbs: polygamy, as elsewhere in the region, was practiced to some extent.

From the foregoing picture, though sketchy, and far from comprehensive, it may be safely assumed that during the middle of the nineteenth century the population of the area could have been in the neighbourhood of ten to twelve lakh persons with an overall decadal increase below 5 per cent. Population density on cultivated land, compared favourably with the figures of the neighbouring tracts under British administration. The sex ratio was adverse to females chiefly because of the evil practice of female infanticide and the general neglect and apathy shown towards the girl child.¹⁶ The number of married women found in excess of married men as in Mandi, Suket and certain areas of Sirmaur is indicative of the prevalence of polygamous marriages where the main object was to secure additional hands for agricultural operations. Polyandry was practiced in the Trans-Giri tract and certain adjacent tehsil of Sirmaur; in Kinnaur and in certain parts of the Simla Hill States. Urbanisation was in nascent state and less than 5 per cent of the population lived in towns. The level of literacy was very low. Despite its inaccessibility — or perhaps, because of it — the

land, since times immemorial, has lured adventurers and conquerors, travellers and traders, saints and scholars, philosophers and religious preceptors, all of whom have left an indelible mark on the region's history, its ethnicity, religion, ethos, customs and culture. However, the most profound impact of the migration has been cultivation of oneness with the mainstream and emergence of unity in diversity.

Political Culture: Nineteenth century historiography has characterised the pre-colonial political structure of the princely states as 'feudal'. In the *History of Punjab Hill States*, Vogel, has likened the principle of their government to 'an order of things that was patriarchal rather than monarchical . . . very much akin to the clan system of the Highlands of Scotland', adding that its primitive character suggested the possibility of its having been the earliest form of government in the hills.¹⁷

Administrators such as H.W. Emerson, for example, defined and elaborated the political and religious ramifications of authority of the State, 'The divinity of kingship, however it arose, appears to have been recognised from very early times in the Himalayas and is one source of the intimate connection between State and religion.'¹⁸ The theory of divinity vested the ruler with an authority of three-fold nature — religious, feudal and personal. The Raja as the head of the State religion was venerated as divine: its nature implied two qualities: divinity and absolutism. Divinity functioned as the ideological means justifying absolutistic ends. The State was proclaimed to be a microcosmic representation of the macrocosm ruled by a 'magnificent theocrat', who in an encompassing sense was the 'lord of

16. *Gazetteer of the Suket State*, 1927.

17. J. Hutchison & J. Ph. Vogel, *History of the Hill States*, Vol. I; Lahore, 1933.

18. *Gazetteer of the Mandi State*, 1920 op.cit.

the life'. This relationship between social order and cosmos worked to legitimise political authority and its widespread acceptance.

BOX 2.2 —

The Collective Action of 'Dhoom'

In former times, the share of the ruler in the produce was assessed according to the amount of seed sown and the quality of the soil. It was realised mostly in kind — though in certain cases payment in cash too was recovered in addition or in lieu. The land revenue used to be assessed at varying rates in different states and at different times but the incidence by and large, it seemed, was not excessive: whenever on rare occasions it exceeded the level of tolerance, there was a revolt or the traditional customary uprising against exploitation called *dhoom*. An important aspect of *dhoom* was the manner in which the protesters were bound to each other by means of an oath sworn in the name and in the presence of the deity: religious symbolism formed an integral part of the peasant resistance. Additionally, it represented a method of protest that was firmly rooted in a strong community consciousness and had its basis in a social system which was powerfully influenced by its ecological surroundings and which had, as a result, evolved into an effective means of collective action.

As a feudal lord, the ruler was the supreme and the sole owner of the soil; he was the fountain from which issued the right of the cultivator to a share of the produce. He was acknowledged the supreme master of all the rights in the soil. The cultivators were mere tenants with no rights except to cultivate the land. This was conferred

by the Raja through a title deed and was conditional to the punctual payment of revenue and satisfaction of other state claims. The Raja, in the words of J.B. Lyall, 'was not like a feudal king, lord paramount over inferior lords of manor but rather, as it were manorial lord of his whole country. . . .'¹⁹ The State was the acknowledged proprietor of all land and levied rent in money or kind according to its exigencies or pleasure. 'There was no intermediate class to intercept the earnings of industry, or to appropriate a share of the public revenue. All that was not required for the subsistence of the cultivator went direct into the Government treasury.'²⁰

In addition to the land revenue, there were various other levies called *karabads* (cesses). The collection of these, in actual practice, provided the State officials an occasion to practise rapacity and oppression beyond imagination. *Begar* in various forms and of various natures was yet another odious impost on personal service and fell heavily on cultivators and the low caste people. This free labour resource was written into the treaties which the hill rulers had to sign at the close of the Gurkha war (1815) — and the British officials of East Indian Company availed of the compulsory, forced or bonded labour to such an excessive extent that it oppressed both the rulers and the poor peasantry. Realising, in the end, that the burden interfered with profitable agricultural operations, the British government abolished it in Kangra proper during 1884, and in Kullu in 1896. In the Punjab Hill States it was either commuted in cash or abolished by the 1940s — though the last traces of the evil practice were finally wiped out as late as in May, 1948. Assumption of suzerainty by the British was followed by Land Revenue Settlements car-

19. *Gazetteer of the Kangra District* (Pt. I) op. cit.

20. *Ibid.*

ried out in all the Hill States, one by one, upon principles imported from the neighbouring district of Kangra.

Land and farming communities: The distribution of cultivable land, especially the fertile and irrigated plots throws some light on the nature of the economy and the socio-political structure, which by and large held sway throughout the region. The flat or almost level terraces mainly along riverbanks yielded the choicest land. For reasons of fertility, accessibility and favourable circumstance, such plots were invariably appropriated by the rulers for their own benefit. Customarily, small portions were assigned as *jagirs* to kinsmen. The grants were regulated to allow the grantees just enough to maintain their dignity and ruled out every possibility of excessive concentration of wealth or of gaining large influence. *Muafis* from such lands were conferred in recognition of signal services to the *darbar*, and religious grants or *sasans* were bestowed to temples or the priests.

In the Beas and Satluj valleys, the *khas* or *basa* or *jagir* lands were cultivated by *bethus*, who were usually landless Kolis.²¹ In consideration, a family was very often given a revenue-free piece of land, invariably inferior in productivity, in the outskirts of the *basa* land to cultivate for self-subsistence. In some cases *bethus* worked the land in lieu of meals and clothes. And here, yet another class rendered farm labour from generation to generation in a futile exercise to wipe out an ancestral debt.

A large population of pure Rajputs and *bal-babak* Brahmans were agriculturists. Ethnically, though, the traditional peasantry comprised the

descendants of *Khashas*, the later-day Kanets, presently known by the generic name of 'Rajput'. At the bottom of the caste hierarchy came the Kolis and their numerous sub-castes. They constituted the bulk of agricultural labour working on *basa* lands or for big land-holders either as bonded labour or as *baseen* or *kamas* committed to both agricultural and non-agricultural work and rarely as sharecroppers. Numerically the smallest group, the artisan class, which held poor and unirrigated land, tended to be marginal farmers. In order to supplement their meagre income from their few fields, they often worked as extra hands at harvest time. Normally, most towns had a concentration of traders and shopkeepers — and they also had a presence in small centres of commerce and large villages as well. Where commercial crops were grown, such as rice, wheat, opium — as in Shimla — they arranged for its financing, transportation and marketing. In the process they emerged as *malguzars*. Blending of political power with the community's culture gave birth to a complex pattern of resource sharing and the social divisions tended to accentuate inequalities not only in land ownership but as a consequence, in the accretion of power, influence and material gains.

Agriculture: The population of Himachal Pradesh has traditionally been agriculture-oriented. In Kangra district, the rural population engaged in farming accounted for an overwhelming 96.95 per cent of the total in 1881. In the Shimla hills, outside the town, the population was almost entirely agricultural. In Bilaspur, three-fourths of the population depended on agriculture and similar situations could be found in the states of Sirmaur, Chamba, Mandi and Suket. In fact the abnormally high ratio was universal throughout the territory. Even today, 90.2 per cent of the people live in villages and ninety out of every hundred, are dependent on

21. Kanwar Pamela, *Essays on Urban Pattern in Nineteenth Century Himachal Pradesh*, IAAS.

agriculture, horticulture and other land related occupations. Due to the terrain, land holdings have never have been as large as in the plains. The people are generally owner-cultivators; the rentier class is a phenomenon now long dead.

Thumb-sized holdings generally sited on steep slopes and dependent on an undependable monsoon and the western disturbances yielded nothing beyond coarse grains. In Lahaul, Spiti, Kinnaur and in some parts of Chamba, only one harvest could be gathered in a year. Today, as in the past, extensive cultivation was practised in the valley areas of Kangra, Hamirpur, Bilaspur, Sirmaur, Solan, Mandi, and Una.

The larger block of pastures in both the Lesser and Greater Himalayas constituted the beats, *dhars*, or *ban* (runs) of the trans humant pastoralists — and the more important among them were (and are), the Gaddis, the Kanauras and the nomadic Gujjars. Apart from supplementing their limited agricultural income from the sale of goats for mutton and wool of the sheep, the Gaddi shepherds traded in cannabis, gold and camphor. Caravans from Lahaul and Kinnaur served as carriers and made their way across the cold desert to Ladakh and Gartok returning with goats, sheep and mules laden with salt, borax, wool and other merchandise.

Livestock: Next to agriculture, livestock rearing has been the backbone of the rural economy; and no farming community in the hills could afford to neglect this supplementary vocation. For ploughing his fields, a cultivator must possess, at the minimum, a pair of bullocks; one or more cows or buffaloes for milk and whey — an essential item of his daily menu. A dozen or more sheep and goats for wool, meat and milk — and occasionally, to offer in sacrifice to local deity. Depending on the extent of its cultivation

Box 2.3 — Traditional Patterns of Agriculture and Land Use

Traditionally, agriculture generally meant subsistence farming and hardly sufficed for the cultivator's simple needs. A survey carried out in 1950, showed that 48 per cent of the working members of landowners and tenants' families pursued some subsidiary occupation to supplement income from the land. Many of them had taken to rearing of sheep, goats, lumbering in the forests, weaving, and to the selling of milk and ghee. Agriculture, the chief source of subsistence depended on forests for the maintenance of its productivity. Forests and pastures in reality constituted an integral component of land-use. The real value of forests for the villagers lay in catering to their domestic needs of timber for building houses, cowsheds, agricultural implements, of fire-wood and charcoal for warming the home and hearth, and providing leaves for fodder and cattle bedding. The right of user, in common parlance called *bartan*, was similar in nature to the right of grazing over such tracts as were later described 'waste land'. Initially, inherent in the land-holding families it later came to be conferred on the traders, shopkeepers and the artisan residents of the village.

and the manure requirement, every household endeavoured to rear as many heads of cattle as could be herded. Ghee from milk, wool from the sheep and mutton of goats still fetch a farmer a little but much-needed cash.

In a country where a large proportion of the landmass consists of vast pastures and of mountainsides that are useless save for grazing purposes, it may well be supposed that pastoral pursuits occupy a peculiarly prominent position

in the rural economy. Gaddis, Kanauras and Lahaulis have from the very beginning, taken advantage of this natural resource and reared large flocks of sheep and goats. The Gujjars are the only people who make a trade of selling milk and ghee and keep large herds of buffaloes. Many of the households in the warmer valleys also keep a few heads for the sale of milk and ghee. Camels, ponies, mules, asses, donkeys have been reared as pack animals. Pivotal as animals are to the agricultural economy, the livestock population in the region has invariably been in excess of the human population. An example lies in Mandi state, and in 1917 there were 4,79,704 heads of cattle reared by a population of 1,81,110 persons.

Trade and Industry: The hill towns, invariably political capitals, represented an economic structure as well. The Mughal rule, described as a veritable 'golden age' of urbanisation for much of North India, fuelled the expansion of economic activity with the development of long-distance and inter-regional trade. This empire relied on several imports from the hills — high quality rice from Kangra; iron from Mandi; copper from Suket and silver from the Rupi mines of Kullu. Opium, a cash crop, grown in many hill states was in high demand in the plains. Many commercial towns were established during the sixteenth and seventeenth centuries — though they really prospered and grew only over the following two centuries.

A series of fairs held in large villages and towns, timed with the agricultural calendar, acted as a vital inter-connected market structure for regional exchange. Some of the larger fairs held at different capitals were inter-linked; for example, traders who converged at Dussehra on Kullu, moved on to the Lavi fair in Bushahr.

In the absence of wheeled transport, traders had to travel on foot and carried their merchandise on pack animals — which included mules, asses, goats and sheep. They had their specific circuits or beats. Yet, like homing pigeons they invariably returned to the towns they had settled in — like Bushahr which had expanded during the eighteenth century or to Raipur Rani, which was a halting stage on the route between Pinjore and Hardwar. For marriages and on other religious occasions, these traders invariably returned to their native places — the Bhandaris to Batala; the Soods to Garli, Pragpur and Haroli; and the Khattris to Mandi.

Over the years, the network of paths had evolved into permanent trade routes. For trade with Tibet and Central Asia there were as many as five recognised routes — two passed through Kashmir, another went through Lahaul and Kullu and three traversed Spiti and Kinnaur. The trans-Himalayan trade was regulated by decisive ecological parameters. For the transhumant tribes trading was an essential concomitant to less-than subsistent agriculture. It required endurance, business acumen, a large flock of sheep and goats and above all capital. Long-distance trade was thus confined to the more affluent families. In quantum it was limited and responded to the principle of demand and supply.

From trade, the people and the princely states benefited clearly in two ways. They attracted talent; for instance, because of the Kashmiri craftsmen encouraged to settle in Nurpur, the town came to be known far and wide as a magnificent centre of shawl manufacture. Secondly, the custom duties yielded substantial revenue. It seems almost needless to mention that the marketing of surplus food grains, cash crops, articles of manufacture and raw material like

Box 2.4 — The Roots of Trade

The hill trade fell into four distinct categories. The inter-regional trade generated the movement of essentials like salt, iron ore, implements and cloth. Much of this trade was carried on at innumerable seasonal fairs. The trade with the plains of Punjab and beyond, involving the inter-change of merchandise was normally conducted at intermediate markets. The trans-Himalayan trade was largely in the hands of transhumant tribes. Lastly, there was the transit trade across lower hills and the Gangetic plains, the *raison d'être* for the importance and growth of several towns, and the engine of substantial pumping of scarce cash into the local economy.

wool and metals contributed significantly to improvement of the economy of the community.

A Summary

This was an era dominated by petty chiefs. The ruler was supreme and the sole owner of the soil; the fountain from which flowed the right of cultivator to a share of the produce. Whatever was in excess of a subsistence level, was exacted from the cultivator. The distribution of the land amongst the high caste hierarchy was discriminatory and exclusively concentrated in the hands of the principal farming communities. The low-caste and the artisan class, for the most part, constituted land-less agricultural labour. Literally they formed the deprived and the depressed classes. A Koli owned no land or any other asset.²² Even the hut raised with his own labour

was not his to claim. The peasantry tilling small holdings harvested grains which were mostly coarse and were barely sufficient to be shared by the family with the artisans as *shikotha* for services rendered throughout the year. The landholders, by and large, just managed to make both ends meet with the support of livestock rearing, weaving and other minor crafts. A socio-economic institutional framework was conspicuous by its absence and means of communications, educational and health facilities were virtually non-existent. The predominantly agrarian economy, in short, was in a state of placidity and from the look of its supineness inspired little hope of growth.

Phase II — 1948–1971

The integration of the Punjab Hill States in 1948 marks a watershed not only in political context but also in the economic life of the people. An anachronistic feudal order yielded way to a democratic government committed to planned development. The economic and social structure of the economy preceding the onset of planned development was woefully inadequate. This is amply borne out from the state of institutional and infrastructural framework as existed when the First Five Year Plan was launched on 1 April 1951 — and of which a brief account may be found hereafter.

Education and Skill Formation Facilities: According to the 1951 Census, literacy was pitifully low at 4.8 per cent; the lowest amongst all the States, only 7.5 per cent of males and 2 per cent of females were counted as literate.²³ The discipline-wise break-up of the educated and skilled class is given in Table 2.2 below.

22. Kanwar, Pamela, *Essays on Urban Pattern in Nineteenth Century Himachal Pradesh*, IAS.

23. Director of Economics and Statistics, Government of Himachal Pradesh, *Statistical Outline of 1965*; Shimla, 1965.

TABLE 2.2: Education Levels in the Year 1951

Graduate in Arts and Science	369	Including 13 women
Post-Graduates	85	Including 1 women
Degree/Diploma holders in:		
Education	338	Including 19 women
Engineering	10	Including 1 woman
Agriculture	11	
Veterinary	2	
Law Commerce	6	
Legal	61	Including 4 women
Medicine	69	Including 10 women
Others	1008	Including 278 women
<i>Total</i>	<i>1959</i>	
Percentage to total population	0.18	

Source: Department of Economics and Statistics, Government of Himachal Pradesh, *Statistical Outline*, 1965.

Most of these professionally qualified hands had received college education and professional training outside the State, mostly in Punjab. No facilities existed within the State.

The number of educational institutions — High, Middle and Lower Middle and Primary — totalled 408 including 17 run exclusively for girls. The first Degree College of the State was set up at Mandi, in October 1948 and an industrial training institute came to be established a good decade later, in 1959–60. Without question, this catalytic force, the *sine-qua-non* for the generation of reasonable conditions for modern development was in very poor shape.

Roads and Transportation: The construction of roads and the development of transportation has been a comparatively recent phenomenon. In 1948, no more than 37 miles of metalled, 183 miles of unmetalled roads (in unconnected patches) and 500 miles of bridle paths existed throughout the length and breadth of the State

— and were in various stages of maintenance. By 1950–51, the position had improved slightly to yield an average of 5.3 miles of surfaced roads per lakh of population. Of the two railway tracks laid by the British to connect the plains with Shimla and Jogindernagar (Mandi), only 34 miles ran through the territory of the State — and because of the peculiarity of the terrain and a poor economy, air or water transport was simply impracticable. According to an averaged estimate based on 1951–52 data, Himachal figured at the bottom among all the States in the matter of vehicles of all types averaged per lakh persons.

Medical and Public Health Facilities: Inadequacy was writ large in this respect as well — there were only 88 hospitals and dispensaries — where during the whole year of 1949–50, only 5,03,292 patients received outdoor medical attention. The number of beds in 1948, stood at only 209 (one for 2,500 persons). This rose to 436 in 1949–50 and 455 in 1950–51 signifying the importance the State attached to public health. In

the absence of transportation and communications, it will not be far from the truth to remark that these facilities remained grossly under-utilised as they were confined to the towns and accessible only to the population of the urban centres and to a limited number of villages.

Financial Institutions: Growth of banking, needless to emphasise, occupies an important place in the modern concept of development. In Himachal Pradesh it was witnessed late and only from the 1960s onward. In the beginning, there were only six branches of two private banks.

Energy: At the time of merger, only six out of the thirty capitals of the princely states were electrified. The primary object of generation was to illuminate the Raja's palace — the little surplus, was distributed among the élite residing in the capital town. The total installed capacity of the six hydro-electricity schemes was 503 kWh and in 1947, industrial consumption was 141 hp. Interestingly, Mandi state had not been utilising more than one-third of its rightful quota from the Jogindernagar hydro-electric scheme. In 1948, the per capita consumption roughly worked out to 0.99 kwh. In 1949, only 5.2 per cent and in 1950, only 8.3 per cent of the total generation was consumed as industrial power.²⁴

Domestic Product: Agriculture, industry and services contributed 69.4 per cent, 17.3 per cent and 13.2 per cent respectively to the Domestic Product. An unbalanced production structure was manifest from the predominance of working population (91 per cent) in the agricultural sector. From the inter-sectoral angle, agriculture received first attention. In 1950–51, out of 69.43

per cent of the output from agriculture, 44.56 per cent had its origin in crop farming; 19.32 per cent in animal husbandry and the balance of 5.55 per cent in forest and fisheries. Food crops accounted for 97 per cent of the cropped area and 99.2 per cent of total agricultural production. The agrarian economy exhibited a pronounced subsistence character.

About the manufacturing sector there is nothing to write home about. There were resin, turpentine and foundry products at Nahan, beer at Solan and guns at Mandi. A sprinkling of traditional cottage industries produced goods mostly for the local market and played a complementary role to agriculture. The four large and medium scale enterprises in 1949, employed only 927 workers.

For a proper appreciation of socio-economic features of the economy at the time, reference to demographic features like literacy percentage and rural-urban distribution might be in order. According to the 1951 Census, the literacy percentage was 4.8 per cent for the entire area, it was 3.9 per cent for rural areas and for females, this was abysmally low at 1.2 per cent. The State was predominantly rural in character with 95.91 per cent of its people living in villages. The remainder 4.9 per cent occupied nine towns. The purview of socio-economic structure and the infrastructure facilities shows that Himachal Pradesh at birth, formed a mosaic of feeble and under-developed sub-economies.

Economic Growth through the Development Plans: Himachal Pradesh of 1950 and 1951 was one amongst the poorly developed areas in the country and lagged behind in practically every sphere. To bring the standard of economic performance in step with that of other progressive states, Himachal Pradesh embarked on economic planning

24. *Himachal Pradesh Government Industrial Survey Report of Himachal Pradesh, 1955-56.*

alongwith the rest of the country. Between its formation and the start of the planning process, the administration had made a wholesome allocation of investible funds for development services whose primary object to broaden the infrastructural base.

Through the first three Plans and through the Annual Plans preceding the Fourth Five Year Plan, relatively large resources were ploughed in to kick-start the economy. Table 2.3 gives an idea about the percentage of sectoral allocation of the total plan outlays during first three Five Year Plans.

Allocation for infrastructure including on irrigation, transport and communications and social services, which accounted for 78.7 per cent of the total during the first FYP declined perceptibly in the subsequent two Plans. A meagre outlay of 1.9 per cent was made for the development of industry and mining. Though enhanced a little during subsequent Plans, it fell far short of actual requirements — considering the sector's potential. Among the directly pro-

ductive sectors, agriculture and allied activities — for obvious reasons — received fairly heavy allocations in the Second and Third Plans. The power sector, a major contender for a big slice of the cake, remained starved for funds. Evidently, it was not realised that this sector is an area of development, where in addition to an optimum exploitation of abundant resources, the growth eventually translates into equity. By and large, the pattern of resource allocation appeared to be broadly in consonance with the requirements of structural change and socio-economic development.

During the initial fifteen years (1950–51 to 1965–66), the Net State Domestic Product, in real terms, recorded an average annual increase of 3.4 per cent. During the first three Plans a very high proportion of the total outlay had been made on infrastructural development. In this backdrop, the growth, by all accounts, was commendable. The growth of per capita income, on the contrary, appeared on an erratic course. Starting with Rs 239.5 (at 1950–51 prices, most rounding-off takes this at Rs 240),

TABLE 2.3: Sectoral Allocations during First Three Five Year Plans

	<i>First Plan</i>	<i>Second Plan</i>	<i>Third Plan</i>	<i>Annual Plans</i>
<i>A. Actual (Rs crore)</i>	5.64	14.73	27.93	40.22
<i>B. Sector (% to total)</i>				
Agriculture and allied activities	14.4	24.9	31.8	19.8
Irrigation	7.0	3.9	1.3	3.5
Power	4.6	9.6	7.1	27.7
Industry and Mining	1.9	2.4	2.5	3.2
Transportation and Communications	51.4	40.1	35.2	34.1
Social Services (Education, Medical, and Public health and other social services)	20.3	17.8	21.1	11.4
Miscellaneous	0.4	1.3	1.0	0.3
	100.0	100.0	100.0	100.0

Source: Department of Economics and Statistics, Government of Himachal Pradesh, *Statistical Outline*, 1971.

it was back to approximately the same figure, i.e. Rs 240.4 at the end of fifteen years of development effort. In between, it had dipped and fluttered without a seeming explanation.

With the transfer of territory from Punjab in 1966, Himachal Pradesh almost doubled in both population as also in size. From 1967–68 to 1970–71, the performance of the NSDP was fairly good. At 1970–71 prices, starting at Rs 203.5 crore, it moved up to Rs 232.4 crore in 1970–71. Obviously the growth was not encouraging when compared to the achievement of the earlier spell (1950–51 to 1965–66). The growth of per capita income too was slower. Though in the national context, Himachal Pradesh counted as one of the relatively faster growing economies. It was truly heartening in view of the fact that it had started as an area with the lowest per capita income in the country.

The expansion of educational facilities through legislative and executive measures was a vital factor, which helped the people to do some rethinking about their old beliefs and prejudices. The first time an educational survey was conducted during 1955. The Himachal Pradesh Compulsory Primary Education Act was passed to focus attention of the people on the education of their children. The results were astonishing so much so that literacy registered a more than three-fold increase within a few years. In 1961, it stood at 21.3 per cent (males 32.3 per cent and females 9.5 per cent) and in 1971, within a decade, this recorded around a 50 per cent increase at 31.92 per cent (males 43 per cent). The low rate of female literacy (20.23 per cent) however, detracted somewhat from the otherwise impressive performance. The number of educational institution had continued to grow year after year. By 1970–71 the number had swelled to 3758 Primary, 730 Middle and 430

High/Higher Secondary schools.²⁵ In consequence, the number of teachers and the taught both had gone up — 22,214 trained teachers coached 5,51,113 students. College education too had received an impressive fillip. In 1971, colleges of general education functioned at 17 places wherein 11,400 students received instructions from 420 lecturers and professors. Facilities for technical education too had been strengthened to a considerable degree.

To begin with the length of motorable roads was ludicrously small and in relation to area as well as population, they were utterly inadequate. During the years of the first popular ministry, top priority was given to road construction and out of the total first Plan expenditure, 51.4 per cent was incurred on road construction alone. In 1966, the motorable road length aggregated about 1443 km. (5.16 km. per 100 sq. km.; 10.83 km. per 10,000 population). By 1970–71, the length had gone up to 7,609 km. averaging 13.67 km. per 100 sq. km. and 22.22 per 10,000 population. The above figure however does not take into account the further lengths of 608 km. of jeepable and 2400 km. of 'less-than-jeepable' roads. Nor is the length of National Highways (239 km.) included.

The postal facilities which were minimal, received better attention at the hands of the Union Government as also the State. Post offices which numbered only 314 during 1956 functioned at 1681 places in 1971 registering an increase from 2.88 to 4.81 per 10,000 population. Admittedly, the low density of population made rapid expansion an onerous and expensive job.

In 1950–51, there were only two medical

25. Department of Economics and Statistics, Government of Himachal Pradesh, *State Outline*, 1971; Shimla 1973.

institutions per 10,000 of population. In the pre-1966 period, relative to population, the number of medical institutions nearly doubled. In the same context, the figure of the number of doctors was a little over double while the bed-strength multiplied three times. In the post-1961 period, however, the pace of growth slowed down, but on the whole, there had been a definite improvement in facilities. By 1971, there were as many as 620 hospitals and dispensaries including — 363 ayurvedic ones. These were manned by 391 doctors, 328 vaidas and 741 paramedical staff and the bed strength stood at 4590 beds. In addition, there were 396 special medical institutions like primary health centres, T.B. clinics and sanatoria, maternity and child welfare centres and V. D. and leprosy clinics.

Before the planning process started, the generation of electricity as well as its per capita consumption, were both were negligible. Initially the growth of hydel-power was tardy. Since the early seventies, however, the tempo has picked up but much has still to be done to exploit the abundance of this natural resource. The actual generation which in 1966–67 was posted at 2349 thousand kWh rose to 52,841 thousand kWh in 1970–71. The consumption of industrial power tripled from 4388 thousand kWh in 1966–67, to 12,399 thousand kWh in 1971.

In the wake of the nationalisation of banks, adequate progress in the growth of banking facilities was recorded. In 1967, there existed about two branches per lakh of population, which in 1971, rose marginally by 0.4 per cent. By the end of December, 1971 there were a 102 branches of various commercial banks in operation and each branch, on an average, provided service to a population of 34,000.

There had been considerable growth in the

‘human capital’ resource as well. By 1971, the number of teachers as a percentage of total population had risen by about five times; that of doctors more than doubled and that of degree and diploma holders trebled. There was a substantial increase in the overall number of institutions as well.

As a direct end-product of development activities, the income of the State as also of its people registered a healthy increase. The per capita income at current prices rose from Rs 240 in 1950–51 to Rs 493 in 1968–69. The expenditure on economic development and social services has registered a steady growth — from Rs 172.20 in 1967–68 to Rs 228.11 in 1971–72. Similarly, the per capita expenditure on education and on medical and public health, which was provided at the higher scale of Rs 36.76 and Rs 11.79 respectively in the Budget of 1971–72, had accounted for an expenditure of Rs 21.69 and Rs 8.54 during 1967–68.

Inter-class Equity: Socio-economic inequalities are a multi-faceted phenomenon, which are hard to capture in terms of a limited number of benchmarks. Examining the question of inter-class equity in the State, Dr L.R. Sharma,²⁶ has looked at it in the context of two variables, namely, consumer expenditure, and, secondly, of ownership of farmland. From an analysis of relevant data, he found that ‘there was not much concentration of these variables in the higher size classes’. In the case of ownership of farmland, he did not come across evidence to discern ‘a trend’ towards unequal distribution of this productive asset. This in his opinion confirmed the ‘proposition that the socio-economic structure of the economy’ was ‘relatively egalitarian’.

26. Dr L.R. Sharma, *The Economy of Himachal Pradesh*; Delhi, 1987.

Besides exploring the above fact of equity, Dr Sharma had gone into the question of inter-regional inequality at a somewhat broader level. Basing his study on various indicators of level of development, he had come to the conclusion that although the 'new' areas of Kangra, Kullu and Shimla had lagged behind in many respects, it was principally due to their relative backwardness at the time of merger. He did not find evidence to show that it was because of any conscious discrimination.

Sociological Transformation: Social and economic conditions, no doubt, influence the political life of a people. But it is the proper use of political power that serves as a powerful instrument of social and economic change. Himachal Pradesh has made great strides in several spheres — economic, social and political. This has been largely due to a highly motivated, people friendly and result oriented leadership. While preserving their cultural and social heritage, the people have adapted to a scientific temper. For instance, the people of Himachal have taken to the idea of family planning more vigorously than people in some 'advanced' States. The result has been a perceptible slowing down of the population growth rate and from an average of over 24 per cent this came down to 21.76 per cent during the 1961–71 decade.

Starting from the early fifties, many important socio-economic laws were enacted. With the integration of parts of Punjab, certain teething troubles arose but gradually homogeneity was established and the much-touted slogan of

distinctions lying between the 'old' and the 'new' areas, lost their political sting. With the enactment of Abolition of Big Landed Estates and Land Reforms Act (1954) the entire relationship between 'landlords' and 'tenants' underwent a sea change. The 'occupant' as also the 'non-occupant' tenants, under certain situations, became the proprietors of the land under their plough. The obnoxious systems of *begar* and *bethu* service were abolished. The condition of the peasantry, on the whole, became secure and society moved to a more equal footing.

Great social change was witnessed with the abolition of untouchability. In the early days, none but the Brahmins and the upper caste people could enter a temple. Any other so-called 'low caste' could not drink at the same source as a 'high class' Hindu. Today, many of the rigidities of the caste system have been discarded. With the spread of education and the opening of employment avenues for both boys and girls, there is greater social mixing which has resulted in inter-community and inter-caste marriages. The reservation of a definite share for Scheduled Tribes and for Scheduled Castes in panchayats and urban local bodies, the Legislative Assembly and in Parliament — as also in the Services — has created a new sense of identity amongst them. The status in society has come to be determined more by the economic and political clout of an individual or family, rather than by its caste or community. Verily, this metamorphosis owes much to the country's independence, the introduction of democratic institutions and finally, to economic planning and development.

CHAPTER 3



**INCOME, EMPLOYMENT
AND POVERTY**



Income, Employment and Poverty

Human welfare is now viewed as combination of indices of growth in per capita income as well as the status of education and health — yet growth in per capita income continues to be an important indicator of economic development. This chapter analyses the pattern of growth of per capita income and of the Domestic Product at the district level. It also attempts to trace the path of the structural transition that the district economies have undergone during the decade of the 1990s. Other aspects touched upon in this chapter relate to employment, labour force participation, labour productivity and inequalities in terms of poverty. Though limited by serious data constraints, an analysis has been attempted in the later sections of this chapter.

Income

Traditionally, economic development has been identified with what Simon Kuznets called ‘a sustained increase in per capita income accompanied by sweeping structural changes’. Developments in the Post World War era have considerably shifted the focus from growth in income as a single benchmark of economic development to include more comprehensive indicators that encompass other aspects of human life as well. Various indices measuring the levels of human welfare were suggested by different social scientists, but per capita income was the

single indicator that was common to all concepts of human development. As a matter of fact, it still continues to be an important yardstick for measuring economic welfare. The need to have development indices at the district level has become more pronounced with the increased emphasis on decentralised micro-level planning. Again, per capita income of districts is used as the main development indicator for immediate reference while formulating plans.

In 2001, Himachal Pradesh’s Department of Economics and Statistics, attempted to estimate district incomes for the first time. District income estimates were made for the period between 1993–94 and 1999–2000. While combining the per capita income for the year 1993–94 with other indicators which were available for 1991 may not have given meaningful results, yet incomes of all the twelve districts of Himachal Pradesh for the period between 1990–91 and 1992–93 have been estimated by making certain assumptions and by following a set of procedures as under:

- i. It was assumed that during the period between 1990–91 to 1993–94 the domestic product in different sectors of a district grew at a constant rate and also at the same rate at which it grew between 1993–94 and 1999–2000.
- ii. The domestic product in different sectors

of the districts at 1993–94 prices was then arrived at by applying the sectoral growth rates between 1993–94 and 1999–2000.

- iii. The domestic product at 1990–91 prices was then obtained by shifting the base year from 1993–94 to 1990–91.
- iv. Sectoral domestic products of the districts were then inflated by WPI of the respective years to reach domestic product at current prices.

The above methodology may not have given accurate information with regard to district domestic product per se between 1990–91 to 1992–93, yet the figures arrived at give a vivid picture of the variations across the districts.

Box 3.1. Categories of Workers

The industrial categories of cultivators namely, agricultural labourers and workers engaged in the caring of livestock, or in forestry, hunting, plantations, orchards and allied activities are included in the Primary Sector. The Secondary Sector covers mining and quarrying, household industries, manufacturing — other than in the household — and construction. Trade and commerce, transport, storage and communications and other services are covered under the Tertiary Sector.

The pattern of economic growth in terms of district income and sectoral growth rates in the twelve districts of Himachal Pradesh is summarised in Table 3.1. The variations in economic performance, particularly in the Primary Sector are quite wide across the districts. The rate of growth of district income during 1990–

91 to 1999–2000 has been less than the State average for the districts of Chamba, Kangra, Kinnaur, Kullu, Lahaul & Spiti and Shimla. The highest growth rate in district income was recorded in Una district which was followed by Solan, Bilaspur, Mandi, Hamirpur and Sirmaur — and all these districts recorded a growth rate in district income higher than the State average. Income generated by the Primary Sector of Shimla and Kullu districts recorded a negative growth rate during the same period. The growth rate recorded in the Tertiary Sector of both these districts has been higher than the State average. The district of Una registered the highest growth rate in income generated by the Primary Sector during the period under reference. Una was followed by Solan, Hamirpur, Sirmaur, Bilaspur, Mandi and Kangra. All these districts have recorded a higher growth rate than the State's average in the Tertiary Sector. Districts that recorded a lower growth rate than the State average in the Tertiary Sector are Shimla and Kullu (both negative), and Kinnaur and Chamba in ascending order. The growth rate in the Secondary Sector has been the highest for Bilaspur, which was followed by Una, Solan, Mandi and Sirmaur with their growth rates for the Secondary Sector being higher than the State average. Growth rates for the Secondary Sector which were lower than the State average were registered for the districts of Chamba, Kangra, Hamirpur, Kullu, Kinnaur, Shimla and the lowest being for Lahaul & Spiti. The highest growth rate for the Tertiary Sector has been recorded in Una at 8.27 per cent and at 3.24 per cent the lowest growth rate was in Kinnaur.

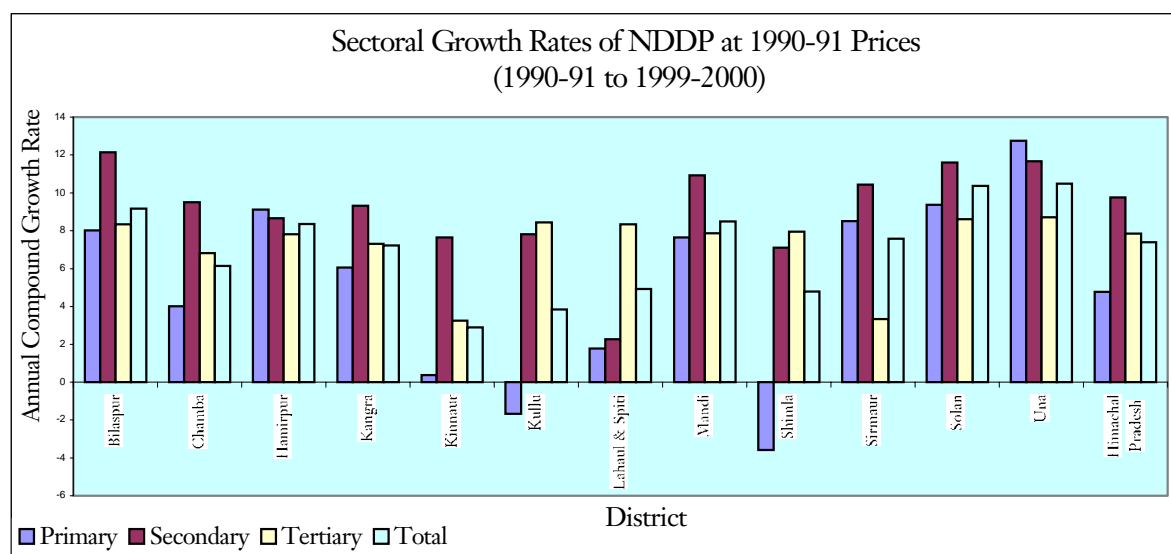
The growth rate of the Net State Domestic Product between 1990–91 and 1999–2000 has been 7.38 per cent for the State as a whole. The Secondary Sector recorded the highest growth rate at 9.75 per cent, which was followed by the

TABLE 3.1: Growth in State Income
(Net State and District Domestic Product) Sector-wise at 1990–91 Prices

S. No.	District/State	District income (Rs Lakh) (Net domestic product)		Annual Compound Growth Rate 1990–91 to 1999–2000			
		1990–91	1999–2000	Primary	Secondary	Tertiary	Total
1.	Bilaspur	13,484	32,432	8.02	12.14	8.35	9.17
2.	Chamba	19,109	3,4647	4.02	9.51	6.82	6.13
3.	Hamirpur	10,214	22,800	9.12	8.65	7.81	8.36
4.	Kangra	48,778	98,034	6.06	9.31	7.31	7.23
5.	Kinnaur	6190	8236	0.39	7.64	3.24	2.90
6.	Kullu	18,402	26,848	-1.68	7.81	8.43	3.85
7.	Lahaul & Spiti	3566	5765	1.78	2.27	8.34	4.92
8.	Mandi	26,552	60,020	7.64	10.93	7.87	8.50
9.	Shimla	46,746	74,623	-3.58	7.11	7.95	4.79
10.	Sirmaur	15,041	31,210	8.51	10.43	3.34	7.57
11.	Solan	23,247	62,355	9.37	11.61	8.60	10.37
12.	Una	9101	24,679	12.75	11.66	8.72	10.49
13.	Himachal Pradesh	2,40,314	4,89,678	4.78	9.75	7.85	7.38

Source: Computed by the Department of Planning, Himachal Pradesh based on the information supplied by the DESHP.

CHART 3. 1



Tertiary Sector at 7.85 per cent and the Primary Sector at 4.78 per cent. Before inferring anything about the direction of structural changes at the district level, it is important to consider the share of different sectors in the domestic product between two points of time. Table 3.2 shows the sectoral contribution in domestic products in 1990–91 and in 1999–2000. In the year 1990–91, the Primary Sector contributed 37.45 per cent to the State income and in the same year, the shares of the Secondary and Tertiary Sectors were 23.95 per cent and 39.12 per cent, respectively. If an increase in the contribution of the Secondary and Tertiary Sectors in total income is any indication of development, on the basis of a relatively higher level of productivity in them, it can then be inferred that the structural transition in the State has been in the right direction during the period under

reference. The share of the Primary Sector in the State's income has declined from 37.45 per cent to 29.32 per cent, whereas it has increased from 23.95 per cent to 29.80 per cent for the Secondary Sector and rose marginally from 39.12 per cent to 40.88 per cent for the Tertiary Sector between 1990–91 and 1999–2000.

Growth in per capita income is another indicator of economic well being. This growth at 1990–91 prices, across the districts, and for the State as a whole is exhibited in Table 3.3. The per capita income of the State in real terms, grew at an average annual compound rate of 3.49 per cent between 1990–91 and 1999–2000. The maximum growth rate in per capita income in real terms was recorded in Una at 6.47 per cent; while at the other end of the spectrum, tribal Kinnaur — which is prone to natural calamities

TABLE 3.2: Sectoral Contribution to Domestic Product (Net State and District Domestic Product) in percentage

Sl. No.	District/State	1990–91			1999–2000		
		Primary	Secondary	Tertiary	Primary	Secondary	Tertiary
1.	Bilaspur	37.82	21.14	41.39	34.01	27.63	38.36
2.	Chamba	47.41	15.03	38.10	38.78	20.58	40.64
3.	Hamirpur	26.18	23.04	50.81	28.08	23.65	48.27
4.	Kangra	42.95	18.69	38.55	38.50	22.65	38.85
5.	Kinnaur	52.25	16.27	32.52	40.83	25.55	33.63
6.	Kullu	60.17	16.80	26.48	34.81	24.42	40.78
7.	Lahaul & Spiti	28.55	35.39	37.41	21.06	27.39	51.55
8.	Mandi	36.30	20.24	43.39	33.80	25.26	40.94
9.	Shimla	40.88	24.35	38.56	17.78	30.31	51.91
10.	Sirmaur	31.82	29.94	39.41	34.70	38.92	26.38
11.	Solan	17.25	51.10	31.88	15.75	57.13	27.13
12.	Una	22.67	23.47	54.25	27.76	26.07	46.17
13.	Himachal Pradesh	37.45	23.95	39.12	29.32	29.80	40.88

Source: Computed by the Department of Planning, Himachal Pradesh based on the information supplied by the DESHP.

like flash floods and frequent slips and slides — had a negative rate at (-)0.97 per cent during the same period. Besides Una, the growth rate in per capita income in real terms was higher than the State average in Solan, Bilaspur, Mandi, Hamirpur, and Sirmaur and registered 6.38 per cent, 3.11 per cent, 5.27 per cent, 4.58 per cent, 4.42 per cent and 3.69 per cent, respectively. Chamba, Kangra, Kinnaur, Kullu, Lahaul & Spiti, and Shimla recorded a growth rate in per capita income in real terms that was lower than the State average.

Employment

Growth in district income and per capita income becomes devoid of meaning if it is not translated into an increase in productive employment opportunities. Growth in income directly or indirectly, has a relationship with the creation of employment opportunities. Increased employment opportunities as a result of growth in income would lead to an increase in per capita income and district income. This section takes stock of the employment opportunities existing in the State at the district level in terms of (i) main and marginal workers, (ii) goes into the

TABLE 3.3: Per Capita Income at 1990–91 Prices (in rupees)

Sl. No.	District /State	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	Annual Compound Growth Rate (1990-91 to 1999-2000)
1.	Bilaspur	4515	4753	5003	5267	5723	5985	6167	6565	6964	7547	5.27
2.	Chamba	4822	4933	5047	5163	5399	5461	5556	5742	5743	6058	2.31
3.	Hamirpur	2753	2875	3002	3135	3417	3353	3450	3627	3895	4243	4.42
4.	Kangra	4128	4266	4409	4556	4717	4736	4881	5151	5404	5736	3.34
5.	Kinnaur	8746	8661	8576	8493	7995	7546	7473	8181	7328	7930	-0.97
6.	Kullu	6039	6045	6051	6057	5612	5711	6074	6577	6573	6098	0.10
7.	Lahaul & Spiti	11,417	11,527	11,637	11,748	10,672	11,064	11,676	11,199	11,420	12,559	0.96
8.	Mandi	3394	3550	3712	3883	4263	4145	4210	4397	4851	5313	4.58
9.	Shimla	7525	7599	7674	7750	7806	8241	8573	8426	8884	8304	0.99
10.	Sirmaur	3934	4079	4229	4385	4973	5023	5236	5281	5245	5650	3.69
11.	Solan	6052	6438	6849	7285	9007	9539	10,511	10,434	10,651	11,231	6.38
12.	Una	2394	2549	2714	2889	3328	3332	3584	3819	4057	4480	6.47
13.	Himachal Pradesh	4618	4779	4946	5118	5447	5557	5804	5990	6253	6507	3.49

Source: Computed by the Department of Planning, Himachal Pradesh based on the information supplied by the DESHP.

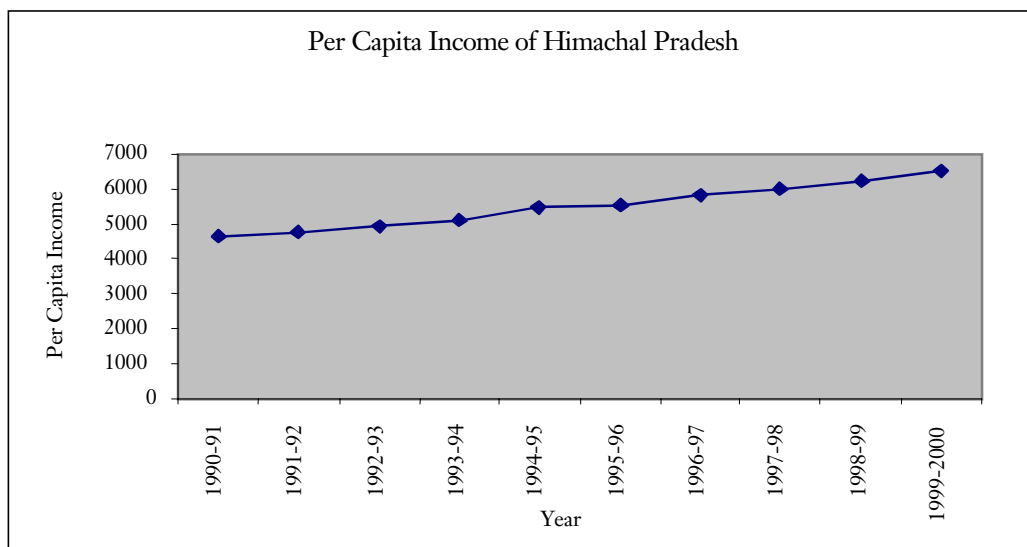
Box 3.2 — District Level Changes in Income

Between 1990–91 and 1999–2000, the district of Kullu passed through a drastic economic transition and the contribution of the Primary Sector plummeted from 60.17 per cent to 34.81 per cent during this period. The Secondary Sector registered a growth in its contribution to the district income and rose from 16.80 per cent to 24.42 per cent. The contribution of the Tertiary Sector in district income, has increased from 26.48 per cent to 40.78 per cent during same period. The contribution of the relatively productive Secondary and Tertiary Sectors has increased in the district income. Table 3.2 shows that the share of the Primary Sector in the district income has increased in Hamirpur, Sirmour and Una districts, while the share of the Tertiary Sector in district income in these three districts has declined during the period under reference. All other districts have recorded an increase in the share of either the Secondary or the Tertiary — or in both these sectors — in district income whereas the share of the Primary Sector has recorded a decline. The contribution of the Primary Sector in total income is higher than that of the State average in Chamba, Kangra, Kinnaur, Kullu and Mandi at both points of time. Shimla district has also registered a decline in the share of the Primary Sector — accompanied by a considerable rise in the share of the Tertiary Sector in total income during the decade of the 1990s. In 1990–91, The maximum dependence on the Primary Sector in the total income was in Kullu, whereas in 1999–2000, it was the maximum in Kinnaur district.

issue of composition of workforce by sex, (iii) discusses the employment by sector, and (iv) attempts to examine the productivity of workforce

in different sectors of the economy and briefly analyses the efforts of the State Government in increasing employment opportunities.

CHART 3.2



Box 3.3 —
Probable Reasons for the Changes
in District Per Capita Income
between 1990–91 and 1999–2000

The probable causes for the negative growth rate in per capita income in Kinnaur can be i) a lower production of horticultural and agricultural crops because of the failure of timely rains, and ii) difficulties in transporting the exportable surplus because of frequent natural disasters which occurred during the second half of the 1990s. Despite adverse climatic and geomorphological conditions prevalent in Lahaul & Spiti, it still had the highest per capita income in the entire State throughout the period under reference. A low density of population and a near total dependence on cash crops like seed potato of high quality of the population of Lahaul & Spiti can be the possible reasons for its high per capita income.

It is meaningful to consider the growth in per capita income of the districts along with the changes in the structure of their economies. The districts with the highest growth rate in per capita income in real terms are Solan and Una. The Secondary Sector dominated the economy of Solan whereas the Tertiary Sector was dominant in the Una district — though the growth rate recorded in the Primary Sector was higher than that recorded in the Secondary and Tertiary Sectors in Una during the period under reference. There has been a considerable shift in the economic structure of Kullu and Shimla districts in favour of the Tertiary Sector in this period, yet the growth rate in per capita income in real terms, has been considerably lower than the State average during the same period.

Tables 3.4 and 3.5 summarise the growth of main and marginal workers and their composition by sex during the period between 1981 and 2001. The total work force of the State grew from about 18 lakhs in 1981 to about 22 lakhs in 1991 and to about 30 lakhs in 2001, thereby registering an annual growth rate of 2.53 per cent. During the period, the highest growth rate in the workforce was recorded in Una (4.18 per cent) followed by Solan (3.68 per cent), Hamirpur (2.82 per cent), Kullu (2.80 per cent) and Kangra (2.79 per cent). All these districts registered a growth rate in the workforce that was higher than that registered by the State as a whole during 1980s and 1990s. All other districts recorded a lower growth rate in workforce than registered by the State. In fact Lahaul & Spiti recorded a negative growth rate in the workforce during the period under reference.

Other districts that recorded a lower growth rate in total workforce are Bilaspur, Sirmour, Mandi, Chamba, Shimla and Kinnaur in descending order.

Composition of Workforce by Sex

Out of the total workforce in 1981, 62.93 per cent were males and 37.07 per cent were females (Table 3.5). This proportion changed to 59.85 per cent and 40.15 per cent for males and females in 1991 and to 56.34 per cent and 43.66 per cent in 2001. These figures indicate progressive improvement in the composition of the workforce as far the gender parity is concerned. In 1981 gender disparity in terms of the share of females in total workforce was minimum in Hamirpur whereas it was the maximum and at

TABLE: 3.4 Compound Growth Rate of Main and Marginal Workers by Sex (1981–2001)

District/State	Main workers			Marginal workers			Main and Marginal workers		
	M	F	T	M	F	T	M	F	T
Bilaspur	1.08	3.06	1.73	7.39	3.09	4.25	1.94	3.08	2.44
Chamba	0.33	2.51	0.81	8.54	3.37	4.50	1.45	3.07	2.12
Hamirpur	1.15	4.09	2.18	7.86	2.58	3.90	2.40	3.25	2.82
Kangra	0.53	3.71	1.23	8.80	5.11	6.18	1.78	4.55	2.79
Kinnaur	1.02	0.78	0.92	11.33	6.88	8.22	1.52	1.65	1.58
Kullu	1.84	2.86	2.22	10.20	3.82	5.45	2.53	3.14	2.80
Lahaul & Spiti	-0.09	0.33	0.07	-0.07	-2.22	-1.42	-0.09	-0.08	-0.08
Mandi	0.63	0.40	0.55	8.88	5.17	6.09	1.74	2.58	2.13
Shimla	1.20	1.37	1.26	6.51	3.78	4.58	1.55	1.93	1.70
Sirmaur	1.06	3.74	1.79	9.97	3.49	5.02	1.64	3.65	2.34
Solan	2.70	1.92	2.53	10.66	6.05	7.07	3.42	4.16	3.68
Una	1.49	7.94	2.37	10.87	8.48	9.13	2.53	8.30	4.18
Himachal Pradesh	1.08	2.36	1.46	8.76	4.55	5.64	1.97	3.38	2.53

Source: Computed from the Census 1981 and 2001 data.

an alarmingly high level in Una. The situation in Una district improved a little in 1991 when the share of female workers increased to 27.87 per cent from 18.90 per cent in 1981 and it improved impressively during 1990s — as is evident from the share of females in the total workforce in 2001 which, stood at 43.66 per cent. What is an issue of concern is that the proportion of female marginal workers was much higher than that of female main workers for all the three points of time in Una. This indicates that female workers in Una are not in continuous and productive employment. The picture for the State as a whole is also not very rosy as the proportion of female marginal workers was much higher than the proportion of the female main workers not only in 1981, but also in 1991 and 2001. The proportion of female workers in the total workforce has been at less than par at all the three points of times. Yet, it is heartening

to note that the female participation in the total workforce has increased during the period between 1981 and 1991 and also between 1991 and 2001, though by small margins in all the districts. Hamirpur, Mandi, Bilaspur and Chamba stand relatively better off than all other districts in terms of gender parity in the total workforce in the year 1991. Una and Kangra districts were at the bottom. The situation has changed in 2001. Hamirpur has emerged as a district where share of females in the total workforce is above par. All other districts with the exception of Lahaul & Spiti registered an improvement in favour of female participation in the total workforce during the decade of the 1990s.

Employment by Sector

This section examines the structural aspect of

employment in the three sector framework — Primary, Secondary and Tertiary. Census data have been used to analyse sectoral employment of the main workers only, as the relevant data for marginal workers could not be retrieved. The pattern of employment in different sectors alongwith the contribution of different sectors of the economy in State income over a period of time gives an idea about the structural transition that the economy has undergone over a period of time.

The period between 1981 and 1991 witnessed a growth rate of 2.09 per cent in full time job opportunities in the State. The maximum growth in full time job opportunities was observed in the Tertiary Sector at 5.97 per cent. The Primary and Secondary Sectors registered much lower growth in employment opportunities which stood at 1.39 per cent and 1.29 per cent, respectively. At 4.04 per cent, the Hamirpur district recorded the highest growth in employ-

ment opportunities in all sectors of the economy. Una, Solan, Sirmaur and Kangra are other districts which recorded a growth in employment opportunities at a higher rate than the State's average (3.93 per cent, 2.77 per cent, 2.34 per cent and 2.22 per cent, respectively). During the same period, Lahaul & Spiti registered a negative growth rate in employment opportunities in all the sectors of economy combined together. The Primary Sector in Lahaul & Spiti was stagnant, the Secondary Sector registered a negative growth rate of minus 6.06 per cent, while the Tertiary Sector was the only area where employment opportunities grew at a rate of 5.64 per cent during the period under reference.

Tables 3.5 and 3.6 reveal that employment in the Tertiary Sector increased at a higher rate than the Primary and Secondary Sectors in all the twelve districts between 1981 and 1991. The highest growth of employment in the Tertiary Sector was recorded at 11.12 per cent in the

TABLE 3.5: Growth of Main Workers during 1981–1991

<i>District/State</i>	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>	<i>Total</i>
Bilaspur	0.61	2.06	7.63	1.65
Chamba	1.38	-1.32	7.57	1.72
Hamirpur	2.53	2.57	11.12	4.04
Kangra	1.52	-0.02	5.84	2.22
Kinnaur	-0.86	4.93	2.38	0.36
Kullu	1.53	1.63	5.45	1.92
Lahaul & Spiti	0.00	-6.06	5.64	-1.06
Mandi	1.65	-0.70	7.14	2.05
Shimla	0.45	2.29	3.86	1.24
Sirmaur	2.33	0.55	4.13	2.34
Solan	0.88	9.36	5.57	2.77
Una	2.80	4.62	7.68	3.93
Himachal Pradesh	1.39	1.29	5.97	2.09

Source: Computed from the Census 1981 and 1991, Economic Tables.

TABLE 3.6: Percentage of Main Workers Employed in Different Sectors of the Economy (1981 and 1991)

District/State	1981			1991		
	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary
Bilaspur	77.79	9.19	13.02	70.79	9.51	19.69
Chamba	73.44	14.72	11.84	71.33	10.91	17.76
Hamirpur	72.19	10.31	17.50	64.44	9.23	26.32
Kangra	65.06	13.74	21.20	61.31	11.21	27.48
Kinnaur	71.03	11.08	17.89	62.65	15.97	21.38
Kullu	84.97	5.07	9.96	82.15	4.95	12.90
Lahaul & Spiti	54.25	31.12	14.63	60.71	13.70	25.59
Mandi	79.53	9.22	11.25	76.88	7.11	16.01
Shimla	73.72	6.83	19.45	68.54	7.47	23.99
Sirmaur	78.15	10.75	11.11	78.09	9.19	12.72
Solan	69.94	12.70	17.37	59.58	19.25	21.17
Una	68.72	13.11	18.17	63.18	13.76	23.06
Himachal Pradesh	73.59	10.71	15.70	69.28	9.99	20.73

Source: Computed from the Census 1981 and 1991 Economic Tables.

Hamirpur district, whereas the lowest growth was in Kinnaur district at 2.38 per cent. Negative growth rates of employment in the Secondary Sector were recorded in Chamba, Kangra, Lahaul & Spiti and Mandi Districts at minus 1.32 per cent, minus 0.02 per cent, minus 6.06 per cent and minus 0.70 per cent respectively. The growth rate of employment in the Primary Sector was the lowest in Kinnaur district at minus 0.86 per cent while the highest growth rate was for Una district at 2.80 per cent.

Across the districts, Table 3.6 gives a picture of employment opportunities in different sectors of the economy. For earning, more than two-thirds of the total main workers are dependent on the Primary Sector. The highest proportion of total main workers engaged in the Primary Sector is for Kullu district both in 1981

and 1991 — although this proportion marginally declined in 1991. Kangra and Hamirpur districts have the maximum employment of main workers in the Tertiary Sector for 1991 and can be termed as relatively developed districts if this

Box 3.4 —

Critical Role of the Primary Sector

Excessive dependence of employment on the Primary Sector reinforces the fact that the climatic and topographical conditions of the State favour agricultural activities. An important policy implication here is to undertake necessary action to raise productivity of manpower engaged in the Primary Sector, as it is conventionally known for its low productivity.

can be treated as an indication of a higher level of development. By following same benchmark, Sirmaur, Mandi, Kullu and Chamba districts can be termed as relatively backward districts. The Secondary and Tertiary Sectors seem to have competed in providing employment in 1981, with the Tertiary Sector succeeding in providing greater employment opportunities in 1991. Between 1981 and 1991, the most pronounced transition in the pattern of sectoral employment was observed in the Solan district where employment in the Primary Sector declined considerably and seems to have shifted mainly to the Secondary Sector and partially, to the Tertiary Sector. The employment of main workers in the Tertiary Sector has actually increased at the cost of employment opportunities in the Secondary Sector in Himachal Pradesh, where the employment declined between 1981 and 1991 as the decline in employment of main workers in the Primary Sector has been marginal during this period.

Box 3.5— Inferences

1. Main workers are dominated by males though females are also making their presence felt rapidly in the stream of main workers.
2. The Primary Sector continues to be the main sector providing employment to main and marginal workers, though employment in the Tertiary Sector is increasing at a steady pace.
3. Employment in the Tertiary Sector has increased more or less steadily without large variations across the districts, except in Hamirpur where employment in the Tertiary Sector has increased at a relatively higher rate.

Employment and Productivity

Growth in employment opportunities is not the only ingredient for a permanent solution to sustainable development. It is important to go into the issue of productivity of employed manpower in terms of magnitude of the income increased as a result of a unit increase in employment. For placing any economy on the path of sustainable development, it is necessary to ensure that a unit increase in employment leads to a relatively larger increase in income. This section examines the productivity of employed manpower for all the three sectors of the economy across the districts as well as in the State as a whole.

Ideally speaking, the issue of productivity of labour would not be complete unless following three aspects of labour productivity are examined:

- i. a comparison between shares of employment and income in three sectors of the economy;
- ii. a comparison between growth rates of Net State Domestic Product and employment in different sectors of the economy which happens to be a measure of sectoral income elasticity of employment; and
- iii. income per worker in different sectors of the economy.

It is not possible to go into the second aspect of labour productivity as neither the growth rates of net domestic product for the decade of the 1980s nor growth rates of employment during the decade of the 1990s are available to compute income elasticities of employment at the district level. However, sector-wise income elasticities of employment at the State level have

TABLE 3.7: Income Elasticity of Employment

<i>Income Elasticity of Employment for a period of time is defined as the ratio of growth rate in employment to growth rate in real NSDP during that particular period of time.</i>	<i>Sector</i>	<i>Income elasticity of employment</i>
	Primary	0.48
	Secondary	0.14
	Tertiary	0.69
	Overall	0.35

Source: Computed by the Department of Planning, Government of Himachal Pradesh.

been worked out. Therefore, the section is restricted to examination of the first and the third aspects of labour productivity. These two aspects are also restricted to the analysis at a given point of time rather than being examined over a period of time, again because of non-availability of data. Tables 3.7, 3.8 and 3.9 examine the above mentioned aspects of labour productivity.

At 0.14, the income elasticity of employment was the lowest for the Secondary Sector during the decade of the 1980s. Overall employment elasticity, for all three sectors combined, was 0.35 during the same decade. As expected, the Tertiary Sector has the greatest capacity to provide employment opportunities per unit of income generated — as is reflected from its employment elasticity for the period between 1981 and 1991 — and was 0.69. Table 3.8 contains the sectoral employment elasticities for the decade of the 1980s.

Sectoral productivity indices have been worked out in Table 3.8. These indices have been worked out as a ratio of proportion of sectoral contribution in total income to the sectoral proportion of main workers for 1991. It is evident from the Table that productivity in the Primary Sector was the lowest. The possible reasons for the relatively low productivity in the Primary Sector could be the following — (i) geomor-

phological features of the State do not permit large size of holdings to exist. Average size of holdings in the State is just 1.16 hectares (as per the records of the Directorate of Land Records, Himachal Pradesh for 1995–96) and out of this area a relatively lower proportion is culturable, (ii) steep slopes and ranger terrain make irrigation an expensive proposition, and (iii) the cost

TABLE 3.8: Sectoral Productivity of Main Workers (1991)

<i>Sl. No</i>	<i>State/ District</i>	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>
1.	Bilaspur	0.53	2.22	2.10
2.	Chamba	0.66	1.38	2.15
3.	Hamirpur	0.41	2.50	1.93
4.	Kangra	0.70	1.67	1.40
5.	Kinnaur	0.84	1.02	1.52
6.	Kullu	0.73	3.39	2.05
7.	Lahaul & Spiti	0.47	2.58	1.46
8.	Mandi	0.48	2.85	2.71
9.	Shimla	0.60	3.26	1.61
10.	Sirmaur	0.41	3.26	3.10
11.	Solan	0.29	2.65	1.51
12.	Una	0.36	1.71	2.35
	Total	0.54	2.40	1.89

Source: Computed by the Department of Planning, Government of Himachal Pradesh..

of other agricultural inputs tends to be on the higher side because of the relatively higher transportation costs involved.

The income per worker is another indicator of labour productivity. Table 3.9 exhibits the sectoral incomes per worker for the year 1991. The Net State Domestic Product per main worker for all sectors was Rs 13,508 in 1991 which is almost half of that in Tertiary Sector (Rs 25,493), approximately one third of that in Secondary Sector (Rs 32,373) and a little less than double of that in Primary Sector (Rs 7302). Maximum per worker income has been in Lahaul & Spiti (Rs 21,033) followed by Kinnaur (Rs 18,355), Shimla (Rs 17,575), Solan (Rs 17,384), Kangra (Rs 15,082), Chamba (Rs 14,927), Kullu (Rs 14,339) and Bilaspur (Rs 14,709). These districts have a higher per

worker income than the State as a whole. The districts with a lower per worker income than the State average are Hamirpur (Rs 9264), Mandi (Rs 9129), Sirmaur (Rs 9876) and Una (Rs 8763). The highest per worker income in the Primary, Secondary and Tertiary Sectors was in Kinnaur, Lahaul & Spiti and Chamba districts, respectively. The lowest income per worker in the Primary Sector was in the Hamirpur district.

Labour Force Participation

Census data have been used to work out labour force participation rates at the district level as NSS data do not give district-wise information. Main workers, marginal workers and job seekers in only the age group of 15 to 59 years have been covered to work out labour force participation

TABLE 3.9: NSDP per Worker (1991)

<i>District/State</i>	<i>(in Rs)</i>			
	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>	<i>Total</i>
Bilaspur	7857	32,680	30,915	14,709
Chamba	9920	20,574	32,021	14,927
Hamirpur	3764	23,109	17,882	9264
Kangra	10,566	25,139	21,161	15,082
Kinnaur	15,306	18,700	27,923	18,355
Kullu	10,503	48,670	29,425	14,339
Lahaul & Spiti	9891	54,326	30,744	21,033
Mandi	4345	25,991	24,744	9129
Shimla	10,483	57,292	28,249	17,575
Sirmaur	4024	32,190	30,591	9876
Solan	5033	46,155	26,178	17,384
Una	3144	14,946	20,611	8763
Himachal Pradesh	7302	32,375	25,493	13,508

Source: Compiled by the Department of Planning, Government of Himachal Pradesh..

rates. Main workers, marginal workers and job seekers have been considered as participants in the labour market and their proportion to the population has been termed as the 'Labour Force Participation Rates' (LFPR). Table 3.10 contains the district-wise LFPR in rural and urban areas for the years 1991.

The overall LFPR for the State has been 74.39 per cent; and it is 87.58 per cent for males and 59.44 per cent for females for the labour force in the age group of 15 to 59 years. The rate is considerably higher in rural areas. LFPR for males does not differ much in rural and urban areas — though the participation of females in urban areas is significantly lower than in rural areas. The maximum Labour Force Participation Rate is in Lahaul & Spiti with an overall rate of 90.65 per cent and is 92.88 per cent for males and 87.57 per cent for females. Incidentally, Lahaul & Spiti happens to be an entirely rural and tribal district. Una has the lowest labour force participation rate at 52.64 per cent, the rate being 77.69 per cent for males and 29.58 per cent for females. Una also has the lowest LFPR for females both in rural and urban areas and are 31.12 per cent and 12.90 per cent, respectively. Kinnaur is another tribal and rural district where the LFPR is relatively high and is 89.14 per cent for males and 70.88 per cent for females.

Development Strategy and Employment

The development strategy of the State has envisaged various programmes and schemes with an aim to increase productive employment in different sectors of the economy. In addition to the programmes and schemes directed at creating additional employment opportunities, there are sector specific schemes and programmes

which aim at not only at the creation of employment opportunities in a slot but also at enhancing the productivity of labour employed.

Box 3.6 — Main Objectives of the State Government's Employment Policy

1. Supplementing and complementing land based agricultural activities with animal husbandry and other diversified horticultural activities to make livelihoods of marginal cultivators and agricultural labourers sustainable.
2. Increasing marginal returns on investment in the Primary Sector.
3. Policies for the provision of income generating assets aimed at encouraging small scale and cottage industries and providing gainful employment opportunities through backward and forward linkages.
4. Direct expenditure on employment generation.
5. Enhancing labour productivity by investing on health and education.

The productivity of labour in the Primary Sector continues to be low — as is evident from the discussion in the previous sections. The possible reason perhaps is that it is difficult to introduce technological changes because of steep slopes and limited and expensive irrigation options. Another possible reason for the low productivity of labour in the Primary Sector is the problem of disguised unemployment. Most of the workforce still continues to earn its living from the Primary Sector. A clear cut policy implication is that a policy reorientation aimed at a rapid growth of employment in the Secondary and Tertiary sectors in both medium and long term perspectives is required.

TABLE 3.10: Labour Force Participation Rates – 1991 (%)

Sl. No.	State/District	Rural			Urban			Total		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
1.	Bilaspur	74.58	80.47	69.12	58.87	79.42	33.70	73.55	80.39	67.09
2.	Chamba	81.26	89.09	73.13	53.37	78.71	25.76	78.94	88.21	69.27
3.	Hamirpur	70.00	74.52	56.81	50.39	72.59	25.16	68.66	74.36	64.04
4.	Kangra	55.09	74.20	37.79	44.45	71.44	16.35	54.51	74.36	64.04
5.	Kinnaur	81.26	89.14	70.88	–	–	–	81.26	89.14	70.88
6.	Kullu	79.09	86.82	70.76	56.46	79.86	24.17	77.25	86.20	67.41
7.	Lahaul & Spiti	90.65	92.88	87.57	–	–	–	90.65	92.88	87.57
8.	Mandi	76.14	80.81	71.80	55.12	75.81	30.44	74.38	80.35	68.73
9.	Shimla	78.74	83.60	60.25	59.77	80.61	28.41	74.32	82.82	64.54
10.	Solan	74.05	85.58	61.49	57.58	82.86	25.45	71.80	85.19	56.91
11.	Una	53.25	77.66	31.12	46.55	77.98	12.90	52.64	77.69	29.58
12.	Sirmaur	77.75	89.21	65.96	48.09	74.97	16.82	74.39	87.58	59.14
	Total	69.92	81.25	58.90	54.14	78.03	24.23	68.37	80.90	55.88

Source: Compiled from the Census 1991 Economic Tables.

Poverty

A major issue that attracts the attention of any development strategy is poverty. There has always been a debate over the issues of measurement of poverty and of policy prescriptions for poverty alleviation. In a broader sense, the concept of poverty should mean not only deprivations of a minimum intake of calories per day and a few other services which are necessary to earn a bare minimum set of living conditions. Rather, it should include socially perceived deprivations of basic minimum requirements in the fields of health, education, shelter and reasonably adequate levels of hygiene and other conditions relating to the environment that surround human settlements.

The UNDP, in its Human Development Reports of 1996 and 1997 suggested refining measures of poverty which were — the Capability Poverty Measure (CPM) and the Human Poverty Index (HPI), respectively. In the present context, no attempt has been made to build the CPM or the HPI as relevant data are not available. The pooling of Central and State data on per capita monthly consumption expenditure to arrive at district level poverty estimates could also not be undertaken as State sample estimates are still not available. Head Count Ratios (HCR) prepared by the Department of Statistics, Government of India based on the 43rd and 50th rounds of the NSSO Survey on per capita monthly consumption expenditure have been used to have an idea about the incidence of poverty in the State. These

estimates have been prepared by using the Official Poverty Line (OPL), Expert Group Official Poverty Line (EOPL) and Alternative Poverty Line (APL) using poverty line based on the official norm and updated using disaggregated price adjustment suggested by Minhas *et al* (1988), poverty line based on the official norm and updated using price adjustments suggested by the Expert Group (1993) and poverty line based on the alternative norm and updated using disaggregated price adjustment suggested by Minhas *et al* (1988) respectively.

Incidence of Poverty in the State

Table 3.11 clearly shows that there is a large variation in head count ratios for Himachal Pradesh as obtained by using different poverty lines. Despite these variations it is amply clear that poverty actually increased in Himachal Pradesh between 1987–88 and 1993–94. The increase in poverty is more pronounced in rural areas. Head count ratio using OPL was 25.23 per cent in 1987–88 which increased to 33.97

per cent in 1993–94. Similarly, HCRs obtained by using EOPL and APL have certainly increased during this period. The incidence of poverty has also increased in urban areas. HCRs in urban areas have increased from 4.18 per cent in 1987–88 to 5.61 per cent in 1993–94 and from 1.31 per cent in 1987–88 to 2.97 per cent in 1993–94 using the OPL and APL, respectively. When calculated on the basis of the EOPL, the HCR for urban areas of Himachal Pradesh has declined marginally from 6.98 per cent to 6.93 per cent during the period between 1987–88 and 1993–94. One of the possible reasons for the increase in the incidence of poverty in Himachal Pradesh can be the failure of development programmes to generate employment corresponding to the rate of growth of population. This can be inferred from having a glance at the dependency ratios for rural and urban areas of Himachal Pradesh for two different years as exhibited in Table 3.12.

Dependents are those who are either not able to work or are unable to get employment

TABLE 3.11: Head Count Ratios for Himachal Pradesh

<i>Year/NSSO Round</i>	<i>Poverty line used</i>	<i>Combined</i>	<i>Rural</i>	<i>Urban</i>
43rd Round (1987–88)	OPL	23.21	25.23	4.18
	EOPL	16.03	16.68	6.98
	APL	13.41	14.28	1.31
50th Round (1993–94)	OPL	31.58	33.97	5.61
	EOPL	21.81	23.18	6.93
	APL	18.53	19.98	2.97

Note: OPL: Official Poverty Line, based on the official norm and updated using disaggregated price adjustment suggested by Minhas *et al* (1988).
EOPL: Expert Group Official Poverty Line, based on the official norm and updated using price adjustment suggested by the Expert Group (1993).
Source: *Counting the Poor*, Sarvekshana Analytical Report Number 1, Department of Statistics, Government of India.

TABLE 3.12: Dependency Ratios in Himachal Pradesh

		1981	1991
A. <i>Dependency ratio taken as the ratio of total population between the age group of 0–14 years and that in 59 years and above to the population in the age group of 15–58 years (expressed as %age)</i>	Rural	92.31	80.72
	Urban	60.54	57.31
	Combined	89.46	78.22
B. <i>Dependency ratios taken as persons per worker</i>	Rural	2.33	
	Urban	2.84	2.86
	Combined	2.36	2.34

Source: Compiled by the Department of Planning, Government of Himachal Pradesh..

over those who are engaged in productive employment. This can be measured in two ways. First, the ratio of the population unable to work to those engaged in productive employment can reflect in the population structure indicating the level of dependency of the former. The second way of showing the level of dependence is per worker population. Part A of Table 3.12 shows that the structure of population during the period between 1981 and 1991 has changed in such a way that the proportion of productive population in total population has increased. Hence, this change in structure of population does not show consistency with the increase in incidence of poverty. The second measure showing dependency level indicates that the dependency ratio has increased only in urban areas whereas dependency ratio for rural areas and for the State as a whole has actually declined marginally. The reasons for increase in the incidence of poverty in the State over the period of reference need a separate examination. Perhaps the poverty line for determining the HCRs need to be redefined keeping in view the geographical and climatic conditions affecting daily consumption in terms of calories.

Poverty in Districts

A household survey in the rural areas of Himachal Pradesh conducted by the Department of Rural Development of Himachal Pradesh to assess the number of rural families living below the poverty line is the only information available to have an idea about the incidence of poverty in the districts. The latest survey conducted by the Department is for the year 1998–99. A survey to assess number of households living below poverty line in the urban areas in various districts of the State was conducted by the Department of Economics and Statistics in the year 1981 and no other survey has been conducted by the Department after that. Since information pertaining to 1981 has little relevance in the present context, it is not being incorporated here. Table 3.13 clearly shows that at 61.72 per cent the maximum number of families in rural areas living below the poverty line is in the Chamba district. At 19.06 per cent, district Una has the distinction of having minimum number of rural households living below the poverty line. Lahaul & Spiti and Shimla, are the only districts besides Chamba, with the number of

TABLE 3.13: Survey on Poor Families (1998–99) – Rural

<i>Sl. No.</i>	<i>District/State</i>	<i>Number of rural households</i>	<i>Number of rural families Below Poverty Line</i>	<i>%age families Below Poverty Line</i>	<i>Rank</i>
1.	Bilaspur	65,532	17,448	26.62	V
2.	Chamba	76,418	47,165	61.72	I
3.	Hamirpur	83,505	20,179	24.16	VIII
4.	Kangra	265,740	63,972	24.07	IX
5.	Kinnaur	10,899	2896	26.57	VI
6.	Kullu	59,227	11,432	19.30	XI
7.	Lahaul & Spiti	6446	2445	37.93	II
8.	Mandi	169,863	42,012	24.73	VII
9.	Shimla	94,316	21,755	33.67	III
10.	Sirmaur	58,618	13,418	22.89	X
11.	Solan	65,418	17,951	27.44	IV
12.	Una	81,014	15,439	19.02	XII
	Total	10,36,996	2,86,112	27.59	

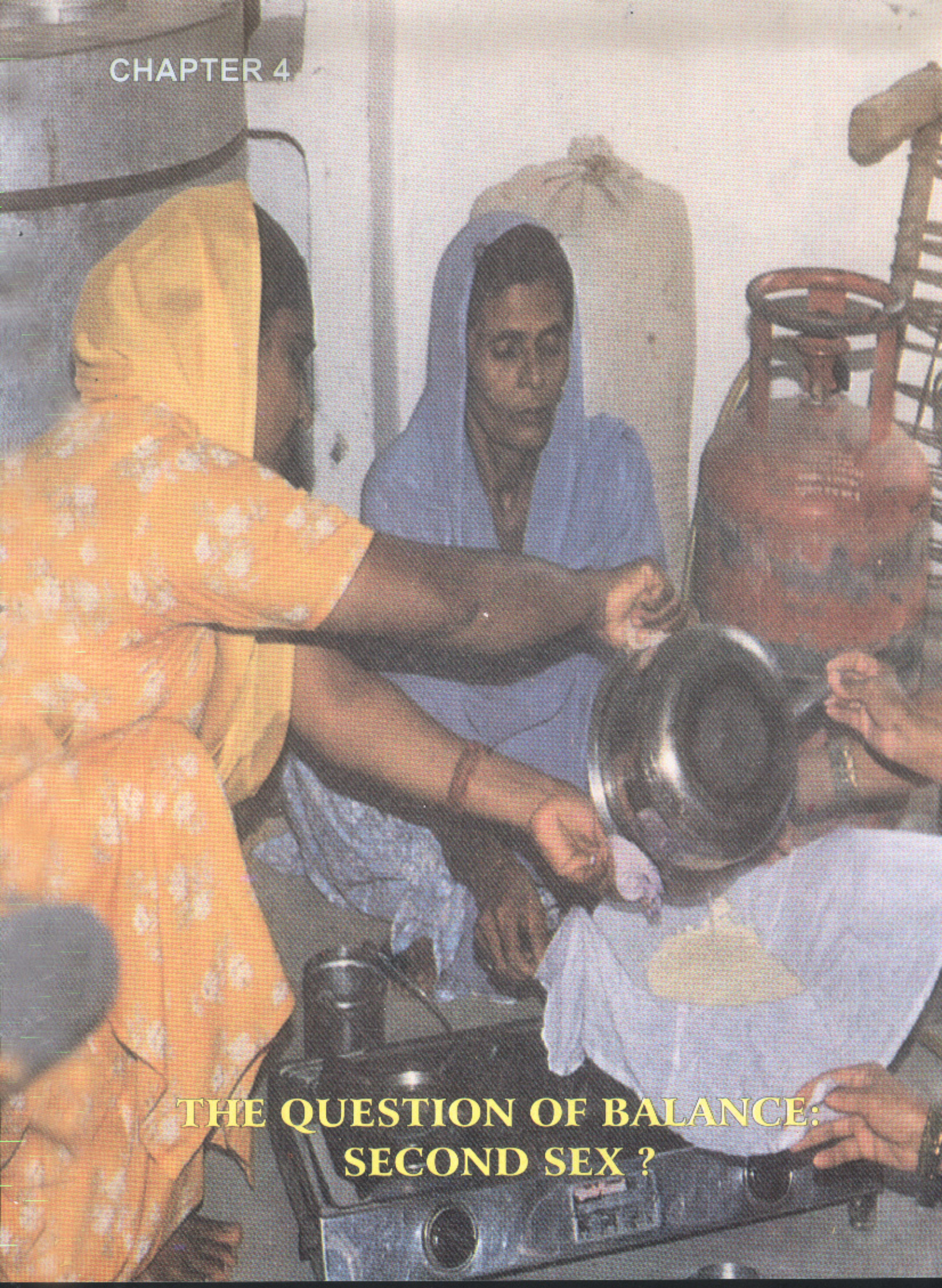
Source: Department of Rural Development, Himachal Pradesh.

rural families below the poverty line in excess of the State's average — 37.93 per cent and 33.67 per cent, respectively. Overall, in Himachal Pradesh, 27.62 per cent of rural families live below the poverty line. The districts have been ranked in terms of number of rural families living below poverty line in Table 3.14. The district with highest percentage of rural families living below poverty line has been ranked first and so on.

Government Policy

The process of economic growth has an inherent tendency to widen the gap between the rich and the poor which needs to be taken care of by the State. Even the economic history of most

of the developed countries show that the degree of parity different sections of their societies enjoy today, could not have been possible without policy interventions. Difficult and vastly diversified living conditions in Himachal Pradesh have made the job of eradication of poverty somewhat difficult. Basic approach of the Government of Himachal Pradesh in eradicating poverty from the State has been more or less same as followed by other States of the Union of India. Minor changes suiting local environment may be found here and there. Difficult living conditions in some parts of the State make the choice between group target and individual target oriented approaches tough tasks. Sparsely dispersed population makes it difficult to shift from individual target oriented approach to group target oriented approach.



**THE QUESTION OF BALANCE:
SECOND SEX ?**



The Question of Balance: Second Sex?

Society can be viewed as a system of interrelated parts characterised by social inequality and an ongoing process of social interactions. However, 'people' are not a homogenous group with 'individual member status' in society being attained either by achievement or by ascription. The 'master status' of female or male is acquired by ascription (with the obvious exception) and cuts across all other distinctions be they ethnicity, caste, class, age or occupation. The social, cultural and psychological aspects linked with this master status where gender becomes a key component of social ordering — and affects almost every aspect of individual lives. This recognition of 'gender issues' has at one level, generated considerable interest in gender awareness and drawn into sharp focus the earlier neglect of the 'female' both as a beneficiary of development strategies and as a contributor to the economy. At a second level, it has thrown up a new subject for inquiry in the direction of differentials in attainment and access between the sexes.

Himachal, like every society has latent reserves in its human resources, especially in women, who generally work for much longer hours than men. Despite a relatively higher contribution of women in the development of an economy, they lack an equal access to opportunities and other resources. Gender equality can be a potent force for initiating acceleration of

development and placing it on a sustainable path. There is increased recognition of the relevance of gender equality not only in urban areas, where there are relatively more opportunities, but also in rural economies where a lot is owed to women for their contribution to overall development.

Out of a total of 25,53,410 women in Himachal Pradesh according to the 1991 Census, 92.01 per cent were categorised as rural while the percentage of rural women according to the 2001 Census stood at 91.18 per cent. Among the districts, Shimla had the lowest rural female population of 81.80 per cent in the 1991 Census, while district Solan had a rural female population of 88.29 per cent at the same time. The corresponding figures for the two districts according to the 2001 Census stood at 79.05 per cent and 84.76 per cent, respectively. The number of towns in these two districts is eleven and seven, respectively.¹ Though Kangra has eight towns it has a rural female population of 95.18 per cent. While in the case of the districts of Shimla and Solan, it is evident that with more towns, more women — relative to other districts — reside in urban areas. This generalisation cannot be applied to the district of Kangra. It is interesting to note that female literacy is higher here than in either Shimla or Solan districts. Towns in the

1. District Census Handbooks, 1991.

TABLE 4.1: Gender-wise Rural–Urban Age Structure of Population by Residence

Age Group	Rural			Urban			Total
	Persons	Male	Female	Persons	Male	Female	
0–14	17,00,492 (36.01)	8,67,350 (36.56)	8,33,142 (35.51)	1,37,452 (30.62)	72,448 (29.54)	65,094 (31.92)	18,38,034
15–59	2,61,0881 (55.30)	12,87,369 (54.27)	13,23,512 (56.40)	2,84,916 (63.43)	1,58,408 (64.58)	1,26,508 (62.04)	28,95,797
60+	3,95,597 (8.38)	20,9161 (8.82)	1,86,436 (7.95)	24,406 (5.43)	13,081 (5.33)	11,325 (5.55)	4,20,057
Age not mentioned (ANM)	14711 (0.31)	8313 (0.35)	6398 (0.27)	2332 (0.52)	1337 (0.55)	995 (0.49)	17,043
Total	47,21,681	23,72,193	23,46,488	4,49,196	2,45,274	2,03,922	51,70,877

Note: Figures in parentheses, rounded off to 2 decimal places indicate percentage of corresponding (column) total.

Source: Based on *Statistical Outline of Himachal Pradesh*, 1998.

district are invariably surrounded by a considerable number of villages, the terrain being less harsh allows for relatively easy communication and consequently, men and women commute between towns and villages. Additionally, a large number of men from Kangra serve in the armed forces and other government services — while the womenfolk remain back in the villages. This explains why despite high literacy amongst women in the district, it has the largest number of unemployed women relative to the total number of women in the district. The cumulative result of these factors and others discussed in the section on Education, translate into higher literacy rates both for men and women on the one hand, and higher rates of women's unemployment, on the other. This would also hold true of Hamirpur, Una and to some extent Mandi district as well.

Health Indicators

The age structure of population in Himachal

Pradesh reflects the largest category to be the 15 to 59 age group, as displayed in Table 4.1. This is the working age group and are also the 'reproductive' years in women. This implies that over the next decade that (i) the number of 'senior citizens' will increase substantially raising the old age dependency ratio,² and (ii) the population is also likely to rise considerably also raising the overall dependency ratio. This has serious ramifications for a welfare state.

The overall sex ratio of 976 was second only to Kerala in 1991. When compared with the sex ratio in India over successive census years, the sex ratio in Himachal showed improvement till 1991, while a decline was noticed in the case of India as a whole (SA-Gender-1). The sex ratio of Himachal Pradesh also recorded a marginal decline in 2001. However, there are considerable inter-district variations. Bilaspur, Hamirpur, Kinnaur, Lahaul & Spiti and Una are the

2. Dependency ratio = $[\text{Population 0-14 Yrs.} + \text{Population 59+ Yrs.}] \div [\text{Population 15-59 Yrs.}] \times 100$ and Old age dependency ratio = $[\text{Population 59+ Yrs.}] \div [\text{Population 15-59 Yrs.}] \times 100$

TABLE 4.2: Sex Ratio in Himachal Pradesh

<i>District/State</i>	<i>Sex ratio</i>					
	<i>1991</i>			<i>2001</i>		
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
Bilaspur	1002	1013	836	992	1001	867
Chamba	949	953	902	961	969	874
Hamirpur	1105	1123	870	1102	1124	862
Kangra	1024	1029	834	1027	1035	908
Kinnaur*	856	856	–	851	851	–
Kullu	920	931	784	928	941	784
Lahaul & Spiti	817	817	–	804	804	–
Mandi	1013	1025	869	1014	1024	895
Shimla	894	943	726	898	947	751
Sirmaur	897	899	874	901	906	861
Solan	909	922	821	853	914	624
Una	1017	1024	939	997	1007	896
Himachal Pradesh**	976	990	831	970	997	997

* on the basis of projected population (for 2001).

** Sex ratios worked out for the State on the basis of population including projected population of Kinnaur (for 2001).

Source: Census 1991 and Census 2001.

districts which, have recorded a decline in the sex ratio in 2001.

Box 4.1 — The Altering Sex Ratio – A Cause for Concern

An alarmingly dangerous picture that has emerged from the Census 2001 data is that the sex ratio of child population in the age group of 0 to 6 years is considerably lower than the sex ratio of the population in the age group of seven years and above. An overall decline in the sex ratio of Himachal Pradesh in the coming decade is expected thereby meaning that the advantages that flow from achievements on this front will not be available in the near future. The issue needs serious consideration by policy makers.

Male out-migration is rampant throughout the State as can be evidenced from the Migration Tables tabulated by the office of the Registrar General of India, (Census) New Delhi. Further, the relatively less developed districts manifest largely an adverse sex ratio because accessibility to health facilities is poor due to the rough terrain, for example in the tribal belt. This reflects a lower priority being accorded to the girl child and to women. Researchers like Raina (1999), have found a widespread preference for sons in urban Himachal Pradesh, both at the individual and aggregate levels. At the same time, it must be borne in mind that for example, in Kinnaur district there is a sizeable presence of armed forces personnel and this too contributes towards lowering of the sex ratio. Charlton (1984), has compiled a list of the possible explanations put

TABLE 4.3: Sex Ratio of the Child Population in the Age Group of 0–6 Years

<i>District/State</i>	<i>Sex ratio of child population in the age group of 0–6 years</i>		
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
Bilaspur	884	886	856
Chamba	962	966	891
Hamirpur	864	867	821
Kangra	836	836	849
Kinnaur	n.a.	n.a.	n.a.
Kullu	960	966	867
Lahaul & Spiti	986	986	–
Mandi	916	920	848
Shimla	930	952	840
Sirmaur	940	944	903
Solan	900	903	882
Una	839	840	835
Himachal Pradesh*	897	900	858

* Sex ratios compiled for the State on the basis of population including projected population of Kinnaur.

Source: Census 2001.

forth by Indian demographers to explain the adverse (declining) sex ratio. These need to be examined in the context of Himachal Pradesh:

- i. That females are under enumerated. This is by far the weakest possible explanation for low sex ratios anywhere. In Himachal the majority of villages being small, the residents know one another fairly well and as such it is near impossible that anyone, men or women are under enumerated.
- ii. That mortality rates are higher for females than males. At the very outset it must be pointed out that Infant Mortality Rate (IMR) values are usually high because the IMR is calculated on live births for the age group year i.e. for infants who do not complete the first year of their

lives. That notwithstanding, there is partial truth in this as a possible explanation for the sex ratio scenario in Himachal Pradesh. SA-Gender-2 presents the State Infant Mortality Rate (SIMR) by Sex and Residence for the years 1990 to 1997 as compiled by the Office of the Registrar General, in New Delhi. On the basis of the overall IMR it cannot be categorically stated that the IMR for the female child is higher than that for the male child — clearly there have been years when the IMR for the male child has been higher. Additionally, life expectancy for the female is higher in Himachal than that for men.

The issue here is more of differences in rural and urban IMR values rather

TABLE 4.4: Life Expectancy at Selected Ages, 1993–1997: Himachal Pradesh and India

Expectation of life at age (in years)	Himachal Pradesh			India		
	Overall	Male	Female	Overall	Male	Female
0 (birth)	65.1	64.6	65.2	61.1	60.4	61.8
1	68.5	68.1	68.5	65.3	64.5	66.0
5	65.4	64.7	65.6	63.4	62.2	64.6
10	60.8	60.1	61.1	59.1	57.8	60.4
20	51.3	50.6	51.7	49.9	48.5	51.3
30	42.5	42.0	42.7	41.1	39.5	42.7
40	33.7	33.5	33.7	32.2	30.7	33.8
50	25.2	25.1	25.0	23.8	22.5	25.1
60	18.1	18.7	17.2	16.5	15.5	17.5
70+	12.2	13.9	10.1	10.8	10.1	11.4

Source: Abridged from Statements 5, 6 and 7 pertaining to Expectation of Life 1992–93 and 1993–1997 made available by The Vital Statistics Division, Registrar General's Office, RK Puram, New Delhi.

than gender-based differences in the same. The urban IMR for both the female and the male child are lower than corresponding rural values. However, there is a significant difference in the Rural–Urban female child IMR. This points to parental apathy towards the girl child. A variety of mutually reinforcing factors in rural Himachal, such as lower levels of education, concerns of dowry — albeit unspoken — a poor 'exposure' to the outside world, among others, combine to create a rural ambience that does not seem favourable to the girl child.

A gender-based comparison of data on life expectancy reveals that female life expectancy is higher than that of their male counterparts in Himachal (however, both are higher than corresponding values for India). Female life expectancy

in Himachal tends to drop for the last three age groups relative to men and tends towards the all India average.

Table 4.4 shows that the female in Himachal is not 'ignored'. Information contained in such documents as the Family Welfare Programme Year Books of the Department of Health and Family Welfare, Himachal Pradesh describe better outreach of health services — especially in rural areas. Achievements under the Child Survival and Safe Motherhood Programme indicate that, for example, there is no discrimination between boy and girl children for the purposes of immunisation. The percentage achievement under CSSM and Maternal Child Health Programme for TT (PW), DPT, Polio, BCG, Measles, Iron & Folic Acid to the mother and Vitamin A to children are 89.82, 96.42, 96.65, 101.76, 91.57,

93.59 and 79.65 per cent, respectively, for the year 1997-98.³ Tables 7.6.1 to 7.7.10 in the mentioned Year Book, describe the district-wise scenario reflecting much the same picture. The percentage achievement in immunisation during 1999-2000 for DPT, Polio, BCG, Measles and Vitamin A first dose has been 98.48, 98.20, 103.35, 93.74 and 91.09 per cent, respectively.⁴

Another factor to consider is that of the 'Age at Marriage'. The 'Health at a Glance - 1997', declares the mean age at marriage for males as 23.8 years and 19.1 years for females in Himachal Pradesh while the corresponding figures for India are 23.32 years and 18.33 years. 'The Health at a Glance - 2000' declares the mean age at effective marriage for females in Himachal, recorded during 1996, as 20.6 years, while the national average is 19.4 years. Early marriages not being the norm, ensure that the accompanying adverse effect on female mortality is avoided.

- iii. That sons are preferred and female infants are neglected. SA-Gender-3 describes that as birth order increases live births of only the boy child are witnessed. This reflects the desire for a male child to carry forth the 'family name' and provide 'old age security', even in the urban setup. Sons are desired for economic and socio-cultural reasons whereas daughters are valued for utilitarian and psychological reasons even by

women (Raina, 1999). This indicates that (a) household income and social (occupational) status are important factors influencing son preference, and (b) the utilitarian value of daughters would be inversely related to the socio-economic well being of the family and household. However, women with higher levels of education have been found to manifest lower preference for sons.

A pertinent observation that lends credence to the 'son preference - daughter neglect' phenomenon is the data on child adoption from the Himachal Pradesh State Council for Child Welfare. Since being declared an adoption agency in April, 1998 the Council has received 94 applications of which 70 — approximately 75 per cent — are for a boy child. Yet, out of the abandoned infants brought to the Council, about 67 per cent, or 8 out of 12 infants, have been girls — all but one have been adopted. Despite the fact that the absolute numbers are small, yet the data from the Council does point to a preference for sons.

The implication of this 'son-preference' attitude would be an inability to reduce fertility further.

- iv. That frequent and excessive child bearing severely compromises the health of women: Achievements under various Family Welfare Programmes point to an increased numbers of births that have been averted by the use of various methods. Out of a total of 22,72,055 births averted upto March 2000, 12,87,185 — approximately 57 per cent — were averted using the procedure of tubectomy, about 24 per

3. Based on Tables 7.1, 7.2, 7.3 and 7.4 of the Family Welfare Programme Year Book 1997-98, Department of Health and Family Welfare, Himachal Pradesh.

4. *Health at a Glance 2000*, Department of Health and Family Welfare, Himachal Pradesh.

Box 4.2 — Incentives for the Promotion of Family Welfare Programmes

Major incentives to promote Family Welfare Programmes in the State are:

- a. Social security for eligible couples — Rs 6000 for those parents who adopt sterilisation after one female child; Rs 5000 for those parents who do so after two living girl children, (now discontinued).
- b. Scheme of individual awards — for other than government servants who motivate no less than 20 cases for sterilisation (12 prizes); NGOs will also give 5 best motivator prizes to individuals who motivate at least 100 cases.
- c. Cash incentives at the time of sterilisation are also given.
- d. ‘ . . . incentive of one advance increment to such employees of the Government . . . who undergo sterilisation after birth of two or less children in their respective scales of pay’ — this incentive was reintroduced after being withdrawn.

The State also makes budgetary allocations to various sectors like Mother–Infant Care and Family Welfare Services. (Budget allocations to Health as an expenditure head are given in the chapter on Health)

Box 4.3 — Quality of Health Services in Himachal Pradesh

The Population Research Centre, Himachal Pradesh University conducted two studies — the first, in 1992, was in the district of Bilaspur and the second, in 1998, was in the district of Sirmaur. Both studies have drawn attention to the lacunae at the implementation stage of the Family Welfare Programmes. The study in Sirmaur revealed that a large number of sanctioned posts remained vacant in the Primary Health Centres, while an inadequate building infrastructure adversely effected the quality of health services being provided and the target population often remain ill informed. A recommendation of the 1992 study is pertinent even today and — succinctly stated — the study recommended that for family welfare programmes to be effective, it was necessary to emphasise that these are ‘*child spacing techniques*’ and not techniques to ‘*restrict family size*’. The study recommended that the focus should be on women who have just given birth. Old age support is recommended, as is the need to improve economic opportunities for women.

cent births were averted with the use of IUD insertions and CC and OP users and about 20 per cent births were averted using vasectomy.⁵ This may concern those who see this as a sign of male dominance but, on the brighter side, averted births allow wider choices to women.

These choices could range from personal to professional.

The reasons that emerge for tubectomy being relatively more ‘popular’ in Himachal can be categorised as the following — (a) Motivating women who have borne the rigours of childbirth is far easier than motivating men. Women

5. Calculated on the basis of data in *Health at a Glance, 2000*.

feel that since they have to bear the trauma of childbirth they might as well put up with the discomfort of tubectomy, and (b) Misconceptions regarding possible male impotence and reduced ability to do 'hard work' Both these reasons combine in a male dominated society to ensure that tubectomy is the most preferred sterilisation technique.

- iv. That a higher incidence of certain diseases occurs in women. For the first time gender segregation has been attempted in Himachal in the 'Monthly Statement Showing Institutional Cases and Deaths due to Communicable Diseases'. This has been attempted on the basis of a format developed by the Ministry of Health, Government of India. The January–December 1999, compilation is reproduced below as Table 4.5. The table only contains information about patients that received treatment in IPDS at various hospitals of the State as the information pertaining to deaths in case of OPD patients is not available.

The information in this table draws attention to the number of women receiving medical attention. The reason as already mentioned is better outreach of health services in the State. This augurs well for overall health status of the population at large. Other than perhaps anemia the incidence of disease and ailments indicate a poorer health status of men. This is evident from figures on bronchitis and asthma which point to habits like smoking. From Table 4.5, it is also evidenced that the major communicable disease is acute diarrhoeal disorder — this is a water borne disease and as such focuses attention on the need to not just combat the disease but also to educate through awareness drives

and other measures. Storage of water is partly responsible for lack of personal hygiene.

However the 'stage of disease' when patients are brought in needs to be examined on a gender basis to truly capture, what is called 'parental priority', for want of a better phrase. This is important because there is evidence that in the majority of cases when women are brought in for medical treatment, their condition is already critical. Making a mention of some general impressions about the female population in the Indian context, malnutrition among women and the girl child are rampant — even the well off are quite often pale and anaemic and these conditions are not accorded the status of major ailments. Repeated pregnancies, excessive bleeding and poor dietary habits all lead to anemia. A balanced and nutritious diet is usually the exception rather than the norm. The calorific intake of women is much lower than that of men. Also a majority of women keep fasts for the well being of the family, son, husband etc. besides a weekly fast in honour of a specific deity. Ailments like carcinoma cervix and leucorrhoea, a vaginal discharge condition are existent, further compromising the woman's health. Poor hygiene is one of the causes of STD especially in the socio-economically backward areas and also the remote areas of the State.

Another general impression of female well being that is often left untouched is that of 'mental health'. This is closely related to low self-esteem. A childhood spent in an environment where the male child preference ranges from the blatant in rural environs to more subtle expressions in urban areas can only serve to lower self-esteem and create stress and depression. This is reinforced in adulthood when in decision-making, women have, at best a negligible say — especially in circumstances

TABLE 4.5: Statement showing Institutional Cases and Deaths due to Communicable Diseases in Himachal Pradesh (January–December 1999)

Name of disease*	Patients Treated						Deaths	
	OPD		IPD		Total (OPD + IPD)		IPD only	
	Male	Female	Male	Female	Male	Female	Male	Female
Acute Diarrhoeal Disorder (including Gastroenteritis and Cholera)	2,39,857	2,40,672	8514	9742	2,48,371	2,50,414	32	16
Tetanus other than neonatal	–	–	3	1	3	1	2	–
Measles	198	173	56	24	254	197	–	–
Acute Respiratory inf. (including influenza and excluding pneumonia)	7,19,552	7,28,045	10,541	10,253	7,30,093	7,38,298	72	49
Pneumonia	15,883	14,733	2801	3170	18,684	17,903	45	37
Enteric Fever	6501	6206	890	1001	7391	7207	1	–
Viral Hepatitis	809	734	164	126	973	860	1	1
Syphilis	23	156	–	2	23	158	–	–
Gonococcal infection	42	361	–	–	42	361	–	–
Pulmonary TB	4934	3924	2404	1470	7338	5394	166	66
All other diseases treated in institutions excluding above mentioned	24,32,562	23,00,648	88,959	1,38,251	25,22,292	24,42,856	1533	1216
Total	34,20,361	32,95,652	1,14,332	1,64,040	35,35,464	34,63,649	1852	1385

Note: * Diphtheria, Acute Poliomyelitis, Neonatal Tetanus, Whooping Cough, Japanese Encephalitis, Meningococcal meningitis and Rabies mentioned in the table have deliberately been left out because no patients were registered for the treatment of these diseases.

Source: Demographic and Evaluation Cell, State Family Welfare Bureau, Department of Health and Family Welfare,

when she is not economically independent. Repeated medical termination of pregnancy and clandestine sex determination, contribute to mental stress especially when women do not always have someone to talk to and also when they find it difficult to articulate their problems.

The symptoms can range from ill-defined aches, anorexia in adolescent girls and even paralysis. It may be inferred, that their treatment is greatly hampered when no neurological basis is medically determined and most medical caregivers are male with their own stereotypes

of women's well-being needs. In the local cultural diagnostic idiom, it is often explained as some 'higher casting of the evil eye' effect.

Education

If literacy rates are indicators of human development, then Himachal Pradesh ranks fifth among the States of India. Access to education is a sound benchmark of the relative status of men and women. Inter-district literacy rates have been discussed in details in the chapter on education. The differential growth rate of literacy over the decade 1981 to 1991 is a substantial 73 per cent for females and a modest for 41 per cent males according to Thakur (1995) who draws attention to the relevance of state intervention in meeting the demand for education. The success of the District Primary Education Programme, (DPEP), lends credibility to the claims of relevance of the State's prioritisation and subsequent intervention in the education sector. The Public Report on Basic Education (PROBE) Report which surveyed 48 villages in seven districts, as also the National Institute for

Education Planning and Administration (NIEPA) study under the Year 2000 Assessment Education for All, point in this direction.

According to the findings of both the PROBE as well as the study by De, Noronha and Samson (2000), Himachal is a success story as far as primary education is concerned. This is reflected in the number of schools, in the teacher-pupil ratio and also in the enrolment and retention rates in the State. Table 4.6 presents an overall enrolment profile and the percentage of girl-student enrolment in the DPEP districts which are Chamba, Kullu, Lahaul & Spiti and Sirmaur. The percentages reflect improving trends in these districts. This improved enrolment of the girl student is expected to yield dividends in the years to come as indicated in studies such as the one conducted by Singh and Gautam (1996). Specifically, this study found maternal education to be one of the prominent predictors of learning achievement among Class V students in the four DPEP districts.

The PROBE investigators, in explaining the

TABLE 4.6: Enrolment Profile and per cent Enrolment of Girls under DPEP in Himachal Pradesh

District	Enrolment (% enrolment of girls)			
	1996-97	1997-98	1998-99	1999-2000
Chamba	57,369 (45)	64,533 (47)	66,695 (48)	66,834 (48)
Kullu	46,331 (48)	50,532 (49)	51,998 (49)	51,334 (50)
Lahaul and Spiti	3270 (48)	3329 (51)	3319 (52)	3244 (52)
Sirmaur	54,451 (47)	62,315 (49)	66,492 (49)	66,640 (49)

Note: Figures in parentheses indicate per cent enrolment of girls.

Source: State Project Director, District Primary Education Programme, Himachal Pradesh.

success — especially in primary education — in Himachal Pradesh, have found parents to be:

- a. Highly motivated in educating their children because they are aware of the profound effect education can have on the quality of life. All respondents considered a boy's education important while the corresponding value for girl's education was a high 99 per cent.
- b. Ninety per cent of parents supported compulsory education for all children.
- c. Primary levels of education also manifested low gender bias.

SA-Gender-4, 5, 6 and 7 all point to high enrolment levels and can largely be explained in terms of the explanation put forward by the PROBE team. The real driving forces are:

- i. Parental motivation, and
- ii. State priority to education.

Both parental (community) motivation and State priority to education can also be witnessed in the strides the Total Literacy Campaign

(TLC) programme has made in the State (Monthly Progress Report, May 2000, Directorate of Adult Education). Since being launched in 1992, 4,28,827 learners (1,00,878 men and 3,27,949 women) have reportedly completed Book III and had acquired literacy in accordance with the National Literacy Mission (NLM) norms by June/July, 2000. Others are in different stages of learning. The Post Literacy Programme (PLP) has been completed in all twelve districts of the State. The Scheme of Continuing Education has been launched in Mandi. An independent evaluation of the TLC programme in six districts namely — Mandi, Kangra, Solan, Hamirpur, Chamba and Shimla and external evaluation in respect of PLP in seven districts namely: Bilaspur, Hamirpur, Kangra, Mandi, Shimla, Solan and Sirmaur stand completed. The findings are displayed in Tables 4.7 and 4.8.

The Education Department reports that the new literates now ensure that their children are sent to school. Additionally, a sense of awakening is also reported by the Department, among women who are, (i) expressing their demands for drinking water, *Anganwadi* (child care) centres,

TABLE 4.7: Details of External Evaluation already Completed in TLC (December 2000)*

<i>District</i>	<i>Name of external agency</i>	<i>% Size of sample</i>	<i>% Learners achieving norms as against target</i>
Bilaspur	Udaipur	—	44.00
Chamba	Indian Institute for Rural Dev., Jaipur	—	47.00
Hamirpur	Regional Resource Centre, Chandigarh	18	89.20
Kinnaur	Regional Resource Centre, Chandigarh	20	30.30
Kangra	CMC	5.32	45.60
Mandi	National Literacy Mission and Regional Resource Centre, Chandigarh	—	67.00

Source: Directorate of Secondary Education, Himachal Pradesh.

TABLE 4.8: Details of External Evaluation already completed in PLP (December 2000)*

<i>District</i>	<i>Name of external agency</i>	<i>% Size of sample</i>	<i>% Learners achieving norms as against target</i>
Bilaspur	UTHAN	—	—
Hamirpur	Indian Institute for Rural Dev. Jaipur	4.2	35.60
Kangra	Council for Social Development, New Delhi	—	17.80
Mandi	Media Research Group, Delhi	4.78	42.00
Shimla	Indian Institute for Rural Dev. Jaipur	2.0	51.80
Solan	Indian Institute for Rural Dev. Jaipur	3.3	43.00
Sirmaur	UTHAN	—	—

* These surveys show positive results but may be treated with caution as these are 'external evaluations' and the sample sizes are very small.

Source: Directorate of Secondary Education, Himachal Pradesh.

sewing centres etc, (ii) organising themselves to combat alcoholism and other social evils, and (iii) keenly participating in the Reproductive Child Health Programme.

On the other hand, researchers like Negi, B.S. (1995) have identified several problems in the Literacy Campaign in Himachal Pradesh.

These problems relate to the issue of non-participation of field functionaries in the planning process, the irregular supply of learning material and claims of no remedial action on feedback provided to the administration. A problem important from the gender perspective is that no specific effort is made to enroll and retain adult women in such programmes.

Box 4.4 — Initiatives by the State to Improve Enrolment and Retention of the Girl Child in the Education Mainstream

The budgetary provisions for education have been steadily increasing over successive plan periods with 14.34 per cent of the total budget being allocated to education during the Ninth Plan Period. Initiatives by the State to improve enrolment and retention of the girl child in the education mainstream form an integral part of the State initiative. These are highlighted below:

- i. *The Compulsory Primary Education Act – 1997, provides for:*
 - a. Universalisation of Primary Education in the State.
 - b. School committees comprising of parents, teachers and local panchayats to look after the day to day activities, enrolment and retention and the effective management of schools.
 - Village Education Committees (VEC) with one-third women members have been made responsible for universal enrolment and retention of children in schools.
 - A girl child scheme was launched on 2 October 1997— involving a gift amount besides a scholarship at the age of six years being given to girl children born on or after 15 August 1997.

- 2745 Mother–Teacher associations have been formed upto 31 March 2000.
- The mother’s name is now recognised as a sufficient condition on the admission form of a child.
- The focus on the appointment of female teachers has seen their percentage in the DPEP districts rise up to 31 per cent, 34 per cent, 37 per cent and 24.6 per cent in Chamba Sirmaur, Kullu and Lahaul & Spiti districts respectively.

ii. *Free education:*

- Exemption of tuition fee (all other dues are paid). This is applicable to all Himachal domicile girl students in all institutions within the state irrespective of income of parents. The tuition component in overall charges being small the science students pay much more than the ‘arts’ (humanities) students do.
- Textbooks and writing material to all SC/ST and Other Backward Classes (OBC) children for the year 2000–01.
- Textbooks to ‘general’ category girls in DPEP districts under DPEP programme.
- Uniforms are provided to tribal girls.

iii. *Scholarships:*

- Integrated Rural Development Programme (IRDP), scholarships from Classes I to V @ Rs 150 per child per annum.
- Poverty scholarship @ Rs 4 per month.
- Girls attendance scholarship @ Rs 2 per month (10 months).
- Special central assistance to Tribal students. Previously, it was meant only for tribal girls studying outside tribal areas. Now, this scholarship stands extended to all tribal students between Classes VI to X, @ Rs 30 per month plus Rs 100 lump sum for the purchase of books, stationery, uniform and other items subject to an income ceiling of Rs 6000 per annum.
- *Ambedkar Medhavi Chattervriti Yojana:* The target is to provide scholarship @ Rs 10,000 per year to 1000 meritorious students belonging to Scheduled Caste and 1000 meritorious students belonging to Other Backward Classes after matriculation examination.
- Maharishi Valmiki Scholarship Scheme: All girl students of the Balmiki community will be covered under this scheme beyond the Matric level.
- Thakur Sain Negi Merit Scholarship Scheme: The target is 100 meritorious girls and 100 meritorious boys belonging to the Tribal community of Himachal Pradesh who secure maximum marks in matriculation examination from the Himachal Pradesh Education Board @ Rs 11,000 per annum upto the +2 level.
- Swami Vivekananda Merit Scholarship Scheme: The target is 2000 meritorious students — both girls and boys — belonging to the General category that secure maximum marks in matriculation examination conducted by the Himachal Pradesh Education Board.

iv. *Mid-day Meal Scheme:*

- From Classes I to V @ 3 kg rice per student per month with 80 per cent class attendance for the month.

- v. *Toilets:*
 - 1228 units of toilets for girls to be constructed in primary schools.
 - Under DPEP, the 808 schools being constructed shall have separate toilets for girls.
 - Through the DPEP programme an additional 612 schools will get separate toilets for girls.
- vi. *Improvements in school infrastructure includes the provision of:*
 - Book banks and libraries.
 - Children parks in the Kullu district.
 - Improvement in playgrounds.
 - Electricity and water supply.
 - Development of suitable pedagogical inputs like blackboards, benches and teaching aids.
- vii. *Melas:*
 - *Ma-Beti* Melas (mother–daughter fairs), and *Bal Melas* (children’s fairs) are held at the cluster and Block level.
- viii. *Competitive primary school sports:*
 - Have been introduced and which culminate in a State level tournament each year.
- ix. *Awareness campaigns:*
 - For universal elementary education, education of the girl child using various media like radio, slogan writing, press releases and children’s rallies.

The present exposition of education clearly reveals that ‘parental incompetence’ as described by Ziderman (that of either of not being aware of educational facilities or of not being in a position to afford the same) has been substantially addressed in Himachal Pradesh. It is observed that in the State there has been an annual growth rate of 4.3 per cent in overall enrolment with the primary education sector registering an annual growth rate of 2.5 per cent which translates as an annual growth rate higher than the rate of growth of population. The per capita expenditure is reportedly higher in Himachal Pradesh than its neighbouring States (Table 2.2, p. 14, De, Anuradha *et al*, 2000).

All these achievements notwithstanding, a word of caution is in order. The index of deprivation for literacy in Table 4.9 presented be-

low, reveals the inter-district gender scenario and draws attention to the task at hand.

The index of deprivation for females is alarmingly high for Chamba, Lahaul & Spiti, Sirmaur and Kullu. It is no wonder that these four districts were covered under the DPEP-II, for which the sole criterion of inclusion in the programme was low female literacy. However, the rank correlation between male and female deprivation for the State is statistically significant and indicates that male and female deprivation tends to occur simultaneously — though the intensity of deprivation is higher for females.⁶

6. A calculation of correlation coefficient, based on ranks in Table 4.9 confirms this. The result of the calculation is: correlation coefficient (r) = +0.95, $t_{\text{cal}} = 9.39$ and $t_{(0.05, 10)} = 2.228$. The result of the same calculation for the Census 2001 data are more interesting where correlation coefficient (r) = +0.999, $t_{\text{cal}} = 62.817$ and $t_{(0.05, 10)} = 2.262$.

Box 4.5 — Girl Students Do Better than Boys

The policy interventions have yielded considerably satisfactory results in terms of encouraging girl students to continue with their studies. One of the policy initiatives of the Government of Himachal Pradesh, The *Medhavi Chhattarvriti Yojana* was started in 1999–2000 for the students belonging to various sections of the society with an aim to inculcate a greater sense of competition among meritorious students and to enable them to compete with greater vigour in various entrance examinations after +2 level for admission to courses of higher education. The eligibility for getting *Medhavi* scholarship is determined on the basis of the marks secured in the matriculation examination. A quick evaluation of the scheme indicated a tremendous success of the scheme in encouraging girl students to go in for post matric studies. Percentage of girls enrolled when is compared with the percentage of girl students who won these merit scholarships, confirms that the girl students have performed much better than their boy counterparts.

The following table is indicative of the disparity in terms of girl enrolment at various levels of school education in Himachal Pradesh:

Percentage of Girl Students to Total Students at various levels of School Education

	<i>Class VI–VIII</i>	<i>Class IX–X</i>	<i>Class XI–XII</i>
All Categories	47.4	45.4	42.0
Scheduled Caste	47.6	48.3	42.6
Scheduled Tribe	44.2	45.5	31.3

It is evident from the above table that there exists disparity in terms of girl enrolment at different levels of school education which is blatantly prominent in case of Scheduled Tribe girls studying in Classes XI and XII. At an overall level, all these percentages are two to seven per cent lower than the figure of sex ratio in the State's population except for Scheduled Tribe girls in Classes XI to XII. Percentage of girl students winning these scholarships as given in the following table along with the data in the above table together give evidently encouraging inferences:

Percentage of Girl Students winning Meritorious Scholarships

	<i>% girls in Classes XI and XII</i>	<i>% girls winning Medhavi Scholarships (post matric)</i>
General	n.a.	54.5
Scheduled Caste	42.6	43.0
Scheduled Tribe	31.3	56.0
Other Backward Classes	n.a.	52.0
All Categories	42.0	51.2

The above two tables indicate that despite a disparity in terms of girl enrolment at various stages of school education the girl students have performed well in scoring higher marks than the boy students.

TABLE 4.9: Gender Segregated Index of Deprivation for Literacy: District Profile

District	1991						2001					
	Overall	Rank	Male	Rank	Female	Rank	Overall	Rank	Male	Rank	Female	Rank
Bilaspur	0.3283	4	0.2203	4	0.4345	4	0.2120	5	0.1287	5	0.2947	5
Chamba	0.5530	12	0.4004	12	0.7143	12	0.3627	11	0.2278	11	0.5030	11
Hamirpur	0.2512	1	0.1489	1	0.3140	1	0.1684	1	0.0914	1	0.2359	1
Kangra	0.2943	3	0.1988	3	0.3861	2	0.1932	3	0.1181	3	0.2643	3
Kinnaur	0.4164	8	0.2796	8	0.5789	8	–	–	–	–	–	–
Kullu	0.4518	10	0.3036	10	0.6147	9	0.2664	8	0.1545	8	0.3876	8
Lahaul & Spiti	0.4318	9	0.2822	9	0.6195	11	0.2683	9	0.1724	9	0.3906	9
Mandi	0.3726	7	0.2335	5	0.5088	7	0.2416	7	0.1333	6	0.3464	7
Shimla	0.3539	5	0.2404	6	0.4825	5	0.2032	4	0.1228	4	0.2932	4
Sirmaur	0.4838	11	0.3680	11	0.6155	10	0.2915	10	0.2027	10	0.3907	10
Solan	0.3670	6	0.2533	7	0.4931	6	0.2284	6	0.1465	7	0.3252	6
Una	0.2909	2	0.1885	2	0.3898	3	0.1891	2	0.1151	2	0.2615	2
Total (HP)	0.3614	–	0.2464	–	0.4787	–	0.2287	–	0.1398	–	0.3192	–

Note: Index of Deprivation = (Target literacy – achieved literacy) / (Target literacy – minimum literacy)

Where target literacy = 100 and minimum literacy = 0.

Source: Calculated on the basis of 1991 Census data on Literacy.

There is some striking common ground in the socio-economic character of these districts that help understand this result of simultaneous occurrence of male and female educational deprivation — albeit there is a greater intensity of female deprivation. The common issues are:

- i. These are geographically ‘far flung’ areas and despite the advances made in infrastructure setup in the State at large, the long distances between homes and schools is a deterrent.
- ii. Illiterate parents are incapable of providing academic support at home — The Study Report on ‘Predictors of Learning Achievement of Class V Students’ in the four DPEP districts (Singh and Gautam,

1996), identified educational status of parents especially that of the mother to be a key determinant of learning achievement among students.

- iii. Fear of reduction in domestic workforce due to out-migration of educated females.
- iv. Conservative views of parents regarding a girl’s education — and that marriage prospects of highly educated females tend to be greatly reduced.
- v. Economically not rich, with existing advantages being given to boys.

All these factors reiterate the need to promote

action that fosters the socio-economic advancement of these areas. Trained and educated manpower has a direct bearing on the nature of the workforce.

Employment Profile: Focus on Women

Traditionally, seven areas of contribution by women have been identified, these are:

- Labour supply.
- Contribution to household income.
- Key to food production and food security.
- Domestic work.
- Care of children and elders.
- Reproduction.
- Preservation of knowledge, culture and bio-diversity.

These can be viewed as comprising three broad categories, these are (i) Productive activities, (ii) Reproductive activities, and (iii) Community activities.

The District Profile of Main, Marginal and Non Workers⁷ describes women to be the overall Non Workers. However there is considerable inter-district variation in the main, marginal and

non-worker categories. When viewed vis-à-vis the literacy profile it can be seen that the districts with a higher female literacy also have a higher percentage of their women in the non-worker category, e.g. Hamirpur, Mandi, Kangra and Una Districts. Conversely, districts like Lahaul & Spiti, Kinnaur have a smaller percentage of their women constituting the non-worker category (Tables 4.10 and 4.11 below), though these districts rank amongst the lowest in literacy. Although following text attempts to attribute some of the possible reasons to the existing of such a strange correlation between higher female literacy and higher percentage of woman in non-working category, yet this phenomenon needs in depth exploration separately especially, when the correlation is much stronger in case of men.

In the main workers category (SA-Gender-8 and 9), It is possible that women are a minority relative to men but they are prominent in Divisions 1, 3 and 5 both in the rural as well as in urban situations. In the employer-employee profile, though they may constitute a minority when one views their position relative to men, yet women appear to be prominent employers in Divisions 7, 8 and 9. It is possible that a household business or enterprise is registered in the name of the woman (perhaps for reasons of reduced tax liability) when in actual practice the man is really running the show. The extent of this practice is a subject for further investigation.

Among the Class of Workers (SA-Gender-10, 11, 12 and 13) again the relative position is the same — women constitute the minority by a fair margin. However, the urban and rural female single worker is prominent in Divisions 4, 7, 8 and 9. The rural female single worker also contributes towards Division 6. The urban female family worker is most concentrated in

7. The 1981 and 1991 census categorised the population into three categories:

1. Main Worker = Defined as a person whose main activity was participation in any economically productive work by his/her physical or mental activities and who worked for 183 days or more (work involves actual work, effective supervision and direction of work).
2. Marginal worker = Defined as a person whose main activity was participation in any economically productive work by his physical or mental activity for less than 183 days.
3. Non-worker = Defined as a person who has done no work at any time.

The reference period is one year preceding the date of enumeration.

TABLE 4.10 District-wise Gender Profile of Main Workers expressed as a percentage of Population in each Category

District	Main Workers as a % of total population		Main Workers – male as a % of total male population		Main Workers – female as a % of total female population	
	T	Rank _T	M	Rank _M	F	Rank _F
Bilaspur	31.04	9	46.05	10	16.04	8
Chamba	32.05	8	51.35	7	12.75	10
Hamirpur	30.44	10	41.91	12	18.98	7
Kangra	27.75	11	44.75	11	10.75	11
Kinnaur	46.35	2	58.85	2	33.85	2
Kullu	41.97	4	53.20	5	30.74	3
Lahaul & Spiti	55.12	1	63.60	1	46.64	1
Mandi	37.52	6	47.33	8	27.71	5
Shimla	42.43	3	54.13	4	30.73	4
Sirmaur	38.83	5	54.25	3	23.34	6
Solan	34.10	7	52.59	6	15.61	9
Una	27.63	12	47.98	9	7.36	12
Total (HP)	34.22	–	49.08	–	19.36	–

Column No. 2 has been calculated as follows: $T = (F + M) \div 2$

Source: Census, 1991.

Division 4 while her rural counterpart is most concentrated in Division 6, as is to be expected.

Based on Tables 4.10 and 4.11, it appears that a significant percentage of literate women are non-workers. The rank correlation (r) between female literacy and female non-worker = +0.65, $t_{cal} = 3.54$ and $t_{(0.05,10)} = 2.228$. This would indicate that lower female literacy and lower female non-worker status are related and tend to co-vary. A variety of factors act simultaneously to cause such a correlation:

1. Literacy typically reflects *functional* literacy whereas most 'jobs' prescribe a minimum hiring standard, which is a

higher level of academic qualification. Fertility tables for Himachal Pradesh, Census 1991, indicate that a large number of married women described by duration and education (rural and urban) fall in the three categories of 'literate but below middle, middle but below matric and matriculate but below graduate' and is a total of 4,37,153 out of 11,75,467 married women and this comes to 37.19 per cent.

2. The definition of non-worker includes women (and men) involved in unpaid work on farm or in family enterprises. Additionally,

TABLE 4.11 District-wise Gender Profile of Non-Workers expressed as a percentage of Population in each Category

District	Non-Workers as a % of total population		Non-Workers – male as a % of total male population		Non-Workers – female as a % of total female population	
	1	2	3	4	5	6
	T	Rank _T	M	Rank _M	F	Rank _F
Bilaspur	55.40	4	51.61	3	59.17	6
Chamba	51.56	10	46.02	7	57.10	10
Hamirpur	58.02	3	55.85	1	60.19	5
Kangra	65.49	2	53.92	2	77.06	2
Kinnaur	48.22	11	39.92	11	77.06	11
Kullu	52.33	9	39.92	8	56.52	7
Lahaul & Spiti	35.52	12	31.10	12	39.93	12
Mandi	54.26	6	50.89	5	57.62	9
Shimla	53.77	7	48.82	6	58.71	8
Sirmaur	53.43	8	43.36	10	63.50	4
Solan	55.30	5	45.86	9	64.74	3
Una	66.42	1	51.34	4	81.50	1
Total (HP)	57.27	–	49.36	–	65.18	–

Column No. 2 has been calculated as follows: $T = (F + M) \div 2$

Source: Census, 1991.

- i. Himachal has by far one of the highest male out-migration rates in the country — consequently women have to stay back as *de facto* heads of household which places a severe mobility constraint on women.
 - ii. Due to the mobility constraint women traditionally prefer jobs close to home and this greatly limits their chances of finding employment.
 - iii. However, in districts such as Kinnaur traditional agriculture has not been feasible due to difficult terrain. This, alongwith the discontinuation of cross-border trade with Tibet, has seen women supplement household incomes through low-skill work outside the household.
 - iv. Society is relatively more liberal in the tribal belt — permitting women ‘outside the home’.
 - v. Reservation policies for Scheduled Castes/Scheduled Tribes have also had a favourable impact on women’s labour force participation.
- District-wise percentage of main workers and non-workers by sex for the year 2001 is given in the Statistical Appendices as SA-Gender-28 and SA-Gender-29.

Women's Drudgery

To truly appreciate women's workload and the consequent drudgery, attention must first be focussed on the nature and type of activities being undertaken. This has to be understood further in terms of the daily and the seasonal workload. The gender picture, which emerges then, is one that is typical of the entire State — though exceptions may be claimed, generalizations can be made without fear of oversimplification.

As mentioned at the very outset, Himachal Pradesh is predominantly rural and the majority of its people lead an agro-horti-pastoral life. The Mid Term Appraisal of the Ninth Five Year Plan estimates that more than two-thirds of the population is directly or indirectly engaged in agriculture and allied activities.

Negi, Rana and Sharma (1997) report that family needs such as 'collection of fuel, fodder and water; animal care; child care; cooking; washing clothes; cleaning utensils as well as the cowshed etc.' fall in the exclusive domain of the daily workload of women — and from which they never get a respite.

In respect of the seasonal workload it needs to be highlighted that:

- a. Typically, throughout the State, men contribute more than the women do during the months when the agricultural or horticultural produce has to be harvested and marketed.
- b. During the agricultural lean season, women are occupied in such activities as weaving in the cold desert regions (Negi, 1997) but with horticultural diversifica-

tion there is a reduction in the 'lean period'.

The activities (SA-Gender-16) carried out during the agricultural operations include low skill tasks involving drudgery, and include ploughing, land preparation and clod breaking, basin preparation, sowing, gap filling, inter-culture, weeding, cleaning orchard floors, irrigation, fertiliser application, plant protection practices, staking of vegetables, harvesting, picking of fruit, threshing and winnowing. Most operations are carried out through the use of traditional implements.

Activities in animal husbandry are again low skill tasks that include the tending cattle in the shed, grazing, removing dung from the shed, fodder collection and milking.

In reference to SA-Gender-16, it is noteworthy that:

- a. Kumar (1992) has documented that the number of female labour days utilised in farm production exceeds the male labour days and that the percentage of female labour days is about three times higher than male labour days utilised in animal husbandry. Likewise, Bhati and Singh (1987), describe a 'very large measure' of women's share in activities such as agriculture, animal husbandry, collection of fuel, etc.
- b. The *only* two activities out of those listed above, performed exclusively by men, are those of ploughing and marketing. The exception here would be for example, the Barad community of Salogra in the Solan district, where the women and girls are solely responsible for marketing as well.

- c. Removing dung from the shed is an activity almost always exclusively performed by women as is gap filling.
- d. Fertiliser application and grazing are two activities where the workload of men exceeds that of women.
- e. Irrigation and transplanting workload are largely equally shared.
- f. All other activities involve both men and women. The bulk of the work being undertaken by the women may lead to very long workdays — often in excess of 17 hours — during the ‘peak agricultural seasons’ which are the times of sowing, harvesting and packing of crop.
- g. Both men and women carry out the water fetching activity with men more involved with this activity where distances are longer and the terrain is tougher (Negi, Rana and Sharma, 1997a).
- h. Wherever undertaken, fuel-wood and fodder collection take longer because the felling of trees and the clearing of shrub has increased the distance between the home and the forest. These two activities are predominantly carried out by women, children and family elders but lopping of dead wood and cutting it into smaller sizes is done by men.
- i. Men collect medicinal plants, wild mushrooms from the jungle in the cold desert regions like Kinnaur district and market the same.

The above mentioned activity profile has to be viewed in light of the horticulture led transformation taking place in the State. The loss of indigenous crop varieties is attributed to this

transformation. This greatly compromises the nutrition of local population with severe implications for women and children and is an aspect that needs investigating.

The commercial focus of cultivation means that the produce is marketed — with very little, if any, being retained for self-consumption. The increased income has undoubtedly ensured access to modern gadgets, to education and to the comforts of modern day living. Negi and Rana, (1998), have documented an ‘expected reduction’ in the agricultural workload of women. However, on closer inspection, they found this to be a ‘shift’ rather than a ‘reduction’ in workload. The study highlights that while farm women are now elevated to a managerial status in respect of agricultural operations, it is the hired migratory labour — mainly ‘Gurkha’ women — that undertake the agricultural operations in addition to their household work.

It must be mentioned however that this ‘shift’ may not always be evident because work in these families is fairly equitably undertaken but when viewed in totality women and girls shoulder the greater burden.

Further, migratory labour has displaced local men and women from poor families who worked for food and cash income. The displaced local labour now work on their own fields (Negi, 1998).

A related aspect is one of male out-migration.⁸ At 64.4 per cent, Marginal holdings constitute the bulk of agricultural holdings in the State.⁹ Poor productivity on small and marginal farms forces men to migrate to supplement meagre

8. Migration Tables, Census, 1991; and Verma and Partap, 1992.

9. *Statistical Outline of Himachal Pradesh*, 1998.

farm incomes — and for the purposes of commercialization, these are non-economic sizes of holdings. Acting as *de facto* head of household women are greatly constrained because:

- not being ‘owners’ of the land the same cannot be used as a collateral to secure finances and
- major decisions pertaining to the farm are taken by men (Negi, Rana and Sharma, 1997a).

This draws attention to the question of access and control over resources — especially credit from banks. As can be inferred from the above description, that while women have access to productive resources, the control largely vests with men. It is only in matters of ceremonies and religious functions that women have greater control. The issue of control is linked to obstructing factors such as patrilocal marriages, inheritance laws, land redistribution etc all of which have had a gender bias. Often enough, the banker’s mindset does not permit him to break free of the ‘loan repayment fear’, as far as women are concerned. She is seen largely as a dependent individual not owning assets. Thus despite the fact that there is the possibility of forwarding upto Rs 25,000 security free loans, the banks do not favour lending to women. However, the fundamental remains the recognition of the fact of a woman’s lack of control over productive resources.

Gender based data on individual borrowings from credit institutions is not easily forthcoming but indications are that women are coming forth in large numbers to take advantage of new schemes like ‘Self Help Groups’ that provide eased access to finance. These groups, and other initiatives to facilitate the access of rural women to credit are discussed in subsequent sections.

Interventions (Also refer to SA-Gender-26 relating to programmes being run in the State for women and girls). Despite their contribution to hill farming, in the past, women have not been the focus of attention of agencies providing technology and resources — especially easy credit inputs to rural women.

Initiatives to address this imbalance include:

1. Non-farm sector schemes sponsored by National Bank for Agriculture and Rural Development (NABARD) are noteworthy, specifically:
 - a. ARWIND Programme: envisages meeting the credit needs of rural women, on group/cluster basis for financially viable activities in the non farm sector. The scheme has two components — a credit component and a promotional component.
 - b. MAHIMA: envisages the formation of appropriate strategies for development of ‘niche’ or ‘pro women’ markets for marketing non-farm products of rural women. (This programme is yet to take off in Himachal).
 - c. Self Help Groups scheme is by far the most successful in linking these groups with banks to ease access to credit, as described in subsequent pages.
 - d. Rural Entrepreneurship Development Programme (REDP): for both men and women involving short duration skill upgradation programmes operational since 1993.
 - e. One-third reservation to the women

- in representation in Panchayati Raj Institutions and Local Urban Bodies has been ensured.
- f. Women Development Cells ostensibly to facilitate credit availability to rural women, have been established in two banks only. NABARD meets the salary obligation of the officers appointed.
 - g. Women Development Cells tie up with the Women's Development Corporation.
 - h. Women farmer clubs formed with five year initial support from NABARD to provide training inputs in horticulture/agriculture etc *Mahila* Club, at BADSU in District Mandi is a successful women farmers club.
 - i. In the Watershed Development Scheme, which is on the anvil, it is proposed that village level monitoring committees that will be formed *should* have 30 per cent women members — i.e. women's membership is not mandatory. The programme will have a special component targeted at women and the landless.
2. Gender sensitisation programmes for officers of 'line departments', for example, these are conducted under the National Agriculture Technology Project and by the Himachal Institute of Public Administration.
 3. In the 'Women in Agriculture' project in the Mashobra, Theog and Rampur Blocks of Shimla district, women farmers benefit from the Women's Meetings that are specifically organised.
 4. The Women Development Corporation makes concessional finance available to women for self-employment ventures and assistance is also provided to women under the *Swaran Jayanti Swarozgar Yojana* (Golden Jubilee Self Employment Scheme). However the subsidy element in this *Yojana* is in the nature of an allurements and as such is seen as an obstacle by those involved in the SHG creation process.
 5. The dissemination of farm technologies where a tuition fee is not charged. These are location-specific transfer of technology programmes to foster farm women's participation by institutions such as the University of Horticulture and Forestry, the Agriculture University and the Women Development Corporation.
 6. Efforts to recognise and document the vast indigenous knowledge that vests in farming communities especially women, this corpus includes knowledge of household and farm operations besides livestock management practices.
 7. Inclusion of 'Gender' as an issue in discussions in workshops, seminars and at other forums.
 8. Documentation of women's role and contributions.
 9. Publication of 'package of practices' and recommendations for various farm operations in simple Hindi for ease in comprehension e.g. by University of Horticulture and Forestry and the Agriculture University.
 10. Targeting women farmers to impart agro-based vocational training like floriculture.

11. Diversification of employment possibilities for women. This includes free training in industrial trades in the fields of post harvest management, hair and skin care, electronics, cutting and tailoring, stenography, etc.
 12. The State Tourism Policy provides subsidy to women entrepreneurs on projects amounting to Rs 10 lakhs, for the setting up of small and tiny tourism units.
- These initiatives point to the recognition

Box 4.6 — Self Help Groups In Himachal Pradesh

This SHG programme is a NABARD sponsored micro-credit programme helping groups to access credit with ease. The focus is on inculcating saving and thrift in members of the group through the instrument of inter-lending. It is implemented through the collaboration of banks with NGOs and concerned government departments e.g. officers and staff of the various programmes under the Directorate of Social and Women's Welfare etc. The performance has been good in those districts where the collaborating agencies have been effective and efficient. This programme was initiated during 2000.

The overall objective of creating Self Help Groups (SHGs) has been the empowerment of rural poor, including women, by targeting the approximately 70 per cent rural poor who get left out of the normal credit delivery system for obvious reasons. It is interesting to note that while SHGs can be all men, all women or some men and some women groups and as of now, these are about 95 per cent all-women groups in the State. The loan recovery in Himachal is 100 per cent — in some cases more than a hundred per cent — which indicates that the loans are repaid before the stipulated period. The all India figure is 98 per cent.

The success of these groups stems from various factors like;

- a. No registration of the group is required. The documentation is simple, and only the group leader is required to make one trip to the bank while the remaining formalities are completed in the village itself.
- b. Simplified access to micro credit as opposed to conventional security tied credit.
- c. Educative, as it inculcates thrift and money management and teaches profitable use of smaller amounts so as to be able to handle larger amounts at later dates.
- d. No requirement to specify need — it is not directed credit. On an average, the first time loan is predominantly used for consumption purposes with roughly 40 per cent being allocated for productive purposes. As opposed to this, second time loans are predominantly production oriented loans (average 70:30 in favour of production purposes).
- e. No security is needed to secure a loan.
- f. Women borrow according to need only and repayment is a prime concern.

Another SHG programme has been in vogue under *Swaranjayanti Gram Sewarozgar Yojana* (SGSY) since 1999–2000. The objective of the scheme is to bring the assisted poor families above poverty line in three years, by providing them income generation assets through a mix of bank credit and government subsidy. The scheme aims at establishing a large number of micro enterprises in rural areas, organisation of rural poor into SHGs and their capacity building, planning of activity clusters, infrastructure build up, technology transfer, provision of credit and marketing infrastructure.

now being accorded to rural women's needs and conditions. It is consequently necessary to monitor and evaluate these efforts in terms of their impact on removing factors that cause low participation of women in farm related extension programmes.

Women's Groups

The success of the SEWA initiative in Gujarat, draws into sharp focus the benefit and strength of organisation. Himachal Pradesh does boast of a significant *Mabila Mandal* (Women's Group) presence. SA-Gender-17 describes the district-wise scenario. By 1996, there were over six thousand registered *Mabila Mandals* in the State. Their performance is judged in terms of action undertaken in the areas of adult education, family planning, health and cleanliness, nutrition, manure (compost) making, vegetable growing, dairy farming, 'smokeless chula', latrines and small savings. Cash awards are given to the top three performers — however a study by Negi, Rana and Sharma (1997b) reports that these State level cash awards are not being given for want of funds. The study goes on to focus on policy level and operational level interventions needed to strengthen these groups. Constrained, as they may be, it needs to be mentioned that *Mabila Mandals* in Kangra and Sirmaur districts have traditionally done well.

Higher literacy may explain the performance of the Kangra *Mabila Mandals* but the performance of these groups in Sirmaur can be attributed to women (though less literate) coming together for a common cause — the 'Gherao' of the district administration to register protest against liquor shops being opened, is a case in point.

Self Help Groups (SHGs) are emerging as

a success story in Himachal Pradesh and a district-wise profile is presented in Table 4.12.

Success Stories of the SHGs in Village Kuthar, District Solan

A few women availed of an opportunity to travel to one of the south Indian States and were exposed to the working and potential of SHGs in 1995–96. Impressed with what they had witnessed, they were able to generate support from other like-minded women in their village. Thus a group of eight to nine women formed this group with individual savings of Rs 100 per month. Strong group cohesion has seen them grow in a short span of time, to a position where it now borrows upto Rs 75,000 with a turnover in the region of Rs 95,000–1,00,000. It also provides assured loans to non-members — both

TABLE 4.12: Self Help Groups — Target and Achievement

<i>District</i>	<i>Target for 2000–2001</i>	<i>Achievement till December 2000</i>
Bilaspur	100	9
Chamba	100	40
Hamirpur	200	115
Kangra	600	275
Kinnaur	25	–
Kullu	400	73
Lahaul & Spiti	10	6
Mandi	400	90
Shimla	265	113
Sirmaur	250	14
Solan	400	262
Una	250	115
Total	3000	1038

Source: NABARD Head Office, Shimla.

within and outside their village. This they are able to do because members act as guarantors. What is remarkable is that they charge a slightly higher rate of interest. Their offer is attractive because it is assured and involves little or no paper work. Their loan repayment is 100 per cent — one of the reasons for this it is claimed is the cohesion in the group — no one dare default.

The *Barad* community mentioned earlier — in the context of women's workload — is yet another success story. To date there are about 14 women's SHGs. Women buy vegetables from villagers and sell them. Loan repayment is again 100 per cent. Their socio-economic condition stands considerably improved.

The *Bangalas*, a community known to have been involved in activities such as petty thieving and begging are another success story. There are a total of 11 SHGs — a majority being women's groups. The women's groups trade in items like cosmetics, bangles and haberdashery. They carry their baskets into villages to sell their wares. The men vend shawls, sheets and woollen garments. Both men and women buy in bulk from markets such as Panipat in Haryana and periodically replenish their stocks. Again, their loan repayment is 100 per cent.

Incidentally, all three success stories come from Solan District. They reiterate the significance of exposure to new developments, of open-mindedness, of excellent identification of target groups and of the benefits of simplified procedures.

A fourth success story comes from the Rohru Block of District Shimla where the Rashtriya Mahila Kosh has sanctioned this group a loan of Rs 10 lakhs.

Box 4.7 – Individual Women Who Have Successfully Championed Causes

- i. Kinkri Devi (Sirmaur) took on the might of the limestone quarrying lobby. For her efforts, she was a delegate to the Beijing Conference and is among the first recipients of a State award under the *Stree Purskar Yojana*.
- ii. The Pradhan of Shilagharat *Mabila Mandal* in Chamba, generated support for the plantation of *rubinia* trees (a fodder species) through personal effort.
- iii. Ms Pasricha has been a pioneer in the field of education and social work.
- iv. Satya Vati Dang, Mrs Subhadra Amin Chand, Mrs Vidya Stokes, Mrs Sarla Sharma, Mrs Chandresh Kumari, Mrs Viplove Thakur, Mrs Asha Kumari, Ms Shyama Sharma, Ms Rattan Manjari, Ms Krishna Mohini, are prominent names in State politics.
- v. Stereotypes are occasionally broken and women in Himachal venture into previously male dominated fields.
- vi. Suman Rawat is a nationally recognised athlete.
- vii. Several women officers are serving the State.
- viii. There are a number of women who run business enterprises as varied as tea stalls to hosiery units.
- ix. Himachal Pradesh has a woman Chief Secretary.

Women in Decision Making

SA-Gender-18 presents a profile of women in the State Legislative Assembly — the Vidhan Sabha — and SA-Gender-19 presents women contestants in Legislative Assembly elections.

The State Assembly has had a lady Speaker in the past. The Indian Parliament has seven representatives from Himachal (four in the Lok Sabha, the Lower House and three in the Rajya Sabha, the Upper House). The present Members of Parliament, includes a lady MP from Himachal in the Rajya Sabha.

As can be seen, women stand clearly outnumbered in the State Legislative Assembly. But it is encouraging to see that the number of women contestants is on the rise. However, to increase their numbers substantially, political parties will have to give party tickets to many more women. The majority of women in politics in Himachal, belong to families that have had a political tradition. To involve more women entails an approach that targets women from all walks of life — especially at the grassroots. This is where the amended Panchayat Raj Act comes into focus as the single most forceful instrument that has brought women into the forefront.

SA-Gender-20, 21, 22, 23, 24 and 25 depict the gender profile of Members and Chairpersons in Zila Parishads, Panchayat Samitis and Gram Panchayats respectively. Prior to the 73rd Amendment, very few women contested elections and even fewer won. It is still early to comment on their achievements or on the success of the entire process but all indications are that women have largely redeemed themselves. Indications are that in the next elections there is likely to be an even larger number of women entering the Panchayati Raj institutions.

To be truly effective, these women need appropriate training inputs. A State initiative in this direction has been lacking. It is imperative to this shortcoming.

The numbers of women in decision-making

positions in the administrative service etc. are increasing — albeit gradually. This is because the hierarchical system allows only a gradual climb up the ladder and is limited by the number of women entering these services. Like men, women too have benefited from the job reservations for Scheduled Caste and Scheduled Tribes. One of the features of a large number of job advertisements is the single statement at the bottom, which encourages women candidates to apply — a clear sign of changing times.

The 73rd and 74th Amendments have had its detractors but in Himachal by far the most significant contribution made by this Amendment is that it has made women take note of their own potential as a potent force for change.

Social Justice

To foster gender equity and to protect human rights various provisions have been made and are enumerated in SA-Gender-26 and 27. The coverage of these provisions is substantial. The critical issue in respect of social justice is of awareness — on the part of women and also men. A lack of awareness of rights, of redressal forums, of provisions under various schemes and programmes etc only serves to undermine women's relative position. At a second level, issues in provision of social justice relate to their financing. Timely release of finances is not always made — these are invariably State or Centrally sponsored schemes and a greater level of sensitivity and awareness are required.

This makes 'awareness' campaigns and drives and advocacy an imperative. Focus on education is another key area. An enlightened society, it is expected, will only promote equity. However, this comment is made with due caution. Two

TABLE 4.13: Progress Report of the State Commission for Women (upto November 2000)

<i>Complaint</i>	<i>Closed during</i>		
	<i>Total</i>	<i>April 2000 – November 2000</i>	<i>Closing balance</i>
Harassment by husband	47	22	25
Harassment by in-laws (includes husband)	29	9	20
Harassment by relatives	9	6	3
Harassment by neighbours	18	10	8
Harassment by officers/officials (while working)	13	4	9
Rape	8	3	5
Abduction	2	1	1
Unnatural death	11	1	10
Complaints against different government departments	33	10	23
Teasing	5	–	5
Miscellaneous	15	10	5
Total	190	76	114

Source: Himachal Pradesh State Commission for Women.

points need to be made. Both relate to inputs provided by the State Commission for Women. Firstly, crime against women is a very real issue. Table 4.13 is an abridged reproduction of the Progress Report of the Commission upto the month of November, 2000. Secondly, an assessment of the *suo-moto* action taken by the Commission on the basis of newspaper reports reveals that in some cases there was no truth in the report.

The accessibility of the Commission, which is located in the State capital, Shimla may account for the largest cases, 25, being reported from the Shimla district. Sensitisation of law enforcing agencies with regard to crimes against women also seems to be required. It is also difficult to say whether crimes against women are on the rise — is it possible that many went unreported in the past and many still do.

In respect of SA-Gender-26 (regarding the

various programmes being implemented in the State to promote women's welfare) a few issues need to be high-lighted: (i) Financial assistance being provided in schemes initiated some decades ago needs to be revisited. It may well turn out that some of these schemes need to be recast if not scrapped, (ii) monitoring of beneficiaries, to really gauge the success of the schemes needs to be undertaken, (iii) perhaps most important issue is for implementing agencies to not lose sight of the primary objective otherwise these well intentioned programmes will get reduced to mere populist measures, for example, support for setting up enterprises must have provisions for backward and forward linkages with the market to ensure success. and the efficacy of any enterprise is another area that needs thorough investigation, and (iv) with the current focus on women's empowerment as opposed to previous concerns with women's welfare and development the future looks promising — yet a gender over-drive is not advisable — the focus of attention

must be society as a whole so as to achieve the desired gender equity.

Gender Development Indices in Himachal Pradesh

It is evident from the present documentation of the gender profile that Himachal Pradesh has made some gains that need to be consolidated further and there are also some grey areas that need prompt remedial action.

In conclusion, the possibility of quantifying the gender profile needs to be examined. This has been attempted on the basis of the methodology prescribed by the UNDP with a slight modification.¹⁰

The Human Development Index and the gender development index of Himachal Pradesh are not strictly comparable with those for the Country and the other States because of methodological innovation in the technique for calculating these indices. Table 4.1 displays Gender Development Indices for all the districts of Himachal Pradesh. It is seen that Hamirpur tops all twelve districts with the highest GDI of 0.556. The GDI for the State as a whole is 0.447. Other districts with a higher GDI than for the State, are Bilaspur (0.523), Lahaul & Spiti (0.521), Mandi (0.512), Una (0.507) and Kangra (0.502). The districts with relatively lower GDI are Solan (0.461), Shimla (0.431), Kullu (0.412), Sirmaur (0.402), Kinnaur (0.361) and Chamba (0.357) in descending order. It is also observed that the differential between the highest and lowest GDI is quite large and indicates wide inter-district disparities in terms of gender related development.

TABLE 4.14: Gender Development Indices (GDIs) for the Districts of Himachal Pradesh

<i>Sl. No.</i>	<i>District/State</i>	<i>GDI</i>	<i>Rank</i>
1.	Bilaspur	0.523	2
2.	Chamba	0.357	12
3.	Hamirpur	0.556	1
4.	Kangra	0.502	6
5.	Kinnaur	0.361	11
6.	Kullu	0.412	9
7.	Lahaul & Spiti	0.521	3
8.	Mandi	0.512	4
9.	Shimla	0.431	8
10.	Sirmaur	0.402	10
11.	Solan	0.461	7
12.	Una	0.507	5
13.	Himachal Pradesh	0.474	—

The district level profile of the Gender Development indicates the fact that a district faring well in terms of income index may not be equally well off in terms of equally distributed indices of health and educational attainment. Table 4.15 indicates that Chamba district is ranked fourth in terms of equally distributed income index but stands eleventh both in terms of equally distributed health and educational attainment indices and twelfth, in terms of the Gender Development Index. It is hence inferred that the Gender Development Index alone can not throw light on different aspects of Gender Development and it is necessary to consider the other aspects relating to economic, educational and health status to arrive at a composite Gender Development Index. It can also be seen from the Table 4.15 that Una district despite being ranked eleventh in terms of the Equally Distributed Income Index (EDII) has managed to rank fifth in terms of the Gender Development Index. Similarly, Lahaul & Spiti with the eighth rank in terms of

10. Please refer to Technical Notes in Appendix 2.

equally distributed educational attainment index has got third rank in terms of Gender Development Index because of relatively higher ranks in terms of the EDII. Hamirpur, Lahaul & Spiti and Hamirpur again has obtained first rank in terms of equally distributed income, health and educational attainment indices, respectively. Una, Kinnaur and Chamba are the last ranked districts in terms of these indices. The last rank of Chamba district — in terms of the Gender Development Index — can be attributed to relatively lower ranks in terms of equally distributed health and educational attainment indices, though it is ranked moderately in terms of income index. The important policy implication which emerges at this point is that the aspects relating to economic, health and educational status of the Gender Issue need simultaneous attention so as to wipe out the skewed development of different aspects related to females.

Gender Empowerment Measure (GEM)

The attempt to estimate the district-wise GEM was abandoned, as the futility of the exercise became evident. The essence of empowerment is the redressal of women's subordination. Defined, as it is, the GEM does not capture the true picture of Himachal Pradesh. For instance in situations where literacy is more in the nature of functional literacy, and where a sizeable non-monetised sector exists, the wisdom of estimating professional/managerial/administrative indices is questionable. Moreover, the methodology does not permit women's involvement in local groups as *Mahila Mandals* etc. to be included — and in the case of Himachal, this is unfortunate as such groups and the newly formed and forming Self Help Groups are important empowering instruments.

TABLE 4.15: Ingredients of Gender Development Index (District-wise)

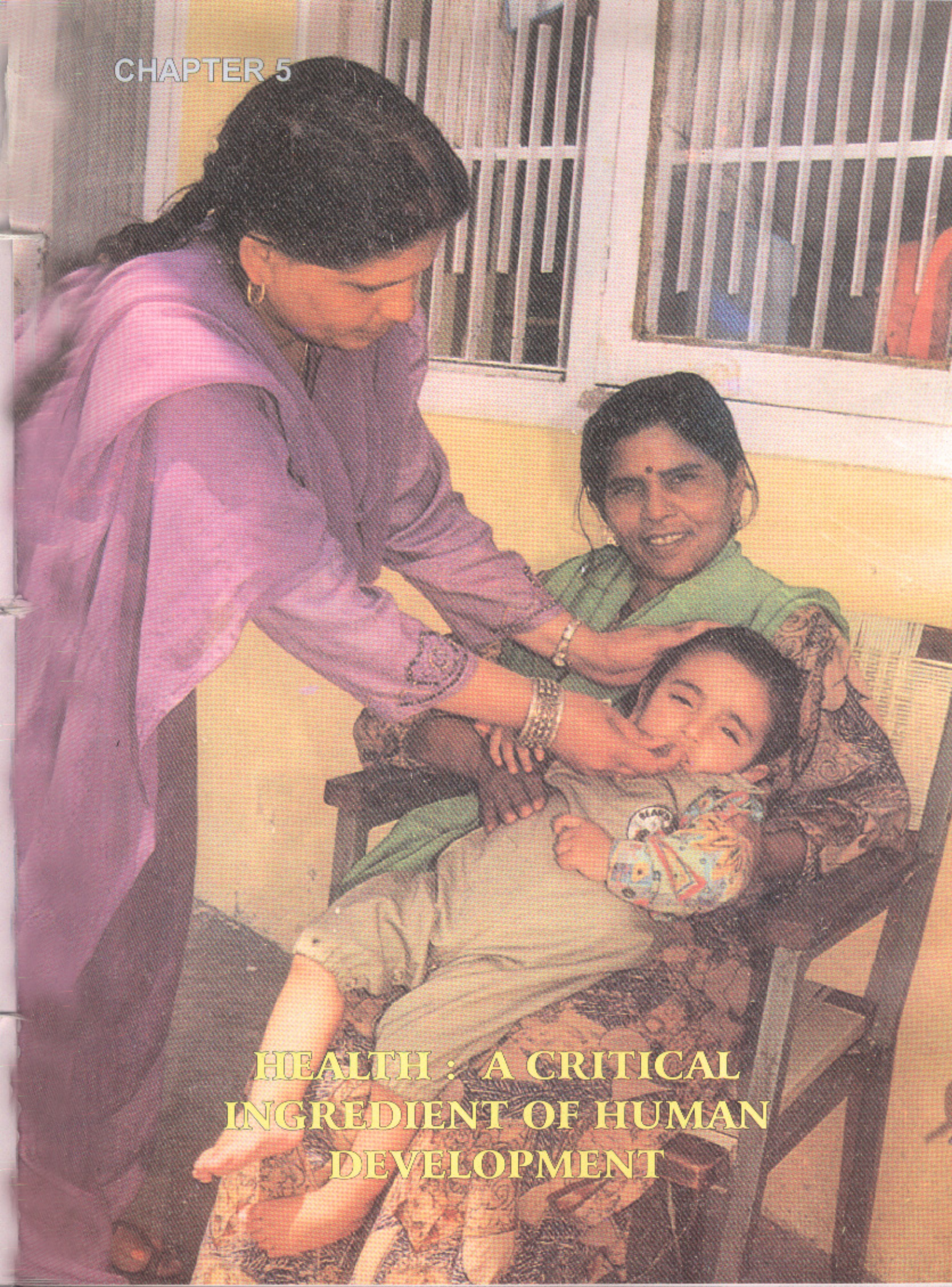
Sl. No.	District/State	<i>Equally distributed income index</i>	Rank	<i>Equally distributed life index (health index)</i>	Rank	<i>Equally distributed educational attainment index</i>	Rank	GDI	Rank
1.	Bilaspur	0.167	3	0.663	4	0.739	4	0.523	2
2.	Chamba	0.166	4	0.443	11	0.462	11	0.357	12
3.	Hamirpur	0.171	1	0.701	2	0.796	1	0.556	1
4.	Kangra	0.139	10	0.621	6	0.747	3	0.502	6
5.	Kinnaur	0.162	7	0.298	12	0.622	9	0.361	11
6.	Kullu	0.165	5	0.448	10	0.622	9	0.412	9
7.	Lahaul & Spiti	0.170	2	0.744	1	0.650	8	0.521	3
8.	Mandi	0.170	2	0.674	3	0.692	5	0.512	4
9.	Shimla	0.164	6	0.461	9	0.668	6	0.431	8
10.	Sirmaur	0.157	8	0.503	8	0.545	10	0.402	10
11.	Solan	0.156	9	0.568	7	0.659	7	0.461	7
12.	Una	0.119	11	0.652	5	0.751	2	0.507	5

There is the 'access and control' factor operating at all levels to further undermine the relative position of women. In addition the information required for computation of GEM pertaining to:

- a. 'Administrative, Executive and Managerial' and the 'Professional and Technical' is not available at the District level. The estimates that were available (Economic Tables) pertain only to Main Workers (State Level estimates)
- b. Women's representation to both the

State Assembly and to the Central Parliament cannot typically be attributed to the Districts.

Consequently the GEM for the districts has not been calculated. Taking the $1 - \epsilon$ averaging with $\epsilon = 2$, the GEM was estimated for the state and was found to be 0.023. This appears as an unfair estimate and as explained above, in its present form, the GEM does not capture all aspect of women's 'empowerment'.



**HEALTH : A CRITICAL
INGREDIENT OF HUMAN
DEVELOPMENT**



Health: A Critical Ingredient of Human Development

Introduction

The WHO defines health as a ‘complete state of physical, mental and social well-being’ (WHO, 1984). Health cannot be seen in isolation from its social, cultural and economic context. The state of health of the individual, or of the community, is a function of the socio-economic environment within which it is embedded, and is, therefore, critically influenced by the socio-economic policies of the State.

The provision of basic health care facilities is primarily a State responsibility. Although there are differences of opinion on what should be the nature and extent of the State provision of health care for all, and significant variations in the public-private division of costs and responsibilities exist across nations, there is hardly any difference of opinion on the issue that primary health care is a public good, and that there should be public provision for it. In its Alma Ata statement, the Government of India had accepted the responsibility of ensuring ‘Health for all by the year 2000 AD’.¹ More than two decades down the line,

1. A global initiative towards health-related research and action was taken at an international conference on Primary Health Care held in Alma Ata (in the erstwhile USSR) in 1978. In its Declaration, the conference spelt out the goal of the signatory nations which was to ensure ‘Health for All by the Year 2000’ with primary health care as its top priority.

one is a long distance away from reaching that goal. It is a well-known fact that in India, especially in rural areas, the health delivery system is inadequate. Experts believe that a structural re-orientation of delivery system may be required in order to make it more responsive to the needs of vulnerable sections of society. Health is also a very important component for the success of the recently reformulated family planning programme, which has been restructured to include reproductive and child health along with fertility control initiatives, and therefore, deserves special attention.

Himachal Pradesh compares favourably with the rest of India and its neighbouring States with respect to most health indicators. However, there is scope for improvement to reach the goal of ‘Health for All’. Inter-district comparisons in the State show the existence of imbalances, as well as disparities between rural and urban areas. Difficult terrain and poor infrastructure, high rates of out-migration, overall shortages of specialist medical personnel are some of the factors causing delay in delivering ‘Health for All’.

The Indian systems of medicine and homeopathy, play a vital role in the health care system

of the State, which has a rich tradition of folk medicine and the Ayurvedic system of medicine. The potential benefits of alternative forms of medicine are significant and should be realised (see Box 5.6).

Trends in Health Status

Himachal Pradesh's achievements and shortfalls can be assessed by observing the trends for various health indicators like life expectancy at birth, infant mortality rate, crude birth rate,

Box 5.1

Achievements

- Life expectancy at birth in Himachal Pradesh (62.8 years) is higher than the national average (57.7 years) for the period, 1986–90 (NFHS).
- Infant mortality rate has declined from 71 per 1000 in 1981 to 64 per 1000 in 1998; IMR is marginally below the national average of 72 per 1000 (SRS Bulletin, April 2000).
- Himachal has experienced a decline in crude death rate from 15.6 in 1971 to 7.7 in 1998, where as the national average was 9.0 in 1998. Crude birth rate also showed a declining trend from 37.3 in 1971 to 22.6 in 1998, which is below the national average— 26.5 in 1998— (SRS Bulletin, April 2000).
- Sixty-six per cent of live births received at least two tetanus toxoid and 86 per cent received iron and folic acid tablets (NFHS-2, 1999).
- Proportion of children fully vaccinated has increased from 63 per cent in NFHS-1, 1992 to 83 per cent in NFHS-2, 1999.
- Knowledge about contraception is almost universal. Though female sterilisation is the popular method, used by 45 per cent of currently married woman; male sterilisation is remarkably high in Himachal Pradesh (13.6), which is four times higher than the national average (3.5).
- Prevalence rate of leprosy has declined from 8.8 per 1000 in 1981 to 0.47 per 1000 in March 2000.

Concerns

- Although the sex ratio of Himachal Pradesh (970) is above national average (933), a decline is observed from what it was during the earlier decade (Census 1991, 2001).
- 87 per cent of births received at least one antenatal checkup; only 39 per cent of children born to illiterate mothers received antenatal care compared to 75 per cent in case of mothers who had completed high school (National Family Health Survey-2, 1999).
- Non-institutional delivery is 71 per cent in Himachal Pradesh (NFHS-2, 1999). The District Survey, 1997 (Department of Health and Family Welfare) noted that women who consulted doctors for health problems after delivery are as high as 60–70 per cent in all districts.
- Couple protection rate has shown a recent declining trend from 58.37 per cent in 1994–95 to 51.57 per cent in March 2000 (Department of Health and Family Welfare, Himachal Pradesh).
- Nutritional status of children showed that nearly half of children below 4 years are underweight.
- Under National AIDS Control Programme, till March 2000, 23870 serum samples were tested and 201 cases found positive with 72 cases of full-blown AIDS.
- Maternal mortality rate is higher in Himachal Pradesh (456) compared to the neighbouring states of Haryana (436) and Punjab (369). It is even higher than the national average (453). (NFHS-1).

total fertility rate and maternal mortality rate, and morbidity patterns (Box 5.1).

Life Expectancy at Birth

For the period 1986–90, Life Expectancy at Birth (LEB) was 62.8 years, higher than the national average of 57.7 years. Since 1970, the LEB for both males and females has risen steadily in the state. However, according to NFHS-1, LEB for both males and females (62.4 and 62.8) was lower than the corresponding figures for Punjab (64.7 and 66.9). In comparison to the LEB figures for Haryana (63.4 for males and 62.0 for females), Himachal Pradesh had lower LEB figures for males, and higher LEB figures for females.

Infant Mortality Rate

For the decade 1971–1981, Infant Mortality Rate (IMR), declined from 113 per 1000 to 71 per 1000. In 1998, it was estimated at 64 per 1000. The decline has been sharper in urban areas compared to rural ones. Between 1981 and 1998, the rural IMR declined from 72 to 66, whereas urban IMR declined from 65 to 38. IMR of Himachal Pradesh compares favourably with that of India as a whole, and with its neighbouring States. According to the SRS figures, between 1981 and 1991, the IMR declined from 110 to 72 at the all-India level, and from 81 to 56 in Punjab and from 101 to 72 in Haryana.

According to the 1991 Census, the district of Kinnaur recorded the highest IMR in the State, with 123 per 1000 live births, followed by Chamba (104), and Shimla (104). It may be noted that Kinnaur also recorded the highest Child Mortality Rate (152) followed by Shimla (126) (SA-Health-4).

Lack of postnatal hygiene is considered to be one of the main reasons for the high number of infant deaths in the State. Awareness on hygiene is, in fact, far from adequate in many places. Absence of easy availability of water and inadequate postnatal care, exposes newborn babies and their mothers to infections.

Crude Death Rate

According to the 'Annual Report on the Working of the Registration of Births and Deaths Act, 1969 for the year 1998' of the Chief Registrar of the State of Himachal Pradesh, the Crude Death Rate (CDR) has decreased sharply in the State, from 15.6 in 1971 to 5.0 in 1998. This decline is much more pronounced than the national rate that stood at 14.8 and 9.0 during the same period. Urban CDR (8.8) was reported to be higher than rural CDR (4.6) in all the twelve districts of Himachal Pradesh. It must be noted that these figures differ from SRS (1998), which reports CDR as 7.7 (7.9 for rural and 5.4 for urban Himachal, see Box 5.2).

At the district level, in 1998, Kullu recorded the highest urban CDR (17.7) and the highest gap between the CDR for rural (4.3) and urban areas. At the other end of the spectrum was Kinnaur, which recorded the lowest CDR (2.9), followed by Lahaul & Spiti (3.3) (SA-Health-3).

Crude Birth Rate

According to the 1991 Census, the Crude Birth Rate (CBR) for Himachal Pradesh is 29.4. SRS (1998) figures indicate a CBR of 22.6 for Himachal Pradesh, which is much lower than the CBR at national level (26.5). Regarding the rural–urban difference, urban Himachal experiences a much lower birth rate (17.0) than

Box 5.2 —

Data Availability and Comparability

Data availability and comparability is a problem common to all States in India, although its intensity may differ. Estimates of the same variable can be widely divergent considering different data sources. An example is the difference in the rural and urban records of SRS and the State government in CDR and CBR in Himachal Pradesh.

However, it should be noted that rural–urban differences for both CDR and CBR, independent of the data source considered, could be a reflection of the fact that urban birth and death rates are computed mostly on the basis of hospital records, and hence are much better estimates than those in rural areas. In rural Himachal Pradesh, because of very low incidence of hospitalisation, rural rates are almost entirely estimated on the basis of reported incidence of births and deaths, generally done by the *Gram Panchayat Evam Vikas Adhikari*, who is the Local Registrar under the Block Development Officer. There is every likelihood of serious downward bias in these estimates.²

rural (23.0). These figures differ from those of the ‘Annual Report on the Working of the Registration of Births and Deaths Act, 1969 for the year 1998’ according to which birth rate in Himachal is much lower (17.2) than the urban (44.1).

According to the Census 1991, the district of Chamba recorded the highest CBR (35.18), while Hamirpur recorded the lowest (25.36). In 1998, according to the figures reported in the

2. Based on interviews with officials of the State Directorate of Health Services, Shimla.

Annual Report of the Office of the Chief Registrar (Births and Deaths) of the Government of Himachal Pradesh, Kullu had the highest CBR (22.3) while Kinnaur, which had one of the highest CBRs in 1991 (30.52), recorded the lowest CBR (7.9). The same report also records a huge gap between rural and urban birth rates, with a very high birth rate in rural areas. The gaps are highest in Hamirpur, Kangra and Kullu districts (SA-Health-1).

Total Fertility Rate

According to Census 1991, in the decade 1981–91 the total fertility rate (TFR) declined from 4.7 to 3.6 in Himachal Pradesh (SA-Health-2). While a decline was recorded in all districts, Hamirpur recorded the lowest TFR in 1991 and the highest decrease (moving from 4.3 to 3.0). In 1991, two of the five districts, Chamba and Sirmaur (4.5), that had the highest TFR in 1981, had the highest TFR again.

Over the six-year period between NFHS-1 (1992) and NFHS-2 (1998), the TFR has decreased from 2.97 to 2.14. SRS figure for TFR in 1998 (2.43) is slightly higher than the NFHS-2 estimate. Himachal Pradesh has shown a faster decline in TFR in recent years as compared to its neighbouring States of Punjab and Haryana.

Maternal Mortality Rate

According to NFHS-1, the Maternal Mortality Rate (MMR) is comparatively higher in Himachal Pradesh (456) than the neighbouring states of Punjab (369) and Haryana (436). It is even higher than the national average of 453. This could very well be a reflection of the inadequacies of infrastructure and in the provision of institutional facilities for child delivery in the

State where their requirement is much higher as compared to that in other areas where topography and the climatic conditions are not as adverse as they are in Himachal Pradesh. However, no consolidated State level records are available on the causes of maternal mortality and morbidity.

The only recently available data for causes of maternal morbidity or mortality are from the UNFPA Baseline survey of 1998. This study shows that, '94 per cent women deliver normally in Sirmaur. Only two per cent have been delivered by caesarean section, which indicates the inadequacy of emergency obstetric services. It is estimated that at least five per cent deliveries develop complications requiring surgical intervention. In the five-year period preceding the survey, out of seven maternal deaths, two occurred due to obstructed labour. A timely caesarean operation might have saved lives. The MMR is estimated to be 364 per 100,000 live births. The causes of these deaths were obstructed labour, eclampsia and bleeding in two cases each and fever in one case. Age of the deceased ranged from 19 years to 35 years. With timely management in an emergency obstetric facility, most of these deaths could have been prevented. Maternity related complications have been reported in 27 per cent women who delivered in the last two years. Fever is the commonest reported symptom indicating (infection from) unhygienic delivery practices. Prolonged labour, ante partum haemorrhage, retained placenta are the major causes of complications.' Thus, all the mentioned problems are preventable causes of maternal mortality.

Himachal Pradesh's achievements relative to the rest of the country are noteworthy. However, more focused attention is needed to overcome the deficiencies identified above.

Morbidity Patterns

NSSO, 52nd Round data show that both in urban and rural areas of Himachal Pradesh, females suffer more due to short-term ailments than males; whereas males suffer more from long-term ailments. As compared to other States, the incidence of hospitalisation is very low in the State. A major factor for this low incidence could be the problem of accessibility due to the difficult terrain. With only 1.7 beds per thousand population in the Government institutions in the State, availability of beds may also be a constraining factor.

Malaria

The distribution of deaths by major cause for the year 1993 reveals that in Himachal Pradesh, 35.4 per cent of deaths were caused by bronchial problems and coughs (Table 5.1). This is very high compared to the national average of 19.2 per cent. Diseases of the circulatory system and digestive disorders marked the next major causes of death in the State (14.3 per cent and 10.7 per cent, respectively).

According to NFHS-1, the prevalence of malaria during the last three months of the survey was 11.41 per 1000 population in Himachal Pradesh, higher than that recorded in Haryana (9.33), but lower than that recorded in Punjab (25.46) and at the all-India level (33.24). In 1998-99, according to NFHS-2 the number of persons suffering from malaria in Himachal Pradesh decreased to 3.74 per 1000 people. This estimate was the lowest in the northern region and much lower than the national average (36.97). The prevalence of malaria continued to be higher in rural areas than in urban areas.

TABLE 5.1: Distribution of Deaths in 1993 by Major Causes (%)

<i>Cause of death</i>	<i>Himachal Pradesh</i>	<i>India</i>
Senility	12.5	22.9
Bronchial problems and Cough	35.4	19.2
Causes peculiar to infancy	3.9	11.0
Diseases of Circulatory System	14.3	10.7
Other Clear Symptoms	7.5	8.9
Accidents and Injuries	8.2	8.3
Digestive Disorder	10.7	6.8
Fevers	5.7	6.7
Disorder of Central Nervous System	1.8	4.2
Child Birth and Pregnancy	0.0	1.3

Source: Government of Himachal Pradesh (1998), *Family Welfare Programme Yearbook 1997-98*, Department of Health and Family Welfare.

Under the National Malaria Eradication Programme, 2026 fever treatment depots, 2883 drug distribution centres and 216 malaria clinics are functioning in the State. The surveillance data showed that number of deaths due to malaria was high in the 1980s, with figures on deaths reaching the highest at 790 deaths in 1984. In 1998, 5,65,611 blood slides were collected and about 1400 cases were found to be positive. However, no death due to malaria was reported in that year. This suggests that malaria is under control in the State.

Leprosy

In 1992, leprosy was as low as 0.56 per 1000 population in the State, as reported in NFHS-1. Though lower than the national rate (1.2), the incidence was slightly higher than in Punjab (0.28) and Haryana (0.14). In Himachal, the prevalence of leprosy has come down from 8.8 per 1000 population during 1981 to 0.47 in March 2000. The National Leprosy Control Programme is now called the Leprosy Elimination

Programme, and is presently equipped with 82 treatment centres with 212 beds in the State. Of these, 71 per cent are located in rural areas where the incidence has continued to be higher.

Tuberculosis

In 1992, the prevalence of tuberculosis in the State was estimated at 2.42 per 1000 population, as against 4.67 in India, 3.27 in Haryana and 2.38 in Punjab. As in the case of leprosy and malaria, the incidence of TB in rural areas was higher (2.6) than in urban areas (0.9). Further, it was noted that the occurrence of TB was higher among rural males (3.3) than rural females (1.9), whereas the figure was very close for both urban males and females. In 1998-99, an increase in the number of cases of tuberculosis (2.59 per 1000 persons) was recorded in Himachal Pradesh, with a steep increase in urban areas (from 0.9 to 2.0), and a low increase in rural areas (from 2.6 to 2.65). The TB Control Programme is implemented through two sanatoria, thirteen clinics, six sub-clinics and one

survey-centre. Most of them (64 per cent) are located in urban areas. A total 751 beds are available for TB patients in the State.

Blindness

According to the NFHS-1 the prevalence of partial and complete blindness in Himachal Pradesh (9.29 and 4.55, respectively per 1000 persons) is higher than in the neighbouring States (Table 5.2). The prevalence of complete blindness is higher than the all-India average (4.16 per 1000 population). District blindness control societies have been constituted in all the districts except in Kinnaur. There are very few eye and ENT Clinics in the State, all of which are located in urban centres. However, there are no such clinics in Lahaul & Spiti or in Kinnaur.

TABLE 5.2: Blindness in Himachal Pradesh and Neighbouring States (per 1000 persons)

Type of blindness	Himachal Pradesh	Haryana	Punjab
Partial			
Male	9.8	6.7	6.1
Female	8.8	6.9	7.2
Total	9.3	6.8	6.6
Complete			
Male	5.5	1.4	1.3
Female	3.7	1.5	2.8
Total	4.5	1.5	2.0

Source: International Institute for Population Sciences (1993), National Family Health Survey of Himachal Pradesh, Haryana and Punjab.

Among the possible causes behind the incidence of blindness in the State, are the

deficiency of Vitamin A, which may cause diseases like keratomalacia and xeroradiography, and the high radiation levels of ultra-violet rays that according to some doctors are very high in the State (Box 5.3).

HIV/AIDS

In Himachal Pradesh the first positive case of HIV/AIDS was detected in 1992. As on 31 March 2000, 23,870 serum samples were tested and 201 were found HIV positive with 72 full blown cases of AIDS. However, seropositivity rate was found to be 8.4 per 1000 persons screened in one test centre in Shimla.

Department of Health and Family Welfare, Himachal Pradesh has prepared a State Project Implementation Plan (PIP) under Phase-II, AIDS Control Project of NACO. The duration of the project is five years, from 1999 to 2004. The State AIDS Control Society is implementing the project in all districts. The main objectives and activities covered under the project are:

- i. To reduce the spread of HIV infection among high-risk groups and others through targeted interventions, control of STDs, condom promotion etc.
- ii. To strengthen the State's capacity to respond to long term challenges posed by HIV/AIDS through training programmes, surveillance, and research.

A plan has been envisaged under the project to provide low-cost, home or community based care to people living with HIV/AIDS. There is also a proposal to establish 'District Community Care Centres' through NGO intervention.

Box 5.3 — Vitamin A Deficit and the Need to Improve the Nutritional Status

Deficiency in vitamin A is one of the features of the nutritional status of Himachal's people. The report, *India Nutrition Profile 1995–96*, by the Department of Women and Child Development, Government of India, shows that in Himachal Pradesh there are high levels of malnutrition amongst children, very low consumption of leafy vegetables and wide inter-district variations in the food consumption patterns and nutritional intakes.

Some of the findings are:

- Nutrient intakes were marginally lower than the Recommended Dietary Allowances (RDA) for energy and iron and much below the RDA for riboflavin and Vitamin A in the State.
- Cereals are consumed at their recommended level in most of the State, although the intake is below the recommended level in five districts.
- The State average of pulses consumption was also adequate though in Hamirpur and Una, this was much below the recommended level.
- Green leafy vegetables were consumed in extremely low quantities in Bilaspur, Shimla and Solan, although the State average consumption was at the recommended level.
- Intake of other vegetables was low in Kangra, Kinnaur, Kullu, Mandi, Sirmaur and Una.
- Milk consumption was adequate except in Kinnaur, Mandi and Sirmaur.
- Fats, oils and sugar consumption is around the recommended level.
- There was wide difference in the average intake of foodstuff from one district to another.
- Eighty-nine per cent of the children suffered from mild to moderate degree of malnutrition.
- Four per cent of children suffered from severe under-nutrition.

Women and Child Health in the State

In Himachal Pradesh, reproductive health problems are widely prevalent amongst women, especially amongst the poorer women and those living in the rural areas. Poor nutritional status during pregnancy and after delivery, increases women's susceptibility to these problems. Another major source of complications is the fact that a high proportion of births in the State continue to take place at home, and are attended by poorly trained *dai's* (midwives). The concept of hygiene and sanitation is poor among people. Many women are still not properly immunised. All these factors make them more vulnerable.

Immunisation of Pregnant Women

The NFHS-1 (1992) estimated that in Himachal Pradesh 47.4 per cent of pregnant mothers, whose pregnancies resulted in live births received two doses of tetanus toxoid vaccine during the four years preceding the survey. This figure was lower than corresponding figures for Punjab (82.7 per cent), Haryana (63.3 per cent) and all-India (53.8 per cent). Further, 71.7 per cent mothers who gave live births, received iron and folic acid tablets. This estimate is similar to that of Punjab (73.6 per cent), while it is much above the figure for Haryana (59.9 per cent) and all-India (50.5 per cent).

Box 5.4 — HIV/AIDS in Himachal Pradesh

As in the rest of the world, HIV/AIDS is an important issue in Himachal Pradesh not only as a communicable disease but also because it represents a microcosm of development issues like destitution, gender discrimination, human rights, social security and livelihoods. It is increasingly recognised that poverty, urbanisation, migration and gender disparity are both a cause and consequence of HIV/AIDS.

The first HIV positive case was detected in a Himachali taxi driver working in Mumbai in 1992 following which AIDS Control activities were launched by the State government. According to a recent HIV/AIDS Surveillance report in India (National Aids Control Organisation):

- As on 30 November 2000, Himachal Pradesh reported 267 positive cases and as on 30 November 2001, the cases of AIDS were reported as 91.
- Out of the twelve districts, eleven have reported HIV/AIDS cases with the exception of the tribal district of Lahaul & Spiti. Over 80 per cent of HIV/AIDS cases in the State are concentrated in the five districts of Shimla, Bilaspur, Hamirpur, Mandi and Kangra.
- The predominant mode of transmission is through the sexual route (96 per cent).
- The current sero-positivity rate is 9.9/1000 persons screened.
- An increasing trend of HIV Infection has been reported among pregnant women (0.2 per cent — 0.8 per cent) indicative of the fact that the epidemic is advancing to the general population. There is a high prevalence of Sexually Transmitted Diseases (STDs) among women (3 per cent by etiological diagnosis). This is a cause for serious concern as a high prevalence of STDs among females coupled with poor health makes them vulnerable to acquiring HIV infection and an increased number of cases of paediatric HIV. It is exacerbated and perpetrated by the low social and economic status ascribed to women and is indicative of low human development.
- The level of awareness about HIV/AIDS among the general population ranges from 34 per cent to 92 per cent according to a Rapid Household Survey done in Himachal Pradesh (1998–99). The lowest level of awareness was found in the districts of Kinnaur and Lahaul & Spiti, Chamba and Sirmour, especially among women.
- Transport workers especially truckers have been found particularly vulnerable to the HIV infection. According to a highway study along one of the National Highways in the State conducted in 2000, 67 per cent of truckers had sex with Commercial Sex Workers (CSWs) and only 19 per cent used condoms. 21.4 per cent truckers suffered from STDs and alarmingly, 77 per cent of the respondents had multiple sex partners.
- Industrialisation and urbanisation has further increased the mobile populations of migrant workers, tourists and industrial labourers extremely vulnerable to HIV/AIDS.

The State AIDS Control Society is working actively to involve civil society organisations and international organisations to reduce the challenge of HIV/AIDS in the State. Phase II of the Aids Control Project (1999–2004) seeks to address two broad objectives — reduction in the spread of HIV infection among high risk and general population and strengthening of the State's capacity to respond to long term challenges posed by the epidemic.

continued

Experience has shown that for intervention programmes to have a lasting impact, holistic approaches addressing the need of establishing an 'enabling environment' is extremely crucial. An enabling environment enhances the individual's life choices thus provides them the capacity to safeguard and respond effectively against the epidemic. This will ultimately contribute towards the promotion of sustainable human development.

Source: State AIDS Control Society and National AIDS Control Organisation (NACO)

NFHS-2 showed that 66 per cent pregnant mothers who gave live births, received at least two tetanus toxoid injections and 86 per cent received iron and folic acid (IFA) tablets or syrup. Thus according to the NFHS figures, there has been a clear improvement in the coverage over the seven-year span between the two surveys.

Antenatal Care

According to NFHS-1, 76 per cent of mothers in the State, received antenatal care, as against 62.3 per cent in India and 72.7 per cent and 87.9 per cent, respectively in Haryana and Punjab. According to NFHS-2 Himachal Pradesh further improved its antenatal care, with 87 per cent illiterate pregnant mothers giving live births received antenatal check-ups from a doctor compared to 75 per cent of mothers who have completed high school. It should be also noted that among the Northern States, Himachal Pradesh ranked first with respect to the percentage of live births whose mothers received at least one antenatal check-up (86.8 per cent, as against 74.0 per cent of Punjab and 58.1 per cent of Haryana).

Institutional and non-Institutional Deliveries

Despite the improvements recorded in the 1990s, institutional delivery is still low in Himachal

Pradesh. In the early 1990s, as per NFHS-1, only 16 per cent of live-birth deliveries occurred in medical institutions. This was comparable to the adjacent State of Haryana (16.7 per cent), as against higher percentages recorded in Punjab (24.8 per cent) and all-India (25.5 per cent). By the time of NFHS-2, this figure nearly doubled in Himachal Pradesh, arriving at 29 per cent.

The district survey by the Department of Health and Family Welfare (1997) noted that institutional deliveries in almost all the districts of Himachal Pradesh fell in the range of 20 to 30 percentage points, with the exception of Shimla (53.3 per cent), Bilaspur (36.8 per cent) and Kullu (34 per cent) (SA-Health-6). Further, the percentage of women who consulted doctors for health problems, but only after delivery, was as high as 60 per cent to 70 per cent in all the districts. This, coupled with the very low incidence of institutional deliveries, could be a reflection of the fact that the incidence of child-birth-induced health complications may be quite high in the State.

Immunisation of Children

Himachal Pradesh performed well with respect to immunisation of children for BCG, DPT, polio and measles, and recorded an improvement between NFHS-1 and NFHS-2. In 1992, 63 per cent of the children were fully vaccinated

— this was almost double of the all-India figure of 35.4 per cent. It was also higher than the adjacent states of Punjab (61.9 per cent) and Haryana (53.5 per cent). An increase of 20 percentage points (moving from 63 per cent to 83 per cent) in this indicator was recorded by the NFHS-2, according to which the percentage of children who did not receive any vaccinations declined from 8 per cent to 3 per cent. The Rural–urban differential was remarkably low in the case of full vaccination coverage (84 per cent and 80 per cent, respectively for rural and urban areas), much lower than the gender differential (87 per cent of boys against 79 per cent of girls). Analysis of vaccine-specific data showed vaccination coverage of children being 95 per cent for BCG, 89 per cent for three doses of DPT vaccine, 90 per cent for three doses of polio vaccine and 89 per cent for measles.

In 1997, the district survey conducted by the Ministry of Health and Family Welfare, Government of India, showed that all the districts, with

the exception of Lahaul & Spiti (70 per cent), Kinnaur (56.2 per cent), Kangra (77.2 per cent) and Sirmaur (69.2 per cent), had coverage levels of all vaccinations comparable to or much above the State figure (SA-Health-7).

The NSSO has recorded immunisation of children and pregnant women according to the monthly per capita consumption (mpcc) fractile groups in rural and urban areas. From the data it is evident that more than 90 per cent children are immunised in all the groups. In rural areas, less than 90 per cent of pregnant women are immunised among first two mpcc fractile groups. In urban areas, pregnant women in the top six fractile groups are fully immunised (Table 5.3).

Diarrhoea

According to NFHS-1 in Himachal Pradesh, more children who suffered from diarrhoea (44.9 per cent) received either ORS or recommended

TABLE 5.3: Immunisation of Children and Pregnant Women according to mpcc fractile groups (percentage)

<i>Fractile group</i>	<i>Immunisation of children</i>		<i>Immunisation of pregnant women</i>	
	<i>Rural</i>	<i>Urban</i>	<i>Rural</i>	<i>Urban</i>
0–10	88.4	100.0	77.9	94.3
10–20	90.0	94.4	86.0	94.4
20–30	97.4	95.2	93.9	95.2
30–40	95.1	95.2	90.9	95.2
40–50	95.7	100.0	93.3	100.0
50–60	98.1	100.0	97.4	100.0
60–70	96.3	100.0	94.7	100.0
70–80	96.2	100.0	94.9	100.0
80–90	95.2	98.3	95.2	100.0
90–100	94.4	98.8	94.7	100.0

Source: NSSO, 52nd Round.

home solution, as compared to those in the neighbouring states of Punjab (32.7 per cent) and Haryana (19.5 per cent) and also compared to the all-India figure (30.6 per cent). This proportion increased in the 1990s. As per NFHS-2, 68 per cent of children who suffered from diarrhoea received Oral Re-hydration Therapy (ORT), either ORS packets or the recommended home solution or increased fluids.

The District Survey 1997, noted that the coverage by ORS was high in the districts of Bilaspur (53.8 per cent), Kullu (42.8 per cent), Lahaul & Spiti (54.5 per cent) and Solan (71.4 per cent), whereas the coverage was as low as between 10 per cent and 15 per cent in the districts of Chamba, Kangra, Kinnaur, Mandi and Una and only 5.1 per cent in Sirmaur (SA-Health-8).

Anaemia

According to the NFHS-2, nearly 67 per cent of children in Himachal Pradesh were found to be anaemic, a proportion that is higher than anaemic women (41 per cent) in the State. A strong relationship is noted between the anaemic state of mothers and their children. Eighty-five per cent of children whose mothers are moderately anaemic (haemoglobin concentration of 7 to 9.9 grams per decilitre) have anaemia, compared with 59 per cent of children whose mothers are not anaemic. The District Survey showed that for the year 1997, the proportion of adolescent girls suffering from anaemia was as high as 63.2 per cent in Solan, 27.3 per cent in Shimla, 18.3 per cent in Hamirpur, 12.1 per cent in Lahaul & Spiti; the other districts ranged from five per cent to ten per cent except Mandi (3.7 per cent) and Sirmaur (2.4 per cent) (SA-Health-9).

Breathing Problems

Nearly 20 per cent to 25 per cent of children suffered from breathing problems in the districts of Chamba, Kangra, Kinnaur, Mandi and Una whereas in most other districts the figure ranged between 10 per cent and 15 per cent. This problem was recorded at the lowest in Lahaul & Spiti (1.9 per cent) and Bilaspur (3.9 per cent).

Nutrition

According to NFHS-1, the nutritional status of children — using anthropometric indices — indicated that nearly half of the young children in Himachal Pradesh (47 per cent) are underweight. Comparable figures in the adjacent States of Punjab and Haryana are 45.9 per cent and 37.9 per cent respectively, while the all-India average is 53.4 per cent.

Summary

It is evident that Himachal Pradesh should focus on strategies to create institutional infrastructure for delivery of children, and to spread knowledge and awareness of nutritional needs of children, especially in the early years of infancy. The orientation of the family welfare programmes discussed below offers the scope to make substantial progress in the well being of women and children.

Family Welfare Programmes

In the year 1956–57, the Family Welfare Programme was launched in Himachal Pradesh as elsewhere in the country, the programme was made 'target oriented' by the mid-1970s. Since then, the proportion of couples protected by

different family planning methods steadily rose from 29.9 per cent in 1976–77 to 58.37 per cent in 1994–95. In 1996, under the reformulated Reproductive and Child Health Programme, the ‘target-free’ approach was introduced, which envisaged decentralised planning at the level of Primary Health Centre (PHC). Since then, a gradual decline in the Couple Protection Rate (CPR) is noted for Himachal Pradesh as a whole. The districts of Chamba (37.95), Lahaul and Spiti (48.87), Sirmaur (46.2) and Una (44.29) showed a value of CPR below the State average. While a small decline in most methods of contraception seems to have set in during the last few years, it is not possible to evaluate the overall impact of the ‘target-free’ approach on such factors as the quality of care and community access to RCH facilities without more qualitative information (Table 5.4).

The Reproductive and Child Health Programme (RCH), intends to integrate maternal and child health with fertility control as well as reproductive health services, such as screening, diagnosis and treatment of STDs/RTIs. The aim is to reduce infant and maternal mortality and morbidity rates, help reduce unwanted fertility, thereby contributing to stabilisation of

population growth, and the improvement of the health status of women and children.

The current phase of the RCH programme in Himachal Pradesh is for a period of five years. The programme has two sub-phases; in the first phase all the districts were covered and in the second phase, Kinnaur and Sirmaur have been selected for more intensive work. A Community Need Assessment approach under RCH programme has been introduced to assess the demographic and family welfare needs at grass-roots levels by involving local public representatives, government machinery and voluntary organisations. Training for government functionaries at various levels has also been arranged.

The NFHS-1 reported that knowledge of contraception is almost universal, in both rural and urban areas of the State. All the modern methods of contraception were known to at least 92 per cent of women surveyed in both rural and urban areas. At 57.2 per cent, the contraception prevalence rate in the state is about 33 per cent higher than the national average (36.9 per cent). Female sterilisation is the most popular method of contraception in Himachal Pradesh, as in almost all Indian States. It is used

TABLE 5.4: Trends in the Percentage of Couples Protected by Different Family Planning Methods in Himachal Pradesh: 1977–78 to 1997–98

<i>Year</i>	<i>Sterilisation</i>	<i>IUD insertion</i>	<i>Condom users</i>	<i>Oral pill users</i>	<i>Couple Protection Rate</i>
1977–78	22.20	1.30	1.70	0.00	25.20
1984–85	30.18	3.54	1.89	0.04	35.65
1987–88	34.50	6.60	2.60	0.90	44.60
1994–95	40.73	10.41	4.86	2.37	58.37
1997–98	39.76	8.55	3.33	2.37	54.00

Source: Government of Himachal Pradesh (1998), *Family Welfare Programme Year Book 1997–98*, Department of Health and Family Welfare.

by 45 per cent of currently married women as per NFHS-2. Male sterilisation is remarkably high in Himachal Pradesh, and is four times higher than the national average. 13.6 per cent of rural couples in the State use this method, as against 5 per cent in Haryana, 2.4 per cent in Punjab and 3.5 per cent in all-India. Patterns of contraceptive use by age reveal that at least 80 per cent of women aged 35–39, and more than 60 per cent of two-child couples, are using contraception in the State of Kerala, Himachal Pradesh and Punjab, whereas the use-rate is 61 per cent for all-India.

The current use of modern contraceptive

methods in Himachal Pradesh increased by 7 percentage points, i.e. from 54 per cent of currently married women aged 15–49 to 61 per cent between 1992 (NFHS-1) and 1999 (NFHS-2). However, the 1999 figures show a decline in the percentage of female and male sterilisations in Himachal Pradesh. Rural–urban differentials exist, with urban areas showing higher incidence of use for most methods as compared to rural areas. Modern spacing methods are used by 26 per cent of currently married women in urban areas as against seven per cent in rural areas. Traditional methods are more popular in urban areas (10 per cent) than in rural ones (six per cent). However it is important

Box. 5.5 — Health Policy and Programmes in Himachal Pradesh

The achievements recorded in Himachal Pradesh with regard to the health status of its people indicate the benefits of the programmes and interventions that have been introduced in the State. During the Ninth Plan (1997–2002), the State Government has undertaken several programmes and schemes to improve the health status of the population of the State (See chart below).

Under the Basic Minimum Services Scheme, the construction of several Health Sub-centres, Primary Health Centres and Community Health Centres with staff quarters was completed. The State Government has already taken initiatives to convert 17 Rural Hospitals into Community Health Centers. There are plans to introduce specialised services in medicine, surgery, gynaecology and obstetrics in these CHC's. There is also a scheme to strengthen the services at District Hospitals and Zonal Hospitals. Measures have been taken to improve the quality and infrastructure of training of health workers at the grassroots level. Two schools each for general nurses and for male health workers have been opened recently to overcome the shortage of these essential paramedics.

The State Government has also established a Composite Testing Laboratory at Kandaghat. To strengthen services for the physically handicapped, a specialised health centre has already been opened at Sundernagar in Mandi district. Recently, a Civil Registration and Vital Statistics Cell has been opened in the Health Directorate for keeping account of births and deaths in the State. A Research, Monitoring and Evaluation Cell for the implementation of Family Welfare Programme has also been established in the Health and Family Welfare Directorate.

The State Government has been continuing with expenditure on the Leprosy Control Programme. The National Leprosy Control Programme has been converted into the Leprosy Elimination Programme with status of a State Plan as against a fully sponsored scheme of the Central Government. Further, provisions have been made to fulfil responsibilities in the National Disease Control Programmes.

to note that sterilisation is more popular in rural areas (46 per cent for females and eight per cent for males) than in urban areas (36 per cent for females and 4 per cent for males). The Survey noted that use of modern spacing methods and traditional methods increase with the level of education, while there is a steep decline in sterilisation among more educated women. The District Survey, 1997 noted that district-wise use-rates for sterilisation (male/female) range from around 42.1 per cent in Chamba, Una and Lahaul & Spiti to 57.8 per cent in Mandi.

Himachal Pradesh provides compelling evidence on the correlation between levels of education and the adoption of sensible practices towards regulation of family size by women. The interconnectedness of the components of human development is well manifested in the State.

The State Government has decided to integrate the Indian System of Medicine and Homeopathy (ISM&H) within the health care delivery system. Efforts are on to improve the

CHART 5.1

Health Sector Programmes under the Ninth Plan

Basic Minimum Services	District-level Initiatives	Training	Indian System of Medicine	Others
<ul style="list-style-type: none"> • Construction of new sub-centres, PHCs and CHCs 	<ul style="list-style-type: none"> • Construction of new district hospitals and civil dispensaries 	<ul style="list-style-type: none"> • New training centres for Nurses and Male Health Workers 	<ul style="list-style-type: none"> • Expanding and Strengthening the health care facilities under ISM 	<ul style="list-style-type: none"> • Establishment of Composite Testing Laboratories
<ul style="list-style-type: none"> • Multipurpose workers' schemes 	<ul style="list-style-type: none"> • Strengthening of services 	<ul style="list-style-type: none"> • Strengthening of existing training schemes 	<ul style="list-style-type: none"> • Expand the scope of services by Ayurvedic hospitals 	<ul style="list-style-type: none"> • Health Centres for Physically Handicapped
<ul style="list-style-type: none"> • Conversion of rural hospitals into CHCs 			<ul style="list-style-type: none"> • Strengthening the education facilities on Ayurvedic system 	<ul style="list-style-type: none"> • Establishment of Drug cells
<ul style="list-style-type: none"> • Strengthening of specialist service delivery at CHCs 			<ul style="list-style-type: none"> • Improve the quality of Ayurvedic medicines 	<ul style="list-style-type: none"> • Strengthening the Civil Registration and Vital Statistics • Strengthening of National Disease Control Programmes • Upgradation of Research, Monitoring and Evaluation Cell

reach of ISM&H both in rural and in urban areas. The Government will also upgrade the quality and expand the scope of services offered by ayurvedic Hospitals and improve the quality of ayurvedic medicines. A couple of schemes are in place to strengthen the training component of the Indian System of Medicine.

Himachal Pradesh has decided to come out with uniform treatment guidelines and a drug formulary to improve the quality of medical care in Government institutions. A Task Force has been set up in the State for preparing the Health 2020 document in Himachal Pradesh which will endeavour to encourage eradication of major diseases like malaria, leprosy, polio, and water borne diseases. A list of 375 essential drugs has been notified to provide inexpensive treatment to common people. Guidelines are to be publicised by NGOs for the general public to educate patients. Feedback about services will be ensured through quality assurance schemes that have been launched in hospitals of Shimla on an experimental basis.³

Public Health Delivery System in Himachal Pradesh: Problems and Prospects

The Public Health System in Himachal Pradesh has witnessed an expansion of its medical institutions since 1973, and there is a shift towards the Indian System of Medicine and Homeopathy. However, improvements are needed, especially in rural and inaccessible areas.

The Ministry of Health and Family Welfare is at the apex of all the Departments and

Directorates of Health and Family Welfare Services in the State. The Directorate of Health Services is responsible for providing preventive, primitive, curative and rehabilitative services to the community, including the rural, backward and tribal areas, through a network of Sub-centres, Primary Health Centres, Community Health Centres, Rural Hospitals and Civil Dispensaries (Chart 5.2).

At the district level, the District Health Officer is assisted by other medical officers such as the District Leprosy Officer and the District T.B. Officer. At the Block Level, the respective medical officers at Primary Health Centres and Civil Dispensaries support the Block Medical Officer. The Health Workers at Sub-centres take care of the village level health activities. It should be noted that because of its hilly and inaccessible terrain, Himachal has more PHCs and Sub-centres than many other States situated in the plains (Box 5.6).

Box 5.6 —

The Norms for Health Delivery Structure

The terrain of the State has an impact on the health delivery structure. The population-based norms for setting up the health delivery structure vary according to the terrain. These norms, are:

- Establishment of one Health Sub-centre for a population of 5000 in plains and 3000 in tribal and hill areas by the year 2000.
- One PHC for the population of 30,000 in plains and 20,000 in tribal and hill areas by the year 2000.
- Establishment of one Community Health Centre (CHC) for a population of eighty thousand to one lakh or to cover the population of four PHCs.

3. Statements by the State Health Minister in *The Pioneer*, dated 24 August 2000.

Considering the terrain of the State, the Health Department concentrated on establishing the sub-centres at the panchayat level, so that basic health service can easily reach the people living in remote areas. Between 1973–74 and 1983–84, 1014 new sub-centres were established in the State. In the ten subsequent years, the State Government gave greater emphasis on establishing Primary Health Centres and Community Health Centres to provide relatively advanced health services to more people (Table 5.5).

Today, on an average, each Primary Health Centre covers around 20,000 people in the

State. A little above 1,20,000 people come under general hospitals in the State, except State ‘special hospitals’ and hospitals run by Cantonment Boards. One Sub-centre covers less than 3000 people on an average and one Community Health Centre covers a little more than 90,000 people on an average (Table: 5.6).

Among the Indian System of Medicines and Homeopathic (ISM&H) institutions, ayurvedic dispensaries have been expanded considerably in the State. In 1996, there were 659 ayurvedic dispensaries, which nearly doubled by the year 2000 and reached 1109). This has been brought about by explicit policy at the State level to ac-

CHART 5.2
Structure of State Health Service Delivery System

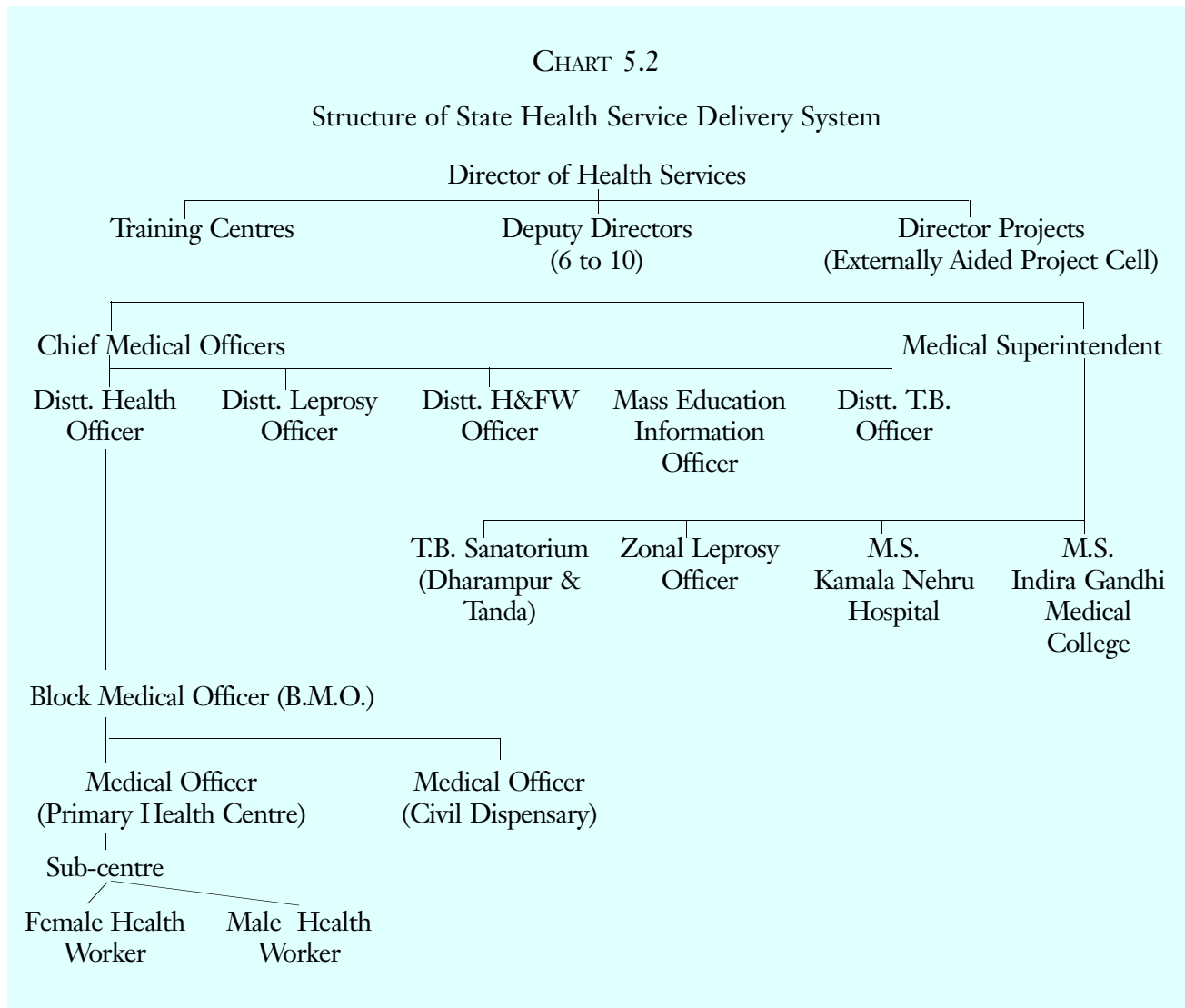


TABLE 5.5: Growth of Government Medical Institutions

	1973-74	1983-84	1993-94	1999-2000*
General Hospitals	37	37	39	50
Community Health Centres	0	6	29	65
Rural Hospitals	0	17	13	0
Primary Health Centres	76	78	218	302
Civil Dispensaries	173	222	167	155
Sub-centres	284	1298	1852	2069
Beds available	3922	4881	7060	8747

Note: * Estimated as on 31 March 2000.

Source: Directorate of Health Services, Himachal Pradesh.

TABLE 5.6: Average Number of People Covered by Different Types of Medical Institutions in Himachal Pradesh

Type of Medical Institutions	Coverage of population by a single unit	
	1996	2000
General Hospital	1,45,773	1,22,683
Community Health Centre	1,20,960	94,372
Primary Health Centre	23,300	20,312
Sub-centre	2909	2965
Civil Dispensary	34,455	39,575
Ayurvedic Hospitals	4,73,761	2,78,825
Ayurvedic Dispensaries	8627	5531

Note: Calculated on the basis of estimated population of 1996 and 2000 as worked out by the RGI.

Source: Directorate of Health Services, Himachal Pradesh

cord official support to these institutions within the Government health delivery structure. As a result of the policy of involving and promoting ayurvedic institutions within the official system and efforts in increasing the number of PHCs and Sub-centres, the coverage of these structures has distinctly improved in the last half a decade (Box 5.7).

Despite the increase in the number of

medical and ayurvedic institutions in the state, there is still a gap between the urban and rural coverage — which is even more so in tribal areas (Table 5.7).

Apart from the hospitals run by the Department of Health and Family Welfare, there are eight State Special hospitals and six Cantonment Board hospitals in the State. Of the eight State Special hospitals, six are located in rural areas

TABLE 5.7: Medical and Ayurvedic Institutions Functioning in Tribal Areas as on 31-03-2000

	Population 1991	Hospital	CHC	PHC	CD	SC	Ayurvedic dispensary	State spl hospital	Beds	
									Allop	Ayur
Kinnaur	71,270	2	3	17	0	32	40	2	206	43
Lahaul & Spiti	31,294	1	3	9	5	35	20	0	136	7
Pangi	14,960	0	1	3	0	16	4	0	38	2
Brahmaur	33,909	0	2	2	0	17	20	0	42	6
Total	1,51,433	3	9	31	5	100	84	2	422	58

Note: Hospital: Government Hospitals, CHC: Community Health Centre, PHC: Primary Health Centre, CD: Civil Dispensary, SC: Sub-Centre, Ayur: Ayurvedic, Allop.: Allopathy.

Source: Directorate of Health Services, Government of Himachal Pradesh.

Box 5.7– Promotion of Indian System of Medicine and Homeopathy – Some Steps

The State Government of Himachal Pradesh has taken various steps to promote the Indian System of Medicine and Homeopathy (ISM&H).

A separate Department for ISM&H was opened in 1985. During the Eighth Plan, the State Government laid special emphasis on the expansion of ISM services and 300 new dispensaries and two hospitals were added to the existing strength of 532 institutions. About one-third of the total patients in the State — numbering about 32 lakhs — came for treatment to ISM institutions despite very poor infrastructure in terms of building, equipment and specialised services.

As a result, in March 1999, in Himachal Pradesh treatment by the Indian System of Medicine and Homeopathy was being provided to the population of the State through two regional ayurvedic hospitals, ten district ayurvedic hospitals, two ayurvedic pharmacies, three homeopathic dispensaries, three unani dispensaries, one nature care unit, 1057 ayurvedic dispensaries and one Ayurvedic Research Institute. There are 3037 panchayats in the State and it is proposed to have one dispensary for every two panchayats by the end of Ninth Plan. The ayurvedic pharmacies, one at Jogindernagar (Mandi district) and the other at Majra (in Sirmaur district), process and pack medicines which are supplied to the Government ISM health institutions. The Ayurvedic Research Institute is located at Jogindernagar in Mandi district.

Further, the Government of Himachal Pradesh has decided to undertake functional integration of the Department of ISM with the Department of Health and Family Welfare for the purposes of implementation of the Reproductive and Child Health Programme and other national programmes. (Government of Himachal Pradesh Notification, No. HFW-A(F)9-1/99, dated 25 November 1999). So, all Government Ayurvedic Dispensaries (GADs) will have their territorial jurisdiction delineated on the pattern of PHCs i.e. villages to be covered, population etc. In places where a GAD is located — and where there is some allopathic institution i.e. Sub-centre/PHC/CD — delineation of the area shall not be undertaken.

TABLE 5.8: Staff Position of Health and Family Health Welfare Department

Category	As on 31 December 1998		As on 1 January 2000	
	No. of posts sanctioned	Percentage lying vacant	No. of posts sanctioned	Percentage lying vacant
Doctor	1498	278 (18.56)	1638	269 (16.42)
Staff Nurse	1365	260 (19.05)	1427	320 (22.42)
Female Health Worker	2100	205 (9.76)	2210	236 (10.68)
Male Health Worker	2005	254 (12.67)	2005	411 (20.50)
Sr. Lab Technician	561	144 (25.67)	612	155 (25.33)
Lab. Asst.	116	54 (46.55)	169	54 (31.95)
Pharmacist	793	95 (11.98)	857	173 (20.19)
Chief Pharmacist	80	3 (3.75)	80	7 (8.75)
Radiographer	165	17 (10.30)	183	40 (21.86)
Ophthalmic Asst.	144	48 (33.33)	145	50 (34.48)
OT Asst.	87	15 (17.24)	95	18 (18.95)

Figures in parenthesis indicate percentages.

Source: Department of Health and Family Welfare, Government of Himachal Pradesh.

and two are in urban areas. All Cantonment Board hospitals are located in urban centres.

There are only 16 private medical institutions in Himachal Pradesh. There are run by private organisations, missionaries or by private trusts. The total bed capacity of these hospitals is 419, and they are mostly located in urban centres.

Of the 133 Government X-ray clinics in the State, 68 per cent are located in rural areas. All 11 Eye and ENT Clinics are situated in urban centres. There are a total of 109 Government dental clinics in the State, of which 61 per cent are in rural areas. Of the 46 Mother and Child Welfare Centres, 41 per cent are located in rural areas.

Concerns

There is however, a serious shortage of medical personnel to run these units (Table 5.8). Despite the improvement recorded in the 1990s, in 2000 16.42 per cent of sanctioned posts for doctors were still lying vacant in the State. For other medical staff, 22.42 per cent posts of staff nurses, 10.68 per cent posts of female health workers and 20.50 per cent posts of male health workers were lying vacant. The highest number of vacancies lying unfilled were for the posts of ophthalmic assistants (34.48 per cent), laboratory assistants (31 per cent) and laboratory technicians (25 per cent).

It will not be presumptuous to suggest that a disproportionately large percentage of the

TABLE 5.9: Medical Personnel in Rural Areas of Himachal Pradesh

<i>Health personnel in rural areas</i>	1980	1985	1990	1995
Specialists (total)	n.a.	n.a.	n.a.	108 (7)
Doctors in Primary Health Centre	n.a.	197 (25)	249 (15)	326 (28)
Doctors in Allopathic Dispensaries	n.a.	220 (21)	42 (0)	n.a.
Male Health Workers	128 (180)	818 (155)	1225 (0)	1551 (301)
Female Health Workers	510 (718)	821 (466)	1693 (12)	2050 (60)
Nurse Midwife	n.a.	484 (28)	484 (28)	351 (113)

Note: Figures in parenthesis refer to vacant posts i.e. the number of sanctioned posts in excess of the number in position.

Source: Compiled by Cehat.

vacancies are still in rural and tribal/hill areas. In 1995, there was a scarcity of doctors in the Primary Health Centres, with 28 per cent of the posts lying vacant, and a very high number of posts lying vacant for the position of nurse midwife (Table 5.9).

More information can be inferred from the data on medical attendance at birth and death

in these locations. SRS figures show that only 25.3 per cent of births in rural areas were attended by trained attendants in 1996, as against 41.6 per cent in the urban areas. Further only 22 per cent of the deliveries in rural areas were institutional, compared to a corresponding figure of 56.4 per cent in urban areas.

Thus, there is a need to ensure accountability

Box 5.8 — Ensuring Accountability Through Community Monitoring

A project on *Reproductive Health Through the Panchayats*, designed and initiated by the Institute of Social Studies Trust (ISST, New Delhi) and SUTRA (partnering organisation in Himachal Pradesh), provides an example on how accountability can be ensured through community participation.

Village women in a study site under one of the Gram Panchayats in Solan district, levelled persistent complaints against a particular ANM who apparently was never to be found at her job. Every time she was accosted by the women, she would say that she was absent in a particular village on a particular date because she had been visiting some other village on that day and time. It soon transpired that this was a ploy to visit no place at all.

After intensive discussions within the group on possible solutions to the problem of truancy, the group on its own decided on an ingenious solution. The very next day, boards went up on the walls of the Gram Panchayat building clearly demarcating the schedule of visits by location and time of the lady. The women explained to the ANM that this was the best thing that could be done to save her good name from being smeared by unnecessary gossip about shirking her work. The ANM knew she had lost out to the women and decided to show up for duty more regularly.

Source: Field Notes of 'Reproductive Health Through Panchayats' (1997–98): A study conducted by ISST.

of existing staff within the Health Department. This may be attempted through community participation and monitoring of Government programmes (Box 5.8 above).

Patterns of Health Sector Expenditure in the State

Theoretical literature on health care financing can be split into models of ‘government-run national health service’, which can provide care for all at a reasonable cost but cannot avoid the dangers of poor quality, and the ‘insurance based system’, which can achieve high quality but cannot ensure care for all at an affordable cost. A judicious mix of these two is believed to be the best way of financing health services. Indiscriminate privatisation can result in lack of access, adequacy and affordability for large segments of users, while total financing of health care through the public coffers without user charges of any kind would obviously end up being non-feasible.

Like various other sectors of the Indian

economy, in the health sector, both the ‘public’ and ‘private’ sector exists. Within the public sector, the provision of health care services is the principal responsibility of individual State Governments. Investment in health infrastructure has been a consistent policy of all State governments in India, irrespective of disparities and a heterogeneous population.

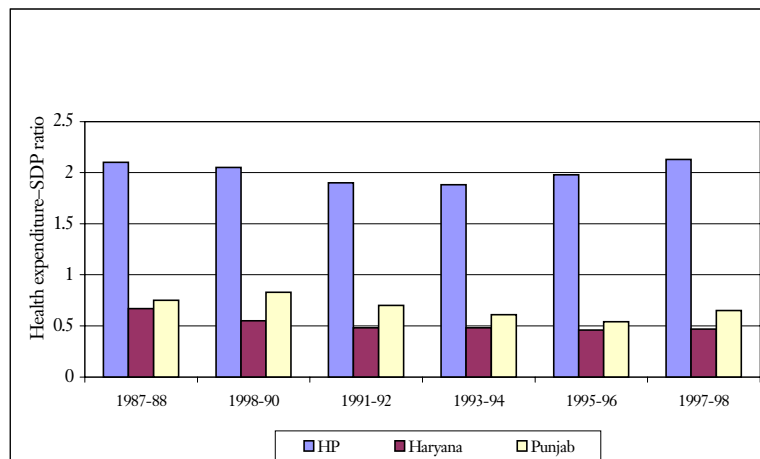
State intervention is significantly visible in health care financing in Himachal Pradesh. The twin indicators of the degree of Government interventions in health services provision are (i) the proportion of health expenditure in the Gross State Domestic Product, and (ii) the share of Government expenditure set apart for health.

Between 1987–88 and 1997–98, the health expenditure to GSDP ratio of Himachal Pradesh was mostly 2 per cent more than that in the neighbouring states of Punjab (0.6 per cent) and Haryana (0.5 per cent) (Chart 5.3).

It is to be noted that, during this period, in spite of the acute fiscal crisis of the States reflected in their revenue and fiscal deficits, the

CHART 5.3

Health Expenditure — GDSP ratio of HP, Haryana and Punjab: 1987–88 to 1997–98



relative share of Government expenditure in medical and public health remained constant at around 6 per cent in Himachal Pradesh. This is quite remarkable in view of the fact that in the adjacent States of Punjab and Haryana a decline was recorded. In Punjab, the ratio declined from 5.64 per cent in 1987–88 to 4.42 per cent in 1997–98, while in Haryana it declined from 4.01 per cent in 1987–88 to 2.84 per cent in 1997–98 (Table 5.10). Similar observations can be made also for social services and developmental expenditure categories.

Further, between 1998–99 and 1999–2000, the total outlay for the health sector (Plan and non-Plan) has increased remarkably moving from Rs 14,97,518 thousand to Rs 21,07,925 thousand. In the decade from 1991–92 to 2001–02, the total outlay for the health sector travelled far and moved from Rs 8,01,677 thousand to Rs 26,23,556 thousand — with an increase of

3.67 times for the Plan expenditure (which moved from Rs 3,36,264 thousand to Rs 12,34,493 thousand) and 2.98 times for the Non-Plan expenditure (which moved from Rs 4,65,413 thousand to Rs 13,89,063 thousand).

Public expenditure on health can be further disaggregated for studying changes in the pattern of allocation of health expenditure under different categories. Although ‘Hospitals and Dispensaries’ has continued to hold the highest percentage share in health expenditure over the years, a declining trend in this share is visible over the last several years. The share of the National Disease Control Programmes has also shown a sharp decline over this period, while there is a significant rise in the share of expenditure on Family Welfare Programmes. The proportion of health expenditure on revenue account on maternal and child health has shown a marginal rise as against a marginal decline in

TABLE 5.10: Trends in Medical and Public Health Expenditure, Social Service Expenditure and Developmental Expenditure as Percentages of State Government Budgets

	1987–88	1990–91	1994–95	1995–96	1996–97	1997–98
Himachal Pradesh						
Medical and public health expenditure	5.93	6.44	6.01	5.74	6.18	5.65
Social service expenditure	40.55	40.74	37.09	38.72	38.53	38.24
Developmental expenditure	74.73	70.14	69.01	68.47	68.77	69.81
Haryana						
Medical and public health expenditure	4.01	3.54	1.80	2.41	2.25	2.84
Social service expenditure	36.18	34.20	19.16	30.23	21.15	24.62
Developmental expenditure	73.58	67.79	44.88	52.56	46.22	51.51
Punjab						
Medical and public health expenditure	5.64	5.82	3.33	3.88	3.88	4.42
Social service expenditure	44.75	37.10	22.04	29.36	24.63	27.71
Developmental expenditure	74.32	66.66	37.94	46.43	57.95	54.00

Source: Finance Accounts of Himachal Pradesh, Haryana and Punjab.

TABLE 5.11: Structure of Public Expenditure on Health in Himachal Pradesh

<i>Expenditure Items</i>	1980-81	1985-86	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
Health Administration	4.02	2.66	4.26	3.39	3.77	3.36	#	#
National Disease Control Programme	13.54	11.68	10.05	11.51	11.53	11.17	11.30	10.73
Hospitals and Dispensaries	41.75	63.79	23.81	21.97	21.79	22.06	21.06	21.22
Medical Education, Training and Research	6.56	6.29	8.59	7.49	8.00	10.94	8.70	9.30
Family Welfare	10.30	18.06	16.50	15.59	18.51	15.44	18.82	17.45
Maternal and Child Health	1.03	1.18	1.14	1.59	2.17	2.42	1.59	2.17
Other Expenditure	11.78	14.13	27.63	26.75	28.11	27.34	32.88	32.56
Total Revenue Expenditure	88.98	90.79	91.97	88.28	93.88	92.73	94.35	93.44
Capital Expenditure	11.02	9.21	8.03	11.72	6.12	7.27	5.65	6.56
Total Expenditure on Health	100	100	100	100	100	100	100	100

Note: # : Expenditure on health administration is included in 'other expenditure' for the years 1995-96 and 1996-97.

Source: Data compiled from Controller and Auditor General, Government of India, 'Combined Finance and Revenue Accounts (for 1980-81 & 1985-86' and 'State Budgets' (for years 1985-86 onwards) by Cehat.

TABLE 5.12: Distribution Percentage of Plan and non-Plan Health Services Expenditure by Systems of Medicine

<i>Systems of Medicine</i>	1987-88			1997-98		
	<i>Plan</i>	<i>non-Plan</i>	<i>Total</i>	<i>Plan</i>	<i>non-Plan</i>	<i>Total</i>
Urban						
Allopathy	4.53	95.47	100	18.39	81.61	100
Ayurvedic	18.30	81.70	100	41.20	58.80	100
Unani	—	—	—	—	100	100
Rural						
Allopathy	20.34	79.66	100	36.11	63.89	100
Ayurvedic	5.04	94.96	100	32.55	67.45	100
Unani	5.50	94.50	100	—	100	100
Homeopathy	—	—	—	100	—	100

Source: Finance Accounts of Himachal Pradesh, 1987-88 and 1997-98.

the share of expenditure on medical education and training (Table 5.11).

In Himachal Pradesh, the Plan expenditure for the Ayurvedic system of medicine has increased considerably over a period of ten years, with an increase of expenditure much higher in the rural sector than in the urban sector (Table 5.12). This could be one of the causes behind the growing presence of the Indian System of Medicine and Homeopathy.

Impact of Public Expenditure on Health

To complete the analysis, one could also investigate the extent to which increased public expenditure on health, improves the health status of the community. Clearly, the link between these two variables will be mediated by a host of other variables such as literacy levels, women's status, nutritional standards, levels of living and other such factors.

Some of the variables that can be taken as good indicators of health status are the Disability Adjusted Life Expectancy (DALE), the Life Expectancy at Birth (LEB) and the Infant Mortality Rate (IMR). The level of health consciousness is reflected in the declining rate of infant mortality and the betterment in the LEB. In the absence of reliable estimates of others, the IMR estimated by Sample Registration General of India has been used as a proxy for health status in the bi-variate analysis attempted below.⁴ It may be noted that the IMR is a widely accepted

4. In order to investigate the links between the two variables, the following bi-variate equation has been estimated:

$$IMR_t = \alpha t + \beta PCH_t + \mu_t$$

where IMR = Infant Mortality Rate, and PCH = Per capita expenditure on Health μ is the error term

indicator of general health of a population and health care services available in a region.

Health Care Provision and Utilisation

No analysis of health care provisioning in the State is complete without a discussion on the public-private mix of health care utilisation and financing. Paucity of information on private health expenditure at a macro level is a major obstacle for such analysis in Himachal Pradesh. Private sector participation in health care provisioning is significant in almost all Indian states, but Himachal Pradesh is more of an exception in this regard.

The utilisation of health care services depends on several factors, such as accessibility, availability, quality and cost of services. The NSSO 42nd and 52nd rounds, reveal that more than 85 per cent of people in the rural areas of Himachal Pradesh utilise public health care facilities for hospitalisation. Even in the urban areas, an increasing trend is noted in the utilisation of the public health care facilities for hospital treatment (Table 5.13).

footnote 4 continued

The dependent variable IMR is a proxy for health status. The data relate to annual figures for the period 1973 to 1996. After correcting for first order auto-correlation using the Cochrane-Orcutt process, the result of the regression comes out as follows:

$$IMR_t = 104.3 - 0.179PCH_t$$

$$R^2 = 0.73$$

$$DW = 1.85$$

$$\rho = 0.5$$

The result shows that IMR is negatively and significantly related to per capita expenditure on health — which is to be expected.

TABLE 5.13: Utilisation of Health Care Service:
Public–Private Differentials in Himachal Pradesh: 1986–87 and 1995–96

<i>Utilisation by type of treatment (%)</i>	<i>Rural</i>		<i>Urban</i>	
	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>
<i>Hospitalisation cases</i>				
NSSO 42nd round (1986–87)	87.93	10.09	80.98	19.02
NSSO 52nd round (1995–96)	86.50	11.50	91.30	8.00
<i>Non-hospitalisation cases</i>				
NSSO 42nd round (1986–87)	60.67	38.33	47.71	50.22
NSSO 52nd round (1995–96)	61.00	39.00	48.00	52.00

Source: NSSO rounds compiled by CEHAT.

In most States, the NSSO has noted a significant utilisation of private sector health services. Himachal Pradesh remains an exception in this regard. NSSO 52nd round revealed that in Himachal Pradesh a high number of treatments were availed from public hospitals, both in rural areas (76 per cent of treatments) and in urban areas (86.9 per cent of treatments). These estimates are significantly higher than those for the neighbouring states of Punjab and Haryana (Table 5.14).

The utilisation pattern of public-private health care facilities is a function — among

other things — of the relative cost of services. The cost of health care for each distinct event of hospitalisation in public and private sector institutions is comprised mainly of expenses incurred on items like bed charges, cost of medicines and other materials and services provided by the hospital and charges for diagnostic tests done.

The NSSO rounds show that the cost of treatment per hospitalisation case in public sector hospitals is lower on an average than in private sector hospitals — in both urban and rural areas of Himachal Pradesh and in its neighbour-

TABLE 5.14: Source of Treatment:
Public–Private Differentials in Himachal Pradesh – 1995–96

		<i>Public hospital</i>	<i>Primary health</i>	<i>Public dispensary</i>	<i>Private hospital</i>	<i>Nursing home</i>	<i>Charitable institutions</i>	<i>Others</i>	<i>Total</i>
Himachal Pradesh	Rural	76.1	4.3	0.8	13	1.5	2.3	0.5	100
	Urban	86.9	1.9	0.0	7.5	1.9	0.9	0.0	100
Haryana	Rural	30.2	0.6	0.3	45.2	19.3	2.8	0.6	100
	Urban	33.2	0.4	0.0	42.2	20.6	2.2	0.4	100
Punjab	Rural	32.1	0.4	0.2	60.1	0.7	3.7	0.0	100
	Urban	27.6	0.2	0.0	65.3	1.8	3.4	0.0	100

Source: NSSO 52nd Round.

ing States — with the exception of urban Haryana. There is not much rural–urban difference in the cost of treatment in government hospitals in Himachal Pradesh as per the NSSO 52nd round. However, this is not the case in the neighbouring States of Haryana and Punjab. A higher cost differential of treatment per hospitalisation between the public and private sectors was noted for urban centres as compared to the rural ones in Himachal Pradesh — which is similar to what is found elsewhere in the country (Table 5.15).

It may be noted that contrary to what is seen in the neighbouring States of Punjab and Haryana, more people seem to be using public institutions for hospitalisation services in Himachal Pradesh. This could be due to one or a combination of more than one factors (i) this could be because of better quality of services, and (ii), it could be a reflection of the fact that there are very few private hospitals in Himachal Pradesh.

Utilisation of health care services across the systems of medicine in Himachal Pradesh vis-à-vis the neighbouring States and India as a whole, reveals that the percentage of treatments in the allopathic system in rural Himachal Pradesh (93 per cent) is slightly lower than that in the neighbouring states of Punjab and Haryana (97 per cent). Compared to the all-India average (95.9 per cent), this is also lower (Table 5.16). This is mainly because of the greater popularity of the ayurvedic system of medicine in Himachal Pradesh (4.3 per cent) as against Punjab (1.12 per cent), Haryana (0.35 per cent) and the all-India (1.53 per cent). The preference for the allopathic system of medicine is observed in the urban areas of Himachal Pradesh (97.39 per cent), which is similar to that in Punjab (97 per cent), Haryana (98.24 per cent) and the average for India (96.31 per cent).

NGO Involvement in Health Programmes

The presence of NGO's in the social sector, including the health sector, has been quite pervasive in the country. Due to the greater flexibility and outreach they enjoy as compared to government mechanisms, many NGO's have been able to reach the poor and deprived sections of the society in a manner that has not been possible for official agencies.

There are several types of NGOs functioning at various levels and for different purposes. Even among the health NGO's, they may range from purely charitable organisations concentrating on service delivery at one end to those that may use health as an entry point to address issues of social and economic inequalities for initiating a process of empowerment.

From the mid-1980s onwards, there has been an explicit official recognition of the potential of NGO-Government partnerships for effectively dealing with social sector issues. However, more often than not, such 'partnerships' have not been on an equal footing, and NGOs have been perceived as structures operating more as extension agencies that implement Government programmes. Fortunately, things seem to be changing for the better, and with increasing awareness and networking among the NGOs, there is greater inclination towards exploring and capitalising on the complementary aspects in such partnerships. The NGOs as a body, have become relatively more proactive in deciding what issues they would like to raise — and are also making their presence felt in the planning and implementation of various programmes.

Unlike many other places in the country, the presence of NGOs has not been very prominent

TABLE 5.15: Average Public and Private Expenditure per Hospitalisation Case in Rural Areas: 1995–96

	<i>Public</i>				<i>Private</i>			
	<i>Free Ward</i>	<i>Paying General Ward</i>	<i>Paying Special Ward</i>	<i>All</i>	<i>Free Ward</i>	<i>Paying General Ward</i>	<i>Paying Special Ward</i>	<i>All</i>
Himachal Pradesh								
42nd round	827.57	1601.10	609.78	n.a.	1232.08	1422.62	1973.29	n.a.
52nd round	2494.00	2935.00	2992.00	2542	1433.00	3753.00	2378.00	2889
Haryana								
42nd round	1149.57	871.47	1887.02	n.a.	535.62	1473.42	3910.90	n.a.
52nd round	2459.00	3928.00	20,000.00	2667	592.00	3420.00	5430.00	3496
Punjab								
42nd round	1088.76	1303.19	2471.15	n.a.	1750.16	1407.42	3575.16	n.a.
52nd round	3474.00	4065.00	1200	3645	1317	6266	12,692.00	6171
India								
42nd round	630.40	1040.21	1482.62	n.a.	665.65	1031.15	1637.85	n.a.
52nd round	1781	3281.00	10,540.00	2080	1463	9281	4300	3202

Source: *Sarveksbana*, April–June 1992 (for 42nd NSS Round data) and NSSO Report No. 441 on Morbidity and Treatment of Ailments. NSS 52nd round (July 1995–June 1996).

TABLE 5.16: Utilisation of Health Care Services by Systems of Medicine

	<i>Allopathic</i>	<i>Homeopathic</i>	<i>Ayurvedic</i>	<i>Unani</i>	<i>Any combination</i>	<i>Others</i>
Rural						
Himachal Pradesh	93.00	1.93	4.30	0.09	0.39	0.29
Punjab	97.80	0.21	1.12	0.39	0.06	0.42
Haryana	97.00	1.91	0.35	0.04	0.04	0.29
India	95.91	1.78	1.53	0.27	0.07	0.44
Urban						
Himachal Pradesh	97.39	0.41	0.45	1.41	0.00	0.34
Punjab	97.80	0.92	0.64	0.44	0.00	0.20
Haryana	98.24	0.74	0.61	0.15	0.26	0.00
India	96.31	2.09	1.03	0.27	0.05	0.25

Source: *Sarveksbana*, April–June 1992.

in Himachal Pradesh in any field — including the health sector. However the relatively recent insistence by most international donor agencies on the involvement of NGOs in programme

design has generated a demand-induced transformation in the scenario. This is true also for the health sector. However, in Himachal Pradesh, many of the NGOs that have come

into being in the last couple of decades, operate as long arms of the Government, and work within the confines of Government programmes. Some have managed to graduate from that status to chart out a separate vision for their work, while others continue to be engaged primarily in service delivery within official programmes (Box 5.9).

One could cite the example of SUTRA, an NGO working in the Solan district. Over two decades back, it started primarily as a service delivery organisation and over the years, developed into a body working for gender sensitisation and training in various sectors, primarily in health. The society for Environmental and Rural Awakening (ERA) operating in the Kangra district specialises in the promotion of better health practices in primary health cases mainly through the traditional systems of medicine. The Voluntary Health Association of Himachal Pradesh, situated in the district of Shimla is an association of NGOs working on health related activities within the State. Like the VHAs in other states of the country, this association also works on a range of training services delivery activities through its membership networks.

Compared to other States, Himachal is unusual in the fact that the population depends more, relatively speaking, on the public health system as compared to the private sector services — especially in rural areas. Considering that the data on health expenditure in the private sector includes expenditure through NGOs, the low share of the expenditure on health in the private sector in the State is quite striking. There could be three reasons for this phenomenon:

- i. The supply of health services through public sector agencies in the State is better and more accessible than in other

States. This may be because of the relatively greater availability of public health services in Himachal — which has been made possible by a much larger share of the State budget being allocated to the health sector in comparison to the neighbouring States.

- ii. It is difficult to conclude whether the high public sector investment in health in the State, has been instrumental in crowding out the private sector investment in the area, or the former was necessitated by the noticeable absence of private sector in health. Perhaps it is a bit of both. On the other hand it is equally possible that because of the difficult terrain in many portions of the State, and the problems of physical access, private sector units may have found it less profitable to set up business.
- iii. A third related reason could be the fact that given the rich and diverse bio-resources in the State and the abundance of herbal medicinal plants, the dependence of the local population on traditional system of medicines has been high enough to make substantive dents in the demand for private sector health services, especially in rural areas.

Health Indices of Districts of Himachal Pradesh

The Infant Mortality Rate has been used as a proxy for the status of health at the district level as no direct estimates of Life Expectancy at Birth at this are available. The maxima for IMR has been taken as 166 (Damoh, Madhya Pradesh) and the minima has been taken as 22 (Hyderabad, Andhra Pradesh) as per the 1991

Box 5.9 — NGOs in Health: Some Glimpses

1. *Himachal Pradesh Voluntary Health Association*: This State level unit of the Voluntary Health Association of India functions as an association of NGOs working on health related activities within the State. The organisation helps in creating an environment for building a people's health movement through networking and provides support services to members in terms of training and capacity building and funding. The HPVHA acts as an intermediary for collaboration between the Government and voluntary organisations working in the field of health within the community.

HPVHA has focused on various issues, covering nutrition and low cost primary health care, home remedies through traditional systems of medicine and knowledge about medicinal plants, laws related to the health and social protection of women and children, child care, TBA training, reproductive health issues and HIV/AIDS, involving Panchayati Raj institutions. The training programmes are organised for field level workers of member NGOs, community based organisations like *Mabila Mandals* and Panchayati Raj representatives, traditional birth attendants, local men, women and adolescent girls, and government officials.

2. *Society for Social Uplift Through Rural Action (SUTRA)*: SUTRA was established in 1977 in Jagjit Nagar in Solan district. Its area of operation covers the two districts of Solan and Sirmaur. This NGO has produced excellent training manuals, which are used to generate awareness on reproductive health issues for rural audiences, on topics ranging from menarche to menopause, using the life cycle approach to health. They also conduct training of trainers for generating awareness in Panchayati Raj members for identifying issues and raising a demand for locally appropriate and relevant health services at the field level as a part of a decentralised target free approach.

3. *People's Action for People in Need (PAPN)*: With other activities, this NGO has also been involved with a Project on Prevention and Management of Reproductive Tract Infections in Women, from 1996 to 1999, has done a substantial amount of work in generating awareness on the causes and prevention of gynaecological morbidity as well as capacity building of its own staff. Health camps organised for diagnosis and treatment of RTIs by this organisation as a part of the project, received a tremendous response from the community and has gone a long way in generating awareness on these infections within the community as also within the health service providers.

4. *Chinmaya Tapovan Trust, Kangra*: This organisation's present programme on rural primary health care and training serves around 150 villages in the Kangra district. It runs training programmes for 11 village health guides, 20 traditional birth attendants, 20 *bal sevikas*, 18 *mabila mandal* workers, nine multipurpose health workers and three adolescent field workers. The centre's awareness-generation programme is run through 150 *Mabila Mandals*, 120 *Yuvati Samoohs* (adolescent girls' groups) and 146 women's self-help credit groups.

5. *Society for Environmental and Rural Awakening (ERA)*: Health has been a major thrust area of ERAs activities. The emphasis has been on the promotion of health care through preventive and curative services. This has been done by assessing PHC services, documentation of local health practices, promotion of herb plantation, and processing and promoting the usage of traditional system of medicine in primary health care.

ERA also organises health awareness camps in different primary schools in the district. It organises health check-ups for primary school students as well as for geriatric patients. Its Out Patient Clinic has also been in operation with medical facilities and referral services.

TABLE 5.17: Health Indices of the Districts of Himachal Pradesh.

<i>Sl. No.</i>	<i>District/State</i>	<i>IMR</i>	<i>Infant Mortality Index</i>	<i>Infant Survival Index/ Health Index</i>
1.	Bilaspur	71	0.340	0.660
2.	Chamba	104	0.569	0.431
3.	Hamirpur	65	0.299	0.701
4.	Kangra	77	0.382	0.618
5.	Kinnaur	123	0.701	0.299
6.	Kullu	102	0.556	0.444
7.	Lahaul & Spiti	59	0.257	0.743
8.	Mandi	69	0.326	0.674
9.	Shimla	104	0.569	0.431
10.	Sirmaur	94	0.500	0.500
11.	Solan	84	0.431	0.569
12.	Una	72	0.347	0.653
13.	Himachal Pradesh	82	0.417	0.583

Source: Compiled by the Planning Department, Government of Himachal Pradesh.

Census data for working out the health index at the district level. The Infant Mortality Index hence obtained has an inverse relationship with human development and therefore, distance of infant mortality index has been taken from unity to covert it into infant survival index. This infant survival index has been used as a proxy to the Health Index. Health indices for all the districts of Himachal Pradesh have been worked out in Table 5.17. The highest Health Index has been recorded in Lahaul & Spiti (0.743), followed by Hamirpur (0.701), Mandi (0.674), Bilaspur (0.660) and Kangra (0.618). Six districts viz. Chamba, Kinnaur, Kullu, Mandi, Shimla and Sirmaur have a Health Index lower than the State index. The Lowest Health Index has been for district Kinnaur (0.299).

Concluding Remarks

Commendable advances have been made by the State of Himachal Pradesh in the area of health. The significant decline in the incidence of communicable diseases such as malaria, tuberculosis and leprosy in the State stands testimony to these claims. The high commitment of the State Government to provide quality health care to the population living even in the remote areas of the State, is reflected in a relatively higher percentage of the State budget being allocated to the health sector.⁵

5. Address by Shri Prem Kumar Dhumal, Chief Minister of Himachal Pradesh delivered on the occasion of the first meeting of the National Population Commission on 2 July 2000.

Nevertheless, certain areas still continue to be plagued with persistent problems, necessitating strong and well directed interventions. The areas of concern have been: the declining sex ratio, especially in the age group of 0–6 years; high maternal and infant mortality rates; and a high incidence of anaemia among women and children. Another area of concern which needs urgent redressing is the low incidence of institutional deliveries and the persistence of various taboos associated with child birth. Immediate steps are required to investigate into the causes of, and the preventive measures to be taken for containing excessively high vitamin A deficiency, blindness and bronchial problems in the State.

The support being given by the State Government to the promotion of ayurvedic and Indian system of medicines, especially the attempt

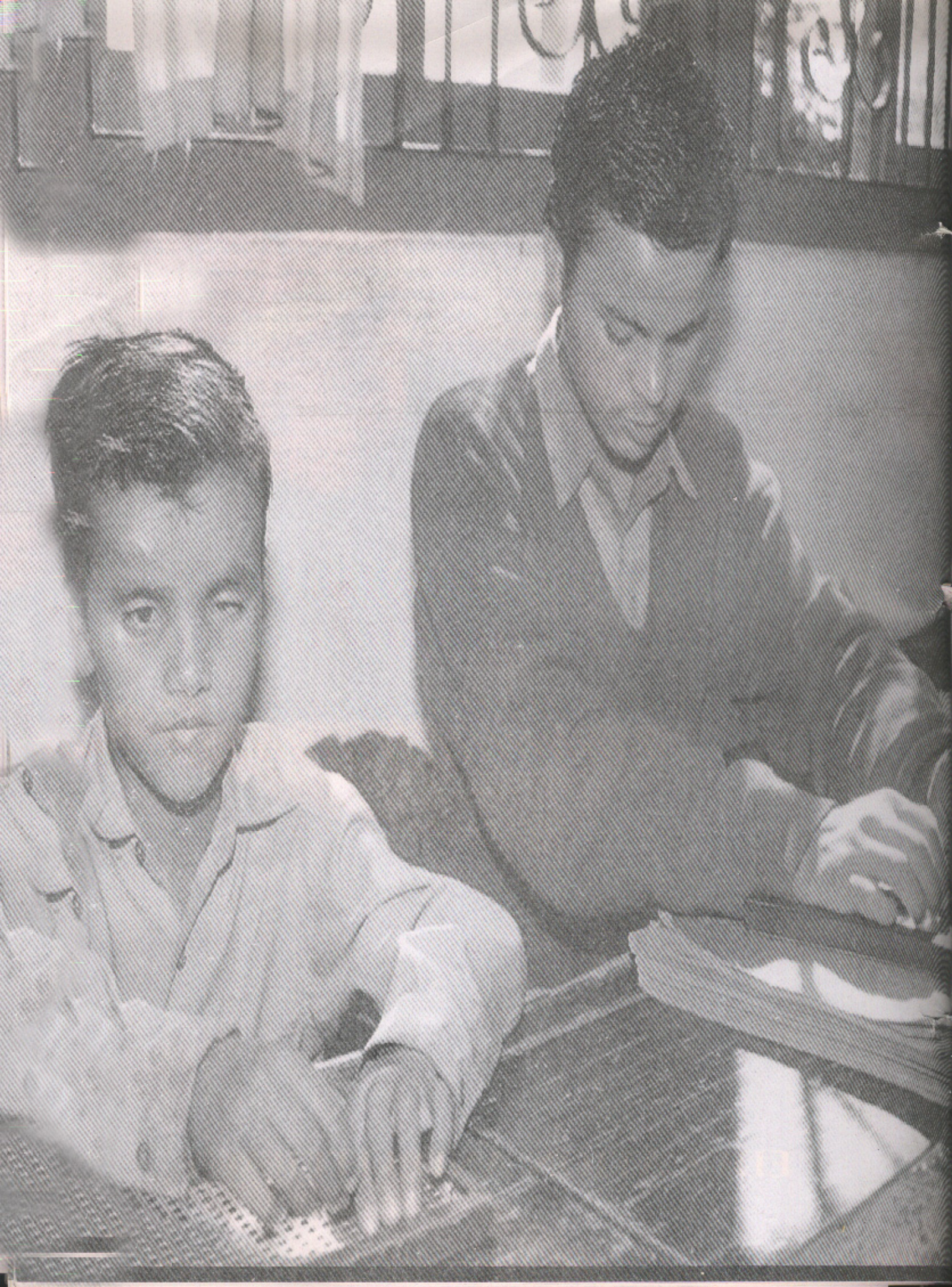
to tie it up with the public health delivery systems is laudable. This step will surely improve public health delivery, both quantitatively and qualitatively. However, these efforts are required to be supplemented with adequate investment in transport and other infrastructural facilities. Provision of specialist medical services, especially in rural areas is an area where a lot remains to be done.

It has been noted above that the participation of the NGOs and the private sector is conspicuously low in the health sector. Keeping in view the financial constraints that the State Government is already facing, the involvement of private players and NGOs — especially those with their own programmes, is required to provide health services to the masses of the State.

CHAPTER 6



EDUCATION AND LITERACY



Education and Literacy

The capability to deliver productive inputs to society can best be developed by instilling knowledge, skills and literacy through education. The actualisation of one's abilities helps individuals not only in attaining gainful employment which helps to ensure a sustainable means of livelihood, but also provides a continuous flow of services to society at large. The resulting reduction of deprivation, assists considerably in empowerment and the process of human development.

This chapter will examine the effectiveness of the delivery mechanism of education in Himachal Pradesh, the access to educational facilities, its role in making its people literate, and in bringing about equity over the years.

Literacy Levels

Figures taken from the Provisional Population Totals, Series 3, Paper 1 of 2001, Directorate of Census Operations, Himachal Pradesh may not be strictly comparable with the earlier Census data, yet they give a fair idea about the progress made on the literacy front.

Overall literacy grew by 34.65 percentage points between 1981 and 2001 whereas, the increase between 1981 to 1991 and 1991 to 2001 has been 21.38 percentage points and 13.27 per-

centage points, respectively. The incremental growth in literacy has tended to slow down in the decade of nineties and is understandable because growth is bound to slow down as the base gets larger and literacy percentage tends to move towards universalisation. The highest increase in literacy during the period between 1981 and 1991 has been recorded in the district of Lahaul & Spiti (25.47 percentage points) whereas, the lowest growth in literacy has been

Box 6.1 — Some Highlights of the Literacy Campaign in Himachal Pradesh

Although Himachal has done remarkably well in achieving relatively higher literacy rates over the last two decades, the results are still average. Relatively faster attainment of literacy amongst females is encouraging but low literacy in rural areas and also among Scheduled Castes and Scheduled Tribes is a matter of serious concern.

The overall literacy rate was reported as 63.86 per cent in the 1991 Census Report, which is a reasonably a good performance considering the fact that literacy rate was below five per cent in 1948 when the State had barely come into existence. Provisional population figures for the 2001 Census have put this figure at 77.13 per cent (excluding district Kinnaur where enumeration could not be done because of a natural calamity).

recorded in Chamba district (18.25 percentage points) during the same period. During the period between 1991 and 2001 Lahaul & Spiti retains top position in terms of growth of overall literacy. The lowest growth in the literacy during the decade of nineties was recorded in Hamirpur which, incidentally happens to be the district with the highest literacy rate in the State. Explanation for lower growth in literacy in Hamirpur follows the general principle enunciated above. Four districts — Lahaul & Spiti, Kullu, Sirmaur and Chamba — have recorded the highest growth in literacy in descending order between 1981–2001. However, the comments on growth rates in literacy from one Census to another need to be seen and used carefully to the extent that percentage growth rates may not reflect actual numbers by which the literates have increased over the years.

Increase in literacy has been higher in case of females as compared to their male counterparts. This is an encouraging trend indicating that male–female differential in terms of literacy has tended to narrow down over a period of time. Overall literacy rate has increased by 10.66 percentage points for males during 1991–2001 whereas; this increase has been by 15.95 percentage points for females during the same period. The same trend can be observed in all the districts during the period of reference. The overall increase in literacy rate has been by 13.27 percentage points between 1991 and 2001. The highest increase in literacy among females was recorded in Lahaul & Spiti (22.89 percentage points), followed by Kullu (22.71 percentage points), Sirmaur (22.48 percentage points), Chamba (21.13 percentage points), Shimla (18.93 percentage points) and Mandi (16.24 percentage points). These districts have recorded higher growth in female literacy than the State average during same period. This is obviously

on account of the fact that the base or the reference figure over which the increment is being worked out was very low. Incidentally, few districts with the highest increase in female literacy happen to be the districts where the District Primary Education Programme (DPEP) is under implementation. The encouraging trend has been that this differential in literacy among males and females has tended to narrow down over the last two decades. This has been possible due to the continuous efforts of the Government not only to spread educational facilities but also to increase and retain girl enrolment through various incentive schemes for girl students including certain freeships.¹

The highest increase in male literacy was observed in Chamba (17.26 percentage points) while the lowest increase was in Hamirpur (5.75 percentage points) against the overall increase of 10.66 percentage points in male literacy.

Although rural–urban comparison carries little meaning in a State where more than 90 per cent of the population lives in rural areas yet it points to the fact that literacy in urban areas has tended to increase at a relatively slower pace than in rural areas mainly due to larger achievement levels in the base year. This observation along with a few others help in inferring that the pockets/sections with higher literacy rates in earlier years have recorded relatively lower growth rate in literacy in the following years. The slowdown is understandable when the attainment levels are nearer to the peak (100 per cent). Relatively higher increase in literacy in the areas/sections with relatively lower literacy rates also establishes that disparity (male–female and rural–urban) in terms of literacy levels is fast diminishing.

1. Please refer to Box 4.3 and section entitled Initiatives by the State to Improve Enrolment and Retention of the Girl Child etc. in Chapter 4).

TABLE 6.1: Growth in Overall Literacy in Districts

<i>Sl. No.</i>	<i>District/State</i>	<i>1981</i>	<i>1991</i>	<i>Growth over 1981 (% points)</i>	<i>2001</i>	<i>Growth over 1991 (% points)</i>	<i>Growth over 1981 (% points)</i>
1.	Bilaspur	44.69	67.17	22.48	78.8	11.63	34.11
2.	Chamba	26.45	44.70	18.25	63.73	19.03	37.28,
3.	Hamirpur	52.70	74.88	22.18	83.16	8.28	30.46
4.	Kangra	49.12	70.57	21.45	80.68	10.11	31.56
5.	Kinnaur	36.84	58.36	21.52	n.a.	n.a.	n.a.
6.	Kullu	33.82	54.82	21.0	73.36	18.54	39.54
7.	Lahaul & Spiti	31.35	56.82	25.47	73.17	16.35	41.82
8.	Mandi	40.12	62.74	22.62	75.86	13.12	35.74
9.	Shimla	42.74	64.61	21.87	79.68	15.07	36.94
10.	Sirmaur	31.78	51.62	19.84	70.85	19.23	39.07
11.	Solan	41.07	63.30	22.23	77.16	13.86	36.09
12.	Una	50.05	70.57	20.52	81.09	10.52	31.04
13.	Himachal Pradesh	42.48	63.86	21.38	77.13	13.27	34.65

Source: Compiled from various Census Reports.

The rural–urban literacy differential exists in all the districts, though the extent varies from district to district. With over 91 per cent population living in rural areas and most of the urban areas being over-grown villages, the rural–urban comparisons are not material and may be taken as such. The rural–urban literacy differential for the general population for the year 1991 was the highest for the districts of Chamba and Sirmaur and the lowest was in Una. The rural–urban literacy differential for the year 2001 has not changed much, although the attainment levels have certainly risen from the levels of 1991. Tables 6.2 and 6.3 give an idea about the rural–urban literacy differential in all the twelve districts of Himachal Pradesh and also display how this differential behaved during the decade of the 1990s. It is interesting to note that the rural–urban literacy differential has been alarmingly

high in the districts of Chamba, Kullu and Sirmaur which also happen to be DPEP districts. There is a need to go into the issue of this ‘urban bias’ in DPEP districts, separately. The lowest rural–urban literacy differential was observed in Una district.

Census data for 1981 shows that the literacy among the Scheduled Castes and Scheduled Tribes of all the districts of Himachal Pradesh was quite low. The lowest literacy among Scheduled Castes and Scheduled Tribes in 1981 was recorded in Chamba district at 20.16 per cent and 18.22 per cent, respectively. (The overall literacy rates in Chamba district were also the lowest in that year). Table 6.4 exhibits the attainment levels of Scheduled Castes and Scheduled Tribes of various districts of Himachal Pradesh for both 1981 and 1991. The table

TABLE 6.2: Literacy in Rural and Urban Areas by Sex in the Districts of Himachal Pradesh

Sl. No.	District/State	1991								
		Persons			Males			Females		
		Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1.	Bilaspur	67.17	66.08	84.65	77.97	77.10	90.68	56.55	55.39	77.39
2.	Chamba	44.70	41.39	83.13	59.96	57.44	88.50	28.57	24.48	77.20
3.	Hamirpur	74.88	74.09	86.57	85.11	84.59	91.81	65.90	65.05	80.50
4.	Kangra	70.57	70.04	80.39	80.12	79.85	84.85	61.39	60.67	75.65
5.	Kinnaur	58.36	58.36	–	72.04	72.04	–	42.04	72.04	–
6.	Kullu	54.82	52.37	85.62	69.64	67.82	90.63	38.53	35.62	79.04
7.	Lahaul & Spiti	56.82	56.82	–	71.78	71.18	–	38.05	38.05	–
8.	Mandi	62.74	60.80	86.42	76.65	75.31	91.56	49.12	46.79	80.43
9.	Shimla	64.61	58.61	86.96	75.96	71.54	90.46	51.75	44.83	81.98
10.	Sirmaur	51.62	48.27	80.04	63.20	60.55	85.67	38.45	34.32	73.62
11.	Solan	63.30	60.18	84.86	74.67	72.53	88.52	50.69	46.70	80.29
12.	Una	70.91	70.26	77.81	81.15	80.70	85.79	61.01	60.26	69.39
13.	Himachal Pradesh	63.86	61.86	81.17	75.36	73.89	88.97	52.13	49.79	78.32

continuation of Table 6.2

Sl. No.	District/State	2001								
		Persons			Males			Females		
		Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1.	Bilaspur	78.80	77.97	90.66	87.13	86.88	93.11	70.53	69.42	87.84
2.	Chamba	63.73	61.50	89.84	77.22	75.73	93.74	49.70	46.81	85.37
3.	Hamirpur	83.16	82.62	89.97	90.86	90.70	92.66	76.41	75.68	86.86
4.	Kangra	80.68	80.31	87.11	88.19	88.05	90.46	72.57	73.04	83.45
5.	Kinnaur	n.a.*	n.a.*	n.a.*	n.a.*	n.a.*	n.a.*	n.a.*	n.a.*	n.a.*
6.	Kullu	73.36	72.02	88.31	84.55	83.81	92.05	61.24	59.43	83.49
7.	Lahaul & Spiti	73.17	73.17	–	82.76	82.76	–	60.94	60.94	–
8.	Mandi	75.86	74.71	91.08	86.67	86.06	94.26	65.36	63.80	87.55
9.	Shimla	79.68	75.76	92.34	87.72	85.46	94.25	70.68	65.50	89.77
10.	Sirmaur	70.85	68.69	88.89	79.73	78.19	92.33	60.93	58.14	84.87
11.	Solan	77.16	74.50	88.67	85.35	83.66	91.44	67.48	64.79	84.05
12.	Una	81.09	80.93	82.71	88.49	88.65	86.99	73.85	73.48	77.99
13.	Himachal Pradesh	77.13	75.71	89.59	86.02	85.20	92.49	68.08	66.30	85.91

Note: * Census data for district Kinnaur is not available.

Source: Compiled from various Census Reports.

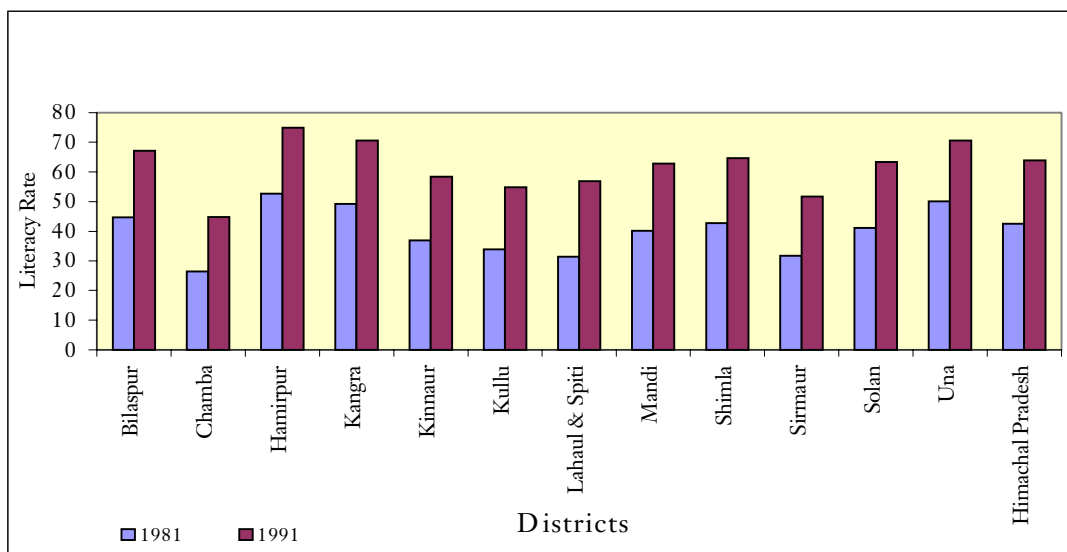
TABLE 6.3: Growth of Literacy in Rural and Urban Areas by Sex between 1991 and 2001

Sl. No.	District/State	Persons			Males			Females		
		Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1.	Bilaspur	11.63	11.89	6.21	9.16	9.78	2.43	13.98	14.03	10.45
2.	Chamba	19.03	20.11	6.71	17.26	18.29	5.24	21.13	22.33	8.17
3.	Hamirpur	8.28	8.53	3.40	5.75	6.11	0.85	10.51	10.63	6.36
4.	Kangra	10.11	10.27	6.72	8.07	8.20	5.61	11.18	12.37	7.80
5.	Kinnaur	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6.	Kullu	18.54	19.65	2.69	14.91	15.99	1.42	22.71	23.81	4.45
7.	Lahaul & Spiti	16.35	16.35	–	10.98	10.98	–	22.89	22.89	–
8.	Mandi	13.12	13.91	4.66	10.02	10.75	2.70	16.24	17.01	7.12
9.	Shimla	15.07	17.15	5.38	11.76	13.92	3.79	18.93	20.67	7.79
10.	Sirmaur	19.23	20.42	8.85	16.53	17.64	6.66	22.48	23.82	11.25
11.	Solan	13.86	14.32	3.81	10.68	11.13	2.92	16.79	18.09	3.76
12.	Una	10.52	10.67	4.90	7.34	7.95	1.20	12.84	13.22	8.60
13.	Himachal Pradesh	13.27	13.85	8.42	10.66	11.31	3.52	15.95	16.51	7.59

Source: Compiled from the data given in various Census Reports.

CHART 6.1

Literacy in Himachal Pradesh



reveals that literacy among the Scheduled Castes and Scheduled Tribes recorded an impressive increase during the decade of the 1980s in all the districts. The highest increase among Scheduled Castes was recorded in Mandi district by 23.39 percentage points, while, the highest growth in literacy among Scheduled Tribes was recorded in Una district by 37.94 percentage points, followed by Hamirpur (27.77 percentage points). The gap between literacy among general population and that of Scheduled Castes and Scheduled Tribes also tended to narrow down during same period. In spite of an impressive increase in literacy among Scheduled Castes and Scheduled Tribes, the situation remains grim as far as the attainment levels of the Scheduled Castes and Scheduled Tribes are concerned. Literacy levels amongst Scheduled Castes in all the districts of Himachal Pradesh

are below literacy rate for the State as a whole. Hamirpur and Una are the only districts with high literacy rates among Scheduled Tribes.

Universalisation of Elementary Education

The Universalisation of Elementary Education is enshrined in the Constitution of India under the Directive Principles of State Policy and is also a globally accepted objective. Access to elementary education has been accepted as the right of every child. The drive for the universalisation of Elementary Education aims at:

- i. Reducing difference in enrolment, drop outs and learning achievements, among genders and other social groups to less than five per cent.

TABLE 6.4: Literacy among Scheduled Castes and Scheduled Tribes

Sl. No.	District/State	1981			1991		
		SC	ST	SC	Growth over 1981 (%)	ST	Growth Over 1981 (%)
1.	Bilaspur	36.02	27.20	59.10	23.08	48.40	21.20
2.	Chamba	20.16	18.22	36.88	16.72	36.74	18.52
3.	Hamirpur	45.47	68.42	68.51	23.04	96.19	27.77
4.	Kangra	37.95	54.22	60.53	22.58	78.88	24.66
5.	Kinnaur	26.98	33.72	45.67	18.69	59.03	25.31
6.	Kullu	21.11	49.09	42.39	21.28	68.21	19.12
7.	Lahaul & Spiti	49.52	32.08	54.91	5.39	55.30	23.22
8.	Mandi	28.44	28.88	51.83	23.39	58.53	29.65
9.	Shimla	27.51	35.65	50.11	22.60	61.22	25.57
10.	Sirmaur	21.93	19.34	40.69	18.76	33.45	14.11
11.	Solan	31.22	33.86	53.22	22.00	57.63	23.77
12.	Una	42.75	52.63	62.99	20.24	90.57	37.94
13.	Himachal Pradesh	31.50	25.93	53.20	21.70	47.09	21.16

Source: Compiled from various Census Reports. SC/ST data from Census, 2001 not available.

- ii. Reducing overall Primary drop out rates for all students to less than 10 per cent.
- iii. Raising average achievement levels by at least 20 per cent over the measured base-line levels and ensuring achievement of the basic literacy and numeracy and a minimum 40 per cent achievement levels in other competencies by all Primary level children.
- iv. Providing access to all children to Primary schooling or an equivalent formal education.

The provision of Primary schools within a walking distance for all children is one of the steps for achieving the above mentioned objectives in the universalisation of elementary education. The policy of the Government of Himachal Pradesh has been to associate parents in imparting education to their children. Steps have also been taken to ensure that children participate actively and regularly to the end of the Primary Education stage. The Constitutional provisions for achieving universal elementary education, have been viewed as a motivation towards the creation of a more equitable society where high levels of human development prevail.

Enrolments and Increasing Participation of Girls

Primary Level

Enrolment in Primary schools rose from 7,62,556 in 1981–82 to 10,66,754 in 1997–98 — which was an increase of almost 40 per cent. Enrolments in the Primary schools have tended to vary across the districts, and the number of girls enrolled at the Primary level in comparison to the number of boys enrolled, also has vari-

ations across the districts. Sirmaur district registered the maximum average annual growth rate in enrolment at the Primary level during the period 1981–82 to 1997–98. Sirmaur was followed by Chamba and Mandi. The maximum average annual growth rate in enrolment at the Primary level among the non-DPEP districts was registered in Kinnaur. Surprisingly, Hamirpur district registered a negative growth rate in Primary level enrolment during the same period. A possible reason for this negative growth in Hamirpur may have been the change in the population structure in the Primary school going age-group. However, the latest Census figures on the Primary school-going population for 2001 are yet to be released by the Directorate of Census, Himachal Pradesh.

At 29.18 per cent, the lowest enrolment of girls at the Primary level was in Chamba district for the year 1981–82. The introduction of the DPEP in the district improved girl enrolment impressively and the percentage of girls enrolled at the Primary level rose to 44.82 per cent in 1997–98. In general, all the DPEP districts have shown an improvement not only in overall enrolment but also in girls enrolment. Although, the overall enrolment in Hamirpur has registered a negative growth rate, the enrolment of girls is higher than that of boys enrolled in the year 1997–98 in the district. Kinnaur and Lahaul & Spiti are two other districts where girl enrolment is more than boy enrolment for the year 1997–98. Comparison of districts in terms of male, female and total enrolment for the years 1981–82 and 1997–98 is exhibited in Table 6.5 below.

Secondary Level

Between 1981–82 and 1997–98, the growth in the enrolment at the Secondary level of education

TABLE 6.5: Enrolment (Boys, Girls and Total) in the Districts of Himachal Pradesh (Classes I to VIII)

Sl. No.	District/State	1981-82			1997-98		
		Boys	Girls	Total	Boys	Girls	Total
1.	Bilaspur	29,857 (58.57)*	21,118 (41.43)	50,975	32,051 (51.37)	30,340 (48.63)	62,391
2.	Chamba	24,903 (70.82)	10,258 (29.18)	35,161	46,967 (55.18)	38,156 (44.82)	85,123
3.	Hamirpur	40,858 (53.66)	35,281 (46.44)	76,239	33,801 (49.83)	34,029 (50.17)	67,830
4.	Kangra	1,14,455 (56.51)	88,088 (43.49)	2,02,543	1,12,208 (50.41)	1,10,403 (49.59)	2,22,611
5.	Kinnaur	5010 (61.70)	3110 (38.30)	8120	7379 (49.78)	7460 (50.22)	14,839
6.	Kullu	2,1349 (66.04)	10,978 (33.96)	32,327	35,180 (51.29)	33,406 (48.71)	68,586
7.	Lahaul & Spiti	2263 (64.16)	1264 (35.84)	3527	2460 (49.06)	2554 (50.94)	5014
8.	Mandi	73,111 (60.93)	46,879 (39.07)	1,19,990	81,100 (51.69)	75,788 (48.31)	1,56,888
9.	Shimla	44,751 (59.86)	30,010 (40.14)	74,761	61,836 (51.51)	58,199 (48.49)	1,20,035
10.	Sirmaur	24,376 (65.08)	13,079 (34.92)	37,455	59,494 (54.62)	49,437 (45.38)	1,08,931
11.	Solan	31,506 (60.65)	20,441 (39.35)	51,947	41,083 (52.01)	37,917 (47.99)	79,000
12.	Una	39,336 (56.51)	30,275 (43.49)	69,611	38,959 (51.60)	36,547 (48.40)	75,506
13.	Himachal Pradesh	4,51,775 (59.24)	31,0781 (40.76)	7,62,556	5,52,518 (51.79)	5,14,236 (48.21)	1,06,6754

* Figures in parenthesis represent percentage of boys and girls in the total enrolment.

Source: Enrolment figures for various years supplied by the Department of Primary Education, Government of Himachal Pradesh.

was impressive in all the districts of Himachal Pradesh. The overall enrolment at this level increased by three times during the period under reference. The performance of Sirmaur district has been outstanding and recorded an increase of more than eight times in the enrolment of students at the Secondary level. Sirmaur was followed by the districts of Kullu, Kinnaur, Shimla

and Chamba — all of which have registered an increase of more than four times in their enrolment. This pleasantly amazing increase in enrolment at secondary level can be attributed to: (i) increased number of primary pass outs and (ii) spread of schooling facilities. Comparatively, enrolment at the Secondary level of education in Una district, 'just doubled' over a period of two

TABLE 6.6: Enrolment (Boys, Girls and Total) in the Districts of Himachal Pradesh (Classes IX to XII)

Sl. No.	District/State	1981–82			1997–98		
		Boys	Girls	Total	Boys	Girls	Total
1.	Bilaspur	3846 (77.68)	1105 (22.32)	4951	9113 (56.05)	7145 (43.95)	16,258
2.	Chamba	2072 (73.18)	759 (26.82)	2831	8939 (62.11)	5453 (37.89)	14,392
3.	Hamirpur	6450 (75.30)	2116 (24.70)	8566	14,580 (52.35)	13,003 (47.65)	27,583
4.	Kangra	13,233 (71.05)	5392 (22.95)	18625	39,042 (53.39)	32,736 (45.61)	71,778
5.	Kinnaur	464 (77.08)	138 (22.920)	602	1605 (51.71)	1499 (48.29)	3104
6.	Kullu	1878 (74.88)	630 (25.12)	2508	7772 (59.96)	5189 (30.04)	12,961
7.	Lahaul & Spiti	325 (74.54)	111 (25.46)	436	727 (51.20)	693 (48.80)	1420
8.	Mandi	8447 (74.38)	2923 (25.71)	11,370	24,796 (56.78)	18,873 (43.22)	43,669
9.	Shimla	4939 (70.92)	2025 (29.08)	6964	19,832 (55.77)	15,729 (44.23)	35,561
10.	Sirmaur	1839 (71.61)	729 (28.39)	2568	14,087 (57.43)	10,441 (42.57)	24,528
11.	Solan	3059 (69.73)	1328 (30.270)	4387	11,191 (53.30)	8338 (46.70)	19,529
12.	Una	4503 (67.64)	2154 (32.36)	6657	11,055 (54.84)	9105 (45.16)	20,160
13.	Himachal Pradesh	51,055 (72.45)	19,510 (27.55)	70,465	1,62,739 (55.94)	1,28,204 (44.06)	2,90,935

* Figures in parenthesis represent percentage of boys and girls in the total enrolment.

Source: Enrolment figures for various years supplied by the Department of Primary Education, Government of Himachal Pradesh.

decades — this also happens to be the lowest growth in this respect. Table 6.6 shows data pertaining to the enrolment at the Secondary level of education during the years 1981–82 and 1997–98. It is also revealed from the table that the proportion of females in the total enrolment was

less than one-third of the total enrolment during 1981–82. The gap between male and female enrolment at the Secondary level of education tended to narrow down over this decade or so, but, female participation in Secondary education is still below par.

Enrolment of Scheduled Caste and Scheduled Tribe Students

Primary Level

The district-wise position of enrolment of Scheduled Castes and Scheduled Tribes students at the Primary level of education is given in the tables SA-Education-1 and 2. The lowest enrolment of Scheduled Caste students was in Lahaul & Spiti in 1981–82 and the gender disparity in Scheduled Caste enrolment was also the greatest in Lahaul & Spiti for the same year. The lowest male–female disparity in Primary enrolment among Scheduled Caste students was in Kangra district in 1981–82. The comparison between the total Scheduled Castes enrolment in 1981–82 and 1997–98 shows that highest growth in Scheduled Castes enrolment was observed in Lahaul & Spiti and lowest in Hamirpur district. The encouraging inference drawn from the figures of 1997–98, is that gender disparity in the Scheduled Caste enrolment has reduced considerably from 1981–82. As a matter of fact, Lahaul & Spiti has more females enrolled than males among the Scheduled Caste students at the Primary level of education. Between 1981–82 and 1997–98, the enrolment of Scheduled Tribe students at the Primary level registered an overall growth of 97.71 per cent for the State as a whole. The highest growth in Scheduled Tribe enrolment was registered in Kangra district followed by the districts of Shimla, Chamba, Sirmaur and Mandi. The proportion of Scheduled Tribe girl students was above par in Kinnaur, Kullu, Lahaul & Spiti and Una in 1997–98. The declining gender disparity in Primary enrolment among Scheduled Castes and Scheduled Tribes is certainly a positive step towards achieving a more equitable society.

Secondary Level

SA-Education-3 and 4 contain figures pertaining to the enrolment of Scheduled Caste and Scheduled Tribe at the Secondary level of education. For the State as a whole, the enrolment of Scheduled Caste students at this level quadrupled between 1981–82 and 1997–98. The maximum increase in Scheduled Caste enrolment was observed in the Kullu district, where it increased by more than seven times. During this period, the increase in Scheduled Caste enrolment varied from two to six times in all the districts. Female enrolment of Scheduled Caste students at the Secondary level of education was less than one-fifth of the total Scheduled Caste enrolment in all the districts of Himachal Pradesh — except in Lahaul & Spiti for the year 1981–82. In fact, Lahaul & Spiti was the only district where the number of female Scheduled Caste students was more than that of male ones in 1981–82. Enrolment figures of 1997–98 show that gender parity has improved from the 1981–82 level, and the number of female Scheduled Caste students has been around two-fifths of the total Scheduled Caste enrolment in all the districts of Himachal Pradesh. The increase in enrolment of Scheduled Tribe students at the Secondary level of education between 1981–82 and 1997–98, has been between two to twenty times in different districts of the State. The greatest increase was recorded in Kangra where the Scheduled Tribe enrolment increased by twenty-one times over the period under reference. The probable reason for this increase in enrolment can be the migration of students from the neighbouring tribal belt of the Bharmaur Sub-division of Chamba district — after finishing their primary education at home. The relatively small population of Scheduled Tribes in Kangra (0.14 per cent of the total as per the 1991 census) rules out the possibility of inferring

that the increase may be attributed to the local population in this segment. The gender parity in the Scheduled Tribe enrolment at the Secondary level of education was disturbingly in favour of males except in Hamirpur and Una districts in the year 1981–82. It has improved for all the districts in 1997–98 — except in Hamirpur, where it has actually deteriorated.

Growth in the Number of Schools

The number of schools grew considerably during the decades of the 1990s and the 1980s. The total number of Primary schools rose from 6126 in 1980–81 to 10,484 in 1997–98, the Middle and High/Senior Secondary schools increased from 1032 to 1214 and from 582 to 1404, respectively, during the same period. SA-Education-5 shows district-wise position of number of primary, middle and high/senior secondary schools in the State.

Primary education is of paramount importance as it provides a window to the world of higher education and subsequently, to better opportunities. The Government of India, through the Planning Commission has specified distance norms to ensure adequate physical access to Primary education facilities. This norm, at present, for hill States stands at one Primary School within a distance of 1.5 kilometres from a habitation, and one Secondary school within a distance of 3 kilometres. At the best of times, the difficult terrain hinders mobility and given the meandering paths, a radius of 1.5 kilometres may mean much more in actual distance. This is all the more so for little children who have either to walk the distance, or take a bus or a taxi to reach school. Reaching school becomes more tiring for children when the roads in the rural areas are not *pucca* ones and in the higher

hills, most are not all-weather roads. Also, a district with a relatively large area and thinly dispersed population may have adequate number of schools per village which, does not get reflected in the information pertaining to the average walking distance (radial) from a school. Hence it is important to analyse the issue of availability of schooling facilities in terms of number of schools per inhabited village along with average walking distance. Tables 6.7 and 6.8 capture district-wise requirement and availability of primary schools in both the contexts mentioned above. These two tables give additional information on the average number of villages served per primary school and population served per primary school against the norm of a population of 200 per primary school prescribed by the Government of India.

Table 6.7 shows that average radial distance from a primary school was 1.49 kilometres in 1992–93 and 1.29 kilometres in 2001–02 which is less than the prescribed norm. But this does not reflect the true picture as actual distance covered can be much more than the radial distance in hilly terrain. Inter-district variations in terms of average radial distance from primary and secondary schools are summed up in Table 6.7. Lahaul & Spiti and Kinnaur districts have maximum average radial distance from both primary and secondary schools in the State. A clearer picture of the availability of primary schools in the State can be had if number of schools available per village or the number of villages served per school is also considered in conjunction with the average radial distance from a school. Going as per norms prescribed by the Government of India of having one primary school for every 200 people at a walking distance of 1.5 kilometres, Himachal Pradesh, based on the population figures for the year 2001, requires 1.8 primary schools per village.

It has only 0.6 primary schools per village available against the prescribed norm. District-wise availability of primary schools against the normative requirement is given in Table 6.8. It can be seen from the table that Lahaul & Spiti is the only district which has more primary schools per village than the normative requirement. In contrast, the average radial distance of 4.59 kilometres from a primary school in Lahaul & Spiti makes one infer otherwise. All other districts have less number of primary schools per village than the prescribed norm.

When examined against the norm of one primary school for every 200 population, again,

Lahaul & Spiti is the only district which stands above all other districts and also above the normative requirement. In fact, all other districts lag much behind the norm of having one primary school per 200 of population. The point which needs to be stressed here is that the norm of one primary school within a walking distance of 1.5 kilometres and one middle school within a walking distance of 3 kilometres set by the Government of India for hill States does not hold good in the face of peculiar topographical features of hill States. These norms need revision and a composite index covering geographical and demographic variables is required to be constructed. Information contained in Tables 6.7

TABLE 6.7: District-wise Availability of Schooling Facilities

District/State (1)	Average radial distance per Primary School (km) (2)		Average radial distance per Middle School (km) (3)		Average number of villages served per Primary School (4)		Average number of villages served per Middle School (5)	
	1992-93	2001-02	1992-93	2001-02	1992-93	2001-02	1992-93	2001-02
1. Bilaspur	0.98	0.79	1.87	1.48	2.55	1.61	8.64	5.59
2. Chamba	1.60	1.39	3.52	2.69	1.48	1.06	6.85	3.97
3. Hamirpur	0.98	0.84	1.69	1.28	4.11	3.20	12.63	7.38
4. Kangra	1.13	1.01	2.11	1.73	2.60	2.02	8.94	5.91
5. Kinnaur	3.52	3.28	6.33	5.39	1.40	1.21	4.47	3.25
6. Kullu	2.03	1.59	4.30	3.30	0.41	0.25	1.81	1.07
7. Lahaul & Spiti	4.92	4.59	10.36	8.87	1.49	1.30	6.63	4.86
8. Mandi	0.98	0.86	2.11	1.63	2.40	1.64	10.28	5.95
9. Shimla	1.26	1.01	2.33	1.85	2.14	1.43	7.48	4.82
10. Sirmaur	1.13	0.97	2.39	1.96	1.53	1.00	6.03	4.12
11. Solan	0.98	0.90	2.03	1.66	4.22	3.11	15.86	10.53
12. Una	1.13	0.97	1.95	1.57	1.33	1.06	4.21	2.77
13. Himachal Pradesh	1.49	1.29	2.98	2.36	2.25	1.60	8.42	5.33

Source: Figures for 1992-93 in columns (2) and (3) are taken from the table 3.13 of A Hand-Book of Educational and Allied Statistics, Directorate of Education, Himachal Pradesh, Shimla, 1993.

Figures for 2001-2002 in columns (2) and (3) and those in columns (4) and (5) have been compiled by the Department of Planning, based on information supplied by the Department of Education, Government of Himachal Pradesh.

and 6.8 may not be able to give an accurate picture of adequacy of schooling facilities because of methodological limitations, yet the inferences drawn from two tables are strong enough to indicate that the availability of schooling facilities in Himachal Pradesh has considerably improved over time.

The growth of private educational institutions has partially met the gap in somewhat limited facilities provided by the State. The greatest growth of privately run educational institutions is in the districts of Mandi and Kangra. There, however remains the question of their affordability and quality.

TABLE 6.8: District-wise Requirement and Availability of Primary Schools according to the Population Norm

<i>District</i>	<i>Total population in 2001</i>	<i>Approximate number of inhabited villages</i>	<i>Schools required per 200 people</i>	<i>Average school requirement per village</i>	<i>Average school availability per village (2001-02)</i>	<i>Population served per school (1992-93)</i>	<i>Population served per school (2001-02)</i>
1. Bilaspur	3,40,735	950	1704	1.8	1.6	792	578
2. Chamba	4,60,499	1144	2302	2.0	0.9	509	426
3. Hamirpur	4,12,009	1617	2060	1.3	0.3	939	814
4. Kangra	13,38,536	3620	6693	1.9	0.5	845	747
5. Kinnaur	83,590	228	420	1.8	0.8	437	444
6. Kullu	3,79,865	172	1899	11.0	4.0	724	564
7. Lahaul & Spiti	33,224	272	166	0.6	0.8	172	159
8. Mandi	9,00,987	2818	4505	1.6	0.6	662	524
9. Shimla	7,21,745	2311	3609	1.6	0.7	571	447
10. Sirmaur	4,56,351	965	2292	2.4	1.0	601	569
11. Solan	4,99,380	2348	2497	1.1	0.3	688	661
12. Una	4,47,967	552	2240	4.0	0.9	911	860
13. Himachal Pradesh	60,77,248	16,997	30,386	1.8	0.6	685	572

Source: Table compiled by the Department of Planning from the Census data (2001) and data supplied by the Department of Education, Government of Himachal Pradesh.

TABLE 6.9: District-wise Distribution of Private Educational Facilities

<i>State/District</i>	<i>Secondary schools</i>	<i>High schools</i>	<i>Middle schools</i>	<i>Special/Minority institutions</i>
Chamba	1	1	–	14
Kangra	35	39	26	16
Hamirpur	9	12	12	4
Una	3	7	4	4
Bilaspur	4	12	5	3
Mandi	38	19	16	10
Kullu	1	–	2	5
Lahaul & Spiti	–	–	–	–
Shimla	6	17	14	25
Solan	4	14	2	11
Sirmaur	1	9	2	11
Kinnaur	–	–	–	5
Himachal Pradesh	102	130	83	108

Source: Directorate of Education, Department of Secondary Education, Shimla, Himachal Pradesh.

Teaching Resources

A school requires premises, a minimum of number of teachers and reading and teaching material. In turn, these lead to access, enrolment and retention. Despite limited resources, efforts have been made to make the best out of the existing situation. Over the years, as the number of schools gradually increased, it became difficult to provide trained, regular teachers. At times untrained teachers were recruited and in-service training was imparted. Massive rationalisation exercises were carried out from time to time to provide at least a minimum teaching staff of two teachers in every Primary school. The district-wise position of teachers by sex has been exhibited in Table 6.10. The total number of teachers at the Primary level (i.e. from Classes I to VIII) was 19,786 in 1981–82 which increased to 32,490 in the year 1997–98. 28.77 per cent of the total teachers were females in

1981–82 and their proportion to the total number of teachers increased to 38.58 per cent in 1997–98. The growth in the number of teachers between 1981–82 to 1997–98, has been recorded at 64.21 per cent for the State.

The maximum growth in the number of teachers at the Primary level was recorded in Bilaspur district between 1981–82 and 1997–98. The proportion of female teachers to the total number, was the least in Bilaspur and Kinnaur — and the maximum proportion was in Kangra for the year 1981–82. The proportion of female teachers to total teachers in Primary educational institutions showed an improvement between 1981–82 and 1997–98 — and this proportion was the maximum in the Una district in the year 1997–98. The total number of school teachers and the proportion of male and female teachers at the Secondary level educational institutions (Classes IX to XII) are shown in Table 6.11.

Box 6.2 — Teacher's Training in Himachal Pradesh

No education policy can succeed without the active and committed involvement of its functionaries, especially those in the field — the teachers. The National Policy (1986) emphasises the paramount role of the teacher in the formulation and implementation of educational programmes.

Soon after the formation of Himachal Pradesh, a 'pre-service training programme' for Primary Teachers was started and the centres were at Nahan (Distt. Sirmaur), Mandi and Chamba. Later centres at Auhar, Dharamsala and Solan also became functional. Training colleges at Dharamshala and Solan provided pre-service training to Secondary teachers as well as in-service training to almost all categories of teachers.

Initially, these programmes were not conducted regularly and were held only when a need was perceived. This led to a wastage of infrastructure and a lack of continuity in training; a detailed exercise was carried out in 1984–85 and the requirements of Primary and Secondary teachers for the next following five years were assessed. Taking into consideration retirements and the opening or upgradation of schools, this requirement came to 4500 Primary teachers and about 750 for Secondary teachers. The Government, then decided to provide pre-service training to 900 Primary teachers and 150 Secondary teachers, mostly in the subject of science, every year, for a period of five years. Since then, the pre-service training programme has been almost a continuous activity.

At present a written test, for pre-service training of Primary teachers is held by the Board of School Education, Dharamsala, which selects and recommends candidates, category-wise, on merit to the respective D.E.O.'s and heads of District Institutes for Education and Training (DIETs) for admission.

In the case of Secondary teachers, a similar exercise is done by the Himachal Pradesh University.

Pre-service training for Junior Basic Teachers continues to be in the hands of the Government and DIETs in various districts take care of this aspect in their respective districts. District Institutes for Education and Training was started as a Centrally Sponsored Scheme with the aim to provide pre-service training and then recruitment of the trainees as Junior Basic Teachers in Government schools. In-service training of Junior Basic Teachers has also been started by the State Government since 1997–98.

However Pre-service training for graduate teachers has been partially privatised. Earlier it was imparted at the H.P. University Shimla and at the training college, Dharamshala. But now training centres have been opened in the private sector at Sundernagar, Solan, Nalagarh and Paonta Sahib in Sirmaur District.

The total number of teachers in Secondary educational institutions was 3,623, 16,513 and 21,237 for the years 1981–82, 1993–94 and 1997–98 respectively. Gender parity in terms of the proportion of female teachers in the total

number of teachers was at the maximum in Solan and the minimum was in Kinnaur in 1981–82. In 1997–98, the same parity was the maximum in the Solan district, and the minimum was in Lahaul & Spiti.

TABLE 6.10: District-wise Number of Teachers (Primary Level)

Sl. No.	District	1981–82			1997–98		
		Male	Female	Total	Male	Female	Total
1.	Bilaspur	431 (88.50)	56 (11.50)	487	1212 (61.71)	752 (38.29)	1964
2.	Chamba	1141 (75.26)	375 (24.74)	1516	2162 (72.48)	821 (27.52)	2983
3.	Hamirpur	1225 (74.42)	421 (25.58)	1646	1146 (58.83)	802 (41.17)	1948*
4.	Kangra	2757 (63.06)	1615 (36.94)	4372	3306 (53.18)	2911 (46.82)	6217*
5.	Kinnaur	300 (88.50)	39 (11.50)	339	418 (62.11)	255 (37.89)	673
6.	Kullu	749 (75.20)	247 (24.80)	996	1175 (66.76)	585 (33.24)	1760
7.	Lahaul & Spiti	235 (81.60)	53 (18.40)	288	418 (78.87)	112 (21.13)	530
8.	Mandi	2405 (71.94)	938 (28.06)	3343	2627 (60.73)	1699 (39.27)	4326
9.	Shimla	1875 (74.76)	633 (25.24)	2508	2833 (64.74)	1543 (35.26)	4376
10.	Sirmaur	1134 (69.06)	508 (30.94)	1642	2279 (68.11)	1067 (31.89)	3346
11.	Solan	981 (70.63)	408 (29.37)	1389	1354 (57.11)	1017 (42.89)	2371
12.	Una	860 (68.25)	400 (31.75)	1260	1025 (51.35)	971 (48.65)	1996
13.	Himachal Pradesh	14,093 (71.23)	5693 (28.77)	19,786	19,955 (61.42)	12,535 (38.58)	32,490

* Decline in number of teachers because of rationalisation of teaching staff.

Source: Directorate of Primary Education, Government of Himachal Pradesh, Shimla.

The teacher–pupil ratio indicating the total number of students per teacher for Primary educational institutions is given in Table 6.12. This ratio was the worst in Bilaspur in 1981–82, and it was the best for Lahaul & Spiti in the same year. Bilaspur made an impressive improvement between 1981–82 and 1997–98 and achieved a teacher–pupil ratio of 31.77 in 1997–98 in sharp

contrast to the ratio of 104.67 in 1981–82. The lowest number of students being taken care of by single teacher was in Lahaul & Spiti, and the highest number of students being taken care of by a single teacher was in Una district in the year 1997–98.

Even though variations in the teacher–pupil

TABLE 6.11: District-wise Number of Teachers (Secondary Level)

Sl. No.	District	1981–82			1997–98		
		Male	Female	Total	Male	Female	Total
1.	Bilaspur	413 (84.63)	75 (15.37)	488	745 (76.33)	231 (23.67)	976
2.	Chamba	370 (74.90)	124 (25.10)	494	943 (68.23)	439 (31.77)	1382
3.	Hamirpur	636 (87.36)	92 (12.64)	728	1305 (74.36)	450 (25.64)	1755
4.	Kangra	1187 (73.63)	425 (26.36)	1612	3059 (61.39)	1924 (38.61)	4983
5.	Kinnaur	116 (94.31)	7 (5.69)	123	267 (79.94)	67 (20.06)	334
6.	Kullu	229 (74.11)	80 (25.89)	309	550 (63.66)	314 (36.34)	864
7.	Lahaul & Spiti	112 (94.12)	7 (5.88)	119	196 (85.22)	34 (14.78)	230
8.	Mandi	834 (75.96)	264 (24.04)	1098	2104 (66.00)	1084 (34.00)	3188
9.	Shimla	701 (72.79)	262 (27.21)	963	1865 (62.06)	1140 (37.94)	3005
10.	Sirmaur	335 (74.28)	116 (25.72)	451	1171 (75.99)	370 (24.01)	1541
11.	Solan	399 (65.30)	212 (34.70)	611	902 (52.81)	806 (47.19)	1708
12.	Una	507 (80.86)	120 (19.14)	627	854 (67.19)	417 (32.81)	1271
13.	Himachal Pradesh	5839 (76.60)	1784 (23.40)	7623	13,961 (65.74)	7276 (34.26)	21,237

Source: Directorate of Primary Education, Government of Himachal Pradesh, Shimla.

ratio in the Primary educational institutions are not much across the districts, yet they need some attention. Table 6.13 contains the teacher-pupil ratio in the Secondary level educational institutions. Inter-district variations were much higher in 1981–82 than in 1997–98 — and these variations have shown a regressive trend in recent years. Several measures have been taken

from time to time, to provide the required number of teachers in all educational institutions. In addition to the regular permanent teachers, several others have been engaged on the basis of ‘tenure’, ‘contract’, ‘stop-gap arrangement’ and ‘ad hoc’. A scheme to recruit ‘volunteer teachers’ in Primary schools — essentially for schools located in ‘tribal and hard areas’ was launched in

1985. The scheme was revised in 1991, and extended to Secondary schools as well. Later, provisions were also made to regularise services after ten or five years of satisfactory performance. It was discovered that there were insufficient teachers willing to serve in 'tribal and hard areas'. An innovative scheme called the *Vidaya Upasak Yojana* was launched in 1998 and was aimed at recruiting Primary teachers for a period of one year on a contract basis. These teachers are recruited in consultation with the concerned Panchayats. The scheme has gained popularity among the local people and the educated and qualified unemployed youth.

TABLE 6.12: District-wise
Teacher-Pupil Ratio in Primary Level

Sl. No.	District	1981-82	1997-98
1.	Bilaspur	104.67	31.77
2.	Chamba	23.19	28.54
3.	Hamirpur	46.26	34.82
4.	Kangra	46.33	35.81
5.	Kinnaur	23.95	22.05
6.	Kullu	32.46	38.97
7.	Lahaul & Spiti	12.25	9.46
8.	Mandi	35.89	36.27
9.	Shimla	29.81	27.43
10.	Sirmaur	22.81	32.56
11.	Solan	37.40	33.32
12.	Una	55.25	37.83
	Himachal Pradesh	43.61	32.83

Source: Directorate of Primary Education, Government of Himachal Pradesh, Shimla.

TABLE 6.13: District-wise
Teacher-Pupil Ratio in Secondary Level

Sl. No.	District	1981-82	1997-98
1.	Bilaspur	10.15	16.66
2.	Chamba	5.73	10.41
3.	Hamirpur	11.77	15.90
4.	Kangra	11.55	14.40
5.	Kinnaur	1.95	9.29
6.	Kullu	20.39	15.00
7.	Lahaul & Spiti	3.66	6.17
8.	Mandi	10.36	13.70
9.	Shimla	7.23	11.83
10.	Sirmaur	5.69	15.92
11.	Solan	7.18	11.43
12.	Una	10.62	15.86
	Himachal Pradesh	9.24	13.70

Source: Directorate of Primary Education, Government of Himachal Pradesh, Shimla.

Education Attainment Indices and Imbalances in the Districts

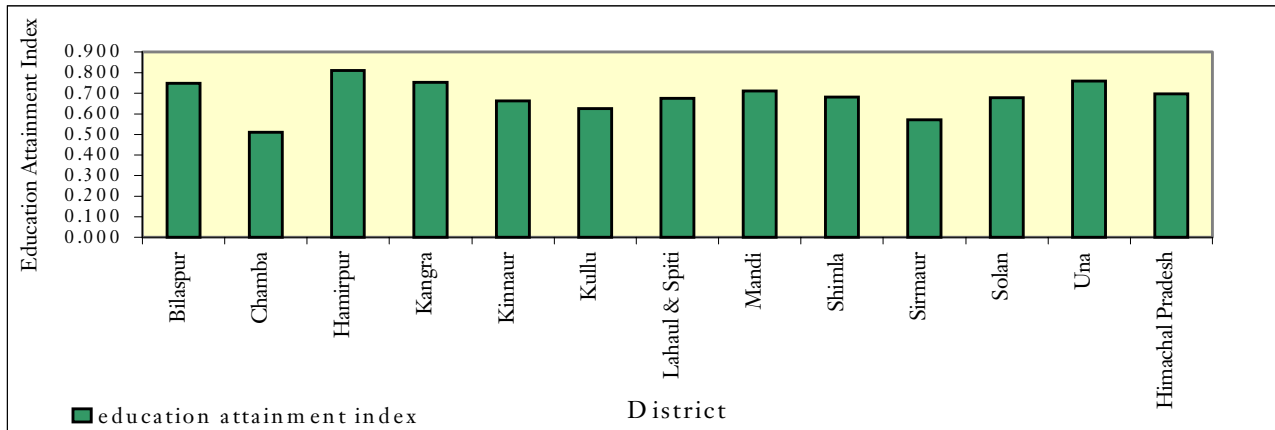
There are considerable imbalances across the districts in terms of education attainment indices. Bilaspur, Hamirpur, Kangra, Mandi and Una districts have their education attainment indices higher than the State average, while the indices for Chamba, Kinnaur, Kullu, Lahaul & Spiti, Shimla, Sirmaur and Solan districts are lower. The highest education index is for Hamirpur and the lowest of Sirmaur (Table 1.16 of Chapter 1).

Educational Policy and Programmes

A distinctive trend which contributed to a favourable situation on the educational front in

CHART 6.2

Education Attainment Indices in Himachal Pradesh



Himachal Pradesh was that the State largely followed the thrusts and programmes of educational development as enunciated in the National Policies and simultaneously devised its own projects and evaluation schemes.

The National Education Policy of 1968 stressed the need for a radical restructuring of the education system, improvement in its quality at all stages, the cultivation of moral human values, and a closer relation between education and life of the people, a common structure of education all over the country, and the introduction of the 10+2+3 system.

The National Policy of 1986, further reviewed these features and the implementation strategies devised to achieve this objective. In the case of elementary education, it emphasised universal enrolment and universal retention of children upto 14 years of age, and a substantial improvement in the quality of education. The Ramamurti Review Committee critically studied the 1986 Policy and suggested, among other things, a few important modifications in the

thrust areas. It observed that the Policy statement should also include three other areas of concern:

- i. Convergence of services.
- ii. Linkages between the school and the community.
- iii. Decentralised and participative mode of educational planning and management.²

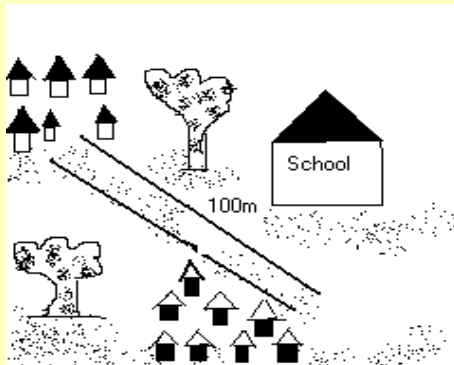
Thereafter, the N. Janardhana Reddy Committee (announced on 31 July 1991), in its Report on the review of Acharya Ramamurti Review Committee Report (NPERC), made two general observations (i) The concept of participatory education should involve the community itself, and (ii) the policy was almost all right, but its Programmes of Action (POA) required elaborate revisions, which were effected later.

Now, many maintain that the NEP (1986 and 1992) too calls for a comprehensive review

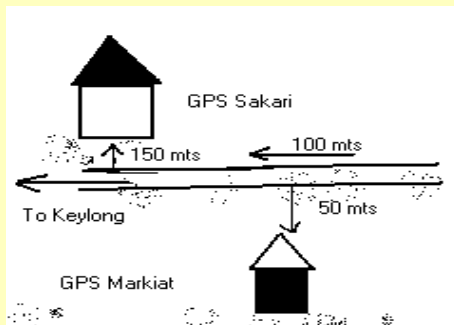
2. *Towards an Enlightened and Human Society* (1990), 6.3.2, p. 154.

Box 6.3 — Mapping of the Institutional Framework of School Education

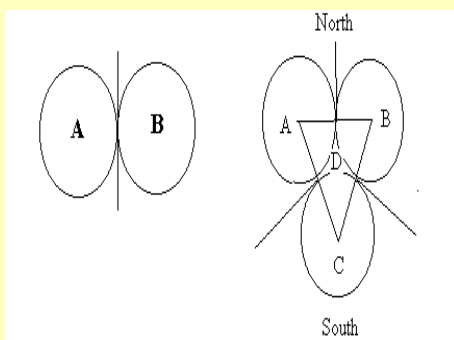
Mapping is an actual map of the area showing the various locations, number of houses and school-going children. The map should depict the existing schools in the area. This mapping simply provides an instant idea of distribution of population proposed to be served in a Panchayat area. Different situations may crop up in the mapping of the institutional framework, and are discussed below.



Distance from habitation: In ancient times education was imparted in ‘ashrams’, located away from the cities. Pupils remained away from the hustle and bustle and concentrated on acquiring knowledge. Therefore mapping should take into consideration that the school is not too close to an inhabited area.

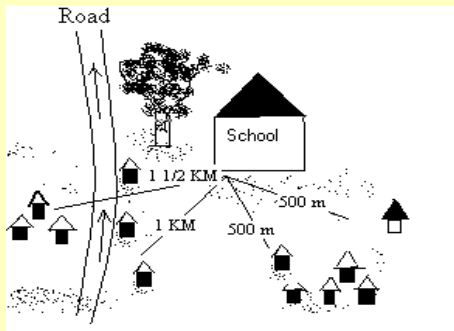


Distance from the existing school: While mapping an educational framework, it is extremely important to take into consideration the location of the school — if any already exist in the area. A field visit to Lahaul revealed that there stood a GPS at Markait. Under DPEP intervention, another one has been built at the village of Sakar — at a distance of 300 metres from the old one. Both schools share the strength of pupils. the GPS, Sakar had eight students with two teachers and the GPS, Markait had three children with three teachers.

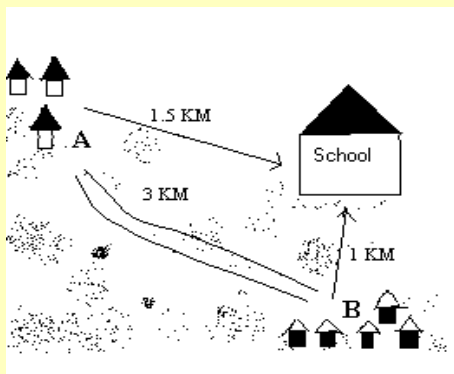


While mapping an educational framework: The existing framework must be kept in mind. Efforts should be made so that the child does not have to walk for more than 1.5 kilometres to reach school. The ‘catchment areas’ should avoid overlapping. If the distribution of population is uniformly scattered, the feeding areas of schools A and B should intersect tangentially.

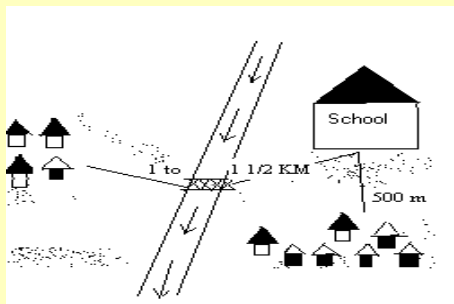
In case a third school is also needed in the area say to the south of these schools, the position may be as shown in the diagram. This is, however, subject to topography of

Box 6.3 — Mapping of the Institutional Framework of School Education (*continued*)

Distance from the main road: Traffic is a great hazard for small children, and produces sound and air pollution. In view of this the location of the school should be slightly away from the main road.



Education must assist in crossing social barriers: Habitation cluster A is inhabited by politically influential and high caste persons and hamlet B by socially backward ones. The distance between the two habitations is say 3 kilometres and the number of school going children in A is far lower than that in B. Hamlet A offers free land as well. Despite pressures and persuasions, justice demands a new school near hamlet B rather than at A.



Situations where a river intersects a habitation: In the case of a habitation being intersected by a river, and the two pockets being connected by a bridge, the larger habitation should be provided with the facility, slightly at a distance from the river. If the two pockets are not connected by a bridge, both may be provided with the educational framework at suitable places.

Institutional framework is neither a workshop nor a general store. It is a place where we deal with sensitive and tender human beings who have yet to take their first steps in life. They should be put in a peaceful, natural and friendly surrounding where they have fresh air to breath in, sun to bask in, if needed, and an open space to play and move about. It requires about 8 to 10 biswas of land for this purpose. Instead of going for horizontal expansion, vertical expansion may be preferred and encouraged.

or redrafting. The Government of Himachal Pradesh has remained largely guided by the Centre and has tried to take the maximum advantage of the existing or of new schemes by adopting or adapting them. Consequently, in several cases, it has had the best of them without the bad ones.

After 1961, the State witnessed an extensive expansion of educational facilities. Various stipulations and thrusts of the policies were incorporated in right earnest. The State, slowly but steadily shifted to the national pattern of 10+2+3, implemented several new projects, opened eight Navodya Vidyalayas, 12 District Institutes of Education and Training (DIETs), went in for the Operation Blackboard Scheme, Vocationalisation of Education, Improvement of Science Education Programme in Middle/High/Senior Secondary schools, District Primary Education Programme (DPEP), Total Literacy Campaign (TLC), and the N.L.M. Programmes, to cite some major ones. To strengthen the educational infrastructure and teaching-staff position, the State Government also initiated several well-conceptualised projects and schemes through the Directorates (Primary and Secondary) of Education, H.P. Board of School Education, and the State Council of Educational Research and Training (SCERT). In 1986, it adopted the CBSE syllabi and NCERT books for all school classes. It strove to give a boost to Primary and Secondary education in terms of both quantity and quality.

Operation Blackboard

The Centrally Sponsored Scheme — Operation Blackboard was introduced in 1986 in Himachal Pradesh. This sought to provide an additional teacher, room and books and equipment to each

primary school. Under this scheme, initially, 1951 single-teacher schools were identified for sending a second teacher; 2400 schools were marked for providing additional rooms. Equipment and books worth Rs 1000 per institution, were also provided to 6942 schools. Also, 838 additional posts of JBT Teachers were created. The scheme has been extended to the Upper Primary level since 1996. Under the scheme, as many as 3790 rooms were constructed between 1987–88 to 1995–96. It is now in the second phase of implementation in the Pradesh.

Buildings, Construction and Maintenance

The Government of Himachal Pradesh also started several schemes to strengthen the physical infrastructure and repair school buildings. Owing to the vagaries of the weather, and the difficult climatic and geographic conditions of many regions, the cost of construction is huge, the progress of work is very slow.

Initially, the building fund rates were enhanced in schools and the rules for the utilisation of the fund were made simpler and more practical. In 1990, and in 1994, elaborate regulations called 'The Government of Himachal Pradesh Educational Institutional Building Fund Utilisation Rules', were framed. However, it was found that crores of rupees of the school fund still remained unused, while many buildings continued to be in a dilapidated condition. Therefore, the regulations and provisions were further revised and simplified in 1998. One of the provisions effected was that half the amount collected is to be remitted to the Deputy Commissioner (District Collector) of the area, to be used on repairs and the extension or construction of school buildings. Ten per cent of the amount is to be shifted to the pool fund

maintained by the District Education Officer of the region. The other 40 per cent of the fund is left with the Head of the institution to be spent on urgent 'minor works' as decided by the Committee constituted for the purpose in each school. (The Committee has representatives of parents, local community, PTA/MTA, Panchayat, etc.)

The arrangement is fine as far it goes. But experience shows that it is not enough on many counts. First, in Primary schools the rate of the building fund or school development fund is very low. Secondly, hundreds of school buildings in each zone require frequent repairs and construction. Therefore, in 1992, the Government of Himachal Pradesh, came out with a new scheme to construct buildings for schools and other community purposes. The scheme was called *Apna Gam Apna Kaam*. In 1994, this was named *Vikas Main Jan Sehyog*. Under this scheme, the local community arranges money and a liberal 'matching' Government grant is made available through the Deputy Commissioner — generally, in the ratio of 25:75 for rural areas and 50:50 for urban areas. This has been a great success and a large number of school buildings have been constructed or repaired. The scheme is still in operation and is available in other departments as well.

Literacy Efforts

The State Government has adopted a strategy of a multi-pronged and sustained attack on illiteracy. It introduced the National Education Audit Programme in 1979 and the Total Literacy Campaign (TLC) on 14 June 1994. The State followed the national model of the TLC and found it largely successful. By December 1998, 4.26 lakh illiterates, out of the total

Box 6.4 — Status of Accommodation in Primary Schools as on 31 December 1998

The number of Primary schools were 10,484. Those without a room were 1964, with one room were 1713, with two rooms were 2436, three rooms were 1883, four rooms were 1253, five rooms were 847 and those with more than five rooms were 388. The total number of rooms in Primary schools were 23,869, out of which *kachha* rooms were 13,989, and *pucca rooms* were 9880.

The State Government with an aim to provide at least three rooms for a primary school, launched a scheme called *Saraswati Bal Vidya Sankalap Yojana* in April 1999. A total of 13,612 primary school rooms were proposed to be constructed in a period of three years. (Details in Box 6.5.)

Source: Department of Primary Education Himachal Pradesh.

7,20,763 in the State, were made literate. The remainder are in different phases of literacy. Seven districts have completed the post-literacy stage and have entered the continuing education phase. Himachal Pradesh has also conducted several programmes under the NLM–Rural Functional Literacy Programme, State Education Audit Programme, Mass Programme of Functional Literacy, *Jan Shiksha Nilayam*, and the *Nebhu Yuvak Kendras*.

Incentives and Freeships

Numerous incentives by way of mid-day meals, freeships, scholarships, free text-books, have been introduced to spread and qualitatively improve elementary education among all the poor and disadvantaged sections of society. The

Box 6.5 —
Saraswati Bal Vidya Sankalp Yojana (SBVSY)

The first scheme of its kind in the country, the *Saraswati Bal Vidhya Sankalp Yojna* (SBVSY) was launched on 15 April 1999. It aimed to provide a minimum of three rooms in all Primary schools in the State. The Scheme envisaged construction of 13,612 rooms for this purpose with an estimated cost of Rs 126.11 crore over a period of three years. The target had to be revised to 11,800 rooms because of problems like land availability etc. All the 11,800 rooms have either been constructed or are near completion. The project has been partially funded by NABARD under RIDF-V and RIDF-VI and a total loan of Rs 3176.00 lakh has been sanctioned by NABARD under the scheme. The scheme also aims at protecting young children from the vagaries of nature and from adverse climatic conditions. The twin objective of universal access and quality education being an integral part of the Primary Education Programme, the availability of Primary schools within a walking distance from a habitation is constrained by tough geographical and climatic conditions. This scheme involves area specific designs of school buildings with respect to pedagogical needs, solar passive features, local material and local technology. These have proved to instrumental in reducing the cost of construction.

The construction of school rooms under the scheme is carried out by involving the local community in the form of the Village Education Committee (VEC). The Committee's inputs are in the form of monitoring, supervision, the release of funds and procurement of construction material.

The role of the engineer is confined to providing technical support to the VECs. It has been made mandatory that the Junior Engineer at the Block level visits the site each week and holds a meeting with the VEC and appraises the district officers about the status of work every month. This method of execution of construction work of school rooms is quite transparent and has been helpful in conserving the local heritage and in giving employment to local labour.

In the years 1999–2002, it was proposed to construct 13,612 rooms and the first priority was to provide accommodation to the 1964 schools that had none at all.

The structure of the Village Education Committee is as follows:

1. The Pradhan of the Panchayat of the Primary school concerned — Patron.
2. The President of Parent Teacher Association (PTA) — Chairman.
3. One Member each of SC, ST, OBC and Minority Community — Member.
4. One Worker of the *Anganwadi* of concerned village — Member.
5. One Member of the concerned village who takes interest in the field of education — Member.
6. One Representative of handicapped children — Member.
7. Teacher of the school concerned — Member.
8. Head Teacher of the Primary school — Member Secretary.

Box 6.6 — *Yashwant Gurukul Awas Yojana*

The State Government is making strenuous efforts in improving the educational status of the members of the Scheduled Tribes who are still based in the tribal areas and to bring education to their doorsteps. Many educational institutions are being opened or upgraded from year to year. One of the main hindrances in the educational development of Scheduled Tribes is that teachers posted in the schools situated in the tribal areas hesitate to join their duties owing to the non-availability of proper residential accommodation. To eliminate the fear of residential problems from the minds of such teachers the State Government has taken a decision for providing adequate accommodation to the teachers in High and Senior Secondary schools under the *Yashwant Gurukul Awas Yojana*. The residential accommodation of one room with common kitchen and toilet for teachers is to be constructed in the tribal areas of Himachal Pradesh.

Mid-Day Meal Scheme (Nutritional Support to Primary Education), launched on 15 August 1995, covered 1808 primary schools i.e. 1.5 lakh children. During 1995–96, it was operative throughout the State's rural primary schools which came under the Employment Assurance Scheme (EAS) Blocks. In 1996–97, it was extended to cover all the Low Family Literacy Blocks (LFC). With effect from 1997–98, all Primary schools throughout the 72 Development Blocks, in the Pradesh have been covered. Accordingly, all children in Classes I–V, with over 80 per cent attendance in a particular month are being given 3 kg. of uncooked rice for that month.

Box 6.7 — Integrated Education for Disabled Children (IEDC)

Physically and mentally challenged children are a part and parcel of society and they cannot be deserted and left to their fate.

A survey conducted in 2000–01 to identify disabled children in the DPEP districts revealed that there are 2048 such children studying in Primary schools and there are about 128 severely disabled out of school children in these districts.

Under the IEDC scheme, the Director -ate of Primary Education received an amount of Rs 51,03,500 to provide learning aids and appliances for the disabled children of the State. In the DPEP districts, a sum of Rs 8,74,850 was spent in providing books, stationery, uniforms, equipment, escorts and transport to the beneficiary children. Beside this, the Welfare Department, NGOs and the Rotary Clubs have also been providing aid and appliances to such children.

As reported, 2048 children already studying in Primary schools appear to have minor disabilities or such disabilities which do not stand in the way of their pursuing studies and there is no problem, whatsoever, in their growing up along with the rest of the children.

However, in the case of high disabilities — including mental retardation — the children may be enrolled at central places, say BRCs and placed under the supervision and care of specially trained teachers. They should be provided with free text-books, stationery, boarding, lodging and other aids and appliances.

Box 6.8 — Promoting Merit: Affirmative Action for Enabling Competition

- Government of Himachal Pradesh initiated a scheme titled *Medhavi Chhatra Yojna* for rewarding merit to enable the children from various sections of the society in the year 1998–99 for scheduled caste children, in 1999–2000 for OBC children, in 2000–01 for scheduled tribes students and in 2001–02 for children belonging to other categories.
- Scholarships under the scheme are given at post-matric stage for a period of two years, i.e. for pursuing Class XI and XII studies. The rate of scholarship is Rs 10,000 per annum.
- Presently, the scheme benefits about 8200 students. It is an incentive for meritorious children to perform better and enter the professional streams after +2. Merit is the only consideration for the award and the other consideration is that the child should belong to Himachal Pradesh and should have passed the matriculation examination from the State Board of Education.
- The scheme has, in its short period of implementation, gained popularity and has become a vehicle of greater competition among the children at the high school level.
- The scheme has become a flagship scheme of education sector and has been praised across the country in terms of being a first major affirmative step for empowering children, specially those belonging to the under privileged sections of the society.
- The State Government wanted a feedback from the beneficiaries of the scheme as to the utility of the scheme, about continuing it and the response about what the beneficiaries were presently doing. Response from a random sample are contained in Box 6.10.

Box 6.9 — Promoting Female Literacy among the Underprivileged Sections of Society in H.P.

- The Government of Himachal Pradesh has been focussing on female literacy in general, and on literacy among the scheduled caste (SC) and scheduled tribe (ST) girls, in particular, over the last couple of decades.
- Keeping in view the low female literacy among the underprivileged sections of the society and a very high drop out rate after Class V, i.e. Classes VI–VIII, the State Government introduced a scheme of attendance scholarships from Class VI onwards for SC/ST in the year 1980–81 which envisaged attendance scholarship of Rs 30 per month and one time grant of Rs 100 for uniform and books etc.
- The scholarship was by way of the opportunity cost for retaining these girl children in schools rather than becoming domestic help or becoming a wage earner for the family. The compensation was raised later on to Rs 50 per month and a one time grant of Rs 200.
- The results achieved are amazing as is borne out by the following data on enrolment ratios:

Category	All girls 1980–81	All girls 1997–98	SC girls 1980–81	SC girls 1997–98	ST girls 1980–81	ST girls 1997–98
Class I–V	79	105	71	105	47	105
Class VI–VIII	37	90	20	77	16	77
Class IX–X	11	69	4	71	5	71

- This scheme was lauded by the Ministry of Welfare in the eighties and was recommended for replication by all States for promoting literacy among scheduled caste and scheduled tribe girls.

Box 6.10 — Response of Beneficiaries of Merit Scholarship Scheme

Responses of the beneficiaries of various merit scholarship schemes were invited by the Chief Minister's office by sending a demi-official letter from Chief Minister to the beneficiaries. A reply paid postcard was also sent to these beneficiaries. Response were received from a very large section of these beneficiaries. In response to the question as to what the beneficiaries were presently doing, the stock response was that all of them were pursuing studies. A sample of some of the responses on other questions received from the beneficiaries is as given below:

'My father is no more. It is only because of this scheme that I am able to continue my studies. The scholarship amount to the IRDP families needs to be enhanced enabling to improve their standard of living'.

— Mohini Devi, Bhoranj, District Hamirpur

'These schemes should be introduced for the students of higher classes also'.

— Maneeta Kumari, Halti, Tehsil Bangana, Una

'Teachers should not be transferred in the middle of an academic session. This lead to non-availability of teaching staff in the middle of the session'.

— Veena Pathania, Nagrota Surian, District Kangra

'My father suffers from asthma. It is very difficult to make both ends meet. I could not have continued with my studies but for your help'.

— Sandeep Singh, Palampur, District Kangra

'Arrange to check copying in the examinations'.

— Tarun and Varun Goel, Sundernagar, Mandi

'I am very happy that Hon'ble Chief Minister wrote to me and asked for suggestions. I wish if more such schemes aimed at benefiting poorer students could be introduced.'

— Soun Chandrika, Kahneti Sandhoch, Shimla

In Himachal Pradesh, education is free upto Matric for all, and since 1994, upto the University level (including Technical Education) for girls. Free text-books are provided to all students from Classes I to X in tribal areas and for ST, SC, IRDP and OBC children in all other areas too. There is also a provision of a variety of scholarships. (Details in Box 6.11)

District Primary Education Programme

As per the 1991 and 2001 Census Reports, the literacy percentage in Himachal Pradesh has grown fairly rapidly. District-wise, too, the figures were uniformly impressive for eight of the twelve districts in regard to males as well as females (1991 Census). In 1996-97, to develop the

Box 6.11 — Scholarships

- *Scholarship for children of such defence personnel who are killed or disabled in action:* This is a State scheme for children of all the categories of classes from VI to XII.
- *IRDP Scholarship Schemes:* A State Scheme for all students who belong to the families identified as IRDP by the Government of Himachal Pradesh. The scheme is also applicable for the BPL students of Urban Areas.
- *Middle School Merit Scholarship:* A State Scheme for the students of Middle schools purely on merit basis, who qualify in the merit scholarship examination.
- *High School Merit Scholarship:* A State Scheme for the students on the basis of Class VIII examinations merit list prepared by the Board of School Education, Dharamshala, in accordance with the number of scholarships sanctioned for a particular district.
- *Scholarship for SCs/STs/OBCs:* A State Scheme for all students belonging to the families which are identified by the Government as SCs/STs/OBCs with an annual family income of less than Rs 11,000 per annum.
- *Merit Scholarship to post-Matric Students:* A State Scheme for post-Matric students on the basis of merit, for students who secure 77 per cent marks or more in Matric and 10+2 examinations conducted by the Himachal Pradesh Board of School Education and 60 per cent or more in the University Examinations. The students must be a bonafide domicile of Himachal Pradesh.
- *National Merit Scholarship Scheme:* A Centrally Sponsored Scheme with committed State liability for those students who have passed the Matric/10+2/Graduation Examinations from Himachal Pradesh Board of School Education/Himachal Pradesh University with not less than 60 per cent marks and the toppers as per the total number of awards.
- *Sainik School Scholarship to the boys belonging to Himachal Pradesh:* A State sponsored scheme for the students of Sainik schools on income and merit bases.
- *Scholarship for the upgradation of merit of SCs/STs students:* A Centrally Sponsored Scheme of the Ministry of Human Resource Development providing residential and special coaching to Scheduled Caste and Scheduled Tribe students.
- *Ambedkar Medhavi Chhatravriti Yojana for Scheduled Caste and OBC students:* A State Scheme for SC and OBC students for regular students of 10+1 and 10+2 classes in any of the recognised schools in Himachal Pradesh. The Scheme is only for the 1000 top SC students and 1000 top OBC students who have achieved at least 50 per cent marks in the Matriculation Examination conducted by the Himachal Pradesh Board of School Education.
- *Sanskrit Medhavi Chhatravriti Yojana:* A Centrally Sponsored Scheme for those students who stand first in their class with more than 50 per cent marks in Sanskrit and a minimum 50 per cent in aggregate.
- *Maharishi Balmiki Chhatravriti Yojana:* A State Sponsored Scheme for all girl students of Balmiki community beyond Matric @ Rs 9000 per annum.
- *Thakur Sen Negi Utkrishtha Chhatravriti Yojana:* A State Scheme for those meritorious 100 boys and 100 girls belonging to Scheduled Tribe Community of Himachal Pradesh who secure maximum marks in matriculation examination from Himachal Pradesh Board of School Education.
- *Swami Vivekananda Utkrishtha Scholarship Scheme:* It is a State Sponsored Scheme based on the same analogy as that of *Ambedkar Medhavi Chhatravriti Yojana* for 2000 meritorious students belonging to the General Category.

TABLE 6.14: DPEP Districts in Himachal Pradesh

District	Area (sq kms)	Total population in 1991			Literacy rate (%)			Project outlay in Rs crore
		Total	Male	Female	Total	Male	Female	
Chamba	6528	3,93,286	2,01,759	1,91,527	44.70	59.96	28.57	38.89
Kullu	5508	3,0,2432	1,57,529	1,44,903	54.82	69.64	38.53	29.65
Lahaul & Spiti	13,835	31,294	17,224	14,070	56.82	71.78	38.05	11.47
Sirmaur	2825	3,79,695	2,00,193	1,79,502	51.62	63.20	38.45	34.24

Source: Himachal Pradesh Primary Education Society (HPPEs).

four districts that were lagging behind, the Government of Himachal Pradesh introduced the Centrally Sponsored District Primary Education Programme (DPEP), Phase II, in these districts. An approved outlay of Rs 12,928 lakhs has been allocated for them for Primary education for a period of six years — this is detailed in Table 6.14.

TABLE 6.15: Out-of-School Children

District	Boys	Girls	Total
Chamba	2257	5851	8108
Kullu	923	1742	2665
Sirmaur	2607	3612	6219
Lahaul & Spiti	—	6	6
Total	5787	10,211	16,998

Survey of out-of-school children in the districts with the help of community and PRIs was conducted at the initiation of the DPEP activities.

Most of these out-of-school children brought into the school stream with the help of NGOs, PRIs and VECs. 13,349 out-of-school children were enrolled in 1996–97 and 1997–98.

It is still too early to assess the effectiveness of the DPEP Programme in the State — although preliminary reports are more than encouraging. There were some teething troubles, but now, the necessary infrastructure has been

created, and the programme is being implemented with zeal and earnestness. Encouraging results have started coming in. In the area of identification and enrolment of children, its achievements are impressive, as Tables 6.15 and 6.16 indicate.

A survey of out-of-school children in the districts with the help of community and PRIs was conducted at the initiation of the DPEP activities. Most of these out-of-school children were brought into the school stream with the help of NGOs, PRIs and VECs. 13,349 out of school children were enrolled in 1996–97 and 1997–98. It is felt that the DPEP should also cover at least seven additional community blocks in the Pradesh where literacy among women remains below the national average. Alternatively, the Government of Himachal Pradesh may launch its own programme in them.

Expenditure on Education

Both the private and public sectors are present in the field of education in the State — though the presence of the private sector is largely confined to the urban areas. Two reasons that seem

responsible for the low concentration of private sector education services in rural areas can be (i) low affordability of rural population in providing expensive education through private institutions to their wards, and (ii) the high cost involved in providing educational services in the rural areas of Himachal Pradesh may not suit private players, who are normally profit-driven. The very fact that the availability of private services in the education sector in rural areas are low, leads to an increased responsibility of the

State Government in taking education to the door steps of the people living in remote areas. The 'Universalisation of Education' campaign of the State Government is an indication of the extent of State intervention in providing basic education to all children of school going age. Literacy figures of the State as a whole and also of the individual districts stand testimony to the Government's efforts in eliminating illiteracy.

Two indicators measuring the extent of State

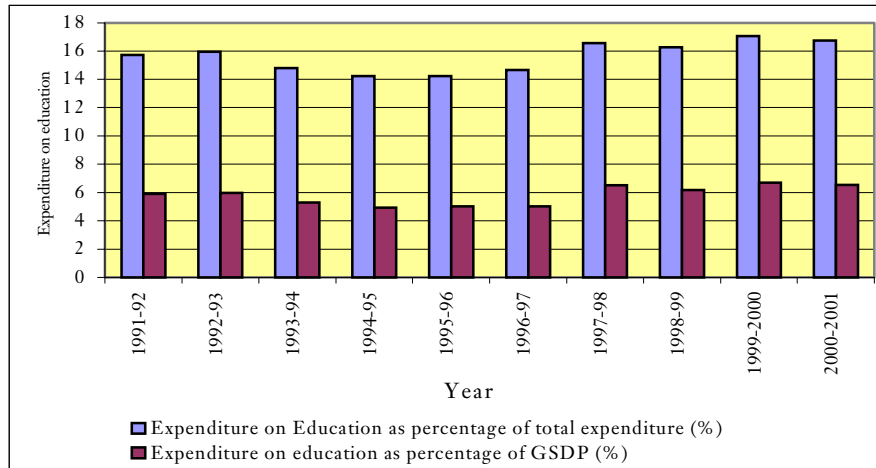
TABLE 6.16: Improvement in Enrolment in DPEP Districts

<i>District</i>	<i>Students</i>			
	<i>1996–97</i>	<i>1997–98</i>	<i>1998–99</i>	<i>1999–2000</i>
Chamba	57,359	61,538	66,895	66,834
Kullu	46,331	50,532	51,998	51,334
Sirmaur	54,551	62,027	66,492	65,640
Lahaul & Spiti	3270	3329	3319	3244
<i>Total</i>	<i>1,61,511</i>	<i>1,80,426</i>	<i>1,88,704</i>	<i>1,87,052</i>
Gross Enrolment Ratio (1999–2000)				
	<i>All students</i>			
	<i>Boys (%)</i>	<i>Girls (%)</i>	<i>Total (%)</i>	
Chamba	116	116	116	
Kullu	110	109	109	
Sirmaur	119	119	119	
Lahaul & Spiti	103	102	103	
H.P. DPEP-II	115	114	115	
Net Enrolment Ratio (1999–2000)				
	<i>All students</i>			
	<i>Boys (%)</i>	<i>Girls (%)</i>	<i>Total (%)</i>	
Chamba	98	98	98	
Kullu	93	93	93	
Sirmaur	99	99	99	
Lahaul & Spiti	91	92	91	
H.P. DPEP-II	97	97	97	

Source: Himachal Pradesh Primary Education Society (HPPEs).

CHART 6.3

Expenditure on Education



intervention in providing education services to the people are, (i) proportion of expenditure in the education sector to the Gross State Domestic Product, and (ii) the share of Government expenditure set apart for education sector. Both reflect the intensity of the Government's efforts in improving the quantity and quality of education. Table 6.17 quantifies these two indicators

of State invention in the education sector from 1991-92 to 2000-01.

The expenditure on education in the State has increased from Rs 195.62 crore in 1991-92 to Rs 844.96 crore in the year 2000-2001 — recording an increase of more than four times in this period. However, expenditure on education as a

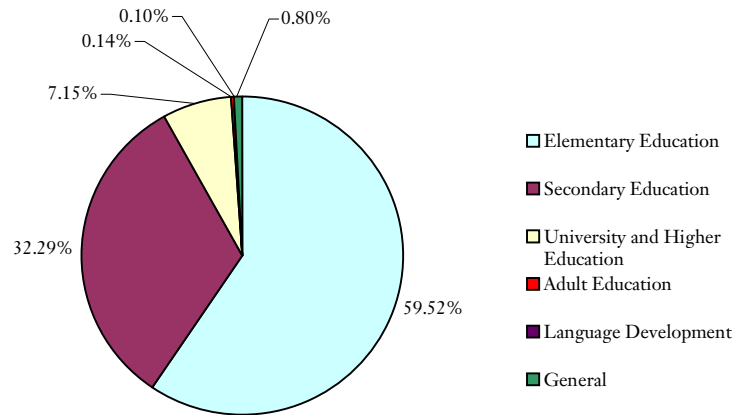
TABLE 6.17: Expenditure on Education

<i>Year</i>	<i>Total expenditure – plan and non-plan (Rs in Crore)</i>	<i>Expenditure on education (Rs in Crore)</i>	<i>Expenditure on education as percentage of total expenditure (%)</i>	<i>Expenditure on education as percentage of GSDP (%)</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1991-92	1243.32	195.62	15.73	5.90
1992-93	1433.56	228.64	15.95	5.98
1993-94	1714.20	253.51	14.79	5.30
1994-95	2021.02	287.89	14.24	4.94
1995-96	2367.78	337.22	14.24	5.03
1996-97	2662.40	390.16	14.65	5.03
1997-98	3472.51	575.56	16.57	6.51
1998-99	4073.49	662.26	16.26	6.19
1999-2000	4713.88	804.39	17.06	6.71
2000-2001	5048.22	844.96	16.74	6.53

Source: Department of Finance, Government of Himachal Pradesh.

CHART 6.4

Allocations in Education Sector



percentage of total Government expenditure has varied between 14.24 per cent during 1994–95 and 1995–96 to 17.06 per cent in 1999–2000. Expenditure on education taken as proportion of the Gross State Domestic Product has increased gradually from 5.90 per cent in 1991–92 to 6.53 per cent in 2000–2001.

out of the total outlay of Rs 856.19 crore for the year 2001–2002. Elementary education was followed by Secondary Education, University, and Higher Education, General, Adult Education and Language Development in descending order. Detailed outlays are given in Table 6.18 and Chart 6. 4.

TABLE 6.18: Allocations in Education Sector

<i>Sector/Head of Development</i>	<i>(Rs in crore)</i> <i>Outlays</i>
General Education	856.19
Elementary Education	509.57
Secondary Education	276.49
University and Higher Education	61.23
Adult Education	1.20
Language Development	0.86
General	6.84

The priority-wise allocations within the education sector for the year 2001–2002 have been given in Table 6.18. Elementary education was given the maximum allocation of Rs 509.57 crore

The preceding analysis of the growth of school education in Himachal suggests a consistent development and marked improvement at all levels. The progress of literacy from 7.07 per cent in 1948 to 77 per cent in 2001, the sizeable increase in the number of primary schools from 261 in 1948 to 10,484 in 1997–98 constitutes a remarkable achievement. This is also the general impression that one gets from all the critical indicators of education development (*Education Administration in Himachal*, App1, pp 145–63). While the State may yet have ‘miles to go’ in the area of quality education, one may well subscribe to the conclusion of the PROBE team, ‘The schooling revolution in Himachal is one of the most enlightening developments of the post-independence period in the field of elementary education.’

CHAPTER 7

A photograph showing a settlement on a riverbank. In the foreground, a large pile of cut logs sits on a rocky, light-colored riverbank. The river flows through the scene, with white water rapids visible in the lower left. In the middle ground, several small, simple buildings with blue roofs are scattered across the bank. A few people and vehicles, including a truck, are visible near the buildings. The background consists of a steep, densely forested hillside.

**NATURAL RESOURCES
AND
HUMAN DEVELOPMENT**



Natural Resources and Human Development

The state of development in the world today, in the opening years of the twenty-first century is fundamentally different, than what it was in the preceding centuries. Intensified environmental changes, the widening gap between the rich and the poor and deprivations of different kinds area few of the issues that have become focal points of any interface related to sustainable development. Institutions have been under pressure both in developing and developed countries and in what are called transition economies, to respond to changes and environmental pressures. The sustainable use of natural resources to attain high levels of human development has become imperative. The gradual shift in the paradigms of economic growth and development, which ushered in the beginning of the twentieth century, have now started getting oriented towards issues related to environment, sustainable use of natural resources, use of environment friendly technologies, and reducing disparities.

The Government of Himachal Pradesh is committed not only to raise the standard of living and quality of life of its people but to provide a greener future to the coming generations. This section takes stock of the available natural resources in Himachal Pradesh and related issues. It starts with a brief presentation of geo-morphology and climatic conditions and then discusses various issues related to endowed natural

resources. In the absence of any established and comprehensive index to measure environmental quality, a district-wise comparison of environmental issues has been undertaken by ranking.

Geophysical Zones

Himachal Pradesh has been divided into four distinctly identifiable stratigraphical zones based on the variations in attitude, climate, geology, soil, flora, fauna and topography.

(a) *Outer Himalayas or the Shiwaliks*

These are the outer-most hills of the State and stretch along its southern boundary from east to west. The average elevation is 600 metres. With steep southern slopes that usually gently dip into longitudinal valleys known as 'duns', these hills gradually merge with the Indo-Gangetic plains of Punjab and Haryana. The southward slopes of the Shiwaliks are usually in the form of escarpments that drop abruptly to the plains. The crests consist of jagged peaks. Some of the recently lifted ranges have, in fact, been the result of unconsolidated river wash, consisting of rounded boulders, pebbles and loose sand being deposited by running water at the foot of the Himalayas. Scrub covers the southern slopes of the Shiwaliks, while Sal forests are found on the

northern faces in the eastern section of the State, and miscellaneous broad-leaved forests in the west. Some of the important towns located in the Shiwalik hills are Paonta, Nahan, Sarahan (Sirmaur), Nalagarh, Kunihar, Hamirpur, Una and Nurpur.

(b) *Lesser or Lower Himalayas*

A series of mountain ranges rising abruptly above the low rolling hills and occupying the central part of the State constitute the Lesser Himalayas. The following ridges and ranges are situated in this physiographic region.

- i. *Mussoorie Ridge*: This runs west from Mussoorie and crosses into Himachal Pradesh just north of Sataun. The river Yamuna cuts through the imposing ridge. Thereafter, the ridge runs to the north of the Giri river, and culminates in the Churdhar massif — which is the highest peak (3647 metres) in the lower Himalayas and is located south of Shimla town.
- ii. *Shimla Ridge*: This ridge marks the water divide of the Satluj River by diverting it into the Indus river system. The western slopes drain into the Arabian Sea whereas the water from the eastern and southern slopes finds its way into the Bay of Bengal.
- iii. *Pir Panjal*: This range originates from the Great or Main Himalayas near the banks of the Satluj forming the water divide between the Chenab on the one side, and the Ravi and the Beas on the other. Thereafter, it turns westwards and runs towards the Dhauladhar range before crossing over into the State of Jammu & Kashmir.

- iv. *Dhauladhar*: This majestic snow clad range rises abruptly over the plains of Punjab. It bifurcates from the Pir Panjal range at the mountain knot of Bara Bhangal. Thereafter, it runs in a NW-SE direction all along the southern flank of the State. It then crosses over to Uttar Pradesh where it merges with the main Himalayas. The river Ravi cuts a gorge across the Dhauladhar, southwest of Chamba town; while the river Beas does so at Larji and the river Satluj, at Rampur.

The lesser or lower Himalayan ranges are clothed with coniferous and broad-leaved forests which include oaks, chir pine, deodar, blue pine, rhododendron, horse chestnut and walnut. These are followed by the sub-alpine and alpine pastures. Prominent towns situated in this physiographic division are Rajgarh, Solan, Shimla, Rampur, Kullu, Mandi, Manali, Baijnath, Palampur, Dharamsala, Dalhousie and Chamba.

(c) *The Greater Himalayas*

The main or greater Himalayan range comprises of a snowclad ridge that runs along the north-eastern border of the State and then turns southwards — separating the Trans-Himalayan zones of Pooch and Lahaul & Spiti from the rest of the country. Most of the peaks in the range have an average elevation of over 6000 metres. Some of the famous passes across this range are the Rohtang (4800 metres), Kangla (5248 metres), Bara Lacha (4512 metres), Parang (5548 metres), and the Pin Parbati (4802 metres).

The deep gorge of the river Satluj, slices across the Greater Himalayas. The range separates the drainage of the Beas in the south from that of the river Spiti in the north. The slopes

are generally steep. The range rises abruptly over the broad and open Kullu valley and hence marks a sharp rise in elevation.

The southern slopes have an abundance of deodar, blue pine, fir, spruce, moru and kharsu oaks, hemlock, rhododendron, betula, sub-alpine and alpine meadows. The northern slopes are largely devoid of vegetation except for occasional tufts of grasses that come up at lower elevations during the summers. The towering range acts as a barrier for the southwest monsoons, thereby causing a rain-shadow effect in the tracts lying to the north.

(d) *Tethys or the Trans-Himalayas*

The area lying to the north of the Greater Himalayas falls in this range. The zone has an average elevation of 3000 metres. Cold desert-like conditions prevail in the area especially in the tract that falls in Tibet. Rainfall is scanty as the moisture laden southwest monsoons are unable to cross the greater Himalayas. The district of Lahaul & Spiti and the Pooh sub-division of Kinnaur fall in this zone.

The Zaskar range stretching southeast from Ladakh, is the most prominent mountain range of the Trans-Himalayan tract of Himachal Pradesh. It separates Spiti and Kinnaur from Tibet. This range has quite a few peaks with an elevation of 6500 metres or above. The Satluj cuts the deep gorge across the range at the Shipki pass. The highest peak in the range is Leo Pargial at 6791 metres. The Trans-Himalayan Zone is generally devoid of vegetation. Occasional tufts of grasses can be found along channels formed by snowmelt waters in the valleys, and also along snow and ice fed streams during the summers.

Biophysical Zones

The State can be divided into four distinguishable biomes on the basis of altitude, climatic parameters and forest types. These are:

- Zone A: This comprises of sub-arctic, alpine and cold temperate zones occurring at altitudes between 3000 metres, and 6000 metres.
- Zone B: This holds the warm temperate, cold temperate and alpine zones which occur at altitudes ranging between 1000 metres and 5500 metres. Perpetual snow, marks the end of the alpine zone.
- Zone C: This occurs at altitudes from 1500 metres, to 3900 metres and is characterised by warm temperate and cold temperate climatic conditions. The timberline marks the end of cold temperate zone.
- Zone D: This is characterised by warm temperate and sub-tropical conditions occurring at altitudes between 300 metres to 2100 metres. The geographical distribution of these biophysical zones is given in Table 7.1.

Climate

Himachal Pradesh experiences diverse climatic conditions due to the wide variations in altitude. The southern slopes receive the full benefit of the southwest monsoons and are influenced by the tropical climate. Atmospheric depressions that originate in the Mediterranean Sea often move eastwards and result in rains and snows during winters. The northern part of the State is a rain shadow zone and receives negligible

TABLE 7.1: Biophysical Zones of Himachal Pradesh

<i>Zone</i>	<i>Biomes</i>	<i>District</i>	<i>Total area (sq. km.)</i>	<i>Population*</i>
A	Sub-Arctic, Alpine, Cold Temperate	Kinnaur, Lahaul & Spiti	20,236	1,17,174**
B	Alpine, Cold Temperate, Warm Temperate	Kullu, Chamba	12,031	8,40,364
C	Cold Temperate, Warm Temperate	Shimla, Kangra	10,870	20,60,281
D	Warm Temperate, Sub-Tropical	Sirmaur, Solan, Bilaspur, Una, Hamirpur, Mandi	12,536	30,59,429

* Population figures have been taken from Provisional Population Totals, Census of India, 2001.

** Includes projected population of Kinnaur where population enumeration could not be held due to natural calamity.

TABLE 7.2: Geophysical Profile of the Districts of Himachal Pradesh

<i>District/State</i>	<i>Altitude (height from MSL in metres)</i>	<i>Climate</i>	<i>Biome/ Zone</i>
1. Bilaspur	300 to 600 and 1200 to 2100	Warm temperate and Sub-tropical	D
2. Chamba	1000 to 5000	Alpine, Cold temperate and Warm temperate	B
3. Hamirpur	300 to 600 and 1200 to 2100	Warm temperate and Sub-tropical	D
4. Kangra	500 to 1000 and 3000 to 6000	Cold temperate and Warm temperate	C
5. Kinnaur	1800 to 4800	Sub-arctic, Alpine and Cold temperate	A
6. Kullu	1500 to 4800	Alpine, Cold temperate and Warm temperate	B
7. Lahaul & Spiti	3000 to 4500	Sub-arctic and Alpine	A
8. Mandi	1200 to 3000	Warm temperate	D
9. Shimla	1500 to 3200	Cold temperate and Warm temperate	C
10. Sirmaur	300-450 and 3000-3300	Warm temperate and Sub-tropical	D
11. Solan	300-2100 and 150 to 1500	Warm temperate and Sub-tropical	D
12. Una	300 to 600 and 1200 to 2100	Warm temperate and Sub-tropical	D

precipitation caused from the southwest monsoons. The Pangi sub-division of Chamba district, the Pooh and Kalpa sub-divisions of Kinnaur district and the entire district of Lahaul & Spiti fall in the rain shadow zone. The southern half of the State receives typical monsoon rains with the highest annual rainfall of 3000 mm at Dharamsala. The lowest annual rainfall is received in Spiti (180 mm) and in Pooh (350 mm). The southern part of Himachal Pradesh has relatively hot summers and mild winters whereas the northern part experiences pleasant summers and severe winters. The tracts lying near the plains of Punjab and Haryana, are comparatively the hottest while the coldest areas lie in Lahaul & Spiti and Pooh — where the mean minimum temperature may drop down to -30° C in winters. All the twelve districts of Himachal Pradesh can be classified as being parts of different biomes/biophysical zones depending upon their geophysical features. This classification is summarised in Table 7.2.

Tectonics: Seismic Vulnerability of the Fragile Himalayas

The relatively younger Himalayas are a classical example of continent collision due to the convergent movement of the Indian plate towards the Eurasian plate. It comprises of two contrasting tectogens and the dividing line between them represents a major tectonic discontinuity. It is referred to as the Main Central Thrust (MCT) and on either side of this thrust, the tectogens display contrasting stratigraphical and tectonic features indicating convergence of two alien blocks. These are called as the Lesser Himalayan tectogens and Tethys Himalayan tectogens. Most of the area of the State falls in Zone V of the Seismic Zoning Map of India. Studies of various aspects of the structure and

tectonics suggest that major earthquakes in the Himalayas occur as the Indian plate is thrust beneath the Himalayas. The dividing line, the MCT separating these tectogens has a great bearing on the occurrence of earthquakes.

Land Use Pattern

According to the Surveyor General of India, the total geographical area of Himachal Pradesh is 55,67,300 hectares. However, according to the village papers, the reported area — which had been surveyed till 1997–98 — is just 42,67,196 hectares. This leaves 13,00,104 hectares of land still unsurveyed. The major part of the unsurveyed area falls in the Kinnaur and Kullu districts. Though there are gaps in data, they are enough to form an approximate idea about the land use patterns. Forests cover 19.52 per cent of the total area of the State. Amongst all the districts, forests cover the maximum geographical area in Mandi district (44.09 per cent), while the lowest coverage of reported area of forest has been in Kinnaur district (6.12 per cent). District-wise details regarding forests, barren and unculturable land, land put to non-agricultural use, culturable waste, permanent pastures and other grazing land, land under tree crops and groves not included in area sown, current fallows, other fallow land, net area sown, area sown more than once and total cropped area are given in Table 7.3 below.

Animal Husbandry and Grazing Lands

The district-wise details of grazing land and permanent pastures which comprise 24.07 per cent of the total geographical area of the State are given in Table 7.4. The table also contains district-wise livestock population and the grazing

TABLE 7.3: Land Use 1997–98 (per cent of total geographical area)

<i>District</i>	<i>Forests</i>	<i>Barren and unculturable land</i>	<i>Land put to non-agricultural uses</i>	<i>Culturable waste</i>	<i>Permanent pastures and other grazing land</i>	<i>Land under miscl. Tree crops and groves not included in area sown</i>	<i>Current fallows</i>	<i>Other fallow land</i>	<i>Net area sown</i>	<i>Area sown more than once</i>	<i>Total cropped area</i>
Bilaspur	10.67	5.60	10.40	4.95	38.44	0.11	1.04	1.37	26.37	24.49	50.86
Chamba	41.61	0.79	1.83	0.94	54.06	0.00	0.32	0.02	6.49	3.67	10.16
Hamirpur	18.07	18.93	15.63	5.13	0.36	0.11	6.76	0.90	32.57	31.52	64.09
Kangra	38.62	4.90	13.12	4.38	7.88	9.47	1.37	0.19	20.75	18.04	38.78
Kinnaur	6.12	14.16	8.00	0.97	34.06	0.13	0.25	0.02	1.19	0.37	1.56
Kullu	n.a.	0.20	1.02	0.57	0.05	0.11	0.47	0.04	6.65	4.82	11.47
Lahaul & Spiti	9.79	38.71	0.35	0.05	16.69	0.03	0.01	0.00	0.23	0.01	0.24
Mandi	44.09	4.59	1.73	1.07	24.32	0.06	1.48	0.07	23.07	18.37	41.44
Shimla	22.33	3.27	1.52	1.88	39.51	0.32	2.43	0.28	13.85	7.02	20.87
Sirmaur	17.17	2.90	3.45	4.65	21.46	13.08	1.60	0.32	14.94	12.83	27.77
Solan	10.48	6.78	5.14	6.71	40.59	0.43	2.55	0.40	20.37	13.55	33.92
Una	18.57	20.38	7.80	7.30	6.23	0.93	2.96	9.82	26.14	22.68	48.82
Himachal Pradesh	19.52	13.94	4.04	1.87	24.07	1.75	1.00	0.41	10.06	7.66	17.72

Source: Annual Season and Crop Report 1997–98, Directorate of Land Records, Government of Himachal Pradesh.

land and pastures availability per animal head. It is observed that per animal 0.26 hectare of grazing land is available for the State as a whole against the required standards of 0.5 hectare. The availability of grazing land and permanent pastures is the lowest in the districts of Hamirpur and Kullu — with a mere 0.01 hectare available per animal. The highest per animal head availability of grazing land and permanent pastures is for the district of Lahaul & Spiti (3.71

hectare), followed by Kinnaur (1.77 hectare). The majority of grazing lands in these two districts is in the form of Alpine pastures where random and unscientific grazing can cause ecological imbalances because of the fragile relationship between Alpine pastures and ecology at higher elevations. In all other districts, the availability of grazing land and permanent pastures is below the minimum prescribed standard of 0.5 hectare per animal.

Table 7.4: Grazing Land and Pastures available per Livestock

<i>District/State</i>	<i>Livestock (nos.)</i>	<i>Grazing land/ pastures (hectare)</i>	<i>Grazing land/pastures available per livestock</i>
Bilaspur	2,38,448	44,858	0.19
Chamba	7,39,036	3,52,934	0.48
Hamirpur	2,32,521	400	0.01
Kangra	9,81,483	45,241	0.05
Kinnaur	1,23,179	2,18,040	1.77
Kullu	3,27,628	279	0.01
Lahaul & Spiti	62,172	2,30,888	3.71
Mandi	9,96,565	96,070	0.10
Shimla	5,60,647	2,02,710	0.36
Sirmaur	4,30,083	60,621	0.14
Solan	3,29,953	78,591	0.24
Una	2,02,352	9590	0.05
Himachal Pradesh	52,24,067	13,40,222	0.26

Source: Annual Season and Crop Report for 1997–98, Directorate of Land Records, Government of Himachal Pradesh.

Forests

Forest Cover: Status and Changes

The National Forest Policy of 1980 states that at least two thirds or 66 per cent of the geographical area should be under forests in hill states like Himachal Pradesh. The area classified as 'Area Under Forests' in Himachal Pradesh, is 63.60 per cent of the total geographical area. However, the effective forest cover is much lower than this — primarily on account of the fact that a large proportion of this area forms either alpine meadows, or is above tree line. The area under alpine meadows is 16,376 sq. km. which forms 29.41 per cent of the geographical area of the State. This leaves only 21,215 sq. km. or 38.11 per cent of the geographical area under forest cover, which is much less than the prescribed standards.

Table 7.5 gives a broad idea about the quality of forests in Himachal Pradesh. Tables 7.6 and 7.7 throw light on the distribution of forests by crown density and their legal status. The forests of the State can be divided into Reserved Forests, Demarcated Protected Forests, Un-Demarcated Protected Forests and Un-Classified Forests as per the legal classification system of forests. The difference between recorded and actual cover is on account of the fact that the actual forest takes into account only such areas which bear tree cover and ignores those areas which may legally have the status of forest but bear no tree cover. Out of the State's total geographical area of 55,673 sq. km., 35,407 sq. km. (63.60 per cent) is recorded as forest area whereas, the actual forest cover in the State is just 12,521 sq. km. (22.49 per cent). SA-Environment-1 and 2 give the district-wise legal classification of forests and changes in forest area

Box 7.1. — Himachal's Unique Forests

Since time immemorial, forests have evoked the finest poetry and enhanced the aesthetic sensibilities of man. They have also provided social, cultural and economic support to the human race. The most striking feature of the forests of Himachal Pradesh is the enormous diversity of woody plant species which range from soft wood conifers to hardwood deciduous flowering plant species. These species owe their origin to the larger Holarctic Floristic Kingdom (the area that extends from Europe to North America), and its Boreal and Tethyan Sub-Kingdom (the ancient Mediterranean). These plants have been brought into the region by past paleoclimatic spells that were favourable to their migration. The forests of Himachal Pradesh — especially in the temperate climatic zone — are in various stages of consolidation which are reflected by different forest types and by prominent tree associations. The deciduous and mixed deciduous forests harbour species and rich flora and fauna that are of immense ecological and economic significance. These forests perform three distinct ecological functions, which are

- i. they act as efficient carbon dioxide sinks,
 - ii. they control the bio-geochemical cycle, and
 - iii. they influence the hydrology of streams.
- Apart from these, they also have great economic, social and cultural importance for the country and the region as a whole.

between 1991 and 1997, respectively. SA-Environment-1 shows that the districts of Lahaul & Spiti, Kinnaur, Shimla, Kangra and Kullu have a relatively larger proportion of Un-Demarcated Protected Forests. Sirmaur district has the

distinction of having the maximum forests declared as Reserve Forests.

SA-Environment-2 gives a brief account of the qualitative changes that forests have undergone in the different districts of Himachal Pradesh between 1991 and 1997. Forest cover has decreased in Bilaspur and Una districts by 8 sq. km and 5 sq. km, respectively. In fact, the area under dense forests has decreased drastically from 101 sq. km. in 1991 to 59 sq. km. in 1997. The decrease in area covered by dense forests in Una district is not much as compared to what it is in Bilaspur.

The districts which have performed remarkably well in terms of an increase in area covered by forests are Kangra and Shimla. Between 1991 and 1997, these districts have registered an increase in the total forest area by 311 sq. km. and 205 sq. km. respectively. The encouraging fact is that increase in area under dense forests is pronounced in both the districts. Besides Bilaspur and Una, Hamirpur, Kinnaur and Sirmaur are the other districts where the area under dense forests has actually declined during the period under reference.

Forest Resource Exploitation

Major Forest Produce (Timber): The Himachal Pradesh State Forest Corporation is the only agency responsible for forest harvesting and exploitation — including resin extraction. The Corporation came into existence in 1974. Before this date, all work pertaining to forests in this category, was conducted by private contractors. The extraction and exploitation of forest resources thus carried out resulted in unscientific over exploitation of these resources, and the exploitation of labour was also rampant. Table 7.8

TABLE 7.5: Current Status of Forests in Himachal Pradesh

<i>Category</i>	<i>Area (in sq. km.)</i>	<i>Remarks</i>
1. Geographical area of the State	55,673	
2. Area required under forest cover as per National Forest Policy 1988	37,115	
3. Forest area as per legal classification	35,427	
4. Area already under good forest cover i.e. dense forest	9565	Requiring protection and regeneration
5. Area under open forests	2,936	Requiring improvement
6. Area under scrubs	1845	Requires conversion into useful forests
7. Balance area (out of classified forests)	21,081	Excluding additional area of 1688 sq. km. (S.N. 2 – S.N. 3) required for fulfilling policy obligation
8. Permanent pastures and other grazing land including alpine pastures barren, uncultivable waste, permanent snow etc.	10,262	Low altitude pastures are available for silvi-pastoral activities
9. Area already covered under various afforestation activities	8005	This figure includes area covered since first five year plan, some of these areas have been converted into good/open forests now being reflected in various survey reports hence entire figure of 8005 sq. km. should not be discounted against the balance area available.
10. Area available for up-bringing	2814	This excludes 1688 sq. km. mentioned under forest/tree cover in remarks column at S.N. 7, actual area available will be much higher as per remarks column at S.N. 9. Area composes largely of Un-demarcated Protected Forests and village common lands etc.

Source: Annual Plan 1999–2000.

TABLE 7.6: Distribution of Forests by Crown Density

Geographical area:	55,673 sq. km.
Recorded forest area:	35,407 sq. km.
Actual forest cover and per cent:	12,521 sq. km., 22.5%
Dense forest (crown density above 40%):	9560 sq. km.
Open forest (crown density 10–40%):	2961 sq. km.
Scrub forest (crown density below 10%):	1825 sq. km.

Source: State of Forest Report, FSI, 1997

TABLE 7.7: Legal Status of Forests of Himachal Pradesh

Recorded Forest area and percentage to Geographical area:	35,407 sq. km., 63.60%
Reserved Forests:	1896 sq. km.
Protected Forests:	31,473 sq. km.
Un-classed Forests:	2038 sq. km.

Source: State of Forest Report, 1997.

TABLE 7.8 Timber Removal from the Forests

(000 cu m standing volume)

Year	Growing stock	Annual prescribed yield	Removal from forest
1970	82,076	5410	6806
1975	98,861	7500	4706
1980	99,458	7220	4637
1985	95,843	4860	4602
1990	96,839	5490	4356
1995	1,02,511	7516	4500
1998	1,03,344	7767	3555

Source: State of Environment Report: Himachal Pradesh.

shows that in all the years — except 1970 — the total removal was lower than the prescribed yield. Out of the growing stock of 82,076 thousand cubic metres of standing volume in 1970, the prescribed yield was 5410 thousand cubic metres standing volume — and the actual removal was 6806 thousand cubic metres standing volume.

In all other years, the actual removal has been generally less than the prescribed yield whereas, it was considerably lower than the prescribed yield in 1998. During last two decades, the timber removal strategy has its orientation towards conservation.

The fact that the growing stock of 25.44

crore cubic metres with a density of 10 per cent and above is available in an area of 12,501 sq. km. — combined with the requirement that felling is necessary to open the canopy cover enabling certain species to regenerate — has made the Government of Himachal Pradesh review the blanket ban on green fellings and has approved silvicultural fellings as chalked out in the Working Plan. However, this is a subject that requires the approval of the Supreme Court of India where, the matter has already been under consideration on a public interest litigation.

Non-timber Forest Produce: Apart from fodder, the forests of Himachal Pradesh are rich in grasses and other grazing plants, organic manure, fibre, gum, resins, katha, medicinal and

TABLE 7.9: 'Out turn' of Non-timber Forest Produce (1992–93 to 1995–96)

(Qty. in tons and value in '000 Rs)

Forest Produce	1992–93		1993–94		1995–96		1994–95	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Resin	10,523	54,322	11,422	74,515	11,363	62,153	87,833	62,644
Bhabbar grass	2563	898	1436	555	1815	927	535	1988
Fodder/Grazing	–	1381	–	1628	–	916	–	908
Medicinal herbs								
a. Dioscorea	31.5		53.3		0.5		13	
b. Dhoop	251.9		216.6		326		202.5	
c. Kaur	61		32.1		34.3		43	
d. Guchhi	120.9		47.5		49		36.3	
e. Kala-Zira	0.5		–		–		–	
f. Mushakbala	183.9		107.9		48.3		148.7	
g. Tej Patta	66.3		74.5		67.5		30.8	
h. Banaksha	9.7		4.7		7.1		3.9	
i. Chilgoza							–	
j. Kuth							13.4	
k. Others.							994.2	
Total (Med plants)	4750.3	23,546	2593.9	73,296	1882.7	77,182	1485.8	4559
Other Produce	439	191	–	5784	–	233	–	94
Grand Total	–	80,338						

Source: Himachal Pradesh Forest Statistics, 1996.

other herbs and edible wild resources — like fruits. Non-timber forest produce has a direct bearing on the livelihoods of the rural poor who depend heavily on the forests for earning their meals. 'Oleo-resin' extracted from *Pinus roxburghii* is the only product that is traded by the Himachal Pradesh State Forest Corporation. Collection permits are issued by the State Forest Department for the collection of other non-timber products of forests. Table 7.9 contains the 'out turn' of non-timber forest produce between 1991–93 and 1995–96 and displays its variations.

Box 7.2 — An Issue for Concern

Several species of medicinal and aromatic plants have either become extinct or have been listed as endangered species, mainly because of unscientific and poorly managed exploitation of these plants by pharmaceutical companies. *Pinus gerardiana* which yields the Chilgoza nuts, is another tree which is facing extinction and has already been listed as an endangered species.

Population Growth and Forests: A large proportion of the State's population depends on forests for earning their livelihoods. Forests also affect the ability of human beings in optimising the use of available resources by performing various balancing functions. In fact, all the three indicators of Human Development — income, health and education — influence, or are influenced by the quality of forests. There is sufficient evidence gathered through various studies to assert that high population growth is one of the factors responsible for deforestation. An increase in population adversely affects the forests by exerting pressure on the demand for food, fodder and fuel wood. Increased pressure on arable land for food production and the loss of land because of human settlements is perhaps one of the biggest environmental impacts of a rapidly growing population. An important indicator highlighting the relationship between forests and human beings is the per capita availability of forests. The per capita availability of forest in hectares for South Asia has been worked out as 0.08 hectares by the Food and Agriculture Organisation of the United Nations in its *Year Book, Forest Products, 1993*. This is the lowest when compared to that of other regions of the world. Table 7.10

TABLE 7.10: Per Capita Forest availability in the Asia and Pacific Region, 1993

<i>Region</i>	<i>Per capita forest (ha.)</i>
South Asia	0.08
South East Asia	0.49
East Asia	0.13
South Pacific	7.34
Asia Pacific	0.23
World	0.75

Source: Extracted from FAO, *Year Book, Forest Products, 1993* (Rome, FAO, 1993).

gives a comparison of the per capita availability of forests in the Asia and Pacific regions. The highest per capita availability of forests is in the South Pacific at 7.34 hectares. The average per capita forest availability for the world as a whole is 0.75 hectares.

The per capita forest availability in Himachal Pradesh (0.22 hectare) is similar to that in the Asia Pacific and is much lower than the world average. Per capita forest availability for all districts of Himachal Pradesh has been exhibited in Table 7.11. The Table compares per capita forest availability in Himachal Pradesh in 1991 with that of 1997 and it may be observed that this declined marginally during this period. Forest availability per capita was the highest in Kinnaur district in both the years. (0.89 hectare in 1991 and 0.80 hectare in 1997). In 1997, the districts with extremely low per capita availability of forests were Bilaspur, Hamirpur, Una and Solan with 0.05 hectare, 0.06 hectare, 0.09 hectare, and 0.10 hectare, respectively.

The districts with a per capita forest availability that were more than the State average, were Sirmaur (0.24 hectare), Lahaul & Spiti (0.27 hectare), Shimla (0.35 hectare), Chamba (0.46 hectare), Kullu (0.59 hectare) and Kinnaur (0.80 hectare) in ascending order. During the period between 1991 and 1997, there has been a considerable reduction in per capita availability of forests in the districts of Kinnaur (by 0.09 hectare), Chamba (by 0.05 hectare) and Kullu (by 0.05 hectare). Kangra and Lahaul & Spiti were the only districts where the per capita forest availability increased over this period.

Poverty and Forests: Whether the poor are victims or are agents of environmental degradation remains an issue of debate. The decision-making abilities of the poor — within a given institutional

TABLE 7.11: Per Capita Forest availability in Himachal Pradesh

<i>District/State</i>	<i>1991</i>		<i>1997</i>	
	<i>Forest cover (ha.)</i>	<i>Per capita forest (ha.)</i>	<i>Forest cover (ha.)</i>	<i>Per capita forest (ha.)</i>
Bilaspur	16,600	0.06	15,800	0.05
Chamba	2,01,700	0.51	2,06,100	0.46
Hamirpur	21,600	0.06	22,300	0.06
Kangra	1,43,300	0.12	1,74,400	0.13
Kinnaur	63,300	0.89	63,200	0.80
Kullu	1,94,900	0.64	2,04,400	0.59
Lahaul & Spiti	1700	0.05	8300	0.27
Mandi	13,01,00	0.17	1,31,500	0.15
Shimla	2,22,000	0.36	2,42,500	0.35
Sirmaur	1,01,900	0.27	1,02,400	0.24
Solan	41,800	0.15	4,22,000	0.10
Una	39,000	0.10	39,000	0.09
Himachal Pradesh	11,78,100	0.23	12,52,100	0.22

Source: Annual Season and Crop Report for 1997–98, Directorate of Land Records, Government of Himachal Pradesh.

and policy framework — are limited by the lack of necessary information. Under varying circumstances, it may be prudent to go in for large scale exploitation of forest resources just to earn one's meals. However, if exploitation of forest resources continues infinitely without any consideration to their replenishment, there is always a danger of letting the incomes of the poor dependent on forests become adversely affected. In such an eventuality, it becomes important to monitor the degree and pace of degeneration and to explore the possibility of alternate inputs for the poor to combat the implications of degeneration. Forests degeneration can affect the poor in three ways, which are (i) productivity of inputs for growing food can be affected adversely, (ii) forests and related produce is directly reduced, and (iii) the ability of natural resources to provide a cushion to the poor in the times of financial

hardship is reduced. The degeneration and degradation of forest resources has an adverse impact on the balancing functions of eco-systems — there is an increase in both ecological fragility and in the vulnerability of the poor to natural shocks. However, it is also true that forests, under certain circumstances, when exploited, augment the incomes of the poor.

The once dense forests of Himachal Pradesh are a victim not of the poor, but of the ruthless exploitation by private contractors prior to the existence of the Himachal Pradesh State Forest Corporation. In fact, the poor were exploited by the contractors who paid them lower wages. More often than not, the contractors resorted to illicit felling and would even purchase timber from the right holders at lower rates. Their sole motive was to maximise profits by exploiting the

maximum forest resources. These resources were exploited without any consideration of replenishment which adversely affected their availability to the poor. Although the traditional practices of forest resource exploitation do reflect a friendly attitude of the indigenous people towards forests, yet the adverse impacts of excessive dependence of the poor on forests is not being ruled out here.

Energy

Energy has a special role to play in the development process of any economy. The development of infrastructure and industries cannot be accomplished without using energy as an input. The path of development followed even by the developed countries has an inherent orientation towards intensive energy use — and this has been used in attaining higher growth rates and higher levels of development even at the cost of the environment. In fact, there has to be a trade off between the level of development and environment quality which, has an established connection with sustainable energy use. Given the facts that energy is required for quickening the pace of development in Himachal Pradesh and that the State's topography comprises of the relatively younger and fragile Himalayas, a fine balance

needs to be achieved and maintained between environment and development.

The availability and utilisation of energy from conventional sources, biomass and renewable resources has been discussed below. Energy from these sources is used mainly for cooking, heating and lighting — depending on the climatic conditions of the area, availability and cost. Electricity is mainly used for lighting and to certain extent, for space heating. Fuel wood is the single source of energy being used for cooking and space heating by approximately eighty percent population of the State. Coal and coke is mainly used by people living in the higher reaches of the State.

Conventional Sources of Energy

Hydroelectric Power: Ready availability, flexibility in utilisation and pollution free production — combined with the comparative advantage that the State has in its production make hydel power the most attractive source of energy. Himachal Pradesh has 20.65 per cent (20,000 MW) of the total available potential of hydel power generation in the country. Table 7.12 summarises the hydroelectric potential along the five river basins.

TABLE 7.12: Hydroelectric Potential Identified in Different River Basins

<i>River Basin</i>	<i>Total identified potential (MW)</i>	<i>Potential already tapped (MW)</i>	<i>Per cent of total</i>	<i>Projected contribution (MW)</i>	<i>Per cent of total</i>
Satluj	94000	1327	6.59	3599	17.87
Beas	4300	1550	7.70	2567	12.75
Chenab	3300	5	0.02	0	0.00
Ravi	2180	738	3.66	239	1.19
Yamuna	960	315	1.56	40	0.20
Total	20140	4219	19.54	6445	32.00

Source: <http://www.himachal.com>

TABLE 7.13: Hydroelectric Potential in Himachal Pradesh

<i>Basin</i>	<i>Projects under operation</i>	<i>MW generated</i>	<i>Projects under construction</i>	<i>MW to be generated</i>	<i>Projects under investigation</i>	<i>MW to be generated</i>
Yamuna	Andhra	16.95	Gumma SHP	3.00	Rupin	39.00
	Yamuna Projects	537.37			Chirgaon-gaon	46.00
	Giri	60.00			Renuka Dam	40.00
	Gumma	3.00			Paudital Lassa	40.00
					Tangnu Romai	44.00
					Shalvi	8.25
Satluj					Sawara Kuddu	144.00
					Nerwar	4.70
	Rongtong	2.00	Bhaba Aug. Scheme	3.00	Thopan Powari	400.00
	SVP Bhaba Chaba	120.00	Ghanvi	22.50	Baspa Stage-I	210.00
	Bhakra Dam	1200.00	Nathpa Jhakri	1500.00	Keshang	120.00
	Rukti	1.50	Rampur	680.00	Shongtong Karcham	225.00
Beas	Nogli Stage-I	2.50	Baspa		Rampur	680.00
	Beas Satluj Project	990.00	Larji	126.00	Nogli Stage-II	3.50
	Uhl Stage-II	60.00	Parbati Stage-II	800.00	Kalath	60.00
	Baner	12.00	Uhl Stage-II	60.00	Parbati Stage-I, II & III	2051.00
	Pong Dam	360.00			Patikari	20.00
	Uhl Stage-I	110.00				
Ravi	Binwa	6.00				
	Gaj	10.50				
	Gharola	0.05	Holi	3.00	Bajoli Holi	200.00
	Bhuri Singh P/House	0.45	Chamera Stage	300.00	Kitehar	240.00
	Chamera Stage-I	540.00	Sal-II	2.00	Bharmour	40.00
	Bharmour Micro	0.02			Sal-I	8.25
Chenab	Baira Sieul	180.00			Holi	3.00
	Sirru	0.10			Harsar	60.00
	Shansha	0.20			Chamera Stage-II	300.00
	Killar	0.30			Siul	7.50
Total	Billing	0.20				
	Thirot	4.50				
		4219.39		3499.50		5006.20

Source: Annual Administration Report, Himachal Pradesh State Electricity Board, 1997.

It is evident from the table that only 20.95 per cent of the total available potential of hydel power has so far been exploited in the State. A summary of the hydel projects being constructed and already in production is given in Table 7.13. Keeping in view the limited resources at the disposal of the State Government and the urgency to exploit available potential, private investment is being invited in this sector. Efforts are being made to speed up the construction of projects already started and to identify new projects. Even if the existing potential of hydel power in the State is fully exploited, it can play a significant role in mitigating never ending shortage of power in the country's northern region. However, an important issue that needs serious consideration is that technological advances may drastically reduce production and other operational costs

of energy from non-conventional and renewable sources.

Power Generation and consumption trends have been displayed in Table 7.14 and their graphical representation is contained in Charts 7.1 and 7.2.

It is evident that after 1991–92, Himachal Pradesh has been consuming more electricity than it produces. Also, the per capita consumption of electricity has increased from 60 kWh in 1980–81, to 198 kWh in 1990–91 and to 303 kWh in 1996–97. With the increase in population and technological advances, this consumption level is likely to go up further. As the State Government has already achieved the target of complete rural electrification, efforts are on to cover any hamlets and isolated houses.

TABLE 7.14: Power Generation and Consumption in Himachal Pradesh

Year	Installed (capacity in MU)	Generated (MU)	Purchased (MU)	Consumed (MU)	Consumers (no.)	Per capita electricity consumed	
						(kWh)	kgcr
1950–51	4.3	0.4	–	1.0	–	–	–
1966–67	5.1	2.3	–	24.3	–	–	–
1970–71	51.3	52.8	138.6	112.0	–	–	–
1971–72	31.0	137.6	166.3	137.9	1,79,616	39	27.3
1980–81	128.0	245.1	265.4	264.7	4,42,493	60	42
1985–86	134.3	596.8	392.1	563.3	7,00,270	119	83.3
1990–91	272.3	1262.4	1058.7	1008.7	9,58,669	198	138.6
1991–92	272.3	1050.4	1200.7	1022.0	10,08,336	198	138.6
1992–93	272.2	1087.4	1256.2	1083.3	10,51,440	206	144.2
1993–94	272.2	976.6	1339.0	115.6	10,87,921	217	151.9
1994–95	272.2	1131.7	1685.4	1339.7	11,29,878	248	173.6
1995–96	277.0	1285.4	1926.4	1597.7	11,76,914	292	204.4
1996–97	299.5	1252.0	2019.0	1758.0	12,31,101	303	212.1
1997–98	229.5	1306.0	2287.6	1946.5	–	–	–

Source: Anon. 2000, Economic Growth of Himachal Pradesh, Department of Economics and Statistics, Himachal Pradesh.

CHART 7.1
Electricity Generation and Consumption Pattern in Himachal Pradesh

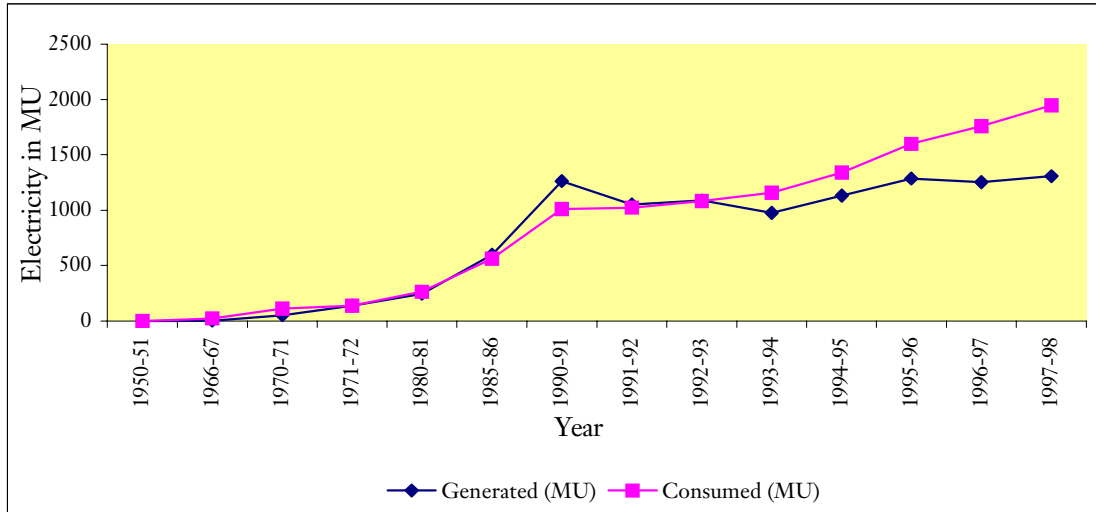


CHART 7.2
Per Capita Electricity Consumed (kW/h)

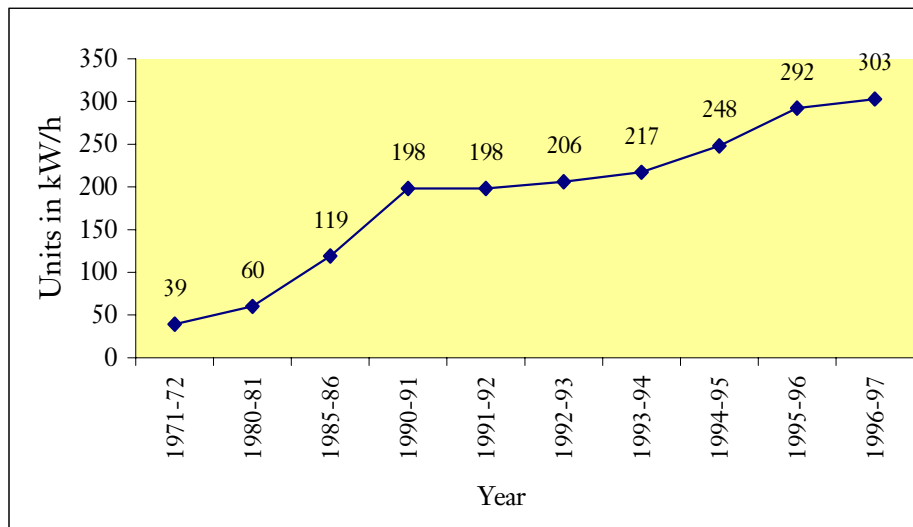


Table 7.15 shows the district-wise per capita consumption of electricity. It is evident from the table that this is the most in the Shimla district for the domestic sector while the Solan district tops in industrial sector per capita electricity consumption. Solan also exhibits the maximum per capita electricity consumption in the agriculture sector.

Consumption trends of LPG (Cooking Gas): LPG is mainly used in the domestic sector in Himachal Pradesh as its scope for commercial use is limited. Baddi, in Solan district is the only area where LPG has significant commercial use. To ensure the availability of LPG to every village, there are 78 distribution counters and 256 extension counters throughout the State. The

TABLE 7.15: District-wise Per Capita Consumption of Electricity (1999–2000)

(Units per kWh)

<i>Districts</i>	<i>Population 1999</i>	<i>Domestic*</i>		<i>Industrial agriculture</i>		<i>Total</i>	
		<i>kWh</i>	<i>Kilo calorie per person</i>	<i>kWh</i>	<i>kWh</i>	<i>kWh</i>	<i>Kilo watt per person</i>
Bilaspur	3,48,865	417.90	11,70,120	629.05	1.15	872.58	24,43,224
Chamba	4,70,472	422.18	11,82,104	85.24	8.29	300.62	8,41,736
Hamirpur	4,21,552	401.61	11,24,508	12.50	0.44	191.51	5,36,228
Kangra	13,67,902	470.30	13,16,840	10.80	0.16	113.90	3,18,920
Lahaul & Spiti	82,242	369.28	10,33,984	8.67	4.11	216.58	6,06,424
Kullu	3,62,366	458.29	12,83,212	10.59	1.30	166.11	4,65,108
Kinnaur	35,340	369.28	10,33,984	14.80	1.44	216.18	6,05,304
Mandi	9,14,733	417.57	11,69,196	9.03	0.38	80.64	2,25,792
Shimla	7,19,908	1133.55	31,73,940	4.47	0.01	259.65	7,27,020
Sirmaur	4,52,400	570.73	15,98,044	423.21	3.48	556.76	15,58,928
Solan	4,62,442	607.60	17,01,280	1289.68	14.20	1525.50	42,71,400
Una	4,38,257	532.73	14,91,644	62.59	5.66	260.63	7,29,764
Himachal Pradesh	60,76,479	484.40	13,56,320	182.91	2.72	360.87	10,10,436

Source: Himachal Pradesh State Electricity Board, 2000.

State Government has been making efforts to encourage the consumption of LPG to counteract the consumption of firewood and to reduce pressure on the forests. Table 7.16 contains district-wise per capita consumption of LPG.

In the year 1999–2000, there were 4,28,486 consumers of LPG in the State and 34,36,200 cylinders were consumed. The maximum consumption of LPG was in the Kangra district followed by the Shimla district, and the minimum consumption was in Kinnaur. Although the consumption of LPG has increased over the years, yet its per capita use is — relatively low especially in remote areas. One of the possible reasons for the low per capita consumption of

LPG in remote areas can be the weight of the LPG cylinders — where in the absence of a home delivery system, people have to carry them, and in rural areas this often involves steep climbs and long distances.

Consumption Trends of Kerosene Oil: Kerosene is used mainly for domestic purposes as its consumption in the commercial sector is not very large. Between 1991 and 2000, the consumption of kerosene doubled in all the districts of Himachal Pradesh (Table 7.17). In 1991–92 the total consumption of kerosene in the State was 44,618 kilolitres, and this increased to 79,857 kilolitres in the year 1999–2000. Details of the consumption pattern through the districts is displayed in

TABLE 7.16: District-wise Number of Consumers and Consumption of LPG

District	Number of consumers			Consumption (number of cylinders)		Per capita consumption of LPG		
	Single cylinder	Double cylinder	Total	Domestic	Commercial	Domestic (kg per person)	Kilo calorie per person	Commercial
Bilaspur	15,573	13,373	28,946	1,44,224	565	29.08	11,92,280	0.04
Chamba	11,940	8835	20,775	1,0,5096	1264	53.14	21,78,740	0.06
Hamirpur	47,242	26,868	74,110	2,87,378	172	18.24	7,47,840	0.01
Kangra	1,04,610	77,202	1,81,812	6,85,931	1736	24.31	9,96,710	0.03
Kinnaur	13,312	5667	18,979	58,250	0	17.37	7,12,170	0.00
Kullu	8386	15,514	23,900	1,27,329	5537	33.73	13,82,930	0.35
Lahaul & Spiti	3080	3006	6086	28,157	0	15.78	6,46,980	0.00
Mandi	53,574	27,526	81,100	3,74,996	573	29.40	12,05,400	0.01
Shimla	82,418	71,198	1,53,616	5,56,164	13,036	15.76	6,46,160	0.40
Sirmaur	17,552	15,490	33,042	2,17,371	2205	24.80	10,16,800	0.11
Solan	35,252	36,299	71,551	3,14,688	3182	17.25	7,07,250	0.16
Una	35,547	26,262	61,809	2,77,616	1231	19.35	7,93,350	0.06
Himachal Pradesh	42,84,86	3,27,240	4,28,486	34,36,200	29,501	21.37	8,76,170	0.11

Source: Director, Himachal Pradesh State Food and Supply Department, 2000, and Managing Director, IOC, Shimla, 2000.

the Table 7.17. A possible reason for the low consumption of kerosene per capita in Kullu may be the easy availability of fuel wood from the forests and at the same time, a relatively better road connectivity ensures access to other sources of energy.

Consumption Trends of Coke and Coal: Both coke and coal are consumed mainly in the cold areas of the State — the districts of Chamba, Kinnaur, Lahaul & Spiti and Shimla. The consumption pattern of the State is displayed in Table 7.18. The consumption of coal has actually decreased from 74,283 quintals in 1996, to 69,528 quintals

in 2000. This decrease in consumption can be partially attributed to an increase in awareness amongst the people about the potential harmful effects of the burning of coal to the environment and mainly due to the Government's decision to ban the use of coal in all government offices.

Consumption Trends of Fuel Wood: Traditionally, fuel wood has been the main source of energy in the entire State because of its ready availability. About 6–8 kg of fuel wood is consumed per day per household in the State and its annual per capita consumption has been estimated at 785 kg. The level of fuel wood consumption is

TABLE 7.17: Number of Consumers and Consumption of Kerosene Oil

District	Consumption (kilolitres)			Year 2000		Per capita consumption	
	1991-92	1996-97	1999-2000	Ration card holders	Population*	Kltr/person	Kilo calorie per person
Bilaspur	2118	3036	3871	77,214	3,54,355	10.92	2,27,136
Chamba	3842	4448	5413	68,535	4,24,734	12.74	2,64,992
Hamirpur	3212	4765	5604	99,236	4,73,736	11.83	2,46,064
Kangra	10,304	16,503	19,132	2,88,167	14,92,557	12.82	2,66,656
Kinnaur	3025	4226	5524	18,074	83,495	66.16	13,76,128
Kullu	805	1100	1249	75,204	3,76,373	3.32	69,056
Lahaul & Spiti	686	989	714	8273	38,254	18.66	3,88,128
Mandi	5025	9316	10,757	1,96,751	9,93,635	10.83	2,25,264
Shimla	6271	8645	10,633	1,29,825	7,15,268	14.87	3,09,296
Sirmaur	2228	3762	4623	74,288	4,23,627	10.91	2,26,928
Solan	3950	5586	6537	73,632	3,99,994	16.34	3,39,872
Una	3152	4463	5800	96,932	4,75,205	12.21	2,53,968
Himachal Pradesh	44,618	66,839	79,857	12,06,131	62,51,233	12.77	2,65,616

Source: Director, Himachal Pradesh State Food and Supply Department, 2000.

mainly related to the natural resource base and the climatic conditions of an area. In the cold areas of Chamba, Lahaul & Spiti and Kinnaur, the average per capita consumption is upto 1000 kg whereas, it is around 500-550 kg in the lower areas (Table 7.19). The forests of Himachal are under great pressure as 82 per cent of the total population of the State is directly or indirectly dependent on fuel wood. Generally, fire wood is not purchased from authorised depots, but is collected from nearby jungles.

Non-conventional Sources of Energy

Bio-gas and solar energy are two sources of non-

conventional energy which are being widely used in the State. In confirmation with the guidelines of National Bio-Gas Development Programme, the use of bio-gas has been encouraged since 1984-85, and the State has identified potential areas for the implementation of the programme. Initially, the programme was very popular in the low and mid hills, but due to functional problems, the efficiency of bio-gas plants came down in winter. The relatively high cost of labour and other inputs, have been the reasons responsible for the declining popularity of bio-gas use in the State.

Solar energy is the second non-conventional source being encouraged in the State and both,

TABLE 7.18: Number of Consumers and Consumption of Coal/Coke

<i>District</i>	<i>Consumption (in quintals)</i>		<i>Population 1999</i>	<i>Per capita consumption</i>	
	<i>1996–97</i>	<i>1999–00</i>		<i>(per kg of coal)</i>	<i>Kilo calorie per person</i>
Bilaspur	n.a.	n.a.	3,48,865	0.00	n.a.
Chamba	4124	4815	4,70,472	1.02	4080
Hamirpur	n.a.	n.a.	4,21,552	0.00	n.a.
Kangra	n.a.	n.a.	13,67,902	0.00	n.a.
Kinnaur	18,633	17,992	82,242	21.88	87,520
Kullu	n.a.	n.a.	3,62,366	0.00	n.a.
Lahaul & Spiti	24,286	25,076	35,340	70.96	2,83,840
Mandi	n.a.	n.a.	9,14,733	0.00	n.a.
Shimla	27,240	21,645	7,19,908	3.01	12,040
Sirmaur	n.a.	n.a.	452400	0.00	n.a.
Solan	n.a.	n.a.	462442	0.00	n.a.
Una	n.a.	n.a.	438257	0.00	n.a.
Himachal Pradesh	74283	69528	6076479	1.14	4560

Source: Director, Himachal Pradesh State Food and Supply Department, 2000.

TABLE 7.19: Biome-wise Per Capita Consumption of Fuel Wood

<i>Biome zone</i>	<i>District</i>	<i>Per capita consumption of fuel wood</i>
A	(1) Kinnaur (2) Lahaul & Spiti	1000 kg/annum
B	(3) Kullu (4) Chamba	800 kg/annum
C	(5) Shimla (6) Kangra	600 kg/annum
D	(7) Sirmaur (8) Solan (9) Bilaspur (10) Una (11) Hamirpur (12) Mandi	500 kg/annum

Source: ICIMOD, Energy use in Mountain Areas, February 1999.

TABLE 7.20: District-wise Biomass Dependency

<i>District</i>	<i>Population 1991</i>	<i>Per cent population using biomass*</i>	<i>Per cent rural population using biomass</i>	<i>Per cent urban population using biomass</i>
Bilaspur	2,95,357	90.770	94.85	24.57
Chamba	3,93,286	85.221	80.60	14.56
Hamirpur	3,69,128	91.682	96.51	30.11
Kangra	11,74,072	88.307	91.02	28.78
Kinnaur	71,270	73.517	72.52	0.00
Kullu	3,02,432	85.279	92.62	16.52
Lahaul & Spiti	31,294	84.364	84.30	0.00
Mandi	7,76,372	88.815	95.94	18.92
Shimla	6,17,404	66.187	89.29	6.23
Sirmaur	3,79,695	84.271	92.51	19.45
Solan	3,82,268	73.173	85.00	7.88
Una	3,78,269	91.073	94.86	49.12
Himachal Pradesh	51,70,847	83.967	90.96	16.78

* Biomass includes Fuel wood, cow dung, charcoal, bio-gas and crop residues.

Source: Census of India, 1991.

solar thermal and photovoltaic systems are in use. Solar energy after being converted to thermal energy is utilised for water heating, space heating and cooking. Solar photovoltaic systems are particularly useful in lighting households and small home appliances in remote areas where continuous supply of hydro-electricity is relatively erratic.

Biomass Dependency and Ecological Impacts: The three main sources of biological fuel commonly used in Himachal are fuel wood, animal dung and agriculture residue. Biomass dependency of the State as whole is quite high and 84 per cent of its total population are dependent on bio-mass energy for cooking only. The ready availability of fuel wood has the people of Himachal using fuel

wood at will. The percentage of population using fuel wood is the highest in Hamirpur (91.07 per cent), followed by Una (89.84 per cent), Bilaspur (87.58 per cent) and Mandi (87.49 per cent). The percentage of population using fuel wood is the lowest in Shimla at 64.86 per cent. The details of consumption patterns are displayed in Table 7.20.

The level of biomass dependency varies according to the living habits of people and is related intimately with local ecological resources and traditions. In the State, 16.78 per cent of the urban population use biological resources such as fuel wood, charcoal, agricultural residue etc. and this high use even in urban areas, may be the result of the relative accessibility of these fuels and their perceived low cost. 90.96 per cent of the

rural population is dependent on biological resources. Proximity of forests and low economic status are the reasons responsible for high consumption of biological energy resources in rural areas. Firewood collection from forests, which involves lopping and sometimes, the illegal felling of trees, poses a major environmental problem. The present rate of consumption of firewood as a source of energy is extremely high in almost all the districts of the State. High rate of extraction of fuel wood may lead to a situation where deforestation is higher than regeneration which can only spell danger for the environment.

Forecasting Energy Demand

There are a lot of factors which influence the choice of the use of a particular source of energy. The rate and pattern of economic activities, the efficiency of energy use, the state of technology and availability of substitutes are few important factors which help in deciding the use of a source of energy. The following text attempts to forecast the energy demand in Himachal Pradesh by 2021. Other than the availability of substitutes, it is assumed that all other factors influencing energy demand remain unchanged. To help forecast the future in this regard, four different scenarios have been simulated — Scenario (I) If the same trend in consumption of different sources of energy continues, Scenario (II) If the supply of LPG and kerosene is augmented by 10 per cent with an objective to reduce consumption of fuel wood, Scenario (III) If the supply of LPG and kerosene is augmented by 20 per cent with an objective to reduce consumption of fuel wood, and Scenario (IV) If the supply of LPG and kerosene oil is augmented by 30 per cent with an objective to reduce consumption of fuel wood.

The energy requirement from different

sources in 2001, is given in Table 7.21. While making these assumptions, it is also assumed that population does not change. An increase in population is bound to increase the overall demand for energy, yet this forecast gives an idea about the proportions in which different sources of energy will be demanded by the year 2021. The state of technology is also assumed to be static — though there is every possibility of changes which will also affect the patterns of consumption.

Water Resources

Richly endowed with perennial rivers that flow down steep gradients in mountain catchments, Himachal has a vast amount of water resources. These resources can well meet drinking water and irrigation requirements, and if exploited properly, they can also be instrumental in supplying hydel power to a large population. Drinking and irrigation requirements are also catered to by numerous springs, streams and infiltration galleries in limestone caverns. The use of ground water sources for irrigation is common in Una, Sirmaur, Solan and Kangra districts. The scope for harnessing ground water resources is still considerable as there has been little development in this area in the State.

Surface Water Resources

A large proportion of water resources of the State comprise of surface water flow which is fed by the glacial melt in the upper Himalayan reaches. The ecological role played by this glacial melt in the sustenance of surface water resources is vital. A majority of the 601 glaciers in the State are of a small size with an accumulation zone of two to four sq. km. The Chandra Bhaga basin has the maximum number of glaciers with an

TABLE 7.21: District-wise Requirement of Different Sources of Energy in Year 2001

<i>District</i>	<i>Electricity (million kWh)</i>	<i>LPG (million kg)</i>	<i>Kerosene (million kltr)</i>	<i>Coal (tonnes)</i>	<i>Fuel wood (thousand tonnes)</i>
Bilaspur	31.73	0.25	0.40	0.00	181.84
Chamba	14.79	0.19	0.63	501.87	393.62
Hamirpur	8.35	0.48	0.52	0.00	217.89
Kangra	16.19	1.18	1.82	0.00	852.70
Kinnaur	1.85	0.10	0.56	1865.05	85.24
Kullu	6.30	0.23	0.13	0.00	303.30
Lahaul & Spiti	0.79	0.47	0.07	2585.14	36.43
Mandi	7.69	0.65	1.03	0.00	476.51
Shimla	19.42	0.96	1.11	2251.75	448.85
Sirmaur	26.32	0.38	0.52	0.00	236.33
Solan	73.98	0.57	0.79	0.00	242.49
Una	11.85	0.47	0.56	0.00	227.31
Himachal Pradesh	228.14	5.97	8.07	7207.13	4962.80

average size of 8.89 sq. km. and a substantial 23.69 per cent of the total basin has been covered by these ice bodies. The largest glacier in the State is the Bara Shigri along the Chander Bhaga and it covers 157 sq. km. with a length of 29

km. The glaciers of Himachal Pradesh are linear, their length varies between two km. and 25 km., and they are formed at altitudes of over 4000 metres. These glaciers are an important source of fresh water and serve as a natural reservoir

Box 7.3 — Policy Interventions that can Protect Forests

SA-Environment-6 and 7 clearly infer that the dependency on fuel wood can be substantially reduced by policy interventions that encourage the consumption of LPG and kerosene. Biomass dependency will keep decreasing as the consumption of other sources of energy increases. A crude analysis shows that if an identical pattern of consumption continues, the requirement of fuel wood would mean the removal of huge forest resources. The consumption of other sources of energy like LPG and kerosene has to be encouraged in order to protect them. It can easily be calculated from Table 7.22 that fuel wood consumption can be reduced by 5.41 per cent if the consumption of LPG and kerosene increases by 10 per cent; by 10.82 per cent if consumption of LPG and kerosene increases by 20 per cent and it would decrease by 16.22 per cent if the consumption of LPG and kerosene increases by 30 per cent. The factors of technological changes, the rise of population and the accessibility and affordability both of LPG and kerosene still need to be taken into consideration.

for the supply of water to the major rivers of north India in summer.

Rivers and Tributaries: Five major rivers of north India, namely the Satluj, Beas, Ravi, Chenab and the Yamuna have their catchments in Himachal Pradesh. The rain water run-off from the slopes, melting snow and the ice melt from the glaciers contribute to the waters of these perennial rivers. (SA-Environment-3.)

Ground Water Resources

The State has a total replenishable ground water reserve of 0.0366 hectare metres (ha m) per year and a net draft of 0.0053 ha m per year (Table 7.22). Most of the water drawn is used for irrigation purposes through tube wells. With the advancement of technology in the manufacture of pumps and with deep well drilling, the exploitation of ground water resources is increasing. In order to a strike balance between the demand and consumption of water, ground water utilisation becomes essential. In an effort to provide safe drinking water, a total of 5418 hand pumps have been installed in the State.

The unconsolidated sediments that occur in the inter-montane valleys and in the sub-montane tracts constitute the principal ground water reservoir. In general, hard rock terrain cannot support large ground water reserves. Kangra,

Box. 7. 4 — Glaciers – A Core Reserve

Almost all the glaciers in Himachal are in a state of constant recession and glaciers like the Bara Shigri, Gaglu and Sonapani decrease annually by 10 metres to 20 metres. However, during the Pleistocene era — which was the glaciation period — these glaciers had descended much lower, as is indicated by the presence of glacial debris. The ice fields, which were very extensive, are also much reduced in area and the existing glaciers in these mountains are the relics of an older and more extensive series of ice flows. The post Pleistocene glacial recession, and the recent episode of global warming have hastened the process of recession.

S.V. Srikantia and O.N. Bhargava, *Geology of Himachal Pradesh*, 1988 gives a detailed account of rivers and their tributaries in Himachal Pradesh.

Una, Hamirpur, Bilaspur, Mandi, Solan and Sirmaur are the districts where the dependency on ground water resources is higher — and these areas fall in the valleys of Nurpur, Una, Balh, Nalagarh and Paonta. All these districts are along the southwestern side of the State and fall in the Shiwalik hills and the lesser Himalayas.

Traditional Water Resources

The traditional water resource systems include

TABLE 7.22: Ground Water Availability

1. Total replenishable ground water sources:	0.03660 ha m yr.
2. Provision for domestic, industrial and other areas:	0.00731 ha m yr.
3. Available ground water resources for irrigation in net terms:	0.02929 ha m yr.
4. Balance ground water resources for future use in net terms:	0.02399 ha m yr.
5. Level of ground water development:	18.1%

Source: R.G. Arya, 'Water Resources of Himachal Pradesh' (Council of Science and Technology and Environment).

streams, *kubls*, *baories*, open wells, step wells and *khaties* or *khataries*. These sources, in the rural and in the urban areas have been retained for use in the event of the failure of the regular water supply systems — and they supplement the requirements of several areas. As there is an imbalance between the supply and consumption of water — particularly among the poorer and weaker sections of the society — the traditional sources of water play a significant role even today.

Water Demand and its Implications

Based on population projections (on the basis of the average exponential growth rate of population between 1951 and 1991), the demand of water for drinking purposes has been forecast upto 2021 AD. The deficit represented by the

difference between future demand and the present level of supply, is an issue that needs to be addressed. This needs to be viewed with respect to available water resources and their exploitation on a sustainable basis. The demand for water, especially for drinking purposes shall have a significant impact and is likely to strain available water resources. Table 7.24 exhibits the demand for water in rural and urban areas based on population projections. The demand for water in urban areas has been projected by following the norm of 140 lpcd (litres per capita per day) whereas the norm of 70 lpcd has been followed for rural areas. The table shows that by 2021 AD, the urban areas of the State will require 150.49 mld of water — out of which over a third will be needed by Shimla alone. The demand for water in rural areas is much higher than in urban areas as majority of the population of the State lives in rural areas. This

TABLE 7.23: District-wise Water Sources

<i>District</i>	<i>Ground water</i>	<i>Surface water</i>	<i>Rain water</i>	<i>Traditional source</i>	<i>Other conventional sources</i>
Bilaspur	827	786	0	461	0
Chamba	1717	2433	3	2598	836
Hamirpur	1057	485	0	231	1
Kangra	1602	1317	11	1369	466
Kullu	0	3392	0	0	0
Lahaul & Spiti	1	290	0	57	0
Mandi	833	3924	0	1483	840
Shimla	233	3917	5	2518	9
Sirmaur	644	2249	0	535	9
Solan	344	1090	0	1215	316
Una	832	123	1	21	116
Himachal Pradesh	8186	20,223	20	10,512	2595

Source: R.G. Arya, 'Water Resources of Himachal Pradesh' (Council of Science and Technology and Environment).

will be 575.97 mld by 2012 AD which is 3.8 times the demand for water in urban areas.

Impact on Water Resources

With the increase in population, the demand for water will go up in the State. Substantial ground water reserves are available only in the five districts located in Shiwaliks and the lower Himalayan ranges. Thus a vast area of the State remains dependent on surface water sources — mainly on streams and *kubls*. Due to the abundance of surface water resources, the pressure on ground water resources is much lower as is clear from the fact that the level of development of ground water is just 18.1 per cent in the State. The total replenishable ground water resource in these five districts is 0.02877 m ha m/year or 788.22 million litres per day. The ground water

resources available for domestic and other uses in these five districts stand at 0.00575 m ha m/year or 157.53 million litres per day. The requirement of water for domestic and other uses will have risen to 424.24 million litres per day (mld) by 2021 AD.. This is bound to increase the pressure on water resources of the State and if surface water does not meet the demand, ground water resources will have to be developed for irrigation and drinking needs.

Environmental Pollution

If undertaken indiscriminately, development processes are capable of harming the environment. Every development project needs an integrated multi-disciplinary approach throughout a project cycle. Rejecting the hypo-

TABLE 7.24: Water Demand for Himachal Pradesh

(mld)

District/State	1999		2001		2011		2021	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Bilaspur	2.69	22.84	2.90	23.76	4.18	28.90	6.04	35.06
Chamba	4.70	30.18	5.03	31.5	7.06	38.96	9.92	48.12
Hamirpur	3.63	27.39	3.90	28.23	5.58	32.75	7.99	37.85
Kangra	8.30	90.9	8.63	94.44	10.46	114.43	12.67	138.37
Kinnaur	—	5.75	—	5.96	—	7.13	—	8.53
Kullu	2.99	23.61	3.13	24.71	3.88	31	4.82	38.89
Lahaul & Spiti	—	2.47	—	2.55	—	2.96	—	3.46
Mandi	7.64	59.57	7.89	62.1	9.31	76.45	10.98	94.12
Shimla	21.75	37.7	23.81	38.47	37.45	41.6	58.91	42.52
Sirmaur	6.05	28.14	6.48	29.3	9.20	35.81	13.06	43.65
Solan	7.63	27.19	8.22	29.15	11.92	36.12	17.27	44.57
Una	4.83	27.86	5.10	28.84	6.71	34.33	8.83	40.82
Himachal Pradesh	70.21	384.32	75.04	399.01	105.76	480.44	150.49	575.97

thesis that pollution or environmental degradation is a necessary by-product of development, the developed countries of the world have already introduced technological changes to reduce environmental pollution. However, developing countries are constrained with limited resources and are slow in introducing environment friendly technologies into their development strategies. Industrial waste flowing into water sources and the diffusion of harmful emissions into the air can be great hazards in attaining high levels — or even minimal levels — of human development.

The Himachal Pradesh State Pollution Control Board has stations at different places to monitor the quality of air and water.

Water Quality

The State Pollution Control Board has been monitoring water quality of only surface water resources. Surface water pollution is on the rise and can become a source of conflict between upstream and downstream users as the latter suffer from the pollution caused upstream. Pollution has an inverse relationship with the water quantity available for specific uses and with the rise in pollution levels, water loses its economic value. Good quality water (Class-A) that is used directly for drinking purposes, loses its value once it becomes polluted. Similarly, water used for bathing cannot be used after a certain level of pollution contaminates it. Polluted water can be used for drinking and other household purposes only after treatment and this results in cost add-ons. The State Pollution Control Board has established different stations along the basins of the rivers Satluj, Ravi and Beas for monitoring water quality. Table 7.25 gives an idea about the quality of water at these stations for the years

1993–94 and 1996–97. The table shows that the water quality improved in 1996–97 — which was three years after the monitoring began. The improvement is significant in the bacteriological count for all rivers. It is also observed that the pH decreases gradually from surface to deep waters, Dissolved Oxygen is lower in deep waters and Bio-oxidation Demand is generally high in summers and low in winters. It can easily be inferred that the in-flow from drains and *nullahs* needs pre-sedimentation to cut down the silt and sand carried by them; this can be done by lining these channels. Filtration and treatment can also be given if needed. Shortage of dissolved oxygen in the deeper water, may prove detrimental in the development of pisciculture and other aquatic life. This needs a separate in-depth analysis for exploring different possibilities of introducing techniques to improve the Dissolved Oxygen in deeper waters.

Water Quality and Health

The Total Coliform (TC) count has a direct relationship with water borne diseases. Diarrhoea and gastroenteritis are common in summers in the rural areas of the State. This problem is acute in the districts of Mandi, Hamirpur, Bilaspur and Kangra. Out of the 111 drinking water samples collected and tested by the State Pollution Control Board, 61 samples had less than 10 TC per hundred millilitres (ml); 55 had less than one fecal coliform per hundred ml; 48 had fecal streptococci; 14 had turbidity above the maximum permissible limit of 25 NTU and 17 had iron above the maximum permissible limit of 1.0 mg per litre. Government agencies undertake cleansing of the spot water sources — apart from chlorinating the water with extra doses during the summer months. The Health Department of Himachal Pradesh

TABLE 7.25: Water Quality at Different Sources

Sampling Point	June (1993–94)				June (1996–97)			
	pH	DO	BOD	TC	pH	DO	BOD	TC
River Beas	7.21	8.8	0.7	220	7.8	9	0.2	2400
Kullu D/S	7.08	8.4	0.7	920	7.8	8	0.2	7
Aut D/S	7.36	9.3	0.7	350	7.6	9.0	0.2	17
Pandoh dam U/S	7.32	9.4	0.7	70	6.8	6.3	0.2	2400
Mandi D/S	6.94	8.9	1.4	2400	7.6	7.5	0.2	2400
River Ravi								
Chamba U/S	7.2	7.7	0.5	46	7.4	8.1	1.3	7
Madhopur U/S	7.32	6.8	0.3	23	7.7	6.9	0.3	920
River Satluj								
Tatta Pani U/S	7.98	8.7	0.3	49	–	–	–	–
Slapper U/S	7.46	8.6	0.3	220	7.7	7.5	0.1	23
Slapper D/S	7.48	8.1	1.1	350	7.8	7.6	0.2	2400
Bhakhra D/S	7.51	8.4	0.4	13	8.2	8.5	0.2	26
Rampur U/S	7.76	9.2	0.2	180	8.2	7.1	0.3	110
Rampur D/S	7.48	9.1	0.2	180	8.3	6.5	0.5	350

Note: DO: Dissolved Oxygen, BOD: Bio-oxidation Demand and TC: Total Coliform

Source: Himachal Pradesh State Pollution Control Board.

undertook a survey of the water sources of the six towns of Chamba, Dharamsala, Manali, Shimla, Mandi and Solan to probe into the factors and problem of water borne diseases. It was found that household taps were the least contaminated while public hydrants and household vessels were most contaminated. It was also found that enteric infectious diseases were at a seriously high level with hepatitis and enteric fever (per 100,000 population) at 207.06 and 939.45, respectively.

Air Quality

The concentration of suspended particulate matter and other harmful emissions in

Himachal Pradesh is monitored by the State Pollution Control Board at different stations established for the purpose. The air quality at Damtal, where one of the stations is located, has deteriorated to dangerous proportions. A leading industrial hub in the Kangra valley, Damtal has been affected by poor air quality because of the concentration of stone crushers in a small area along the banks of the Chakki Khad. Excessive mining operations have further aggravated the problem. About 1500 truckloads of sand, boulders and crushed stone are removed every day from the river bed which is sinking at an alarming rate. The lowering of the river bed has also resulted in a fall in the water table.

The air quality at the four stations of Damtal, Parwanoo, Paonta Sahib and Shimla is exhibited in Table 7.26. Paonta Sahib and Parwanoo are the two other industrialised cities in the State with a relatively high concentration of medium and large-scale industries and these also suffer from air pollution which exceeds the all India ambient air quality standards of maximum suspended particulate matter.

The use of fossil fuel in *bukharies* during winter, alongwith uninterrupted vehicular traffic, are major contributors of air pollution in Shimla. The emission of gases from vehicles is so high that it causes the temperature to rise considerably. The concentration of suspended particulate matter as shown in the Table 7.26 clearly indicates excessive levels of air pollution which are much above the standards for ambient air quality. The use of fuel wood for cooking is a major cause of indoor air pollution and its impact is evidently higher in rural areas. Although no quantitative information regarding indoor air pollution is available yet its harmful effects are much higher than those of industrial and road air pollution.

Stress on Environment: District-wise Analysis by Ranking Method

The impact of different anthropogenic and developmental factors on the environment for various districts has been studied on the basis of certain ecological, developmental and demographic parameters. Some factors affect the en-

vironment more critically than others, and therefore these parameters have been classified into Primary and Secondary Parameters. The district with the maximum stress has been ranked first and that with the least stress has been ranked as twelfth. Districts with the same value for parameters are given the same rank. Ranks for secondary parameters have been assigned a weight of 1.5 emphasising the lesser importance of Secondary Parameters. A simple average of rankings for individual parameters (both Primary and Secondary) is then obtained to rank the districts.

All the twelve districts of Himachal Pradesh have been ranked on the basis of the above listed parameters (please refer to SA-Environment-4 and 5). It is clear from Table 7.27 that the environment in the Solan district is under the maximum stress, followed by Shimla, Bilaspur, Kinnaur and Kangra. Lahaul & Spiti has the least stress on its environment and incidentally, this is also district with the lowest population density in the State. It is also clear from part B of Table 7.27 that most of the districts with high stress level on environment fall in geophysical Zone D. This ranking analysis may give an inadequate idea about the exact amount of damage, or of the stress on environment yet, it is useful in making a inter-district comparison. Much more is required to be done to quantify environmental quality by identifying a set of measurable variables to obtain an index indicating the quality of environment. This index than can then be incorporated into the Human Development Index to give it a broader perspective.

TABLE 7.26: Air Quality Status

Air Quality Status at Damtal (Kangra)									
Year	Sulphur dioxide ($\mu\text{g}/\text{cu m}$)			Nitrogen dioxide ($\mu\text{g}/\text{cu m}$)			Suspended particulate matter ($\mu\text{g}/\text{cu m}$)		
	Min	Average	Max	Min	Average	Max	Min	Average	Max
1993	126.8	126.8	126.8	n.a.	n.a.	n.a.	8	253	857
1995	n.a.	n.a.	n.a.	1.3	4.6	10.3	55	247	754
Air Quality Status at Paonta Saheb, Sirmaur									
1990	1.4	3.8	13.6	3	12.4	56.7	9	193	845
1991	0	0.7	7.7	0	9.1	109	4	210	1050
1992	3.8	4.2	4.9	0.9	7.8	19.8	28	212.5	768
1993	0.5	0.5	0.5	3.4	10.1	24.3	8	194.5	654
1994	4	4	4	4.5	8.4	19.9	43	220	677
1995	4	4	4	3.6	7.9	12.5	8	225.5	674
Air Quality Status at Parwanoo, Solan									
1990	0.9	3.3	16.7	1.8	10.8	48.3	35	207	781
1991	0	0.8	35.4	3.8	43.4	171.8	19	221.5	1466
1992	1	1	1	0	22.9	121	1	224	1321
1993	0.5	0.5	1.2	0	6.7	91.4	8	195.5	600
1994	0	3.4	12.9	0	7.6	38.8	69	251.5	565
1995	n.a.	n.a.	n.a.	0.1	12.1	51.2	31	229	580
Air Quality Status at Shimla									
Year	Sulphur dioxide ($\mu\text{g}/\text{cu m}$)			Nitrogen dioxide ($\mu\text{g}/\text{cu m}$)			Suspended particulate matter ($\mu\text{g}/\text{cu m}$)		
	Min	Average	Max	Min	Average	Max	Min	Average	Max
1987	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	40	229	640
1988	BDL	BDL	4.2	2.6	18.1	118.2	11	264	784
1989	0.6	3.3	28.4	2	17	48.1	11	264	734
1990	BDL	3.3	16.9	2.1	17.7	48.1	22	252	604
1991	0.1	3.7	13.3	0.5	12.5	56.3	1	178	599
1992	3.7	15.7	52.8	0.9	10.4	50.9	6	138	936
1993	0.5	1.6	12.6	1.1	10.2	40.4	8	122	491
1994	3.8	5.2	6.2	1	12.1	34.2	26	170	552
1995	0.6	3.4	14.1	1.8	11.3	37.5	27	142	588

Note: n.a.: not available; BDL: Below detection limit.

Source: The Citizen' Fifth Report, Part II Statistical Database.

TABLE 7.27: District-wise Ranking of Environmental Stress

Part A			
<i>Rank</i>	<i>Ranking on the basis of Primary parameters</i>	<i>Ranking on the basis of Secondary parameters</i>	<i>Cumulative ranking</i>
I	Shimla	Solan	Solan
II	Bilaspur	Kinnaur	Shimla
III	Una	Shimla	Bilaspur
IV	Kangra	Bilaspur	Kinnaur
V	Kullu	Hamirpur	Kangra
VI	Mandi	Sirmaur	Una
VII	Sirmaur	Kangra	Sirmaur
VIII	Solan	Chamba	Mandi
IX	Hamirpur	Una	Hamirpur
X	Chamba	Mandi	Chamba
XI	Kinnaur	Lahaul & Spiti	Kullu
XII	Lahaul & Spiti	Kullu	Lahaul & Spiti

Part B		
<i>Geophysical Zone</i>	<i>Biomes</i>	<i>Districts</i>
A	Sub-arctic Alpine Cold Temperate	Kinnaur Lahaul & Spiti
B	Alpine Cold Temperate Warm Temperate	Kullu Chamba
C	Cold Temperate Warm Temperate	Shimla Kangra
D	Warm Temperate Sub-tropical	Sirmaur Solan Bilaspur Una Hamirpur Mandi

CHAPTER 8



THE ROAD AHEAD



The Road Ahead

In 1971, Himachal Pradesh became a full-fledged State. The five decades that preceded Statehood, were full of conflicting currents. Those were the heady days of the freedom movement — and it was a time that held both promise and uncertainty. Then came the point when Himachal sought a clear geographical and political identity to match its cultural and historical heritage. It was a stage of disappointments that were tinged with hope; it was a time when there seemed to be no road ahead — and if there was, it seemed to be covered in shadows. With the attainment of Statehood, Himachal Pradesh began taking the steps that seemed to have been long planned, but had been repeatedly thwarted. Today, to say that Himachal Pradesh has made immense progress as a State seems to simply announce the obvious. In several aspects, the State has established benchmarks that have become role models for the other hill States of the country. Since 1971, there has been a steady movement targeted at the well being of its people. This has stemmed from strong political and administrative commitments and the active involvement of the people. The roads, the schools, the expansion in health care all combine to create a picture that indicates human well being — or at least its outline. But this is hardly a time for complacency — at best, it may be said that the foundations are in position and it is now time to build the edifice. There are areas which need to be immediately addressed — the indications of

the rise of poverty, protection of the fragile environment, the remote possibility of the appearance of gender imbalances, the inadequate health facilities in the far flung areas, the need to create fresh employment avenues and develop new sectors of the economy. The core remains that Himachal has to protect what it already has, and yet move ahead.

Himachal packs an enormous geographical spectrum within its borders, low rolling hills touch the snowline and the arid tracts of the trans-Himalaya hold a distinctive terrain. There are cultural, religious and ethnic variations. Here, the finer nuances of policy interventions come into play and demand that the process of planning and governance address issues on a more localised basis — the requirements of the areas of the trans-Himalaya are hardly those of the lower hills. The fact that certain standardisations are required, are inescapable. The question that has to be addressed repeatedly is — ‘Will what is valid and holds good in a given situation and at a given place, also be valid and effective and desirable at another?’ The famous quip whether ‘one size fits all’ does not hold true in a plain State and it cannot be imagined to hold true given the enormity of diversity in Himachal Pradesh. The processes of planning and governance do not move with ‘near-mathematical precision’ — there are no assurances that certain inputs will lead to specific outputs. And

even if they do, will those be the best for the people? For example, the town of Manali has undergone a dramatic change over the last two decades and has emerged as the focal point of a strong tourism industry. It has dramatically altered lifestyles and has brought a 'visible' prosperity. While the subject still needs an in-depth analysis, it is also apparent that certain critical, but still unquantified factors that establish human well being have also been disturbed — the stability of family units, drug related abuse, and increased law and order requirements. Interestingly, the district of Kullu where the town of Manali is situated, ranks first in the Human Development Index and this is largely due to the Health and Life Index — the district does not fare very well in the Education and Income Indices. Appropriately, the indices of gender parity, education and health also need to be studied in the context of an order that is undergoing considerable changes.

In many ways, this example is an aberration from the rest of the State where the greatest strength has come from the adage of 'change with continuity'. The old traditions with basic human values still stand intact. Where policy interventions have altered the social system and have sought to correct regressive factors, the changes have been welcomed and have shown positive results — for example, there is a clear erosion of many of the undesirable aspects of the caste system. Hospitality, honesty, warmth and generosity are the accepted characteristics of the people of Himachal. It is no surprise that the words Himachal and 'a peaceful State' are often treated synonymously.

The State remains primarily rural and agrarian. However, as communications improve, as geographical barriers become less insurmountable, as avenues of employment open up in dif-

ferent sectors, certain processes of change are bound to occur. One of the indications that has emerged from the Census of 2001 is the increasing trend towards urbanisation. Shimla has added considerably to its population and the once 'small towns' of Himachal — Mandi, Sundernagar, Palampur and Solan, to name just a few — are expanding rapidly. The same holds true for the industrial towns that lie along the border with Punjab, Uttaranchal and Haryana — Parwanoo, Baddi, Nalagarh, Una and Paonta Sahib. This trend opens out a whole series of questions — why is this happening, are the people 'absentee farmers', are they landless or are they migrants, is it 'better' education, lifestyles and opportunities that are drawing them out of their homes. If the trend continues, it will mean a re-analysis of the division of resources and may hold currents that will affect rural Himachal as well.

Apart from several still intangible issues, the Human Development Report of Himachal Pradesh has raised certain specific ones. The methodology in computing the Human Development Index (HDI) for the State required certain innovations and these are explained in the Technical Note. This is also a good time to take stock of the State's human, biological and natural bases — the 'bank balance' as it were. With near-universal primary education close to becoming a reality, both the human resource base and the HDI take a quantum step forward. The quality of education needs to be addressed next — especially at the post-school stage; the danger remains of creating a body of youth that are 'educated, but unemployed — and unfortunately, unemployable'.

While the State may have a limited financial resource base, it has been richly bestowed with some of nature's greatest gifts. There are rich

and still well protected forests and substantial hydel resources. For the people, the forests yield herbs, firewood, fodder and building material and their presence acts as the lungs for a substantial chunk of north India — however, this treasure as it were, cannot be translated into the black and white of financial terms. Hydel power generation is likely to show results only in medium and long term perspectives. Tourism still remains a potential but nebulous area.

The Primary Sector still holds sway in the State and it seems that policy interventions are required to selectively promote the Secondary and Tertiary Sectors. While steady economic growth has been there, Himachal has been somewhat overshadowed by its immediate neighbours of Punjab and to an extent, by Haryana. However, there are some basic differences between Himachal and these States that question the validity of parity. The most obvious one is that of the terrain and the climate. And unfortunately, on various counts comparisons with the other hill States of the country cannot display an accurate picture — the States of the North East and Jammu & Kashmir have witnessed insurgency, terrorism and political turbulence, while the picture from neighbouring Uttaranchal as an entity (it formed a part of Uttar Pradesh), is not yet available.

Speaking of the State *per se*, it is safe to say that on the counts of real per capita income, the declining population growth rate, the spread of literacy and elementary education and on certain health indicators, Himachal has held its own

and surpassed many of the other States with whom comparisons have been drawn. However, there are issues of concern that require to be addressed — the incidence of poverty is high and many of the indicators on health and medical facilities leave much to be desired — like the Maternal Mortality Rate, nutrition and readily accessible medical facilities. The Census of 2001 has brought up issues like the appearance of gender disparity in infants in the age group of 0 to 6 years that may indicate a deeper malaise and the fact that a wider urbanisation seems to be making its appearance for the first time. Many points of concern that existed when Himachal came into being, still exist today — village connectivity and easy access to potable water are but two. Given the terrain, in many cases if people cannot come to where the services exist — then the services have to be taken to them.

While speaking of the broader picture of human development, the thresholds of various disciplines and the tools of analysis seem to merge. From hard economics and policy forecasting, from painstakingly collected and analysed data, to the history of a society and its priorities, from cultural interpretations to more arcane realms where philosophic content seeks both to question and to give answers to the purpose of human life, all the colours merge into a vast area where the shade of one's choosing may be selected. The minimisation of deprivation, and the ability of a society to give 'educated choices' or 'informed choices' to its people may perhaps be real empowerment and true human development.

Fact Sheets

State Fact Sheet: Himachal Pradesh

1. Geographical Area (sq. km.)	55,673 (as on 31 October 2002)					
2. Population	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	51,70,877	26,17,467	25,53,410	60,77,248	30,85,536	29,91,992
3. Percentage of Urban Population to Total Population	8.69 (1991)			9.79 (2001)		
4. Literacy Rate	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	70.91	81.15	62.01	81.09	88.49	73.85
5. Density of Population (persons per sq. km.)	246 (1991)			291 (2001)		
6. Sex Ratio (Females per 1000 Males)	976 (1991)			970 (2001)		
7. Decadal Growth Rate (%)	(+ 20.79 (1991)			(+ 17.53 (2001)		
8. Rural Households living below Poverty Line (1997-98)	<i>Total no. of rural households</i>	<i>No. of rural households living below poverty line</i>		<i>Rural households headed by women living below poverty line</i>		
	10,36,996	2,86,447 (27.59)*		41,850 (14.61)**		
9. Crude Birth Rate (no. of births per thousand of population)	36.27 (1991)			29.37 (2001)		
10. Infant Mortality Rate	1981			1991		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	143	160	126	82	84	81

continued

	<i>Total</i>	<i>Male</i>	<i>Female</i>
11. Life Expectancy at Birth (1993–97)	65.1	64.6	65.2
12. Number of Health Sub-centres per 1,00,000 population	22.89 (1981)	35.80 (1991)	34.30 (2001)
13. Number of Primary Health Centres per 1,00,000 population	1.40 (1981)	3.67 (1991)	5.00 (2001)
14. Number of Community Health Centres per 1,00,000 population	0.40 (1981)	0.68 (1991)	1.07 (2001)
15. Number of Hospitals per 1,00,000 population	0.86 (1981)	0.75 (1991)	0.82 (2001)
16. Number of Dispensaries per 1,00,000 population	4.42 (1981)	3.81 (1991)	2.55 (2001)
17. Number of Hospital Beds per 1,00,000 population	22.89 (1981)	129.90 (1991)	143.93 (2001)
18. Number of Health Sub-centres per 1000 sq. km.	17.60 (1981)	33.25 (1991)	37.15 (2001)
19. Number of Primary Health Centres per 1000 sq. km.	1.08 (1981)	3.41 (1991)	5.46 (2001)
20. Number of Community Health Centres per 1000 sq. km.	0.31 (1981)	0.63 (1991)	1.17 (2001)
21. Number of Hospitals per 1000 sq. km.	0.66 (1981)	0.70 (1991)	0.90 (2001)

continued

State Fact Sheet: Himachal Pradesh continued

22. Number of Dispensaries per 1000 sq. km.	3.39 (1981)	3.54 (1991)	2.78 (2001)
23. Number of Hospital Beds per 1000 sq. km.	17.7 (1981)	120.65 (1991)	157.11 (2001)
24. Gross Fertility Rate	152 (1981)		118 (1991)
25. Total Fertility Rate	4.70 (1981)		3.50 (1991)
		<i>1991</i>	
26. Enrolment Ratio (Primary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	85.04	89.56	80.35
		<i>1991</i>	
27. Enrolment Ratio (Secondary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	64.51	76.03	52.65
	<i>1981</i>		<i>1991</i>
28. Number of Fair Price Shops	<i>1999–2000</i>		
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	2873	2658	215
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	3214	3001	213
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	3895	3554	341

* as percentage of total number of rural households.

** as percentage of total number of rural households living below poverty line.

Source:

Figures at Serial No. 1

Statistical Outline of Himachal Pradesh, 1989.

Figures at Serial No. 2

Census of India, 1991 and Census of India, 2001, Himachal Pradesh Series-3, Paper-2 of 2001.

Figures at Serial

Census of India, 2001 Himachal Pradesh; Series-3, Paper-2 of 2001.

Nos. 3 to 7

Figures at Serial No. 8

District-wise results of the BPL Census according to the Census, 1998.

Figures at Serial

Occasional Paper No. 1 of 1997, titled 'District level estimates — feasibility and child mortality for 1991 and their inter-relations with other variables', by the RGI of India.

Nos. (9, 10, 24, 25)

Figures at Serial Nos.

Department of Health and Family Welfare, Himachal Pradesh., Shimla.

(11 to 23)

Figures at Serial

Enrolment Ratio worked out on the basis of enrolment figures received from the Department of Education, Government of Himachal Pradesh.

Nos. 26 to 27

Figures at Serial No. 28

Department of Food and Supplies, Government of Himachal Pradesh.

District Fact Sheet: Bilaspur

1. Geographical Area (sq. km.)	1167 (as on 31 October 2002)					
2. Population	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	2,95,387	1,47,555	1,47,832	3,40,735	1,71,074	1,69,661
3. Percentage of Urban Population to Total Population	5.67 (1991)			6.44 (2001)		
4. Literacy Rate	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	67.17	77.97	56.55	78.80	87.13	70.53
5. Density of Population (persons per sq. km.)	253 (1991)			292 (2001)		
6. Sex Ratio (Females per 1000 Males)	1002 (1991)			992 (2001)		
7. Decadal Growth Rate (%)	(+ 19.41 (1991)			(+ 15.35 (2001)		
8. Rural Households living below Poverty Line (1997-98)	<i>Total no. of rural households</i>	<i>No. of rural households living below poverty line</i>		<i>Rural households headed by women living below poverty line</i>		
	65,532	17,448 (26.62)*		2222 (12.73)**		
9. Crude Birth Rate (no. of births per thousand of population)	36.27 (1981)			27.89 (1981)		
10. Infant Mortality Rate	1981			1991		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	118	126	109	71	70	71

continued

District Fact Sheet: Bilaspur continued

11. Number of Health Sub-centres per 1,00,000 population	20.21 (1981)	32.16 (1991)	34.63 (2001)
12. Number of Primary Health Centres per 1,00,000 population	0.81 (1981)	3.72 (1991)	4.99 (2001)
13. Number of Community Health Centres per 1,00,000 population	0.40 (1981)	0.34 (1991)	1.47 (2001)
14. Number of Hospitals per 1,00,000 population	0.40 (1981)	0.34 (1991)	0.59 (2001)
15. Number of Dispensaries per 1,00,000 population	5.26 (1981)	4.74 (1991)	3.23 (2001)
16. Number of Hospital Beds per 1,00,000 population	20.21 (1981)	99.19 (1991)	112.99 (2001)
17. Number of Health Sub-centres per 1000 sq. km.	42.84 (1981)	81.41 (1991)	101.11 (2001)
18. Number of Primary Health Centres per 1000 sq. km.	1.71 (1981)	9.43 (1991)	14.57 (2001)
19. Number of Community Health Centres per 1000 sq. km.	0.86 (1981)	0.86 (1991)	4.28 (2001)
20. Number of Hospitals per 1000 sq. km.	0.86 (1981)	0.86 (1991)	1.71 (2001)
21. Number of Dispensaries per 1000 sq. km.	11.14 (1981)	12.00 (1991)	9.43 (2001)

continued

22. Number of Hospital Beds per 1000 sq. km.	42.84 (1981)	251.07 (1991)	329.91 (2001)
23. Gross Fertility Rate	151 (1981)		112 (1991)
24. Total Fertility Rate	4.50 (1981)		3.37 (1991)
	<i>1991</i>		
25. Enrolment Ratio (Primary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	92.04	92.56	91.50
	<i>1991</i>		
26. Enrolment Ratio (Secondary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	80.55	93.92	66.44
	<i>1981</i>		
27. Number of Fair Price Shops	<i>1991</i>		
	<i>1999–2000</i>		
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	107	101	6
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	148	141	7
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	168	161	7

* as percentage of total number of rural households.

** as percentage of total number of rural households living below poverty line.

Source:

Figures at Serial No. 1

Statistical Outline of Himachal Pradesh, 1989.

Figures at Serial No. 2

Census of India, 1991 and Census of India, 2001, Himachal Pradesh Series-3, Paper-2 of 2001.

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Nos. (9, 10, 23, 24)

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Department of Health and Family Welfare, Himachal Pradesh., Shimla.

(11 to 22)

Figures at Serial

Enrolment Ratio worked out on the basis of enrolment figures received from the Department of Education, Government of Himachal Pradesh.

Nos. 25 to 26

Figures at Serial No. 27

Department of Food and Supplies, Government of Himachal Pradesh.

District Fact Sheet: Chamba

1. Geographical Area (sq. km.)	6528 (as on 31 October 2002)					
2. Population	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	3,93,286	2,01,759	1,91,521	4,60,499	2,34,812	2,25,687
3. Percentage of Urban Population to Total Population	7.60 (1991)			7.50 (2001)		
4. Literacy Rate	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	44.70	59.96	28.57	63.73	77.22	49.70
5. Density of Population (persons per sq. km.)	60 (1991)			71 (2001)		
6. Sex Ratio (Females per 1000 Males)	949 (1991)			961 (2001)		
7. Decadal Growth Rate (%)	(+ 26.40 (1991)			(+ 17.09 (2001)		
8. Rural Households living below Poverty Line (1997-98)	<i>Total no. of rural households</i>	<i>No. of rural households living below poverty line</i>		<i>Rural households headed by women living below poverty line</i>		
	76,418	47,165 (61.72)*		6328 (13.42)**		
9. Crude Birth Rate (no. of births per thousand of population)	38.12 (1981)			35.18 (1991)		
10. Infant Mortality Rate	1981			1991		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	132	147	119	104	109	93

continued

11. Number of Health Sub-centres per 1,00,000 population	25.71 (1981)	39.41 (1991)	36.70 (2001)
12. Number of Primary Health Centres per 1,00,000 population	1.61 (1981)	4.58 (1991)	6.08 (2001)
13. Number of Community Health Centres per 1,00,000 population	0.96 (1981)	1.02 (1991)	1.52 (2001)
14. Number of Hospitals per 1,00,000 population	1.29 (1981)	0.76 (1991)	0.87 (2001)
15. Number of Dispensaries per 1,00,000 population	3.86 (1981)	3.31 (1991)	2.29 (2001)
16. Number of Hospital Beds per 1,00,000 population	25.71 (1981)	133.74 (1991)	132.68 (2001)
17. Number of Health Sub-centres per 1000 sq. km.	12.25 (1981)	23.74 (1991)	25.89 (2001)
18. Number of Primary Health Centres per 1000 sq. km.	0.77 (1981)	2.76 (1991)	4.29 (2001)
19. Number of Community Health Centres per 1000 sq. km.	0.46 (1981)	0.61 (1991)	1.07 (2001)
20. Number of Hospitals per 1000 sq. km.	0.61 (1981)	0.46 (1991)	0.61 (2001)
21. Number of Dispensaries per 1000 sq. km.	1.84 (1981)	1.99 (1991)	1.69 (2001)

continued

District Fact Sheet: Chamba continued

22. Number of Hospital Beds per 1000 sq. km.	12.25 (1981)	80.58 (1991)	93.60 (2001)
23. Gross Fertility Rate	161 (1981)		148 (1991)
24. Total Fertility Rate	4.90 (1981)		4.48 (1991)
	<i>1991</i>		
25. Enrolment Ratio (Primary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	68.38	83.59	52.67
	<i>1991</i>		
26. Enrolment Ratio (Secondary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	42.52	58.51	26.03
	<i>1981</i>		
27. Number of Fair Price Shops	<i>1991</i>		
	<i>1999–2000</i>		
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	259	242	17
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	304	283	21
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	359	322	37

* as percentage of total number of rural households.

** as percentage of total number of rural households living below poverty line.

Source:

Figures at Serial No. 1

Statistical Outline of Himachal Pradesh, 1989.

Figures at Serial No. 2

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Figures at Serial

Enrolment Ratio worked out on the basis of enrolment figures received from the Department of Education, Government of Himachal Pradesh.

Nos. 25 to 26

Figures at Serial No. 27

Department of Food and Supplies, Government of Himachal Pradesh.

District Fact Sheet: Hamirpur

1. Geographical Area (sq. km.)	1118 (as on 31 October 2002)					
2. Population	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	3,69,128	1,75,329	1,93,799	4,12,009	1,95,971	2,16,038
3. Percentage of Urban Population to Total Population	6.15 (1991)			7.32 (2001)		
4. Literacy Rate	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	74.88	85.11	65.90	83.16	90.86	76.41
5. Density of Population (persons per sq. km.)	330 (1991)			369 (2001)		
6. Sex Ratio (Females per 1000 Males)	1105 (1991)			1102 (2001)		
7. Decadal Growth Rate (%)	(+ 16.17 (1991)			(+ 11.62 (2001)		
8. Rural Households living below Poverty Line (1997-98)	<i>Total no. of rural households</i>	<i>No. of rural households living below poverty line</i>		<i>Rural households headed by women living below poverty line</i>		
	83,505	20,179 (24.16)*		3902 (19.34)**		
9. Crude Birth Rate (no. of births per thousand of population)	24.72 (1981)			25.36 (1991)		
10. Infant Mortality Rate	1981			1991		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	113	116	109	65	65	65

continued

District Fact Sheet: Hamirpur continued

11. Number of Health Sub-centres per 1,00,000 population	25.49 (1981)	36.84 (1991)	37.14 (2001)
12. Number of Primary Health Centres per 1,00,000 population	1.57 (1981)	2.71 (1991)	4.13 (2001)
13. Number of Community Health Centres per 1,00,000 population	0.31 (1981)	0.81 (1991)	1.21 (2001)
14. Number of Hospitals per 1,00,000 population	0.31 (1981)	0.27 (1991)	0.49 (2001)
15. Number of Dispensaries per 1,00,000 population	3.15 (1981)	2.98 (1991)	1.46 (2001)
16. Number of Hospital Beds per 1,00,000 population	25.49 (1981)	79.65 (1991)	105.34 (2001)
17. Number of Health Sub-centres per 1000 sq. km.	72.45 (1981)	121.65 (1991)	136.85 (2001)
18. Number of Primary Health Centres per 1000 sq. km.	4.47 (1981)	8.94 (1991)	15.21 (2001)
19. Number of Community Health Centres per 1000 sq. km.	0.89 (1981)	2.68 (1991)	4.47 (2001)
20. Number of Hospitals per 1000 sq. km.	0.89 (1981)	0.89 (1991)	1.79 (2001)
21. Number of Dispensaries per 1000 sq. km.	8.94 (1981)	9.84 (1991)	5.37 (2001)

continued

22. Number of Hospital Beds per 1000 sq. km.	72.45 (1981)	262.97 (1991)	388.19 (2001)						
23. Gross Fertility Rate	136 (1981)		97 (1991)						
24. Total Fertility Rate	4.30 (1981)		3.00 (1991)						
<i>1991</i>									
25. Enrolment Ratio (Primary Level)	<i>Total</i>								
		<i>Male</i>	<i>Female</i>						
	95.12	94.07	96.20						
<i>1991</i>									
26. Enrolment Ratio (Secondary Level)	<i>Total</i>								
		<i>Male</i>	<i>Female</i>						
	84.64	94.98	74.44						
<i>1981</i>									
27. Number of Fair Price Shops	<i>1981</i>			<i>1991</i>			<i>1999–2000</i>		
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	198	189	9	229	216	13	280	252	28

* as percentage of total number of rural households.

** as percentage of total number of rural households living below poverty line.

Source:

Figures at Serial No. 1

Statistical Outline of Himachal Pradesh, 1989.

Figures at Serial No. 2

Census of India, 1991 and Census of India, 2001, Himachal Pradesh Series-3, Paper-2 of 2001.

Figures at Serial

Census of India, 2001 Himachal Pradesh; Series-3, Paper-2 of 2001.

Nos. 3 to 7

Figures at Serial No. 8

District-wise results of the BPL Census according to the Census, 1998.

Figures at Serial

Occasional Paper No. 1 of 1997, titled 'District level estimates — feasibility and child mortality for 1991 and their inter-relations with other variables', by the RGI of India.

Nos. (9, 10, 23, 24)

Figures at Serial Nos.

Department of Health and Family Welfare, Himachal Pradesh., Shimla.

(11 to 22)

Figures at Serial

Enrolment Ratio worked out on the basis of enrolment figures received from the Department of Education, Government of Himachal Pradesh.

Nos. 25 to 26

Figures at Serial No. 27

Department of Food and Supplies, Government of Himachal Pradesh.

District Fact Sheet: Kangra

1. Geographical Area (sq. km.)	5739 (as on 31 October 2002)					
2. Population	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	11,74,072	5,80,021	5,94,051	13,38,536	6,60,224	6,78,312
3. Percentage of Urban Population to Total Population	5.05 (1991)			5.39 (2001)		
4. Literacy Rate	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	70.57	80.12	61.39	80.68	88.19	73.57
5. Density of Population (persons per sq. km.)	205 (1991)			233 (2001)		
6. Sex Ratio (Females per 1000 Males)	1024 (1991)			1027 (2001)		
7. Decadal Growth Rate (%)	(+ 18.50 (1991)			(+ 14.01 (2001)		
8. Rural Households living below Poverty Line (1997-98)	<i>Total no. of rural households</i>	<i>No. of rural households living below poverty line</i>		<i>Rural households headed by women living below poverty line</i>		
	2,65,740	63,972 (24.07)*		10,421 (16.29)**		
9. Crude Birth Rate (no. of births per thousand of population)	36.04 (1981)			28.21 (1991)		
10. Infant Mortality Rate	1981			1991		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	131	136	127	77	79	74

continued

11. Number of Health Sub-centres per 1,00,000 population	20.99 (1981)	32.88 (1991)	32.42 (2001)
12. Number of Primary Health Centres per 1,00,000 population	1.01 (1981)	2.64 (1991)	3.59 (2001)
13. Number of Community Health Centres per 1,00,000 population	0.30 (1981)	0.51 (1991)	0.90 (2001)
14. Number of Hospitals per 1,00,000 population	0.40 (1981)	0.60 (1991)	0.60 (2001)
15. Number of Dispensaries per 1,00,000 population	3.73 (1981)	3.24 (1991)	2.47 (2001)
16. Number of Hospital Beds per 1,00,000 population	20.99 (1981)	108.17 (1991)	105.49 (2001)
17. Number of Health Sub-centres per 1000 sq. km.	36.24 (1981)	17.26 (1991)	75.62 (2001)
18. Number of Primary Health Centres per 1000 sq. km.	1.74 (1981)	5.40 (1991)	8.36 (2001)
19. Number of Community Health Centres per 1000 sq. km.	0.52 (1981)	1.05 (1991)	2.09 (2001)
20. Number of Hospitals per 1000 sq. km.	0.70 (1981)	1.22 (1991)	1.39 (2001)
21. Number of Dispensaries per 1000 sq. km.	6.45 (1981)	6.62 (1991)	5.75 (2001)

continued

District Fact Sheet: Kangra continued

22. Number of Hospital Beds per 1000 sq. km.	36.24 (1981)	221.29 (1991)	246.04 (2001)
23. Gross Fertility Rate	146 (1981)		109 (1991)
24. Total Fertility Rate	4.80 (1981)		3.42 (1991)
	<i>1991</i>		
25. Enrolment Ratio (Primary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	89.70	90.42	88.97
	<i>1991</i>		
26. Enrolment Ratio (Secondary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	62.10	71.74	52.54
	<i>1981</i>		
27. Number of Fair Price Shops	<i>1991</i>		
	<i>1999–2000</i>		
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	670	635	35
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	751	719	32
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	865	824	41

* as percentage of total number of rural households.

** as percentage of total number of rural households living below poverty line.

Source:

Figures at Serial No. 1

Statistical Outline of Himachal Pradesh, 1989.

Figures at Serial No. 2

Census of India, 1991 and Census of India, 2001, Himachal Pradesh Series-3, Paper-2 of 2001.

Figures at Serial

Census of India, 2001 Himachal Pradesh; Series-3, Paper-2 of 2001.

Nos. 3 to 7

Figures at Serial No. 8

District-wise results of the BPL Census according to the Census, 1998.

Figures at Serial

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Nos. (9, 10, 23, 24)

Figures at Serial Nos.

Department of Health and Family Welfare, Himachal Pradesh., Shimla.

(11 to 22)

Figures at Serial

Enrolment Ratio worked out on the basis of enrolment figures received from the Department of Education, Government of Himachal Pradesh.

Nos. 25 to 26

Figures at Serial No. 27

Department of Food and Supplies, Government of Himachal Pradesh.

District Fact Sheet: Kinnaur

1. Geographical Area (sq. km.)	6401 (as on 31 October 2002)					
2. Population	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	71,270	38,394	32,876	83,950	45,353	38,597
3. Percentage of Urban Population to Total Population	– (1991)			– (2001)		
4. Literacy Rate	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	58.36	–	–	–	–	–
5. Density of Population (persons per sq. km.)	11 (1991)			130 (2001)		
6. Sex Ratio (Females per 1000 Males)	856 (1991)			851 (2001)*		
7. Decadal Growth Rate (%)	(+ 19.69 (1991)			(+ 17.79 (2001)*		
8. Rural Households living below Poverty Line (1997–98)	<i>Total no. of rural households</i>	<i>No. of rural households living below poverty line</i>		<i>Rural households headed by women living below poverty line</i>		
	10,899	2896 (26.57)*		334 (11.53)**		
9. Crude Birth Rate (no. of births per thousand of population)	34.74 (1981)			30.52 (1991)		
10. Infant Mortality Rate	1981			1991		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	257	242	270	123	124	122

continued

District Fact Sheet: Kinnaur continued

11. Number of Health Sub-centres per 1,00,000 population	30.23 (1981)	49.11 (1991)	38.12 (2001)
12. Number of Primary Health Centres per 1,00,000 population	5.04 (1981)	8.42 (1991)	20.25 (2001)
13. Number of Community Health Centres per 1,00,000 population	1.68 (1981)	4.21 (1991)	3.57 (2001)
14. Number of Hospitals per 1,00,000 population	3.36 (1981)	2.81 (1991)	2.38 (2001)
15. Number of Dispensaries per 1,00,000 population	3.36 (1981)	2.81 (1991)	0.00 (2001)
16. Number of Hospital Beds per 1,00,000 population	30.23 (1981)	190.82 (1991)	245.38 (2001)
17. Number of Health Sub-centres per 1000 sq. km.	2.81 (1981)	5.47 (1991)	5.00 (2001)
18. Number of Primary Health Centres per 1000 sq. km.	0.47 (1981)	0.94 (1991)	2.66 (2001)
19. Number of Community Health Centres per 1000 sq. km.	0.16 (1981)	0.47 (1991)	0.47 (2001)
20. Number of Hospitals per 1000 sq. km.	0.31 (1981)	0.31 (1991)	0.31 (2001)
21. Number of Dispensaries per 1000 sq. km.	0.31 (1981)	0.31 (1991)	0.00 (2001)

continued

22. Number of Hospital Beds per 1000 sq. km.	2.81 (1981)	21.25 (1991)	32.18 (2001)
23. Gross Fertility Rate	153 (1981)		136 (1991)
24. Total Fertility Rate	4.90 (1981)		4.00 (1991)
	<i>1991</i>		
25. Enrolment Ratio (Primary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	87.98	85.82	89.42
	<i>1991</i>		
26. Enrolment Ratio (Secondary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	58.55	65.45	51.04
	<i>1981</i>		
27. Number of Fair Price Shops	<i>1991</i>		
	<i>1999–2000</i>		
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	47	47	–
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	52	52	–
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	57	57	–

* as percentage of total number of rural households.

** as percentage of total number of rural households living below poverty line.

Source:

Figures at Serial No. 1

Statistical Outline of Himachal Pradesh, 1989.

Figures at Serial No. 2

Census of India, 1991 and Census of India, 2001, Himachal Pradesh Series-3, Paper-2 of 2001.

Figures at Serial

Census of India, 2001 Himachal Pradesh; Series-3, Paper-2 of 2001.

Nos. 3 to 7

Figures at Serial No. 8

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Nos. (9, 10, 23, 24)

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Department of Health and Family Welfare, Himachal Pradesh., Shimla.

(11 to 22)

Figures at Serial

Enrolment Ratio worked out on the basis of enrolment figures received from the Department of Education, Government of Himachal Pradesh.

Nos. 25 to 26

Figures at Serial No. 27

Department of Food and Supplies, Government of Himachal Pradesh.

District Fact Sheet: Kullu

1. Geographical Area (sq. km.)	5503 (as on 31 October 2002)					
2. Population	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	3,02,472	1,57,529	1,44,903	3,79,865	1,97,035	1,82,830
3. Percentage of Urban Population to Total Population	6.95 (1991)			7.92 (2001)		
4. Literacy Rate	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	54.82	69.64	38.53	73.36	84.55	61.24
5. Density of Population (persons per sq. km.)	55 (1991)			69 (2001)		
6. Sex Ratio (Females per 1000 Males)	920 (1991)			928 (2001)		
7. Decadal Growth Rate (%)	(+ 26.68 (1991)			(+ 25.60 (2001)		
8. Rural Households living below Poverty Line (1997-98)	<i>Total no. of rural households</i>	<i>No. of rural households living below poverty line</i>		<i>Rural households headed by women living below poverty line</i>		
	59,227	11,432 (19.30)*		1630 (14.26)**		
9. Crude Birth Rate (no. of births per thousand of population)	36.99 (1981)			32.63 (1991)		
10. Infant Mortality Rate	1981			1991		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	192	205	178	102	101	102

continued

11. Number of Health Sub-centres per 1,00,000 population	23.04 (1981)	31.41 (1991)	26.33 (2001)
12. Number of Primary Health Centres per 1,00,000 population	1.68 (1981)	3.64 (1991)	3.16 (2001)
13. Number of Community Health Centres per 1,00,000 population	0.42 (1981)	0.66 (1991)	1.32 (2001)
14. Number of Hospitals per 1,00,000 population	0.84 (1981)	0.33 (1991)	0.53 (2001)
15. Number of Dispensaries per 1,00,000 population	2.93 (1981)	2.31 (1991)	1.32 (2001)
16. Number of Hospital Beds per 1,00,000 population	23.04 (1981)	81.31 (1991)	105.83 (2001)
17. Number of Health Sub-centres per 1000 sq. km.	9.99 (1981)	17.26 (1991)	18.17 (2001)
18. Number of Primary Health Centres per 1000 sq. km.	0.73 (1981)	2.00 (1991)	2.18 (2001)
19. Number of Community Health Centres per 1000 sq. km.	0.18 (1981)	0.36 (1991)	0.91 (2001)
20. Number of Hospitals per 1000 sq. km.	0.36 (1981)	0.18 (1991)	0.36 (2001)
21. Number of Dispensaries per 1000 sq. km.	1.27 (1981)	1.27 (1991)	0.91 (2001)

continued

District Fact Sheet: Kullu continued

22. Number of Hospital Beds per 1000 sq. km.	9.99 (1981)	46.88 (1991)	73.05 (2001)
23. Gross Fertility Rate	157 (1981)		137 (1991)
24. Total Fertility Rate	4.90 (1981)		4.04 (1991)
	<i>1991</i>		
25. Enrolment Ratio (Primary Level)	<i>Total</i>		
	84.21	93.52	74.43
	<i>1991</i>		
26. Enrolment Ratio (Secondary Level)	<i>Total</i>		
	50.73	63.08	37.61
	<i>1981</i>		
27. Number of Fair Price Shops	<i>1991</i>		
	<i>1999-2000</i>		
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	155	146	9
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	212	201	11
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	341	323	18

* as percentage of total number of rural households.

** as percentage of total number of rural households living below poverty line.

Source:

Figures at Serial No. 1

Statistical Outline of Himachal Pradesh, 1989.

Figures at Serial No. 2

Census of India, 1991 and Census of India, 2001, Himachal Pradesh Series-3, Paper-2 of 2001.

Figures at Serial

Census of India, 2001 Himachal Pradesh; Series-3, Paper-2 of 2001.

Nos. 3 to 7

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Nos. (9, 10, 23, 24)

Figures at Serial Nos.

Department of Health and Family Welfare, Himachal Pradesh., Shimla.

(11 to 22)

Figures at Serial

Enrolment Ratio worked out on the basis of enrolment figures received from the Department of Education, Government of Himachal Pradesh.

Nos. 25 to 26

Figures at Serial No. 27

Department of Food and Supplies, Government of Himachal Pradesh.

District Fact Sheet: Lahaul & Spiti

1. Geographical Area (sq. km.)	13,835 (as on 31 October 2002)					
2. Population	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	31,294	17,224	14,070	33,224	18,413	14,811
3. Percentage of Urban Population to Total Population	— (1991)			— (2001)		
4. Literacy Rate	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	56.82	71.78	38.05	73.17	82.76	60.94
5. Density of Population (persons per sq. km.)	2 (1991)			2 (2001)		
6. Sex Ratio (Females per 1000 Males)	817 (1991)			804 (2001)		
7. Decadal Growth Rate (%)	(-) 2.51 (1991)			(+) 6.17 (2001)		
8. Rural Households living below Poverty Line (1997-98)	<i>Total no. of rural households</i>	<i>No. of rural households living below poverty line</i>		<i>Rural households headed by women living below poverty line</i>		
	6446	2445 (19.30)*		542 (14.26)**		
9. Crude Birth Rate (no. of births per thousand of population)	29.66 (1981)			28.14 (1991)		
10. Infant Mortality Rate	1981			1991		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	89	86	126	59	61	56

continued

District Fact Sheet: Labaul & Spiti continued

11. Number of Health Sub-centres per 1,00,000 population	28.04 (1981)	92.67 (1991)	105.35 (2001)
12. Number of Primary Health Centres per 1,00,000 population	3.12 (1981)	12.78 (1991)	27.09 (2001)
13. Number of Community Health Centres per 1,00,000 population	3.12 (1981)	6.39 (1991)	9.03 (2001)
14. Number of Hospitals per 1,00,000 population	3.12 (1981)	3.20 (1991)	3.01 (2001)
15. Number of Dispensaries per 1,00,000 population	24.92 (1981)	25.56 (1991)	15.05 (2001)
16. Number of Hospital Beds per 1,00,000 population	28.04 (1981)	306.77 (1991)	409.34 (2001)
17. Number of Health Sub-centres per 1000 sq. km.	0.65 (1981)	2.10 (1991)	2.53 (2001)
18. Number of Primary Health Centres per 1000 sq. km.	0.07 (1981)	0.29 (1991)	0.65 (2001)
19. Number of Community Health Centres per 1000 sq. km.	0.07 (1981)	0.14 (1991)	0.22 (2001)
20. Number of Hospitals per 1000 sq. km.	0.07 (1981)	0.07 (1991)	0.07 (2001)
21. Number of Dispensaries per 1000 sq. km.	0.58 (1981)	0.58 (1991)	0.36 (2001)

continued

22. Number of Hospital Beds per 1000 sq. km.	0.65 (1981)	6.94 (1991)	9.83 (2001)
23. Gross Fertility Rate	130 (1981)		122 (1991)
24. Total Fertility Rate	4.20 (1981)		3.77 (1991)
	<i>1991</i>		
25. Enrolment Ratio (Primary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	92.24	97.00	87.48
	<i>1991</i>		
26. Enrolment Ratio (Secondary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	73.36	77.89	87.48
	<i>1981</i>		
27. Number of Fair Price Shops	<i>1991</i>		
	<i>1999–2000</i>		
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	49	49	–
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	52	52	–
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	62	62	–

* as percentage of total number of rural households.

** as percentage of total number of rural households living below poverty line.

Source:

Figures at Serial No. 1

Statistical Outline of Himachal Pradesh, 1989.

Figures at Serial No. 2

Census of India, 1991 and Census of India, 2001, Himachal Pradesh Series-3, Paper-2 of 2001.

Figures at Serial Nos. 3 to 7

Census of India, 2001 Himachal Pradesh; Series-3, Paper-2 of 2001.

Figures at Serial No. 8

District-wise results of the BPL Census according to the Census, 1998.

Figures at Serial Nos. (9, 10, 23, 24)

Occasional Paper No. 1 of 1997, titled 'District level estimates — feasibility and child mortality for 1991 and their inter-relations with other variables', by the RGI of India.

Figures at Serial Nos. (11 to 22)

Department of Health and Family Welfare, Himachal Pradesh., Shimla.

Figures at Serial Nos. 25 to 26

Enrolment Ratio worked out on the basis of enrolment figures received from the Department of Education, Government of Himachal Pradesh.

Figures at Serial No. 27

Department of Food and Supplies, Government of Himachal Pradesh.

District Fact Sheet: Mandi

1. Geographical Area (sq. km.)	3950 (as on 31 October 2002)					
2. Population	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	7,76,372	3,85,746	3,90,626	9,00,987	4,47,271	4,53,716
3. Percentage of Urban Population to Total Population	7.18 (1991)			6.77 (2001)		
4. Literacy Rate	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	62.74	76.65	49.12	75.86	86.67	65.36
5. Density of Population (persons per sq. km.)	197 (1991)			228 (2001)		
6. Sex Ratio (Females per 1000 Males)	1013 (1991)			1014 (2001)		
7. Decadal Growth Rate (%)	(+) 20.40 (1991)			(+) 16.05 (2001)		
8. Rural Households living below Poverty Line (1997-98)	<i>Total no. of rural households</i>	<i>No. of rural households living below poverty line</i>		<i>Rural households headed by women living below poverty line</i>		
	1,69,863	42,012 (19.30)*		5254 (14.26)**		
9. Crude Birth Rate (no. of births per thousand of population)	37.39 (1981)			30.12 (1991)		
10. Infant Mortality Rate	1981			1991		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	109	120	98	69	69	69

continued

11. Number of Health Sub-centres per 1,00,000 population	21.56 (1981)	36.19 (1991)	34.52 (2001)
12. Number of Primary Health Centres per 1,00,000 population	1.55 (1981)	3.61 (1991)	4.99 (2001)
13. Number of Community Health Centres per 1,00,000 population	0.31 (1981)	0.77 (1991)	1.00 (2001)
14. Number of Hospitals per 1,00,000 population	0.62 (1981)	0.39 (1991)	0.67 (2001)
15. Number of Dispensaries per 1,00,000 population	3.10 (1981)	2.70 (1991)	1.44 (2001)
16. Number of Hospital Beds per 1,00,000 population	21.56 (1981)	107.68 (1991)	126.53 (2001)
17. Number of Health Sub-centres per 1000 sq. km.	35.19 (1981)	71.14 (1991)	78.73 (2001)
18. Number of Primary Health Centres per 1000 sq. km.	2.53 (1981)	7.09 (1991)	11.39 (2001)
19. Number of Community Health Centres per 1000 sq. km.	0.51 (1981)	1.52 (1991)	2.28 (2001)
20. Number of Hospitals per 1000 sq. km.	1.01 (1981)	0.76 (1991)	1.52 (2001)
21. Number of Dispensaries per 1000 sq. km.	5.06 (1981)	5.32 (1991)	5.29 (2001)

continued

District Fact Sheet: Mandi continued

22. Number of Hospital Beds per 1000 sq. km.	35.19 (1981)	211.65 (1991)	288.61 (2001)
23. Gross Fertility Rate	157 (1981)		119 (1991)
24. Total Fertility Rate	4.60 (1981)		3.48 (1991)
	<i>1991</i>		
25. Enrolment Ratio (Primary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	89.88	95.24	84.39
	<i>1991</i>		
26. Enrolment Ratio (Secondary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	78.52	93.82	62.51
	<i>1981</i>		
27. Number of Fair Price Shops	<i>1991</i>		
	<i>1999–2000</i>		
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	336	312	24
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	447	422	25
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	547	516	31

* as percentage of total number of rural households.

** as percentage of total number of rural households living below poverty line.

Source:

Figures at Serial No. 1

Statistical Outline of Himachal Pradesh, 1989.

Figures at Serial No. 2

Census of India, 1991 and Census of India, 2001, Himachal Pradesh Series-3, Paper-2 of 2001.

Figures at Serial

Census of India, 2001 Himachal Pradesh; Series-3, Paper-2 of 2001.

Nos. 3 to 7

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District-wise results of the BPL Census according to the Census, 1998.

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Occasional Paper No. 1 of 1997, titled 'District level estimates — feasibility and child mortality for 1991 and their inter-relations with other variables', by the RGI of India.

Nos. (9, 10, 23, 24)

Figures at Serial Nos.

Department of Health and Family Welfare, Himachal Pradesh., Shimla.

(11 to 22)

Figures at Serial

Enrolment Ratio worked out on the basis of enrolment figures received from the Department of Education, Government of Himachal Pradesh.

Nos. 25 to 26

Figures at Serial No. 27

Department of Food and Supplies, Government of Himachal Pradesh.

District Fact Sheet: Shimla

1. Geographical Area (sq. km.)	5131 (as on 31 October 2002)					
2. Population	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	6,17,404	3,25,897	2,91,507	7,21,745	3,80,244	3,41,501
3. Percentage of Urban Population to Total Population	20.43 (1991)			6.77 (2001)		
4. Literacy Rate	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	64.61	79.56	51.75	79.68	87.72	70.68
5. Density of Population (persons per sq. km.)	120 (1991)			141 (2001)		
6. Sex Ratio (Females per 1000 Males)	894 (1991)			898 (2001)		
7. Decadal Growth Rate (%)	(+ 20.84 (1991)			(+ 16.90 (2001)		
8. Rural Households living below Poverty Line (1997-98)	<i>Total no. of rural households</i>	<i>No. of rural households living below poverty line</i>		<i>Rural households headed by women living below poverty line</i>		
	94,316	31,755 (33.67)*		4686 (14.76)**		
9. Crude Birth Rate (no. of births per thousand of population)	35.75 (1981)			28.92 (1991)		
10. Infant Mortality Rate	1981			1991		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	169	196	141	104	112	77

continued

District Fact Sheet: Shimla continued

11. Number of Health Sub-centres per 1,00,000 population	18.79 (1981)	35.47 (1991)	35.89 (2001)
12. Number of Primary Health Centres per 1,00,000 population	1.57 (1981)	5.02 (1991)	7.62 (2001)
13. Number of Community Health Centres per 1,00,000 population	0.20 (1981)	0.49 (1991)	0.83 (2001)
14. Number of Hospitals per 1,00,000 population	1.96 (1981)	1.78 (1991)	1.52 (2001)
15. Number of Dispensaries per 1,00,000 population	5.87 (1981)	5.18 (1991)	4.30 (2001)
16. Number of Hospital Beds per 1,00,000 population	18.79 (1981)	233.72 (1991)	290.55 (2001)
17. Number of Health Sub-centres per 1000 sq. km.	18.71 (1981)	42.68 (1991)	50.48 (2001)
18. Number of Primary Health Centres per 1000 sq. km.	1.56 (1981)	6.04 (1991)	10.72 (2001)
19. Number of Community Health Centres per 1000 sq. km.	0.19 (1981)	0.58 (1991)	1.17 (2001)
20. Number of Hospitals per 1000 sq. km.	1.95 (1981)	2.14 (1991)	2.14 (2001)
21. Number of Dispensaries per 1000 sq. km.	5.85 (1981)	6.24 (1991)	6.04 (2001)

continued

22. Number of Hospital Beds per 1000 sq. km.	18.71 (1981)	281.23 (1991)	408.69 (2001)						
23. Gross Fertility Rate	152 (1981)		119 (1991)						
24. Total Fertility Rate	4.70 (1981)		3.47 (1991)						
1991									
25. Enrolment Ratio (Primary Level)	1991								
	<i>Total</i>	<i>Male</i>	<i>Female</i>						
	78.25	80.91	75.49						
26. Enrolment Ratio (Secondary Level)	1991								
	<i>Total</i>	<i>Male</i>	<i>Female</i>						
	60.91	69.55	51.85						
27. Number of Fair Price Shops	1981			1991			1999–2000		
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	361	290	71	323	277	46	424	374	50

* as percentage of total number of rural households.

** as percentage of total number of rural households living below poverty line.

Source:

Figures at Serial No. 1

Statistical Outline of Himachal Pradesh, 1989.

Figures at Serial No. 2

Census of India, 1991 and Census of India, 2001, Himachal Pradesh Series-3, Paper-2 of 2001.

Figures at Serial Nos. 3 to 7

Census of India, 2001 Himachal Pradesh; Series-3, Paper-2 of 2001.

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Figures at Serial Nos. (9, 10, 23, 24)

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Figures at Serial Nos. (11 to 22)

Department of Health and Family Welfare, Himachal Pradesh., Shimla.

Figures at Serial Nos. 25 to 26

Enrolment Ratio worked out on the basis of enrolment figures received from the Department of Education, Government of Himachal Pradesh.

Figures at Serial No. 27

Department of Food and Supplies, Government of Himachal Pradesh.

District Fact Sheet: Sirmaur

1. Geographical Area (sq. km.)	2825 (as on 31 October 2002)					
2. Population	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	3,79,695	2,00,193	1,79,502	4,58,351	2,41,109	2,17,242
3. Percentage of Urban Population to Total Population	10.03 (1991)			10.38 (2001)		
4. Literacy Rate	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	51.62	63.20	38.45	70.85	79.73	60.93
5. Density of Population (persons per sq. km.)	134 (1991)			162 (2001)		
6. Sex Ratio (Females per 1000 Males)	897 (1991)			901 (2001)		
7. Decadal Growth Rate (%)	(+ 23.72 (1991)			(+ 20.72 (2001)		
8. Rural Households living below Poverty Line (1997-98)	<i>Total no. of rural households</i>	<i>No. of rural households living below poverty line</i>		<i>Rural households headed by women living below poverty line</i>		
	58,618	13,753 (22.89)*		1569 (11.41)**		
9. Crude Birth Rate (no. of births per thousand of population)	36.32 (1981)			34.25 (1991)		
10. Infant Mortality Rate	1981			1991		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	165	195	133	94	94	93

continued

11. Number of Health Sub-centres per 1,00,000 population	20.09 (1981)	36.08 (1991)	32.29 (2001)
12. Number of Primary Health Centres per 1,00,000 population	1.30 (1981)	4.21 (1991)	5.24 (2001)
13. Number of Community Health Centres per 1,00,000 population	0.33 (1981)	0.26 (1991)	0.65 (2001)
14. Number of Hospitals per 1,00,000 population	1.30 (1981)	1.05 (1991)	1.09 (2001)
15. Number of Dispensaries per 1,00,000 population	5.54 (1981)	4.48 (1991)	3.05 (2001)
16. Number of Hospital Beds per 1,00,000 population	25.09 (1981)	141.69 (1991)	138.32 (2001)
17. Number of Health Sub-centres per 1000 sq. km.	27.26 (1981)	48.50 (1991)	52.39 (2001)
18. Number of Primary Health Centres per 1000 sq. km.	1.42 (1981)	5.66 (1991)	8.50 (2001)
19. Number of Community Health Centres per 1000 sq. km.	0.35 (1981)	0.35 (1991)	1.06 (2001)
20. Number of Hospitals per 1000 sq. km.	1.42 (1981)	1.42 (1991)	1.77 (2001)
21. Number of Dispensaries per 1000 sq. km.	6.02 (1981)	6.02 (1991)	4.96 (2001)

continued

District Fact Sheet: Sirmaur continued

22. Number of Hospital Beds per 1000 sq. km.	27.26 (1981)	190.44 (1991)	224.42 (2001)						
23. Gross Fertility Rate	160 (1981)		150 (1991)						
24. Total Fertility Rate	4.90 (1981)		4.49 (1991)						
<i>1991</i>									
25. Enrolment Ratio (Primary Level)	<i>Total</i>								
	<i>Male</i>		<i>Female</i>						
	73.22	84.92	60.91						
<i>1991</i>									
26. Enrolment Ratio (Secondary Level)	<i>Total</i>								
	<i>Male</i>		<i>Female</i>						
	45.75	56.45	33.76						
<i>1981</i>									
27. Number of Fair Price Shops	<i>1981</i>			<i>1991</i>			<i>1999–2000</i>		
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	191	172	19	239	223	16	281	267	14

* as percentage of total number of rural households.

** as percentage of total number of rural households living below poverty line.

Source:

Figures at Serial No. 1

Statistical Outline of Himachal Pradesh, 1989.

Figures at Serial No. 2

Census of India, 1991 and Census of India, 2001, Himachal Pradesh Series-3, Paper-2 of 2001.

Figures at Serial

Census of India, 2001 Himachal Pradesh; Series-3, Paper-2 of 2001.

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Nos. (9, 10, 23, 24)

Figures at Serial Nos.

Department of Health and Family Welfare, Himachal Pradesh., Shimla.

(11 to 22)

Figures at Serial

Enrolment Ratio worked out on the basis of enrolment figures received from the Department of Education, Government of Himachal Pradesh.

Nos. 25 to 26

Figures at Serial No. 27

Department of Food and Supplies, Government of Himachal Pradesh.

District Fact Sheet: Solan

1. Geographical Area (sq. km.)	1936 (as on 31 October 2002)					
2. Population	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	3,82,268	2,00,238	1,82,030	4,99,380	2,69,451	2,29,929
3. Percentage of Urban Population to Total Population	12.37 (1991)			18.26 (2001)		
4. Literacy Rate	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	63.30	74.67	50.69	77.16	85.35	67.48
5. Density of Population (persons per sq. km.)	197 (1991)			258 (2001)		
6. Sex Ratio (Females per 1000 Males)	909 (1991)			853 (2001)		
7. Decadal Growth Rate (%)	(+ 26.02 (1991)			(+ 30.64 (2001)		
8. Rural Households living below Poverty Line (1997-98)	<i>Total no. of rural households</i>	<i>No. of rural households living below poverty line</i>		<i>Rural households headed by women living below poverty line</i>		
	65,418	17,951 (22.89)*		2461 (11.41)**		
9. Crude Birth Rate (no. of births per thousand of population)	36.33 (1981)			29.81 (1991)		
10. Infant Mortality Rate	1981			1991		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	145	164	126	84	87	81

continued

District Fact Sheet: Solan continued

11. Number of Health Sub-centres per 1,00,000 population	31.32 (1981)	42.90 (1991)	35.64 (2001)
12. Number of Primary Health Centres per 1,00,000 population	1.32 (1981)	3.66 (1991)	4.00 (2001)
13. Number of Community Health Centres per 1,00,000 population	0.33 (1981)	0.52 (1991)	0.60 (2001)
14. Number of Hospitals per 1,00,000 population	0.99 (1981)	1.05 (1991)	1.00 (2001)
15. Number of Dispensaries per 1,00,000 population	6.92 (1981)	5.76 (1991)	3.40 (2001)
16. Number of Hospital Beds per 1,00,000 population	31.32 (1981)	207.71 (1991)	184.43 (2001)
17. Number of Health Sub-centres per 1000 sq. km.	49.07 (1981)	84.71 (1991)	91.94 (2001)
18. Number of Primary Health Centres per 1000 sq. km.	2.07 (1981)	7.23 (1991)	10.33 (2001)
19. Number of Community Health Centres per 1000 sq. km.	0.52 (1981)	1.03 (1991)	1.55 (2001)
20. Number of Hospitals per 1000 sq. km.	1.55 (1981)	2.07 (1991)	2.58 (2001)
21. Number of Dispensaries per 1000 sq. km.	10.85 (1981)	11.36 (1991)	8.78 (2001)

continued

22. Number of Hospital Beds per 1000 sq. km.	49.07 (1981)	410.12 (1991)	475.72 (2001)						
23. Gross Fertility Rate	156 (1981)		122 (1991)						
24. Total Fertility Rate	4.60 (1981)		3.51 (1991)						
<i>1991</i>									
25. Enrolment Ratio (Primary Level)	<i>Total</i>								
	<i>Male</i>		<i>Female</i>						
	80.03	87.56	72.05						
<i>1991</i>									
26. Enrolment Ratio (Secondary Level)	<i>Total</i>								
	<i>Male</i>		<i>Female</i>						
	60.26	73.89	45.75						
<i>1981</i>									
27. Number of Fair Price Shops	<i>1981</i>			<i>1991</i>			<i>1999–2000</i>		
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	288	269	19	227	196	31	258	220	38

* as percentage of total number of rural households.

** as percentage of total number of rural households living below poverty line.

Source:

Figures at Serial No. 1

Statistical Outline of Himachal Pradesh, 1989.

Figures at Serial No. 2

Census of India, 1991 and Census of India, 2001, Himachal Pradesh Series-3, Paper-2 of 2001.

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Nos. 3 to 7

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Nos. (9, 10, 23, 24)

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Department of Health and Family Welfare, Himachal Pradesh., Shimla.

(11 to 22)

Figures at Serial

Enrolment Ratio worked out on the basis of enrolment figures received from the Department of Education, Government of Himachal Pradesh.

Nos. 25 to 26

Figures at Serial No. 27

Department of Food and Supplies, Government of Himachal Pradesh.

District Fact Sheet: Una

1. Geographical Area (sq. km.)	1540 (as on 31 October 2002)					
2. Population	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	3,78,269	1,87,582	1,90,687	4,47,967	2,24,299	2,23,668
3. Percentage of Urban Population to Total Population	8.53 (1991)			8.80 (2001)		
4. Literacy Rate	1991			2001		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	70.91	81.15	62.01	81.09	88.49	73.85
5. Density of Population (persons per sq. km.)	246 (1991)			291 (2001)		
6. Sex Ratio (Females per 1000 Males)	1017 (1991)			997 (2001)		
7. Decadal Growth Rate (%)	(+ 19.17 (1991)			(+ 18.43 (2001)		
8. Rural Households living below Poverty Line (1997-98)	<i>Total no. of rural households</i>	<i>No. of rural households living below poverty line</i>		<i>Rural households headed by women living below poverty line</i>		
	81,014	15,439 (22.89)*		2401 (11.41)**		
9. Crude Birth Rate (no. of births per thousand of population)	34.17 (1981)			27.82 (1991)		
10. Infant Mortality Rate	1981			1991		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
	149	88	108	72	70	74

continued

11. Number of Health Sub-centres per 1,00,000 population	22.68 (1981)	31.46 (1991)	29.24 (2001)
12. Number of Primary Health Centres per 1,00,000 population	1.26 (1981)	2.64 (1991)	2.68 (2001)
13. Number of Community Health Centres per 1,00,000 population	0.32 (1981)	0.53 (1991)	0.89 (2001)
14. Number of Hospitals per 1,00,000 population	0.32 (1981)	0.26 (1991)	0.45 (2001)
15. Number of Dispensaries per 1,00,000 population	3.78 (1981)	3.17 (1991)	2.01 (2001)
16. Number of Hospital Beds per 1,00,000 population	22.68 (1981)	61.60 (1991)	82.37 (2001)
17. Number of Health Sub-centres per 1000 sq. km.	46.75 (1981)	77.27 (1991)	85.06 (2001)
18. Number of Primary Health Centres per 1000 sq. km.	2.60 (1981)	6.49 (1991)	7.79 (2001)
19. Number of Community Health Centres per 1000 sq. km.	0.65 (1981)	1.30 (1991)	2.60 (2001)
20. Number of Hospitals per 1000 sq. km.	0.65 (1981)	0.65 (1991)	1.30 (2001)
21. Number of Dispensaries per 1000 sq. km.	7.79 (1981)	7.79 (1991)	5.84 (2001)

continued

District Fact Sheet: Una continued

22. Number of Hospital Beds per 1000 sq. km.	46.75 (1981)	151.30 (1991)	239.61 (2001)
23. Gross Fertility Rate	142 (1981)		110 (1991)
24. Total Fertility Rate	4.90 (1981)		3.50 (1991)
	<i>1991</i>		
25. Enrolment Ratio (Primary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	90.32	91.87	88.67
	<i>1991</i>		
26. Enrolment Ratio (Secondary Level)	<i>Total</i>	<i>Male</i>	<i>Female</i>
	65.59	76.12	55.41
	<i>1981</i>		
27. Number of Fair Price Shops	<i>1991</i>		
	<i>1999–2000</i>		
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	212	206	6
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	231	220	11
	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
	253	238	15

* as percentage of total number of rural households.

** as percentage of total number of rural households living below poverty line.

Source:

Figures at Serial No. 1

Statistical Outline of Himachal Pradesh, 1989.

Figures at Serial No. 2

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Census of India, 2001 Himachal Pradesh; Series-3, Paper-2 of 2001.

Nos. 3 to 7

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(11 to 22)

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Enrolment Ratio worked out on the basis of enrolment figures received from the Department of Education, Government of Himachal Pradesh.

Nos. 25 to 26

Figures at Serial No. 27

Department of Food and Supplies, Government of Himachal Pradesh.

Index:
Statistical Appendices
and Statistical Tables

Index:

Statistical Appendices and Statistical Tables

SA-Income-1	Sex Composition of Main and Marginal Workers (1981–2001)	285
SA-Gender-1	Sex Ratio of Himachal Relative to that of India (1901–1991)	288
SA-Gender-2	Infant Mortality Rate by Sex and Residence, 1990–1997	288
SA-Gender-3	Percentage Distribution of Live Births by Order of Birth, 1997	289
SA-Gender-4	Enrolment by Courses/Stages	290
SA-Gender-5	Number of Teachers and Teacher Pupil Ratio in Himachal Pradesh	292
SA-Gender-6	School Enrolment of Students in Himachal Pradesh (including SC and ST students): District-wise Gender Profile	293
SA-Gender-7	Gender Profile of School Going Students by Category	295
SA-Gender-8	Rural–Urban Gender Profile of Main Workers in Himachal Pradesh	296
SA-Gender-9	Rural–Urban Gender Profile of Main Workers in Himachal Pradesh	297
SA-Gender-10	Class of Workers	298
SA-Gender-11	Class of Workers	300
SA-Gender-12	A Gender Description of the Single and the Family Worker in Himachal Pradesh	302
SA-Gender-13	A Gender Description of the Single and the Family Worker in Himachal Pradesh	304
SA-Gender-14	Percentage of Female Regular Employees in Himachal Pradesh	306
SA-Gender-15	Government Employees: A Gender Description	306
SA-Gender-16	Gender Based Percentage Share in Agriculture and Animal Husbandry Activities	307
SA-Gender-17	District-wise List of Registered <i>Mabila Mandals</i>	308
SA-Gender-18	Gender Profile of the State Legislative Assembly	308
SA-Gender-19	Women Contestants: Legislative Assembly Elections (1967–1998)	309
SA-Gender-20	Gender Profile of Members in Zila Parishads	310
SA-Gender-21	Gender Profile of Chairpersons in Zila Parishads	310
SA-Gender-22	Gender Profile of Members in Panchayat Samiti	311
SA-Gender-23	Gender Profile of Chairpersons in Panchayat Samitis	312
SA-Gender-24	Gender Profile of Members in Gram Panchayat	313
SA-Gender-25	Gender Profile of Chairpersons in Gram Panchayat	314
SA-Gender-26	Women Welfare Programmes: A Brief Picture	315
SA-Gender-27	Constitutional, Legal and Other Provisions fostering Gender Equity and Protection of Human Rights	317

SA-Gender-28	District-wise Gender Profile of Main Workers Expressed as a Percentage of Population in Each Category	320
SA-Gender-29	District-wise Gender Profile of Non-Workers Expressed as a Percentage of Population in Each Category	320
SA-Health-1	Estimated Crude Birth Rate	321
SA-Health-2	District-level Total Fertility Rate	321
SA-Health-3	Estimated Crude Death Rate with Rural/Urban Breakups	322
SA-Health-4	District-wise Distribution of Infant Mortality Rate and Child Mortality Rate in Himachal Pradesh with Gender Break-ups, 1991	323
SA-Health-5	Sex Ratio (1991), Mean Age of Marriage (females) and Number of Maternal Deaths (1997)	324
SA-Health-6	Immunisation of Pregnant Women and Institutional Deliveries (1997)	324
SA-Health-7	Immunisation of Children (given all doses) in 1997 (in per cent)	326
SA-Health-8	Child Morbidity Patterns in 1997 (in per cent)	327
SA-Health-9	District-wise Couple Protection Rate in Himachal Pradesh since 1985	328
SA-Health-10	District-wise and Method-wise Couple Protection Rate in 1998	328
SA-Health-11	District-wise Growth of Allopathic Medical Institutions (1996–2000)	329
SA-Health-12	Growth of Medical Institutions under Indian Systems of Medicine and Homeopathic Department in Himachal Pradesh between 1996 and 2000	330
SA-Health-13	Coverage of Population by a Single Unit of Sub-centre, Primary Health Centre and Community Health Centre in Himachal Pradesh, 1996 and 2000	331
SA-Health-14	Beds per Thousand Population in Himachal Pradesh as on 31 March 2000	332
SA-Health-15	Distribution of Medical Institutions in Backward Contiguous Backward and Dispersed Backard areas in Himachal Pradesh as on 31 March 2000	333
SA-Health-16	Distribution of Medical Institutions with Rural–Urban Breakups in Himachal Pradesh as on 31 March 2000	334
SA-Health-17	Distribution of Beds with Rural–Urban breakup as on 31 March 2000	335
SA-Health-18	Inadequate Intake of Foodstuff at the District Level	336
SA-Education-1	District-wise Enrolment of Scheduled Castes (Primary Level)	337
SA-Education-2	District-wise Enrolment of Scheduled Tribes (Primary Level)	338
SA-Education-3	District-wise Enrolment of Scheduled Castes (Secondary Level)	339
SA-Education-4	District-wise Enrolment of Scheduled Tribes (Secondary Level)	340
SA-Education-5	District-wise Distribution of Schools in Himachal Pradesh by Types (1990–91 to 1997–98)	341
SA-Environment-1	Legal Status of Forests of Himachal Pradesh in 1995–96 (area in sq. km.)	343
SA-Environment-2	District-wise Forest Area (sq. km.)	344
SA-Environment-3	District-wise Rivers and Water Bodies in Himachal Pradesh	345

SA-Environment-4	Stress Analysis by Ranking Method (Primary Parameters)	346
SA-Environment-5	Stress Analysis by Ranking Method (Secondary Parameters)	348
SA-Environment-6	District-wise Changes in Requirement of Different Sources of Energy under Different Scenarios	350
SA-Environment-7	Reduction of Fuel Wood Consumption under Different Scenarios	352

Statistical Tables

Table-1	District Profile: Census 2001	355
Table-2	District-wise PDS off-take of Food Grain Per Capita	356
Table-3	District-wise Fertiliser Consumption per hectare (m.t)	357
Table-4	District-wise Crop Intensity	357
Table-5	District-wise Percentage Area under Food Crops (in hectares)	358
Table-6	District-wise Gross Cropped Area (in hectares)	358
Table-7	District-wise Cultivable Land (in hectares)	359
Table-8	District-wise Forest Area (in hectares)	359
Table-9	District-wise Net Irrigated Area — Source-wise (in hectares)	360
Table-10	District-wise Percentage Area under Irrigation	362
Table-11	District-wise <i>Pucca</i> Roads/100 sq. km.	363
Table-12	District-wise Percentage of Villages having a Post Office within a Distance of 1 k.m.	364
Table-13	District-wise Percentage of Villages having Banks within a Distance of 1 k.m.	364
Table-14	District-wise Percentage of Households Electrified	365
Table-15	District-wise Crimes/Atrocities against Women	366
Table-16	District-wise Workforce in the Organised Sector	367
Table-17	District-wise Percentage of Villages having a PHC within a Distance of 1 k.m.	368
Table-18	District-wise Percentage of Villages having a CHC within a Distance of 1 k.m.	368
Table-19	District-wise Percentage of Villages having Health Sub-centres within a Distance of 1 km.	369
Table-20	District-wise Basic Village-level Data (1991)	370

Statistical Appendices

SA-Income-1

Sex Composition of Main and Marginal Workers (1981–2001)

<i>District/State</i>	<i>Main workers</i>		<i>Marginal workers</i>		<i>Main and Marginal workers</i>	
	<i>1981</i>					
	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>
Bilaspur	71.30	28.70	19.69	80.31	59.09	40.91
Chamba	81.24	18.76	14.70	85.30	62.66	37.34
Hamirpur	70.90	29.10	16.81	83.19	52.82	47.18
Kangra	82.81	17.19	22.57	77.43	69.35	30.65
Kinnaur	59.85	40.15	22.46	77.54	58.15	41.85
Kullu	64.72	35.28	15.97	84.03	58.01	41.99
Lahaul & Spiti	63.28	36.72	32.45	67.55	59.71	40.29
Mandi	64.64	35.36	18.87	81.13	55.92	44.08
Shimla	65.05	34.95	24.25	75.75	60.95	39.05
Sirmaur	77.53	22.47	14.40	85.60	69.19	30.81
Solan	77.14	22.86	15.77	84.23	66.05	33.95
Una	92.25	7.75	23.27	76.73	81.10	18.90
Himachal Pradesh	73.15	26.85	19.11	80.89	62.93	37.07

Table continued

Sex Composition of Main and Marginal Workers (1981–2001) (*continued*)

<i>District/State</i>	<i>Main workers</i>		<i>Marginal workers</i>		<i>Main and Marginal workers</i>	
	<i>1991</i>					
	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>
Bilaspur	74.13	25.87	8.59	91.41	54.19	45.81
Chamba	80.92	19.08	8.44	91.56	57.00	43.00
Hamirpur	66.64	33.36	8.86	91.14	50.08	49.92
Kangra	80.25	19.75	9.63	90.37	66.23	33.77
Kinnaur	67.00	33.00	12.92	87.08	61.74	38.26
Kullu	65.30	34.70	8.08	91.92	58.74	41.26
Lahaul & Spiti	64.62	35.38	27.12	72.88	58.41	41.59
Mandi	62.78	37.22	10.66	89.34	53.37	46.63
Shimla	66.32	33.68	10.03	89.97	59.91	40.09
Sirmaur	71.31	28.69	11.28	88.72	62.96	37.04
Solan	78.75	21.25	8.06	91.94	62.95	37.05
Una	86.49	13.51	6.36	93.64	72.13	27.87
Himachal Pradesh	72.21	27.79	9.35	90.65	59.85	40.15

Table continued

Sex Composition of Main and Marginal Workers (1981–2001) (*concluded*)

<i>District/State</i>	<i>Main workers</i>		<i>Marginal workers</i>		<i>Main and Marginal workers</i>	
	<i>2001</i>					
	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>
Bilaspur	62.73	37.27	35.69	64.31	53.65	46.35
Chamba	73.80	26.20	31.36	68.64	55.00	45.00
Hamirpur	57.87	42.13	35.53	64.47	48.67	51.33
Kangra	72.06	27.94	36.73	63.27	56.94	43.06
Kinnaur	60.99	39.01	39.56	60.44	57.54	42.46
Kullu	60.06	39.94	38.54	61.46	55.12	44.88
Lahaul & Spiti	61.34	38.66	42.61	57.39	59.68	40.32
Mandi	65.66	34.34	31.77	68.23	51.85	48.15
Shimla	64.29	35.71	34.98	65.02	59.14	40.86
Sirmaur	67.12	32.88	36.20	63.80	60.28	39.72
Solan	79.73	20.27	30.48	69.52	62.78	37.22
Una	77.67	22.33	31.95	68.05	58.96	41.04
Himachal Pradesh	67.92	32.08	34.19	65.81	56.34	43.66

Source: Compiled from the Census 1981 and 1991, Economic Tables.

SA-Gender-1

Sex Ratio of Himachal Relative to that of India (1901–1991)

<i>Census Year</i>	<i>Himachal Pradesh</i>	<i>India</i>
1901	884	972
1911	889	964
1921	890	955
1931	897	950
1941	890	945
1951	912	946
1961	938	941
1971	958	930
1981	973	934
1991	976	929
2001	970	933

Source: Provisional Population Tables, 5, Provisional Population Totals, Paper-1 of 1991, Series 1.

SA-Gender-2

Infant Mortality Rate by Sex and Residence, 1990–1997

<i>Year</i>	<i>Total</i>			<i>Rural</i>			<i>Urban</i>		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
1990	68.4	62.6	75.0	70.0	63.4	77.3	40.3	45.4	35.1
1991	74.6	80.8	67.3	76.4	82.3	69.3	38.2	48.5	26.9
1992	68.6	67.1	70.7	69.7	68.4	71.1	44.9	33.3	58.7
1993	65.6	74.7	55.4	64.7	74.3	54.1	97.5	88.7	109.4
1994	59.0	55.2	63.7	60.1	55.8	65.1	42.7	45.1	39.7
1995	62.5	67.8	55.8	63.9	69.7	56.5	39.2	37.2	42.5
1996	63.3	57.0	70.5	64.9	57.8	73.0	37.5	43.6	31.4
1997	62.5	64.1	60.7	63.9	65.1	62.6	37.6	45.7	28.2
1998*	64.0	–	–	66.0	–	–	38.0	–	–
1999*	62.0	–	–	63.0	–	–	38.0	–	–

* Data for the years 1998 and 1999 (Provisional estimates) are from Sample Registration System Bulletin, Vol. 34, No. 2, October 2000, Table-1 and Table-2, Registrar General, India (Gender based data are not mentioned in this Bulletin).

Source: Table-7, p. 288, Himachal Pradesh, Vital Statistics Division, Office of the Registrar General, India, New Delhi 110066.

SA-Gender-3

Percentage Distribution of Live Births by Order of Birth, 1997

<i>Birth Order</i>	<i>Total</i>			<i>Rural</i>			<i>Urban</i>		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	38.8	38.6	39.1	38.4	38.3	38.6	45.5	42.5	49.0
2	34.3	33.4	35.4	34.2	33.1	35.4	36.7	38.3	34.8
3	16.4	18.4	14.3	16.7	18.7	14.6	11.4	12.4	10.4
4	5.8	4.9	6.7	5.9	5.0	6.9	4.1	3.9	4.3
5	2.7	2.6	2.8	2.7	2.6	2.9	1.6	2.1	1.0
6	1.2	1.2	1.1	1.2	1.2	1.2	0.2	0.4	0.0
7	0.3	0.4	0.2	0.3	0.4	0.2	0.5	0.5	0.5
8	0.1	0.0	0.3	0.1	0.0	0.3	0.0	0.0	0.0
9	0.2	0.5	0.0	0.3	0.5	0.0	0.0	0.0	0.0
10+	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0

Source: Part of Table-5, p. 287, Himachal Pradesh, Vital Statistics Division, Office of the Registrar General, India, New Delhi 110066.

SA-Gender-4

Enrolment by Courses/Stages

Sl. No.	Total enrolment			Scheduled Caste category students (included in cols. 3-5)			Scheduled Tribe category students (included in cols. 3-5)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
A: Degree Standard and Above									
1. Ph.D/D.Sc./ D.Phil./M.Phil	484	236	720	42	11	53	13	03	13
2. MA	974	965	1939	131	74	205	46	56	102
3. M.Sc.	492	268	760	54	18	72	20	09	29
4. M.Com.	287	135	422	36	8	44	14	6	20
5. BA and BA (Hons.)	24,807	19,985	44,792	3395	1897	5292	1123	761	1184
6. B.Sc. and B.Sc. (Hons.)	8366	5071	13437	867	380	1247	230	102	332
7. B.Com. and B.Com. (Hons.)	7669	3798	11467	813	272	1085	173	65	238
8. B.E./B. Sc. (Engg.)	688	74	762	101	04	105	47	04	51
9. B.Ed./B.T.	181	64	245	40	12	52	11	01	12
10. MBBS (Allo- pathy) including Ayurveda/ Homeopathy/ Dentistry/ Pharmacy	479	245	724	67	23	90	33	07	40
11. Any Other	—	—	—	—	—	—	—	—	—
Total: A (1-11)	44,427 (59.03)	30,841 (40.97)	75,268 (100.00)	5546 (67.27)	2699 (37.73)	8245 (100.00)	1710 (62.78)	1014 (37.22)	2724 (100.00)

continued

SA-Gender-4 continued

Sl. No.	Total enrolment			Scheduled Caste category students (included in cols. 3-5)			Scheduled Tribe category students (included in cols. 3-5)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
B: Below Degree Level									
12. Higher Secondary Classes (XI-XII)	60,357	42,470	1,02,827	9509	6424	15,933	2444	1463	3907
13. High/Post Basic Classes (IX-X)	98,021	82,575	1,80,596	20,891	16,856	37,747	3372	2694	6066
14. Middle/Senior Basic Classes (VI-VIII)	1,91,858	1,68,331	3,60,189	46,976	40,784	87,760	5824	4983	10,807
15. Primary/Junior Basic Classes (I-V)	3,43,045	3,22,493	6,65,538	1,00,172	89,601	1,89,773	15,783	14,285	30,068
16. Pre-Primary Classes	241	215	453	60	41	101	01,-	01	
17. Any Other	-	-	-	-	-	-	-	-	-
Total: B (12-17)	6,93,522 (52.96)	6,16,084 (47.04)	13,09,606 (100.00)	1,17,608 (53.61)	1,53,706 (46.39)	3,31,314 (100.00)	27,424 (53.93)	23,425 (46.07)	50,849 (100.00)
C: Professional Institutions									
18. Teacher Training School	-	-	-	-	-	-	-	-	-
19. Polytechnic (Diploma)	941	294	1235	195	61	256	83	26	109
20. Technical Industrial Art and Craft Schools	2052	1295	3347	586	291	877	124	121	245
21. Any Other	-	-	-	-	-	-	-	-	-
Total: C (18-21)	2993 (65.32)	1589 (34.68)	4582 (100.00)	781 (68.93)	352 (31.07)	1133 (100.00)	207 (58.47)	147 (41.53)	354 (100.00)
Grand Total: (A+B+C)	7,40,942 (53.33)	6,48,514 (46.67)	13,89,456 (100.00)	1,83,935 (53.99)	1,56,757 (46.01)	3,40,692 (100.00)	29,341 (54.41)	24,586 (45.59)	53,927 (100.00)

Note: Figures in parentheses, rounded off to 2 decimal places indicate % to corresponding Totals.

Source: Based on Table II of Selected Educational Statistics, Data Collection Tables, Ministry of Human Resource Development, Government of India, 1999.

SA-Gender-5

Number of Teachers and Teacher Pupil Ratio in Himachal Pradesh

Sl. No.	Institution	Teachers			% of Trained teachers	Enrolment			Teacher-Pupil Ratio
		Male	Female	Total		Boys	Girls	Total	
1	2	3	4	5	6	7	8	9	10
1.	Higher Secondary Schools	6831 (67.72)	3256 (32.28)	10,087 (100.00)	100%	1,61,028 (55.85)	1,27,303 (44.15)	2,88,331 (100.00)	1:29
2.	High/Post Basic Schools	6367 (70.16)	2708 (29.84)	9075 (100.00)	100%	1,33,828 (52.97)	1,18,821 (47.03)	2,52,649 (100.00)	1:28
3.	Middle/Senior Basic Schools	5006 (75.10)	1660 (24.90)	6666 (100.00)	100%	55,380 (53.96)	47,252 (46.04)	1,02,632 (100.00)	1:15
4.	Primary/Junior Basic Schools	17872 (64.96)	9641 (35.04)	27513 (100.00)	100%	3,43,045 (51.54)	3,22,493 (48.46)	6,65,538 (100.00)	1:24
5.	Pre-Primary Schools	—	19 (100.00)	19 (100.00)	100%	241 (52.85)	215 (47.15)	456 (100.00)	1:24
Overall		36,076 (67.61)	17,284 (32.39)	53,360 (100.00)	100%	6,93,522 (52.96)	6,16,084 (47.04)	13,09,606 (100.00)	1:25

Note: Figures in parentheses, rounded off to 2 decimal places indicate % to corresponding Totals.

Source: Based on Table III of Selected Educational Statistics, Data Collection Tables, Ministry of Human Resource Development, Government of India, 1999.

SA-Gender-6

School Enrolment of Students in Himachal Pradesh
(including SC and ST students): District-wise Gender Profile (*continued*)

District	Primary (I-V)			Middle (VI-VIII)		
	Boys	Girls	Total	Boys	Girls	Total
Bilaspur	21,691 (51.18)	20,694 (48.82)	42,385 (100.00)	11,217 (51.48)	10,572 (48.52)	21,789 (100.00)
Chamba	29,765 (56.33)	23,074 (43.67)	52,839 (100.00)	10,874 (59.56)	7384 (40.44)	19,258 (100.00)
Hamirpur	21,527 (49.02)	22,386 (50.98)	43,913 (100.00)	12,815 (52.70)	13,358 (47.30)	26,173 (100.00)
Kangra	69,859 (49.39)	71,580 (50.61)	1,41,439 (100.00)	39,062 (49.51)	39,837 (50.49)	78,899 (100.00)
Kinnaur	5202 (50.41)	5118 (49.59)	10,320 (100.00)	2354 (48.66)	2484 (51.34)	4838 (100.00)
Kullu	25,295 (53.60)	21,899 (46.40)	47,194 (100.00)	11,017 (54.70)	9123 (45.30)	20,140 (100.00)
Lahaul & Spiti	1798 (49.05)	1868 (50.95)	3666 (100.00)	856 (48.66)	903 (51.34)	1759 (100.00)
Mandi	54,242 (51.38)	51,329 (48.62)	1,05,571 (100.00)	30,327 (52.13)	27,853 (47.87)	58,180 (100.00)
Shimla	35,558 (51.27)	33,793 (48.73)	69,351 (100.00)	25,838 (53.03)	22,881 (46.97)	48,719 (100.00)
Sirmaur	28,642 (54.37)	24,035 (45.63)	52,677 (100.00)	16,094 (71.62)	6376 (28.38)	22,470 (100.00)
Solan	25,001 (51.61)	23,443 (48.39)	48,444 (100.00)	15,353 (54.02)	13,068 (45.98)	28,421 (100.00)
Una	24,706 (51.26)	23,489 (48.74)	48,195 (100.00)	16,051 (52.55)	14,492 (47.45)	30,543 (100.00)
Overall (Himachal Pradesh)	3,43,286 (51.54)	3,22,708 (48.46)	6,65,994 (100.00)	1,91,858 (59.94)	1,68,241 (40.06)	3,60,099 (100.00)

School Enrolment of Students in Himachal Pradesh
(including SC and ST students): District-wise Gender Profile (*concluded*)

District	High (IX-X)			Higher Secondary (XI-XII)		
	Boys	Girls	Total	Boys	Girls	Total
Bilaspur	6053 (53.62)	5236 (46.38)	11289 (100.00)	3712 (59.64)	2512 (40.36)	6224 (100.00)
Chamba	6648 (58.02)	4810 (41.98)	11,458 (100.00)	5074 (80.18)	1254 (19.72)	6328 (100.00)
Hamirpur	7350 (49.20)	7590 (50.80)	14,940 (100.00)	6024 (54.51)	5027 (45.49)	11,051 (100.00)
Kangra	21,028 (50.59)	20,537 (49.41)	41,565 (100.00)	12,573 (55.91)	9851 (44.09)	22,424 (100.00)
Kinnaur	1115 (51.36)	1056 (48.64)	2171 (100.00)	401 (54.26)	338 (45.74)	739 (100.00)
Kullu	4094 (54.62)	3401 (45.38)	7495 (100.00)	1853 (52.04)	1708 (47.96)	3561 (100.00)
Lahaul & Spiti	517 (50.44)	508 (49.56)	1025 (100.00)	277 (48.85)	290 (51.15)	567 (100.00)
Mandi	15,057 (53.73)	12,966 (46.27)	28,023 (100.00)	9062 (57.38)	6731 (42.62)	15,793 (100.00)
Shimla	13,684 (54.14)	11,593 (45.86)	25,277 (100.00)	9438 (59.13)	6523 (40.87)	15,961 (100.00)
Sirmaur	7856 (74.71)	2660 (25.29)	10516 (100.00)	2861 (71.67)	1131 (28.33)	3992 (100.00)
Solan	8121 (56.17)	6336 (43.83)	14,457 (100.00)	3957 (56.34)	3067 (43.66)	7024 (100.00)
Una	6490 (52.49)	5882 (47.51)	12,380 (100.00)	5125 (55.93)	4038 (44.07)	9163 (100.00)
Overall (Himachal Pradesh)	98,021 (54.28)	82,575 (45.72)	1,80,596 (100.00)	60,357 (58.70)	42,470 (41.30)	1,02,827 (100.00)

Note: Figures in parentheses, rounded off to 2 decimal places indicate % of corresponding totals.

Source: Based on Part B, District-wise School Statistics 1999, Table VI C, of Selected Educational Statistics, Data Collection Tables, Ministry of Human Resources Development, Department of Education, Government of India.

SA-Gender-7

Gender Profile of School Going Students by Category

Institution and Classes	Total Enrolment (including SC and ST students)			Students belonging to SC			Students belonging to ST		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Pre-primary School	241 (52.85)	215 (47.15)	456 (100.00)	60 (59.41)	41 (40.59)	101 (100.00)	1 (100.00)	– (0.00)	1 (100.00)
Primary School (I–V)	3,43,045 (51.54)	3,22,493 (48.46)	6,65,538 (100.00)	1,00,172 (52.79)	89,601 (47.21)	1,89,773 (100.00)	15,783 (52.49)	14,285 (47.51)	30,068 (100.00)
Middle School (VI–VIII)	1,91,858 (53.26)	1,68,331 (46.74)	3,60,198 (100.00)	46,976 (53.53)	40,784 (46.47)	87,760 (100.00)	5824 (53.89)	4983 (46.11)	10,807 (100.00)
High School (IX–X)	98,021 (54.28)	82,575 (45.72)	1,80,596 (100.00)	20,891 (55.34)	16,856 (44.66)	37,747 (100.00)	3372 (55.59)	2694 (44.41)	6066 (100.00)
Higher Secondary School (XI–XII)	60,384 (58.71)	42,470 (41.29)	1,02,854 (100.00)	9509 (59.68)	6424 (40.32)	15,933 (100.00)	2444 (62.55)	1463 (37.45)	3907 (100.00)
Overall Totals	69,35,49 (52.96)	6,16,084 (47.04)	13,09,633 (100.00)	1,77,608 (53.61)	1,53,706 (46.39)	3,31,314 (100.00)	27,424 (53.93)	23,425 (46.07)	50,849 (100.00)

Note: Figures in parentheses, rounded off to 2 decimal places indicate % of corresponding totals.

Source: Based on Part B, District-wise School Statistics 1999, Table II, of Selected Educational Statistics, Data Collection Tables, Department of Education, Ministry of Human Resources Development, Government of India.

SA-Gender-8

Rural-Urban Gender Profile of Main Workers in Himachal Pradesh

Divisions	Main Workers-Urban			Main Workers-Rural		
	Total	Male	Female	Total	Male	Female
Division-I						
Professional, Technical and Related Workers	24,992 (18.11)	15,899 (13.48)	9093 (45.37)	56,629 (13.12)	43,807 (10.94)	12,822 (40.93)
Division-II						
Administrative, Executive and Managerial Workers	5380 (3.90)	5117 (4.34)	263 (1.31)	5002 (1.16)	4876 (1.22)	126 (0.04)
Division-III						
Clerical and Related Workers	29,691 (21.51)	25,189 (21.35)	4502 (22.46)	51,708 (11.98)	48,552 (12.13)	3156 (10.07)
Division-IV						
Sales Workers	20,799 (15.07)	20,027 (16.98)	772 (3.85)	37,082 (8.59)	35,990 (8.99)	1092 (3.49)
Division-V						
Service Workers	18,427 (6.11)	15,986 (13.55)	2441 (12.18)	31,652 (7.33)	29,567 (7.39)	2085 (6.66)
Division-VI						
Farmers, Fishermen, Hunters, Loggers and Related Workers	1696 (1.23)	1629 (1.38)	67 (0.33)	25,756 (5.97)	23,073 (5.76)	2683 (8.56)
Divisions-VII, VIII and IX						
Production and Related Workers, Transport Equipment Operators and Labourers	34,896 (25.29)	32,527 (25.57)	2369 (11.82)	1,59,877 (37.04)	1,52,272 (38.04)	7605 (24.28)
Division-X						
Workers not classified by Occupation	2356 (1.71)	1819 (1.54)	537 (2.68)	63,724 (14.76)	61,968 (15.48)	1756 (5.61)
Total	1,38,008 (100.00)	1,17,966 (100.00)	20,042 (100.00)	43,159 (100.00)	4,00,332 (100.00)	31,327 (100.00)

Note: Figures in parentheses expressing % to column total have been rounded off to 2 decimal places.

Source: Economic Tables, Vol. 8 Part-3 Census of India-1991, Series-1, Part IIIB - B Series.

SA-Gender-9

Rural–Urban Gender Profile of Main Workers in Himachal Pradesh

Divisions	Main Workers–Urban			Main Workers–Rural		
	Total	Male	Female	Total	Male	Female
Division-I						
Professional, Technical and Related Workers	24,992 (100.00)	15,899 (63.62)	9093 (36.38)	56,629 (100.00)	43,807 (77.36)	12,822 (22.64)
Division-II						
Administrative, Executive and Managerial Workers	5380 (100.00)	5117 (95.11)	263 (4.89)	5002 (100.00)	4876 (97.48)	126 (2.52)
Division-III						
Clerical and Related Workers	29,691 (100.00)	25,189 (84.84)	4502 (15.16)	51,708 (100.00)	48,552 (93.90)	3156 (6.10)
Division-IV						
Sales Workers	20,799 (100.00)	20,027 (96.29)	772 (3.71)	37,082 (100.00)	35,990 (97.06)	1092 (2.94)
Division-V						
Service Workers	18,427 (100.00)	15,986 (86.75)	2441 (13.25)	31,652 (100.00)	29,567 (93.41)	2085 (6.59)
Division-VI						
Farmers, Fishermen, Hunters, Loggers and Related Workers	1696 (100.00)	1629 (96.05)	67 (3.95)	25,756 (100.00)	23,073 (89.58)	2683 (10.42)
Divisions-VII, VIII & IX						
Production and Related Workers, Transport Equipment Operators and Labourers	34,896 (100.00)	32,527 (93.21)	2369 (6.79)	1,59,877 (100.00)	1,5,2272 (95.24)	7605 (4.76)
Division-X						
Workers not classified by Occupation	2356 (100.00)	1819 (77.21)	537 (22.79)	63724 (100.00)	61,968 (97.24)	1756 (2.76)
Total	1,38,008 (100.00)	1,17,966 (85.48)	20,042 (14.52)	4,31,659 (100.00)	4,00,332 (92.74)	31,327 (8.07)

Note: Figures in parentheses expressing % to corresponding row total have been rounded off to 2 decimal places.

Source: Economic Tables, Vol. 8 Part-3 Census of India–1991, Series-1, Part IIIB – B Series.

SA-Gender-10

Class of Workers (*continued*)

<i>Division</i>	<i>Urban</i>					
	<i>Employer</i>			<i>Employee</i>		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
Division-I						
Professional, Technical and Related Workers	537 (3.24)	453 (2.84)	84 (13.42)	23,271 (22.66)	14,345 (17.00)	8926 (48.82)
Division-II						
Administrative, Executive and Managerial Workers	642 (3.87)	631 (3.96)	11 (1.76)	3932 (3.83)	3759 (4.45)	173 (0.95)
Division-III						
Clerical and Related Workers	127 (0.77)	108 (0.68)	19 (3.04)	29,460 (28.69)	24,983 (29.60)	4477 (24.49)
Division-IV						
Sales Workers	9912 (59.79)	9624 (60.33)	288 (46.01)	3898 (3.80)	3760 (4.46)	138 (0.75)
Division-V						
Service Workers	1636 (9.87)	1566 (9.82)	70 (11.18)	15,251 (14.85)	13,044 (15.46)	2207 (12.07)
Division-VI						
Farmers, Fishermen, Hunters, Loggers and Related Workers	112 (0.68)	106 (6.64)	6 (0.96)	1392 (1.36)	1344 (1.59)	48 (0.26)
Division-VII, VIII and IX						
Production and Related Workers, Transport Equipment Operators and Labourers	3557 (25.47)	3415 (21.41)	142 (22.68)	23,431 (22.82)	21641 (25.64)	1790 (9.79)
Division-X						
Workers not classified by Occupation	58 (0.35)	52 (0.33)	6 (0.96)	2233 (2.17)	1708 (2.02)	525 (2.87)
Total	16,578 (100.00)	15,952 (100.00)	626 (100.00)	1,02,674 (100.00)	84,392 (100.00)	18,282 (100.00)

Class of Workers (concluded)

Division	Rural					
	Employer			Employee		
	Total	Male	Female	Total	Male	Female
Division-I						
Professional, Technical and Related Workers	1046 (2.74)	946 (2.57)	100 (7.37)	53,295 (16.01)	40,721 (76.41)	12,574 (49.44)
Division-II						
Administrative, Executive and Managerial Workers	513 (1.36)	505 (1.37)	8 (0.59)	2,775 (0.83)	2,726 (0.89)	49 (0.19)
Division-III						
Clerical and Related Workers	266 (0.70)	253 (0.69)	13 (0.96)	51,223 (15.38)	48,094 (15.64)	3,129 (12.30)
Division-IV						
Sales Workers	18,668 (48.95)	18,193 (49.47)	475 (35.00)	6,614 (1.99)	6,490 (2.11)	124 (0.49)
Division-V						
Service Workers	3,322 (8.71)	3,202 (8.71)	120 (8.84)	24,703 (7.23)	22,955 (7.46)	1,748 (6.87)
Division-VI						
Farmers, Fishermen, Hunters, Loggers and Related Workers	3,660 (9.60)	3,402 (9.25)	258 (19.01)	12,037 (3.62)	11,369 (3.70)	668 (2.63)
Division-VII, VIII and IX						
Production and Related Workers, Transport Equipment Operators and Labourers	10,482 (27.49)	10,113 (27.50)	369 (29.18)	1,18,876 (35.70)	1,13,423 (36.88)	5,453 (21.44)
Division-X						
Workers not classified by Occupation	173 (0.45)	159 (0.43)	14 (1.03)	63,242 (16.01)	61,558 (20.02)	1,684 (6.62)
Total	38,133 (100.00)	36,776 (100.00)	1,357 (100.00)	3,32,959 (100.00)	3,07,528 (100.00)	25,431 (100.00)

Note: Figures in parentheses expressing % to column total have been rounded off to 2 decimal places.

Source: Economic Tables, Vol. 8, Part-3 Census of India-1991, Series-1, Part IIIB - B Series.

SA-Gender-11

Class of Workers (*continued*)

<i>Division</i>	<i>Urban</i>					
	<i>Employer</i>			<i>Employee</i>		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
Division-I						
Professional, Technical and Related Workers	537 (100.00)	453 (84.36)	84 (15.64)	23,271 (100.00)	14345 (61.64)	8926 (38.36)
Division-II						
Administrative, Executive and Managerial Workers	642 (100.00)	631 (98.29)	11 (1.71)	3932 (100.00)	3759 (95.60)	173 (4.40)
Division-III						
Clerical and Related Workers	127 (100.00)	108 (85.03)	19 (14.96)	29,460 (100.00)	24983 (84.80)	4477 (15.20)
Division-IV						
Sales Workers	9912 (100.00)	9624 (97.09)	288 (2.91)	3898 (100.00)	3760 (96.46)	138 (3.54)
Division-V						
Service Workers	1636 (100.00)	1566 (95.72)	70 (4.28)	15,251 (100.00)	13044 (85.53)	2207 (14.47)
Division-VI						
Farmers, Fishermen, Hunters, Loggers and Related Workers	112 (100.00)	106 (94.64)	6 (5.66)	1392 (100.00)	1344 (96.55)	48 (3.45)
Division-VII, VIII and IX						
Production and Related Workers, Transport Equipment Operators and Labourers	3557 (100.00)	3415 (96.01)	142 (3.99)	23,431 (100.00)	21,641 (92.36)	1790 (7.64)
Division-X						
Workers not classified by Occupation	58 (100.00)	52 (89.66)	6 (10.34)	2233 (100.00)	1708 (76.49)	525 (23.51)
Total	16,578 (100.00)	15,952 (96.22)	626 (3.78)	1,02,674 (100.00)	84,392 (82.19)	18,282 (17.81)

Class of Workers (concluded)

Division	Rural					
	Employer			Employee		
	Total	Male	Female	Total	Male	Female
Division-I						
Professional, Technical and Related Workers	1046 (100.00)	946 (90.44)	100 (9.56)	53,295 (100.00)	40,721 (76.41)	12,574 (23.59)
Division-II						
Administrative, Executive and Managerial Workers	513 (100.00)	505 (98.44)	8 (1.56)	2775 (100.00)	2726 (98.23)	49 (1.77)
Division-III						
Clerical and Related Workers	266 (100.00)	253 (95.11)	13 (4.89)	51,223 (100.00)	48,094 (93.89)	3129 (6.11)
Division-IV						
Sales Workers	18,668 (100.00)	18193 (97.46)	475 (2.54)	6614 (100.00)	6490 (98.13)	124 (1.87)
Division-V						
Service Workers	3322 (100.00)	3202 (96.39)	120 (3.61)	24,703 (100.00)	22,955 (92.92)	1748 (7.08)
Division-VI						
Farmers, Fishermen, Hunters, Loggers and Related Workers	3660 (100.00)	3402 (92.95)	258 (7.05)	12,037 (100.00)	11,369 (94.45)	668 (5.55)
Division-VII, VIII and IX						
Production and Related Workers, Transport Equipment Operators and Labourers	10,482 (100.00)	10,113 (96.48)	369 (3.52)	1,18,876 (100.00)	113,423 (95.41)	5,453 (4.59)
Division-X						
Workers not classified by Occupation	173 (100.00)	159 (91.91)	14 (8.09)	63,242 (100.00)	61,558 (97.34)	1,684 (2.66)
Total	38,133 (100.00)	36,776 (96.44)	1,357 (3.56)	3,32,959 (100.00)	3,07,528 (92.36)	25,431 (7.64)

Note: Figures in parentheses expressing % to corresponding row total have been rounded off to 2 decimal places.

Source: Economic Tables, Vol. 8, Part-3 Census of India-1991, Series-1, Part IIIB - B Series.

SA-Gender-12

A Gender Description of the Single and the Family Worker in Himachal Pradesh (*continued*)

Division	Urban					
	Urban Single			Urban: Family Worker		
	Total	Male	Female	Total	Male	Female
Division-I						
Professional, Technical and Related Workers	1058 (7.34)	991 (7.34)	67 (7.43)	26 (2.90)	110 (2.67)	16 (6.90)
Division-II						
Administrative, Executive and Managerial Workers	757 (5.25)	678 (5.02)	79 (8.76)	49 (1.13)	49 (1.19)	0 (0.00)
Division-III						
Clerical and Related Workers	92 (0.62)	87 (0.64)	5 (0.55)	12 (0.28)	11 (0.27)	1 (0.43)
Division-IV						
Sales Workers	4423 (30.69)	4200 (31.09)	223 (24.72)	2566 (59.06)	2443 (59.40)	123 (53.01)
Division-V						
Service Workers	1086 (7.54)	968 (7.66)	118 (13.08)	454 (10.44)	408 (9.92)	46 (19.83)
Division-VI						
Farmers, Fishermen, Hunters, Loggers and Related Workers	110 (0.76)	105 (0.78)	5 (0.55)	82 (1.89)	74 (1.80)	8 (3.45)
Division-VII, VIII and IX						
Production and Related Workers, Transport Equipment Operators and Labourers	6864 (47.63)	6463 (47.84)	401 (44.47)	1044 (24.03)	1008 (24.51)	36 (15.52)
Division-X						
Workers not classified by Occupation	53 (0.37)	49 (7.34)	4 (0.44)	12 (0.28)	10 (0.24)	2 (0.86)
Total	14,411 (100.00)	13,509 (100.00)	902 (100.00)	4345 (100.00)	4113 (100.00)	232 (100.00)

A Gender Description of the Single and the Family Worker in Himachal Pradesh (concluded)

Division	Rural					
	Rural: Single			Rural: Family Worker		
	Total	Male	Female	Total	Male	Female
Division-I						
Professional, Technical and Related Workers	2171 (4.47)	2047 (4.47)	124 (5.30)	117 (0.98)	93 (0.95)	24 (1.09)
Division-II						
Administrative, Executive and Managerial Workers	1700 (3.50)	1631 (3.53)	69 (2.95)	14 (0.12)	14 (0.14)	0 (0.00)
Division-III						
Clerical and Related Workers	208 (0.43)	194 (0.42)	14 (0.60)	11 (0.09)	11 (0.11)	0 (0.00)
Division-IV						
Sales Workers	9875 (20.32)	9568 (20.69)	307 (13.13)	1925 (16.07)	1739 (17.78)	186 (8.45)
Division-V						
Service Workers	3174 (6.53)	3041 (6.58)	133 (5.69)	453 (0.38)	369 (3.77)	84 (3.82)
Division-VI						
Farmers, Fishermen, Hunters, Loggers and Related Workers	3569 (7.35)	3282 (7.10)	287 (12.27)	6490 (54.18)	5020 (51.34)	1470 (66.82)
Division-VII, VIII and IX						
Production and Related Workers, Transport Equipment Operators and Labourers	27,659 (56.92)	26,274 (56.81)	1385 (59.21)	2860 (23.88)	2462 (25.18)	398 (18.09)
Division-X						
Workers not classified by Occupation	201 (0.41)	181 (0.39)	20 (0.86)	108 (0.90)	70 (0.72)	38 (1.73)
Total	48,589 (100.00)	46,250 (100.00)	2339 (100.00)	11,978 (100.00)	9778 (100.00)	2200 (100.00)

Note: Figures in parentheses expressing % to corresponding row total have been rounded off to 2 decimal places.

Source: Economic Tables, Vol. 8, Part-3 Census of India-1991, Series-1, Part IIIB – B Series.

SA-Gender-13

A Gender Description of the Single and the Family Worker in Himachal Pradesh (*continued*)

<i>Division</i>	<i>Urban: Single</i>			<i>Urban: Family Worker</i>		
	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>
Division-I						
Professional, Technical and Related Workers	1058 (100.00)	991 (93.67)	67 (6.33)	126 (100.00)	110 (87.30)	16 (12.70)
Division-II						
Administrative, Executive and Managerial Workers	757 (100.00)	678 (89.56)	79 (10.44)	49 (100.00)	49 (100.00)	0 (0.00)
Division-III						
Clerical and Related Workers	92 (100.00)	87 (94.57)	5 (5.43)	12 (100.00)	11 (91.67)	1 (8.33)
Division-IV						
Sales Workers	4423 (100.00)	4200 (94.96)	223 (24.72)	2566 (100.00)	2443 (59.40)	123 (53.01)
Division-V						
Service Workers	1086 (100.00)	968 (89.13)	118 (10.87)	454 (100.00)	408 (89.87)	46 (10.13)
Division-VI						
Farmers, Fishermen, Hunters, Loggers and Related Workers	110 (100.00)	105 (95.45)	5 (4.55)	82 (100.00)	74 (90.24)	8 (9.76)
Division-VII, VIII and IX						
Production and Related Workers, Transport Equipment Operators and Labourers	6864 (100.00)	6463 (94.16)	401 (5.84)	1044 (100.00)	1008 (96.55)	36 (3.45)
Division-X						
Workers not classified by Occupation	53 (100.00)	49 (92.45)	4 (7.55)	12 (100.00)	10 (83.33)	2 (16.67)
Total	14,411 (100.00)	13,509 (93.74)	902 (6.26)	4345 (100.00)	4113 (94.66)	232 (5.34)

A Gender Description of the Single and the Family Worker in Himachal Pradesh (*concluded*)

Division	Rural: Single			Rural: Family Worker		
	Total	Male	Female	Total	Male	Female
Division-I						
Professional, Technical and Related Workers	2171 (100.00)	2047 (94.29)	124 (5.71)	117 (100.00)	93 (79.49)	24 (20.51)
Division-II						
Administrative, Executive and Managerial Workers	1700 (100.00)	1631 (95.94)	69 (4.06)	14 (100.00)	14 (100.00)	0 (0.00)
Division-III						
Clerical and Related Workers	208 (100.00)	194 (93.27)	14 (6.73)	11 (100.00)	11 (100.00)	0 (0.00)
Division-IV						
Sales Workers	9875 (100.00)	9568 (20.69)	307 (13.13)	1925 (100.00)	1739 (90.34)	186 (9.66)
Division-V						
Service Workers	3174 (100.00)	3041 (95.81)	133 (4.19)	453 (100.00)	369 (81.46)	84 (18.54)
Division-VI						
Farmers, Fishermen, Hunters, Loggers and Related Workers	3569 (100.00)	3282 (91.96)	287 (8.04)	6490 (100.00)	5020 (77.35)	1470 (22.65)
Division-VII, VIII and IX						
Production and Related Workers, Transport Equipment Operators and Labourers	27,659 (100.00)	26,274 (94.99)	1385 (5.01)	2860 (100.00)	2462 (86.08)	398 (13.92)
Division-X						
Workers not classified by Occupation	201 (100.00)	181 (90.05)	20 (9.95)	108 (100.00)	70 (64.81)	38 (35.19)
Total	48,589 (100.00)	46,250 (95.19)	2339 (4.18)	1,1978 (100.00)	9778 (81.63)	2200 (18.37)

Note: Figures in parentheses expressing % to corresponding row total have been rounded off to 2 decimal places.

Source: Economic Tables, Vol. 8, Part-3 Census of India-1991, Series-1, Part IIIB - B Series.

SA-Gender-14

Percentage of Female Regular Employees in Himachal Pradesh

<i>Date of Census</i>	<i>No. of regular employees</i>	<i>% of female employees</i>
31.3.88	1,03,211	16.1
30.6.89	1,07,669	16.8
31.3.90	1,11,700	17.2
31.3.91	1,13,851	17.3
31.3.92	1,14,831	17.8
31.3.93	1,12,717	17.9
31.3.94	1,13,039	18.0
31.3.95	1,15,493	18.3
31.3.96	1,17,944	18.8
31.3.97	1,20,703	19.5

Source: Abridged from Table 2, p. 2, Census of Himachal Pradesh Employees as on 31 March 1997, Government of Himachal Pradesh.

SA-Gender-15

Government Employees: A Gender Description

<i>Type of Employees of all Departments/Offices</i>	<i>Scheduled Caste</i>		<i>Scheduled Tribe</i>		<i>Others</i>		<i>Total</i>
	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	
Gazetted	647	46	281	34	5633	646	7287
Non-gazetted	17,296	3699	4181	987	69,375	17,878	1,13,416
Total	17,943	3745	4462	1021	75,008	18,524	1,20,703

Source: Abridged from Table 8, p. 14, Census of Himachal Pradesh Employees as on 31 March 1997, Government of Himachal Pradesh.

SA-Gender-16

Gender Based Percentage Share in Agriculture and Animal Husbandry Activities

<i>Activity</i>	<i>Percentage Share</i>	
	<i>Men</i>	<i>Women</i>
Agriculture		
– ploughing	100	0
– land preparation and clod breaking	15	85
– sowing and transplanting	28	72
– gap filling	0	100
– inter-culture	32	68
– weeding	6	94
– irrigation	50	50
– fertiliser application	55	45
– harvesting	29	71
– threshing and winnowing	42	58
Animal Husbandry		
– tending cattle in shed	5	95
– grazing	52	48
– removing dung from shed	0	100
– fodder collection	7	93
– milking	4	96

Source: Mountain Women Development Centre Records, 1995 as quoted in State of the Environment Report.

SA-Gender-17

District-wise List of Registered *Mabila Mandals*

<i>District</i>	<i>Year</i>			
	<i>1991</i>	<i>1992</i>	<i>1993-94</i>	<i>1995-96</i>
Bilaspur	225	249	337	399
Chamba	188	200	200	290
Hamirpur	286	301	342	395
Kangra	963	1030	1018	1462
Kinnaur	101	102	102	105
Kullu	241	304	388	538
Lahaul & Spiti	85	85	86	123
Mandi	494	518	671	905
Shimla	790	811	891	1084
Sirmaur	272	528	686	740
Solan	383	422	469	519
Una	175	178	226	254
Total (HP)	4403	4728	5416	6814

Source: Department of Rural Development, Government of Himachal Pradesh.

SA-Gender-18

Gender Profile of the State Legislative Assembly

<i>Sessions</i>	<i>Total seats</i>	<i>Men legislators</i>	<i>Women legislators</i>
1942–56 H.P. 'Part-C' including Bilaspur	41	40	1
1957–62 H.P. Territorial Council	44	43	1 (nominated)
1962–1963 (30 June) H.P. Territorial Council	43	41	2 (1 nominated)
1963–67 1st Vidhan Sabha including 1966 reorganisation of states	56	53	3 (1 nominated)
1967–72 2nd Vidhan Sabha	63	63	0
1972–77 3rd Vidhan Sabha	68	63	5
1977–82 4th Vidhan Sabha	68	67	1
1982–85 5th Vidhan Sabha	68	65	3
6th Vidhan Sabha	68	65	3
7th Vidhan Sabha	68	65	3
8th Vidhan Sabha	68	64	4
9th Vidhan Sabha	68	64	4

Source: Vidyanmala: Independence Golden Jubilee Special, Himachal Pradesh Vidhan Sabha Secretariat, Vol. 2, July–December 1997.

SA-Gender-19

Women Contestants: Legislative Assembly Elections (1967–1998)

<i>Year</i>	<i>No. of women contestants</i>
1967	2
1972	7
1977	8
1982	6
1985	9
1990	18
1993	16
1998	18

Source: Vidyanmala: Independence Golden Jubilee Special, Himachal Pradesh Vidhan Sabha Secretariat, Vol. 2, July–December 1997 and Election Department, Government of Himachal Pradesh.

SA-Gender-20

Gender Profile of Members in Zila Parishads

<i>Total Zila Parishads</i>	<i>Total Members</i>	<i>Members</i>							
		<i>SC</i>		<i>ST</i>		<i>General</i>		<i>Overall</i>	
		<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>
12	252	46	20	14	7	108	57	168	84
								(66.67)	(33.33)

Note: Figures in parentheses, rounded off to 2 decimal places, express percentages to total.

Source: Panchayati Raj Department, Government of Himachal Pradesh.

SA-Gender-21

Gender Profile of Chairpersons in Zila Parishads

<i>Total Zila Parishads</i>	<i>Total Chairpersons</i>	<i>Chairpersons</i>							
		<i>SC</i>		<i>ST</i>		<i>General</i>		<i>Overall</i>	
		<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>
12	12	2	1	1	1	5	2	8	4
								(66.67)	(33.33)

Note: Figures in parentheses, rounded off to 2 decimal places, express percentages to total.

Source: Panchayati Raj Department, Government of Himachal Pradesh.

SA-Gender-22

Gender Profile of Members in Panchayat Samiti

District	Total Panchayat Samiti	Total Members	Members									
			SC		ST		General		Overall			
			M	F	M	F	M	F	M	F		
Bilaspur	3	93	16	8	–	–	47	22	63	30	(66.74)	(33.26)
Chamba	7	135	16	9	33	16	40	21	89	46	(65.93)	(34.07)
Hamirpur	5	119	18	10	–	–	61	30	79	40	(66.39)	(33.61)
Kangra	13	372	53	27	–	–	194	98	247	125	(66.40)	(33.60)
Kinnaur	3	45	12	4	18	11	–	–	30	15	(66.67)	(33.33)
Kullu	5	98	20	10	1	1	44	22	65	33	(66.33)	(33.67)
Lahaul & Spiti	2	30	2	–	20	8	–	–	22	8	(73.33)	(26.67)
Mandi	10	241	48	24	–	–	112	57	160	81	(66.39)	(33.61)
Shimla	9	179	30	17	–	–	89	43	119	60	(66.48)	(33.52)
Sirmaur	6	119	26	12	2	–	51	28	79	40	(66.39)	(33.61)
Solan	5	114	21	14	–	–	54	25	75	39	(65.79)	(34.21)
Una	4	116	18	9	–	–	58	31	76	40	(65.52)	(34.48)
Total (HP)	72	1661	280	144	74	36	749	378	1103	558	(66.40)	(33.59)

Note: Figures in parentheses, rounded off to 2 decimal places, express percentages to corresponding (row) total.

Source: Panchayati Raj Department, Government of Himachal Pradesh.

SA-Gender-23

Gender Profile of Chairpersons in Panchayat Samitis

District	Total Panchayat Samiti/ Chairpersons	Chairpersons									
		SC		ST		General		Overall			
		M	F	M	F	M	F	M	F		
Bilaspur	3	1	–	–	–	1	1	2	1	(66.67)	(33.33)
Chamba	7	1	–	–	1	4	1	5	2	(71.43)	(28.57)
Hamirpur	5	1	–	–	–	3	1	4	1	(80.00)	(20.00)
Kangra	13	2	1	1	–	6	3	9	4	(69.23)	(30.77)
Kinnaur	3	1	–	–	1	1	–	2	1	(66.67)	(33.33)
Kullu	5	1	1	1	–	1	1	3	2	(60.00)	(40.00)
Lahaul & Spiti	2	–	–	–	1	1	–	1	1	(50.00)	(50.00)
Mandi	10	2	1	–	–	5	2	7	3	(70.00)	(30.00)
Shimla	9	2	1	–	–	4	2	6	3	(66.67)	(33.33)
Sirmaur	6	1	1	–	–	3	1	4	2	(66.67)	(33.33)
Solan	5	1	1	–	–	2	1	3	2	(60.00)	(40.00)
Una	4	1	–	–	–	2	1	3	1	(75.00)	(25.00)
Total (HP)	72	14	6	3	3	32	14	49	23	(68.06)	(31.94)

Note: Figures in parentheses, rounded off to 2 decimal places express percentages of corresponding (row) total.

Source: Panchayati Raj Department, Government of Himachal Pradesh.

SA-Gender-24

Gender Profile of Members in Gram Panchayat

District	Total Gram Panchayats	Total Members	Members									
			SC		ST		General		Overall			
			M	F	M	F	M	F	M	F		
Bilaspur	130	946	170	93	13	6	459	205	642	304	(67.86)	(32.14)
Chamba	264	1526	242	76	311	174	431	292	984	542	(64.48)	(35.51)
Hamirpur	209	1325	228	80	–	–	688	329	916	409	(69.13)	(30.87)
Kangra	708	4354	759	253	–	–	2284	1058	3043	1311	(69.89)	(30.11)
Kinnaur	62	350	70	48	153	79	–	–	223	127	(63.71)	(36.29)
Kullu	181	1104	331	112	30	2	391	238	752	352	(68.12)	(31.88)
Lahaul & Spiti	41	205	19	5	115	66	–	–	134	71	(65.36)	(34.64)
Mandi	382	2582	529	243	29	1	1198	582	1756	826	(68.01)	(31.99)
Shimla	316	1970	581	197	5	–	764	423	1350	620	(68.53)	(31.47)
Sirmaur	217	1311	276	146	10	6	565	308	851	460	(64.91)	(35.09)
Solan	195	1243	404	209	6	2	329	293	739	504	(59.45)	(40.55)
Una	217	1349	215	86	–	–	639	409	854	495	(63.31)	(36.69)
Total (H.P.)	2922	18,264	3824	1548	672	336	7749	4136	12,244	6020	(67.04)	(38.96)

Note: Figures in parentheses, rounded off to 2 decimal places, indicate percentage to corresponding (row) total.

Source: Panchayati Raj Department, Government of Himachal Pradesh.

SA-Gender-25

Gender Profile of Chairpersons in Gram Panchayat

District	Total Panchayats/ Chairpersons	Chairpersons							
		SC		ST		General		Overall	
		M	F	M	F	M	F	M	F
Bilaspur	130	22	12	–	–	65	31	87 (66.92)	43 (33.08)
Chamba	264	36	17	58	28	83	42	177 (67.05)	87 (32.95)
Hamirpur	209	34	16	–	–	106	53	140 (66.99)	69 (33.01)
Kangra	708	104	53	–	–	368	183	472 (66.67)	236 (33.33)
Kinnaur	62	10	6	31	15	–	–	41 (66.13)	21 (33.87)
Kullu	181	35	19	2	1	84	40	121 (66.85)	60 (33.15)
Lahaul & Spiti	41	3	–	27	11	–	–	30 (73.17)	11 (26.83)
Mandi	382	74	37	–	–	181	90	255 (66.75)	127 (33.25)
Shimla	316	60	30	–	–	150	76	210 (66.46)	106 (33.54)
Sirmaur	217	48	23	2	1	96	47	146 (67.28)	71 (32.72)
Solan	195	43	23	–	–	85	44	128 (65.64)	67 (34.36)
Una	217	34	16	–	–	111	56	145 (66.82)	72 (33.18)
Total (HP)	2922	503	252	120	56	1329	662	1952 (66.80)	970 (33.20)

Note: Figures in parentheses, rounded off to 2 decimal places, indicate percentage to corresponding (row) total.

Source: Panchayati Raj Department, Government of Himachal Pradesh.

SA-Gender-26

Women Welfare Programmes: A Brief Picture

A. State programmes

- Protective/State Homes: Their objective is to provide shelter, education and skill training to destitute and deserted women, and those women who are in moral danger.
- *Bal/Balika Ashrams*: Offer free board and lodging and educational facilities to orphan/semi-orphan children. Out of five, two are exclusively for girls.
- Rehabilitation Grant @ Rs 6000 per inmate is provided to inmates of State Homes and Bal/Balika Ashrams upon leaving the institution — for the setting up of small self-employment ventures.
- After Care Facility for inmates who seek further study/vocational training to make them self-reliant.
- A Self-Employment scheme was launched in 1986 and provides Rs 2500 per woman for availing self-employment opportunities.
- Awareness camps are being organised throughout the state to generate public support for issues such as atrocities against women.
- A widow's pension of Rs 150 per month (on a quarterly basis) is being given to 98,439 women.

B. Agencies set up for improvement of the socio-economic status of women

- State Social Welfare Board: Operating since 1954, the Board runs pro-

grammes such as: family counselling centres for women; awareness programmes assisted by the central Social Welfare Board etc.

- Women Development Corporation: Operating since 1989 for providing financial assistance to women entrepreneurs at low interest rates.
- H.P. State Commission for Women: Constituted under the H.P. State Commission for Women Act, 1996 to protect the rights of women and to promote the well being of women in the state. It is both a monitoring and an implementing agency.
- *Matri Shakti Bima Yojana*: launched in September 2000 ostensibly to provide security cover to women belonging to IRDP families. There is provision to provide a compensation of Rs 25000 to the legal heir of the woman in case of death. In the event of permanent disability or death of husband assistance is provided. The loss, for example of an eye is compensated.

C. Centrally sponsored schemes

- Distance Education Programme: For enhancing the capacity of field functionaries. It is proposed to start, in collaboration with IGNOU and ISRO, a certificate course in the distance education mode on women's group mobilisation and empowerment.

- Support to Training and Employment Programme (STEP): Available since 1987 to upgrade skills and provide new technology to poor women without assets in the traditional sector. Linkage with the market, extension and credit is ensured.
- Setting up of Employment-cum-Income Production Units (NORAD): Launched in 1982–83 with assistance from NORAD. Aim is to improve the lives of poor women. Financial assistance is provided to Women Development Corporations, Public Sector Corporations, Voluntary Organizations and Autonomous bodies for the training of women in non-traditional trades and to ensure they find employment in these areas.
- Awareness Generation on Women's Rights and Laws: Grant-in-aid is provided to voluntary agencies to undertake awareness generation activities, research work etc.
- Scheme of Working Women's Hostel: Set up with the aim of providing safe accommodation at concessional rates to employed women living away from their homes.
- Short Stay Homes: Operating since 1969, for the protection and rehabilitation of women and girls facing social and moral danger due to family problems, exploitation etc.
- Crèches: For taking care of the children of working women.
- *Balika Samridhi Yojana*: Operating since 1997, for the prosperity of the girl child and bringing about changes in attitudes of the family and community towards her.
- *Kishori Shakti Yojana*: 2000 is the recast Adolescent Girls Scheme of 1991–92, and is an integral part of the Integrated Child Development Scheme (ICDS) to improve the capability of adolescent girls by providing them education, nutrition, health checks and skill training through the network of Anganwadi Centres.
- *Stree Puroskar Yojana*: Introduced in 2000, its aim is to reward women who have done exemplary work for improving the lot of women in particular and society as a whole.
- *Indira Mahila Yojana*: Operates across the country since 1995, in 238 blocks, for the holistic empowerment of women. The focus is to create an organisational base for women to come together. Operational in Rohru, Baijnath and Chamba Blocks in Himachal. The focus is on creating self-help groups (SHG).
- *Rashtriya Mahila Kosb*: Operating since 1993. Its aim is to provide micro finance to poor women through non-government organisations.
- The Integrated Child Development Services (ICDS) cater to the holistic development of the child. Besides children, pregnant women and nursing mothers and women in the reproductive age group are covered under the programme — this centrally sponsored scheme, operational since 1975, covers 65 rural projects and 7 tribal projects in the state.

SA-Gender-27

Constitutional, Legal and Other Provisions fostering
Gender Equity and Protection of Human Rights

Constitution

Fundamental Rights (Part III)

Article 15(3) provides for upliftment of women and children

Article 16 provides reservation for weaker section — women being included in the definition of weaker

Directive Principles of State Policy (Part IV)

Article 39(a) promotes equal rights for means of livelihood

Article 39(d) promotes equal pay for equal work

Article 42 provides for humane conditions of work and maternity leave

Article 46 promotes education and economic interests of weaker sections, free education to girls

Article 243(d & t) provides no less than one-third reservation for women in Panchayats and Municipalities

Electoral Laws

Equal right to contest and caste votes

Himachal Pradesh Panchayati Raj Act and Rules 1994

Rule 28(5) provides reservation of seats for women

Employment

Maternity Benefit Act 1961 such as pre and post maternity paid leave, salary and other

benefits subject to regulation during employment

No discrimination due to pregnancy or age

39(d) secures equal pay for equal work

Equal Remuneration Act 1976

Where other things are equal preference to women

Income tax rebate to working women

Investigation, Arrest and Summoning of
Witness

HP Panchayati Raj Act 1964, Section 66: disobedience of summon to produce evidence or document is punishable but for women a Commission is to be constituted to record evidence and produce document as per procedure prescribed in Rule 52 Cr. PC 1973

a) Section 100(3) provides that women to be searched by women with strict regard to decency

b) Section 160 provides that women be searched at their residence and not in the Police Station

c) Section 437(1) makes special provisions for the release of women on bail alongwith the sick and the infirm and persons below the age of fifteen years

CPC Section 56 prohibits arrest and detention of women in the execution of money decree

Order 32(a) in family matters declare proceedings to be in camera

Source: Office of The Advocate General, Himachal Pradesh, High Court

Sexual Harassment at Workplace

Committee constituted to combat instances of sexual harassment as and when needed on Himachal Pradesh Campus as per University Grants Commission directive to the Vishakha & others v/s State of Rajasthan 1977 Vol. 6 SSC 241: judgement holds

Succession and Inheritance

The Hindu Succession Act 1956 Section 8 makes Hindu daughter, mother, widow and wife Class-I heir with a right to succeed

Section 14 converts life interest of female into absolute rights in property

Section 15 makes the life of domicile as that of her husband

Matrimonial Laws

The Hindu Marriage Act 1955 fixes the age of Male as 21 years and the girl 18 years at the time of marriage

Child Marriage Restraining Act 1977 Sections 3, 4, 5 and 6 provides punishment for child marriage

Section 13 stipulates special grounds for divorce for women where the husband has not paid maintenance under the Hindu Adoption and Maintenance Act

Section 22 provides for camera proceedings

Section 25 provides for permanent alimony and maintenance and custody of children

Istri Dhan

Section 60 declares that *Istri Dhan* cannot be attached in execution of a decree (*Istri Dhan* constitutes all gifts/presents given at the time of marriage by the boy's or girl's family and that the subsequent sole ownership lies with the girl)

Custody and Adoption

The Hindu Minority and Guardianship Act 1956,

- a) Section 6 gives the mother and the father status of natural guardian: Paramount interest of the child is the determining factor

The Hindu Adoption and maintenance Act 1956

- a) Section 7 ensures that without the consent of the wife the husband cannot adopt a child
- b) Section 8 provides that a single girl can adopt a child
- c) Section 9 provides that a child cannot be given up for adoption without the consent of the wife

Maintenance

Section 125 Cr. PC Section 24 and 25 of the Hindu Marriage Act 1955

Section 18 gives a right of maintenance to the Hindu wife

Offences Related to Marriage

Dowry

- a) Dowry Prohibition Act 1951 and the HP Amendment to Dowry Prohibition Act 1976 prohibits demand, giving and taking of dowry and makes it punishable for one year with a fine of Rs 5000. Gifts, Tikkas and Shaguns cannot be displayed
- b) Section 304(b) Cr. PC relates to the presumption of unnatural death on showing of cruelty or harassment by in-laws within seven years of marriage as dowry death

- c) Section 498 (a) Cr. PC prescribes punishment of upto three years for causing cruelty
- d) Evidence Act 113(b) presumption as to dowry death

Adultery

- a) The woman is not prosecuted alongwith the adulterer

Social Recognition

The Consumer Protection Act 1986 Section 10, 16 and 20 provides for appointment of women as members

Social Welfare Board set up in the state to foster women's welfare

Protection in Rent Laws

HP Tenancy and Land Reforms Act 1971: Section 34(c) protects for ejection of unmarried/divorced/separated women or widows

Tribal Laws

Customary laws regarding matters such as marriage, custody and inheritance hold in relation to women

Protection in Home Care

The Suppression of Immoral Traffic in Women and Girls Act provides for protection homes wherein proper care is taken of inmates

Education

Article 46 of the Constitution provides for the promotion of educational and economic interests of weaker sections including women:

1. As such girl students are exempt from tuition fee in the state and
2. Women candidates can appear in examinations as private candidates without seeking admission either in regular or in correspondence courses in all subjects except those in which practicals are an essential part of the coursework

Legal Aid

Legal Aid and Advisory Boards provide legal assistance and also provide services of competent lawyers to people belonging to the weaker sections of society such as scheduled castes, scheduled tribes, women labourers etc when needed

SA-Gender-28

District-wise Gender Profile of Main Workers
Expressed as a Percentage of Population in Each Category

<i>District</i>	<i>Main Workers as a % of total population</i>	<i>Main Workers–male as a % of total male population</i>	<i>Main Workers–female as a % of total female population</i>
Bilaspur	32.51	40.62	24.34
Chamba	27.88	40.35	14.90
Hamirpur	29.34	35.70	23.58
Kangra	25.20	38.81	13.89
Kinnaur	50.79	58.36	42.23
Kullu	43.96	50.90	36.48
Lahaul & Spiti	57.88	64.06	50.19
Mandi	29.89	39.53	20.38
Shimla	42.19	51.49	31.84
Sirmaur	38.38	48.98	26.62
Solan	34.57	51.08	15.22
Una	26.60	41.26	11.90

Source: Calculated on the basis of data from Census 2001.

SA-Gender-29

District-wise Gender Profile of Non-Workers
Expressed as a Percentage of Population in Each Category

<i>District</i>	<i>Non-Workers as a % of total population</i>	<i>Non-Workers–male as a % of total male population</i>	<i>Non-Workers–female as a % of total female population</i>
Bilaspur	51.05	47.69	54.44
Chamba	49.96	46.02	54.06
Hamirpur	50.10	48.94	51.15
Kangra	55.96	49.16	62.59
Kinnaur	39.46	45.22	39.46
Kullu	42.95	39.37	46.80
Lahaul & Spiti	36.50	31.61	42.57
Mandi	49.56	47.31	51.77
Shimla	48.81	42.54	55.50
Sirmaur	50.70	43.51	58.68
Solan	47.30	38.68	57.40
Una	54.97	46.98	62.99

Source: Calculated on the basis of data from Census 2001.

SA-Health-1

Estimated Crude Birth Rate

District	Crude Birth Rate– SRS 1998			Crude Birth Rate– Census 1991
	Rural	Urban	Total	Total
Bilaspur	15.5	51.9	18.0	27.89
Chamba	14.5	30.8	15.8	35.18
Hamirpur	17.7	66.9	21.2	25.36
Kangra	18.9	79.2	22.2	28.21
Kinnaur	7.9	0.0	7.9	30.52
Kullu	18.5	74.8	22.3	32.63
Lahaul & Spiti	8.6	0.0	8.6	28.14
Mandi	19.3	44.2	21.1	30.12
Shimla	11.7	31.0	16.7	28.92
Sirmaur	15.9	32.1	17.9	34.25
Solan	17.4	31.1	19.4	29.81
Una	20.3	30.9	21.1	27.8
Himachal Pradesh	17.2	44.1	19.8	29.37

Source: Annual Report on the Working of the Registration of Births and Deaths Act, 1969 for the year 1998, Chief Registrar, Director of Health Services, Himachal Pradesh and Census 1991.

SA-Health-2

District-level Total Fertility Rate

Districts	TFR (1981)	TFR (1991)
Bilaspur	4.5	3.3
Chamba	4.9	4.5
Hamirpur	4.3	3.0
Kangra	4.8	3.4
Kinnaur	4.9	4.0
Kullu	4.9	4.0
Lahaul & Spiti	4.2	3.8
Mandi	4.6	3.5
Shimla	4.1	3.5
Sirmaur	4.9	4.5
Solan	4.6	3.5
Una	4.9	3.5
Himachal Pradesh	4.7	3.6

Source: Census of India 1981 and 1991.

SA-Health-3

Estimated Crude Death Rate with Rural/Urban Breakups in 1998

<i>District</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>
Bilaspur	4.3	8.9	4.6
Chamba	4.9	9.3	5.3
Hamirpur	5.3	14.8	6.0
Kangra	4.8	14.1	5.3
Kinnaur	2.9	–	2.9
Kullu	4.3	17.7	5.2
Lahaul & Spiti	3.3	–	3.3
Mandi	4.5	8.2	4.7
Shimla	4.6	7.3	5.2
Sirmaur	3.6	7.9	4.1
Solan	4.5	4.5	4.5
Una	4.8	4.3	4.7
Himachal Pradesh	4.6	8.8	5.0

Note: Estimated by ISST.

Source: Rural Urban Mid-year population 1998 in Family Welfare Programme Year Book 1997–98, Department of Health and Family Welfare, Himachal Pradesh; No. of deaths in 1998 in Annual Report on the Working of the Registration of Births and Deaths Act, 1969 for the year 1998, Chief Registrar, Director of Health Services, Himachal Pradesh.

SA-Health-4

District-wise Distribution of Infant Mortality Rate and
Child Mortality Rate in Himachal Pradesh with Gender Break-ups, 1991

<i>District</i>	<i>Infant Mortality Rate</i>			<i>Child Mortality Rate</i>		
	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
Bilaspur	70	71	71	80	84	82
Chamba	109	93	104	113	114	113
Hamirpur	65	65	65	82	79	81
Kangra	79	74	77	100	99	100
Kinnaur	124	122	123	159	145	152
Kullu	101	102	102	115	116	116
Lahaul & Spiti	61	56	59	124	118	122
Mandi	69	69	69	92	87	90
Shimla	112	77	104	133	119	126
Sirmaur	94	93	94	124	111	118
Solan	87	81	84	105	99	101
Una	70	74	72	92	97	96
Himachal Pradesh	84	81	82	98	92	95

Source: Himachal Pradesh District Profile 1991, Census of India 1991.

SA-Health-5

Sex Ratio (1991), Mean Age of Marriage (females) and Number of Maternal Deaths (1997)

<i>District</i>	<i>Sex Ratio</i>	<i>Mean age at marriage (females)*</i>	<i>No. of maternal deaths (No. in the sample of 1000 hhs)</i>
Bilaspur	1002	18.91	6
Chamba	949	19.19	0
Hamirpur	1105	19.52	1
Kangra	1024	20.32	0
Kinnaur	856	19.49	2
Kullu	920	19.31	0
Lahaul & Spiti	817	20.33	9
Mandi	1013	19.01	1
Shimla	894	19.93	3
Sirmaur	897	18.92	1
Solan	909	19.43	0
Una	1017	20.60	1
Himachal Pradesh	976	19.62	—

Note: * Females married during 1986–91.

Source: Census 1991 and District Surveys, Ministry of Health and Family Welfare.

SA-Health-6

Immunisation of Pregnant Women and Institutional Deliveries (1997)

(in per cent)

<i>District</i>	<i>Pregnant women who had full antenatal care (3 checkups)</i>	<i>Pregnant women who had IFA tablets (full course)</i>	<i>Pregnant women who had TT (2 doses)</i>	<i>Institutional deliveries</i>
Bilaspur	61.4	46.3	58.1	36.8
Chamba	48.4	30.7	49.0	22.5
Hamirpur	61.3	46.0	39.5	27.8
Kangra	54.3	29.4	45.6	29.8
Kinnaur	47.9	47.1	29.3	28.1
Kullu	57.5	21.0	59.5	34.0
Lahaul & Spiti	46.3	23.4	50.2	25.8
Mandi	48.7	31.4	54.3	31.8
Shimla	41.3	30.6	56.1	53.3
Sirmaur	42.7	33.5	26.8	22.9
Solan	55.8	36.5	50.0	32.1
Una	64.3	30.6	40.4	27.7
Himachal Pradesh	52.5	33.9	46.6	31.1

Source: FW Indicators-District Surveys, Ministry of Health and Family Welfare.

SA-Health-7

Immunisation of Children (given all doses) in 1997 (in per cent)

<i>District</i>	<i>Fully Immunised</i>	<i>BCG</i>	<i>DPT</i>	<i>Polio</i>	<i>Measles</i>	<i>Vitamin A</i>
Bilaspur	84.6	96.9	88.7	88.7	93.8	11.2
Chamba	84.8	93.5	93.1	90.8	98.9	50.4
Hamirpur	92.5	98.6	97.9	98.6	93.2	4.0
Kangra	77.2	97.4	98.7	79.7	97.4	91.7
Kinnaur	56.2	96.8	96.2	67.5	96.2	56.2
Kullu	87.0	96.8	94.5	91.4	89.8	0.0
Lahaul & Spiti	70.0	88.3	83.2	81.0	73.7	2.8
Mandi	87.0	97.0	95.5	92.0	93.5	69.9
Shimla	82.0	92.1	87.5	88.2	89.0	3.9
Sirmaur	62.9	90.2	86.3	64.6	87.4	70
Solan	91.0	95.9	93.8	93.2	93.2	0.0
Una	95.5	98.8	97.7	97.4	98.5	86.7
Himachal Pradesh	80.9	95.2	92.8	86.1	92.1	37.2

Source: FW Indicators-District Surveys, Ministry of Health and Family Welfare.

SA-Health-8

Child Morbidity Patterns in 1997 (in per cent)

<i>District</i>	<i>Children who had diarrhoea (during last two months)</i>	<i>Children treated by ORS due to diarrhoea in last two months</i>	<i>Children who had breathing problem</i>	<i>Treated by ANM/PH/ Govt. facilities for breathing problem</i>	<i>Baby weight found below 2.5 kg.</i>	<i>No. of infant deaths due to Tetanus (no. in 1000 sample b.b.)</i>	<i>Adolescent girls suffering from Anaemia</i>
Bilaspur	7.3	53.8	3.9	42.8	17.8	0	9
Chamba	19.2	16.6	25.7	80.7	3.3	2	6.3
Hamirpur	6.0	21.4	12.1	64.2	65.9	0	18.5
Kangra	32.0	9.2	22.7	50.0	8.3	0	5.0
Kinnaur	18.4	13.6	17.5	83.3	3.3	0	6.4
Kullu	7.0	42.8	7.5	60.0	12.4	2	5.5
Lahaul & Spiti	5.4	54.5	1.9	100.00	9.4	1	12.1
Mandi	22.5	12.5	20.7	75.0	2.7	2	3.7
Shimla	12.9	35.7	11.1	62.5	9.3	0	27.3
Sirmaur	25.9	5.1	15.6	61.5	4.3	1	2.4
Solan	13.2	71.4	14.3	50.0	14.7	0	63.2
Una	26.0	10.3	22.7	34.6	3.8	1	7.4
Himachal Pradesh	16.3	28.9	14.6	63.7	12.9	—	13.9

Source: FW Indicators-District Surveys, Ministry of Health and Family Welfare.

SA-Health-9

District-wise Couple Protection Rate in Himachal Pradesh since 1985

<i>District</i>	<i>1985</i>	<i>1990</i>	<i>1995</i>	<i>2000</i>
Bilaspur	40.80	53.00	70.20	68.15
Chamba	27.20	38.10	44.21	38.50
Hamirpur	36.60	53.90	66.18	60.14
Kangra	32.30	50.20	57.03	46.05
Kinnaur	34.30	41.70	45.01	45.33
Kullu	37.20	50.30	59.00	56.55
Lahaul & Spiti	26.10	32.60	46.87	50.18
Mandi	36.90	55.60	63.23	57.71
Shimla	42.40	52.60	62.33	54.59
Sirmaur	32.10	47.50	54.44	45.03
Solan	37.00	51.30	60.51	56.50
Una	27.60	41.50	47.31	42.25
Himachal Pradesh	35.70	50.10	58.37	51.57

Source: Department of Health and Family Welfare, Himachal Pradesh.

SA-Health-10

District-wise and Method-wise Couple Protection Rate in 1998

<i>District</i>	<i>Percentages of couples effectively protected with</i>			
	<i>Sterilisation</i>	<i>IUD Insertion</i>	<i>CC</i>	<i>OP</i>
Bilaspur	45.35	13.67	5.38	3.42
Chamba	29.82	4.88	1.07	2.18
Hamirpur	45.60	10.00	3.89	2.15
Kangra	38.41	6.88	3.15	2.11
Kinnaur	35.72	7.36	5.80	2.57
Kullu	41.67	9.53	4.94	3.03
Lahaul & Spiti	35.29	7.39	3.61	2.58
Mandi	43.10	10.33	3.46	2.82
Shimla	42.57	9.70	3.33	2.40
Sirmaur	35.90	5.09	3.14	2.08
Solan	42.62	12.04	2.83	1.97
Una	33.33	6.23	2.84	1.88
Himachal Pradesh	39.76	8.55	3.33	2.37

Source: Department of Health and Family Welfare, Himachal Pradesh.

SA-Health-11

District-wise Growth of Allopathic Medical Institutions (1996–2000)

<i>District</i>	<i>General hospitals</i>		<i>CHC/Rural hospitals</i>		<i>Primary health centres</i>		<i>Sub-centres</i>		<i>Civil dispensaries</i>	
	<i>1996</i>	<i>2000</i>	<i>1996</i>	<i>2000</i>	<i>1996</i>	<i>2000</i>	<i>1996</i>	<i>2000</i>	<i>1996</i>	<i>2000</i>
Bilaspur	1	2	4	5	11	17	108	118	11	11
Chamba	3	4	5	7	24	28	159	169	11	11
Hamirpur	1	2	4	5	14	17	146	153	6	6
Kangra	7	8	9	12	35	47	407	434	35	34
Kinnaur	2	2	3	3	9	17	35	32	1	0
Kullu	1	2	3	5	14	12	97	100	5	5
Lahaul & Spiti	1	1	2	3	7	9	32	35	6	5
Mandi	3	6	7	9	36	44	296	312	15	13
Shimla	11	11	5	6	42	55	238	259	30	31
Sirmaur	4	5	1	3	20	24	143	148	16	13
Solan	4	5	2	3	18	20	169	178	20	17
Una	1	2	2	4	14	12	124	131	9	9
Himachal Pradesh	39	50	47	65	244	302	1954	2069	165	155

Source: Directorate of Health Services, Himachal Pradesh.

SA-Health-12

Growth of Medical Institutions under Indian Systems of Medicine and Homeopathic Department in Himachal Pradesh between 1996 and 2000

District	Ayurvedic hospitals		Ayurvedic dispensaries		Unani dispensaries		Homeopathic dispensaries	
	1996	2000	1996	2000	1996	2000	1996	2000
Bilaspur	1	2	36	63	0	0	1	1
Chamba	1	2	58	98	0	0	1	1
Hamirpur	1	3	31	68	0	0	0	0
Kangra	2	4	128	226	1	1	0	0
Kinnaur	1	1	35	40	0	0	0	0
Kullu	1	1	38	63	0	0	0	0
Lahaul & Spiti	0	1	14	20	0	0	0	0
Mandi	1	2	91	162	0	0	0	0
Shimla	1	2	92	145	1	1	0	0
Sirmaur	1	1	49	80	0	0	0	0
Solan	1	1	46	75	1	1	0	0
Una	1	2	41	69	0	0	0	0
Himachal Pradesh	12	22	659	1109	3	3	2	2

Source: Directorate of Health Services, Himachal Pradesh.

SA-Health-13

Coverage of Population by a Single Unit of Sub-centre, Primary Health Centre and Community Health Centre in Himachal Pradesh, 1996 and 2000*

<i>District</i>	<i>Population per sub-centre</i>		<i>Population per PHC</i>		<i>Population per CHC</i>	
	<i>1996</i>	<i>2000</i>	<i>1996</i>	<i>2000</i>	<i>1996</i>	<i>2000</i>
Bilaspur	2989	2937	29,344	20,384	80,697	69,305
Chamba	2781	2873	18,423	17,343	88,432	69,371
Hamirpur	2725	2761	28,418	24,849	99,463	84,487
Kangra	3140	3152	36,517	29,104	1,42,009	1,13,990
Kinnaur	2228	2618	8663	4928	25,990	27,927
Kullu	3509	3742	24,314	31,181	1,13,465	74,834
Lahaul & Spiti	966	874	4414	3398	15,450	10,195
Mandi	2878	2941	23,664	20,854	1,21,698	1,01,951
Shimla	2852	2827	16,159	13,310	1,35,738	1,22,012
Sirmaur	2953	3107	21,115	19,158	4,22,296	1,53,264
Solan	2539	2645	23,843	23,540	2,14,586	1,56,935
Una	3330	3381	29,495	36,912	2,06,468	1,10,736
Himachal Pradesh	2909	2965	23,300	20,312	1,20,960	94,372

Note: * Calculated on the basis of estimated population of 1996 and 2000.

Source: Directorate of Health Services, Himachal Pradesh.

SA-Health-14

Beds per Thousand Population in Himachal Pradesh as on 31 March 2000

<i>Districts</i>	<i>Estimated mid-year population</i>	<i>Total no. of beds available</i>	<i>Beds per thousand population</i>
Bilaspur	3,46,527	436	1.3
Chamba	4,85,598	691	1.4
Hamirpur	4,22,434	478	1.1
Kangra	13,67,884	1706	1.2
Kinnaur	83,780	279	3.3
Kullu	3,74,171	489	1.3
Lahaul & Spiti	30,586	143	4.7
Mandi	9,17,559	1419	1.5
Shimla	73,2074	2428	3.3
Sirmaur	4,59,793	697	1.5
Solan	4,70,804	1120	2.4
Una	4,42,943	424	0.9
Himachal Pradesh	61,34,153	10,310	1.7

Note: No. of beds includes the available beds in State special hospitals, mission hospitals and other private hospitals.

Source: Directorate of Health Services, Himachal Pradesh.

SA-Health-15

Distribution of Medical Institutions in Backward Contiguous Backward and Dispersed Backward areas in Himachal Pradesh as on 31 March 2000

<i>Districts</i>	<i>Hospitals</i>	<i>Community health centre</i>	<i>Primary health centre</i>	<i>Civil dispensary</i>	<i>Sub-centre</i>	<i>Beds available</i>
Bilaspur	0	0	2	0	10	6
Chamba	1	3	9	6	69	120
Hamirpur	0	0	3	0	9	17
Kangra	0	0	2	0	8	6
Kinnaur	0	0	0	0	0	0
Kullu	0	3	4	2	40	48
Lahaul & Spiti	0	0	0	0	0	0
Mandi	0	2	12	4	92	54
Shimla	0	1	13	1	54	76
Sirmaur	0	0	2	0	18	12
Solan	0	0	1	0	5	0
Una	0	0	0	0	3	0
Himachal Pradesh	1	9	48	13	308	339

Source: Directorate of Health Services, Himachal Pradesh.

SA-Health-16

Distribution of Medical Institutions with Rural–Urban Breakups
in Himachal Pradesh as on 31 March 2000

District	General hospitals		Community health centres		Primary health centres		Civil dispensaries	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Bilaspur	0	2	5	0	16	1	10	1
Chamba	1	3	7	0	28	0	11	0
Hamirpur	1	1	3	2	16	1	6	0
Kangra	3	5	10	2	47	0	32	2
Kinnaur	2	0	3	0	17	0	0	0
Kullu	0	2	4	1	11	1	5	0
Lahaul & Spiti	1	0	3	0	9	0	5	0
Mandi	2	4	9	0	43	1	13	0
Shimla	3	8	4	2	54	1	23	8
Sirmaur	1	4	3	0	24	0	12	1
Solan	2	3	2	1	20	0	15	2
Una	1	1	2	2	12	0	7	2
Himachal Pradesh	17	33	55	10	297	5	139	16
	TB institutes		Leprosy institutes		STD institutes		Ayurvedic institutes	
Bilaspur	0	1	0	0	2	2	61	4
Chamba	2	1	16	2	8	1	99	1
Hamirpur	0	1	0	0	0	1	70	1
Kangra	1	1	2	4	0	1	227	4
Kinnaur	3	0	0	0	5	0	41	0
Kullu	0	1	4	1	5	3	62	2
Lahaul & Spiti	1	0	0	0	2	0	21	0
Mandi	0	1	12	4	7	3	161	3
Shimla	0	5	12	8	8	8	134	14
Sirmaur	0	1	11	5	5	4	80	1
Solan	1	1	1	0	3	2	74	3
Una	0	1	0	0	0	1	70	1
Himachal Pradesh	8	14	58	24	45	26	1100	34

Note: TB institutes include hospitals, District TB clinics/centres, and TB sub-clinic. Leprosy institutes include hospitals, clinics, and sub-clinics. STD Institutes include clinics/sub-clinics, units. Ayurvedic Institutes include Ayurvedic hospitals, Ayurvedic dispensaries and Unani dispensaries.

SA-Health-17

Distribution of Beds with Rural–Urban Breakup as on 31 March 2000

<i>District</i>	<i>Beds available (sanctioned)</i>	
	<i>Rural</i>	<i>Urban</i>
Bilaspur	143 (32.8%)	293 (67.2%)
Chamba	325 (48.9%)	340 (51.1%)
Hamirpur	193 (43.2%)	254 (56.8%)
Kangra	782 (52.5%)	708 (47.5%)
Kinnaur	249 (100%)	0 (0.00%)
Kullu	121 (28.8%)	300 (71.2%)
Lahaul & Spiti	143 (100%)	0 (0.00%)
Mandi	479 (39.6%)	731 (60.4%)
Shimla	498 (22.6%)	1708 (77.4%)
Sirmaur	225 (32.8%)	460 (67.2%)
Solan	525 (55.9%)	415 (44.1%)
Una	143 (36.8%)	246 (63.2%)
Himachal Pradesh	3826 (41.2%)	5455 (58.8%)

Note: Beds available in Mission Hospitals, State Special Hospitals and other private hospitals are not included.

Source: Directorate of Health Services, Himachal Pradesh.

SA-Health-18

Inadequate Intake of Foodstuff at the District Level

<i>District with consumption level below RDA</i>	<i>Cereals</i>	<i>Pulses</i>	<i>Green leafy vegetables</i>	<i>Roots and Tubers</i>	<i>Other vegetables</i>	<i>Milk and its products</i>	<i>Fats and Oils</i>	<i>Sugar</i>
Bilaspur								
Chamba								
Hamirpur			*					*
Kangra								
Kinnaur	*							
Kullu								
Lahaul & Spiti								
Mandi								
Shimla								
Sirmaur		*						*
Solan								
Una								*
Himachal Pradesh								

Note: * Marginally below the RDA; foodstuff = g/cu/day

Source: Government of India (1996) *India Nutrition Profile 1995-96*, Department of Women and Child Development, New Delhi.

SA-Education-1

District-wise Enrolment of Scheduled Castes (Primary Level)

Sl. No.	District	1981-82			1997-98		
		Male	Female	Total	Male	Female	Total
1.	Bilaspur	6756 (59.91)	4521 (40.09)	11,277	9124 (52.13)	8379 (47.87)	17,503
2.	Chamba	4307 (72.53)	1648 (27.67)	5955	10,012 (55.66)	7977 (44.44)	17,989
3.	Hamirpur	9075 (55.65)	7231 (44.35)	16,306	9208 (50.08)	9179 (49.92)	18,387
4.	Kangra	21845 (58.91)	15,240 (41.09)	37,085	28,202 (51.73)	26,758 (48.27)	54,960
5.	Kinnaur	1429 (71.25)	665 (28.75)	2094	2737 (50.42)	2691 (49.58)	5428
6.	Kullu	4723 (70.49)	1977 (29.51)	6700	11,913 (53.67)	10,535 (46.37)	22,448
7.	Lahaul & Spiti	63 (78.75)	17 (21.25)	80	250 (45.96)	294 (54.04)	544
8.	Mandi	18,434 (63.89)	10,418 (36.11)	28,852	26,222 (52.64)	23,596 (47.36)	49,818
9.	Shimla	10,962 (64.47)	6040 (35.53)	17,002	19,423 (51.73)	18,121 (48.27)	37,544
10.	Sirmaur	5663 (65.18)	3025 (34.82)	8688	14,568 (52.26)	13,309 (47.74)	27,877
11.	Solan	9099 (62.92)	5362 (37.08)	14,461	14,309 (52.34)	13,030 (47.66)	27,339
12.	Una	8755 (59.31)	6006 (40.69)	14,761	10,009 (51.64)	9372 (48.36)	19,381
	Himachal Pradesh	1,01,111 (61.93)	62,150 (38.07)	1,63,261	1,55,977 (52.13)	1,43,241 (47.87)	2,99,218

* Figures in parenthesis represent per cent of boys and girls in the total enrolment.

Source: Enrolment figures for various years supplied by the Department of Primary Education, Government of Himachal Pradesh.

SA-Education-2

District-wise Enrolment of Scheduled Tribes (Primary Level)

Sl. No.	District	1981-82			1997-98		
		Male	Female	Total	Male	Female	Total
1.	Bilaspur	843 (70.48)	353 (29.52)	1196	1136 (55.33)	917 (44.67)	2053
2.	Chamba	7471 (76.32)	2318 (23.68)	9789	13,066 (53.91)	11,169 (46.09)	24,235
3.	Hamirpur	18 (72.00)	7 (28.00)	25	35 (85.37)	6 (14.63)	41
4.	Kangra	118 (60.51)	77 (39.49)	195	1002 (54.37)	841 (45.68)	1843
5.	Kinnaur	3297 (59.58)	2237 (40.42)	5534	3640 (47.93)	3955 (52.07)	7595
6.	Kullu	764 (55.81)	605 (44.19)	1369	894 (49.26)	921 (50.74)	1815
7.	Lahaul & Spiti	2194 (63.78)	1246 (36.22)	3440	2138 (49.13)	2214 (50.87)	4352
8.	Mandi	803 (66.09)	412 (37.91)	1215	1352 (53.17)	1190 (46.83)	2542
9.	Shimla	198 (65.56)	104 (34.44)	302	619 (54.59)	515 (45.41)	1134
10.	Sirmaur	546 (66.18)	279 (33.81)	825	1110 (56.40)	858 (43.60)	1968
11.	Solan	299 (66.59)	150 (33.41)	449	328 (56.36)	254 (43.64)	582
12.	Una	20 (62.50)	12 (37.50)	32	11 (44.00)	14 (56.00)	25
Himachal Pradesh		16,571 (68.00)	7800 (32.00)	24,371	25,331 (52.57)	22,854 (47.43)	48,185

* Figures in parenthesis represent per cent of boys and girls in the total enrolment.

Source: Enrolment figures for various years supplied by the Department of Primary Education, Government of Himachal Pradesh.

SA-Education-3

District-wise Enrolment of Scheduled Castes (Secondary Level)

Sl. No.	District	1981-82			1997-98		
		Male	Female	Total	Male	Female	Total
1.	Bilaspur	561 (81.90)	124 (18.10)	685	1968 (59.62)	1333 (40.38)	3301
2.	Chamba	230 (72.33)	88 (27.67)	318	1374 (66.67)	687 (33.33)	2061
3.	Hamirpur	1103 (80.28)	271 (19.72)	1374	2758 (54.34)	2317 (45.66)	5075
4.	Kangra	1778 (78.57)	485 (21.43)	2263	6589 (56.58)	5056 (43.42)	11,645
5.	Kinnaur	135 (89.40)	16 (10.60)	151	371 (59.36)	254 (40.64)	625
6.	Kullu	228 (90.84)	23 (9.16)	251	1318 (64.14)	737 (35.86)	2055
7.	Lahaul & Spiti	1 (33.33)	2 (66.67)	3	11 (61.11)	7 (38.89)	18
8.	Mandi	1388 (79.50)	358 (20.50)	1746	5282 (56.93)	3996 (43.07)	9278
9.	Shimla	699 (78.10)	196 (21.90)	895	3612 (59.60)	2448 (40.40)	6060
10.	Sirmaur	289 (83.53)	57 (16.47)	346	1710 (55.18)	1389 (44.82)	3099
11.	Solan	551 (74.06)	193 (25.94)	744	2423 (57.61)	1783 (42.39)	4206
12.	Una	846 (77.26)	249 (22.74)	1095	2021 (57.88)	1471 (42.12)	3492
Himachal Pradesh		7809 (79.11)	2062 (20.89)	9871	29,437 (57.82)	21,478 (42.18)	50,915

* Figures in parenthesis represent per cent of boys and girls in the total enrolment.

Source: Enrolment figures for various years supplied by the Department of Primary Education, Government of Himachal Pradesh.

SA-Education-4

District-wise Enrolment of Scheduled Tribes (Secondary Level)

Sl. No.	District	1981-82			1997-98		
		Male	Female	Total	Male	Female	Total
1.	Bilaspur	47 (94.00)	3 (6.00)	50	274 (69.19)	122 (30.81)	396
2.	Chamba	410 (89.32)	49 (10.68)	459	2199 (66.39)	1113 (33.61)	3312
3.	Hamirpur	1 (5.26)	18 (94.74)	19	25 (92.59)	2 (7.41)	27
4.	Kangra	32 (78.05)	9 (21.95)	41	554 (61.08)	353 (38.92)	907
5.	Kinnaur	352 (76.36)	109 (23.64)	461	1022 (49.42)	1046 (50.88)	2068
6.	Kullu	162 (69.53)	71 (30.47)	233	534 (47.38)	593 (52.62)	1127
7.	Lahaul & Spiti	324 (73.30)	118 (26.70)	442	704 (50.87)	680 (49.13)	1384
8.	Mandi	111 (94.87)	6 (5.13)	117	350 (57.38)	260 (42.62)	610
9.	Shimla	45 (95.74)	2 (4.26)	47	303 (57.50)	224 (42.50)	527
10.	Sirmaur	42 (76.36)	13 (23.64)	55	175 (58.72)	123 (41.28)	298
11.	Solan	10 (62.50)	6 (37.50)	16	106 (53.54)	92 (46.46)	198
12.	Una	3 (50.00)	3 (50.00)	6	-	-	-
Himachal Pradesh		1539 (79.09)	407 (20.91)	1946	6246 (57.55)	4608 (42.45)	10,854

* Figures in parenthesis represent per cent of boys and girls in the total enrolment.

Source: Enrolment figures for various years supplied by the Department of Primary Education, Government of Himachal Pradesh.

SA-Education-5

District-wise Distribution of Schools in Himachal Pradesh by Types
(1990-91 to 1997-98)

<i>District</i>	<i>1990-91</i>	<i>1991-92</i>	<i>1992-93</i>	<i>1993-94</i>	<i>1994-95</i>	<i>1995-96</i>	<i>1996-97</i>	<i>1997-98</i>
Primary Schools								
1. Bilaspur	368	371	376	382	379	460	481	585
2. Chamba	766	769	778	778	795	795	982	1070
3. Hamirpur	379	383	405	418	398	436	461	495
4. Kangra	1360	1369	1428	1465	1413	1568	1635	1790
5. Kinnaur	159	162	162	162	163	175	181	185
6. Kullu	413	416	417	420	428	428	491	652
7. Lahaul & Spiti	174	179	181	181	186	186	195	209
8. Mandi	1157	1168	1168	1190	1190	1338	1421	1697
9. Shimla	1058	1065	1107	1106	1111	1277	1366	1608
10. Sirmaur	623	630	623	637	645	645	798	946
11. Solan	548	556	554	564	565	627	654	744
12. Una	383	416	418	418	420	456	473	50
Himachal Pradesh	7388	7484	7617	7721	7693	8391	9138	10,484
Middle Schools								
1. Bilaspur	60	60	68	69	59	57	63	59
2. Chamba	77	83	84	84	89	85	86	127
3. Hamirpur	53	53	71	69	57	57	57	62
4. Kangra	188	188	212	219	189	184	182	217
5. Kinnaur	26	26	27	27	29	28	28	2
6. Kullu	47	47	50	50	48	46	49	6
7. Lahaul & Spiti	19	19	21	19	20	22	22	23
8. Mandi	132	132	153	163	137	134	136	164
9. Shimla	147	149	163	164	154	155	170	197
10. Sirmaur	96	96	98	100	95	95	95	108
11. Solan	77	77	81	83	79	78	86	93
12. Una	58	58	61	61	59	59	63	70
Himachal Pradesh	980	988	1089	1108	1015	1000	1037	1214

continued

<i>District</i>	<i>1990-91</i>	<i>1991-92</i>	<i>1992-93</i>	<i>1993-94</i>	<i>1994-95</i>	<i>1995-96</i>	<i>1996-97</i>	<i>1997-98</i>
High/Higher Secondary Schools								
1. Bilaspur	47	47	61	61	53	55	76	73
2. Chamba	82	82	93	95	85	89	95	116
3. Hamirpur	70	71	89	95	81	82	85	104
4. Kangra	213	214	262	280	222	237	249	291
5. Kinnaur	22	22	27	28	25	26	27	34
6. Kullu	47	47	49	50	51	54	57	68
7. Lahaul & Spiti	20	20	22	21	22	22	22	24
8. Mandi	122	122	169	191	145	156	164	205
9. Shimla	68	68	201	199	164	174	229	215
10. Sirmaur	61	61	62	74	66	70	75	92
11. Solan	67	68	88	93	71	74	106	90
12. Una	69	69	84	79	74	71	93	92
Himachal Pradesh	888	891	1207	1266	1059	1116	1278	1404

Source: Education Department, Himachal Pradesh.

SA-Environment-1

Legal Status of Forests of Himachal Pradesh in 1995–96 (area in sq. km.)

<i>District</i>	<i>Reserved forests</i>	<i>Demarcated protected forests</i>	<i>Un-demarcated protected forests</i>	<i>Un-classified forests</i>	<i>Road strips</i>	<i>Railway strips</i>
Bilaspur	0.9	189.54	237.87	–	–	–
Chamba	376.52	3541.91	989.44	–	–	–
Hamirpur	–	95.58	60.84	27.13	0.18	–
Kangra	72.02	537.12	1643.4	439.64	4.36	4.59
Kinnaur	–	304.46	4364.38	–	–	–
Kullu	160.53	3211.84	1583.15	–	–	–
Lahaul & Spiti	70.54	396.61	8516.26	–	–	–
Mandi	–	1575.57	145.05	0.26	–	–
Shimla	53.46	1139.6	2235.81	14.6	0.13	–
Sirmaur	1064.7	56.66	–	32.98	–	–
Solan	53.55	288.02	214.03	165.77	0.39	–
Una	43.91	47.96	155	3.4	0.96	–
Himachal Pradesh	1896.13	11,384.87	20,145.23	683.78	6.02	4.59

<i>District</i>	<i>Area under Section 38 IEA</i>	<i>LPA & HP Private Forest Act</i>	<i>Cantonment forests</i>	<i>Municipal forests</i>	<i>Other forests</i>	<i>Total forest area</i>
Bilaspur	–	–	–	–	–	428.31
Chamba	–	0.01	6.42	5.31	–	4919.61
Hamirpur	24.06	10.77	–	–	–	218.56
Kangra	6.51	41.71	–	0.8	–	2750.15
Kinnaur	–	–	–	–	–	4668.84
Kullu	–	–	–	–	–	4955.32
Lahaul & Spiti	–	–	–	–	–	8983.41
Mandi	–	–	–	–	246.47	1967.35
Shimla	0.66	–	–	18.69	44.54	3507.49
Sirmaur	20.74	–	–	4.26	663.43	1842.77
Solan	–	35.51	3.37	–	–	760.64
Una	56.7	207.54	–	–	–	515.47
Himachal Pradesh	108.67	295.54	9.79	29.06	954.44	35,518.12

Source: Himachal Pradesh Forest Statistics, 1996.

SA-Environment-2

District-wise Forest Area (sq. km.)

District	Geographical area	Dense forests					Open forests				
		1991	1993	1995	1996	1997	1991	1993	1995	1996	1997
Bilaspur	1167	101	49	49	49	59	101	108	108	108	99
Chamba	6528	1625	1801	1767	1767	1768	392	323	293	293	293
Hamirpur	1118	156	151	151	151	150	60	62	72	72	73
Kangra	5739	808	1071	1071	1071	1071	625	684	673	673	673
Kinnaur	6401	565	547	547	547	541	68	82	82	82	91
Kullu	5503	1817	1911	1911	1911	1907	131	133	133	133	137
Lahaul & Spiti	13,835	0	15	49	49	49	17	4	34	34	34
Mandi	3950	839	848	848	848	848	462	461	461	461	467
Shimla	5131	1921	2094	2094	2094	2084	299	331	331	331	341
Sirmaur	2825	740	740	740	740	736	279	279	279	279	288
Solan	1936	164	164	164	164	173	251	254	254	254	249
Una	1540	175	174	174	174	174	220	216	216	216	216
Himachal Pradesh	55,673	8911	9565	9565	9565	9560	2905	2937	2936	2936	2961

District	Total forest cover					Forest cover as % to Geo Area					Change
	1991	1993	1995	1996	1997	1991	1993	1995	1996	1997	
Bilaspur	166	157	157	157	158	14.22	13.45	13.45	13.45	13.54	-8
Chamba	2017	2124	2060	2060	2061	30.90	32.54	31.55	31.55	31.57	44
Hamirpur	216	213	223	223	223	19.30	19.85	19.95	19.95	19.95	7
Kangra	1433	1755	1744	1744	1744	24.98	30.56	30.39	30.39	30.39	311
Kinnaur	633	629	629	629	632	9.88	9.83	9.83	9.83	9.87	-1
Kullu	1949	2044	2044	2044	2044	35.39	37.14	37.14	37.14	37.14	95
Lahaul & Spiti	17	19	83	83	83	0.12	0.14	0.60	0.60	0.60	66
Mandi	1301	1309	1309	1369	1315	32.95	33.14	33.14	33.14	33.29	14
Shimla	2220	2425	2425	2425	2425	43.26	47.25	47.25	47.25	47.26	205
Sirmaur	1019	1019	1019	1019	1024	36.06	36.07	36.07	36.07	36.25	5
Solan	415	418	418	418	422	21.46	21.59	21.59	21.59	21.80	7
Una	395	390	390	390	390	25.66	25.32	25.32	25.32	25.32	-5
Himachal Pradesh	11,781	12,502	12,501	12,501	12,521	21.16	22.46	22.45	22.45	22.49	740

Source: State of forest report, FSI.

SA-Environment-3

District-wise Rivers and Water Bodies in Himachal Pradesh

<i>District</i>	<i>Major Rivers</i>	<i>Tributaries</i>	<i>Lakes</i>
Bilaspur	Satluj	Ali khad, Gamrola khad, Sir khad, Sukar khad, Saryali khad, Gambhar khad	
Chamba	Ravi, Chenab		Manimahesh in Brahmaur tehsil, Khajiar in Chamba tehsil
Hamirpur	Beas	Bekar khad, Pung khad, Kunah khad, Man khad, Sir khad, Sukar khad, Mundkhar khad	
Kangra	Beas	Binun stream, Neual stream, Bangana Gaj, Awa stream, Dehar nullah, Chukki nullah	
Kinnaur	Satluj, Spiti	Baspa river, Tidong river, Darbang river, Sorang khad, Wangar khad, Roap khad, Togla khad	
Kullu	Satluj, Beas	Kurpan khad, Ani khad, Jibhi khad, Salang nullah, Mahalsu nullah, Sujoin nullah, Fozal nullah, Sarvary, Pavati river	
Lahaul and Spiti	Chenab or Chandra-Bhaga, Spiti, Chandra, Bhaga, Pin, Parechu	Chandra tal Suraj tal	
Mandi	Beas, Satluj	Uhl river, Luni river, Rina river, Babhar river, Son river, Jajehli, Tirhan, Ramoli, Suketi, Jinni, Bantrehr, Siwan, Behna, Kotlu, Bogre, Bahlu, Siun, Khadel river, Bhagwati river	Rawalsar, Prasher, Kamrunag
Shimla	Satluj, Pabbar, Giri	–	
Sirmaur	Giri, Yamuna	Jalal river, Tons river, Markanda river, Bata river	
Solan	Satluj, Asni, Ghagar	Kiar ka nala Gambhar nullah Dadar khad Kuthar nadi Sirsa khad	
Una	Satluj, Beas	Soan river	

Source: 'Water Resource of Himachal Pradesh' by R.G. Arya (Council of Science and Technology and Environment, unpublished); S.V. Srikantia and O.N. Bhargava, *Geology of Himachal Pradesh*, 1998.

SA-Environment-4

Stress Analysis by Ranking Method (Primary parameters) (continued)

Primary Parameters								
	<i>Forest cover decrease</i>	<i>Reserve forests as percentage to total forest</i>	<i>Decrease in dense forest area</i>	<i>Decrease in open forest area</i>	<i>Fuelwood dependency hotspots</i>	<i>Ground water dependency for irrigation</i>	<i>Water deficiency</i>	<i>Percentage distribution of small scale industrial activities</i>
	1	2	3	4	5	6	7	8
1. Bilaspur	5	1	2	10	4	5	5	9
2. Chamba	1	7	10	4	11	1	10	10
3. Hamirpur	10	10	6	6	1	4	3	7
4. Kangra	2	4	7	8	7	3	1	1
5. Kinnaur	4	10	4	2	12	1	11	8
6. Kullu	3	5	11	1	5	1	8	12
7. Lahaul & Spiti	9	2	1	9	10	1	12	11
8. Mandi	6	10	8	7	2	2	4	2
9. Shimla	3	3	12	3	8	1	2	3
10. Sirmaur	7	9	9	5	6	6	9	6
11. Solan	8	6	3	10	9	7	7	4
12. Una	3	8	5	10	3	1	6	5

Stress Analysis by Ranking Method (Primary parameters) (concluded)

Primary Parameters									
	<i>Percentage distribution of large scale industrial activities</i>	<i>Distribution of hazardous waste generating industries</i>	<i>Tourism hotspots</i>	<i>Grazing hotspots (grazing area per animal)</i>	<i>Increase in cultural waste</i>	<i>Increase in barren land</i>	<i>Workers engaged in biological resource based activities</i>	<i>Total of primary parameters</i>	<i>Average of primary parameters</i>
	9	10	11	12	13	14	15	16	17
1. Bilaspur	6	6	4	6	4	2	5	74	4.63
2. Chamba	8	6	6	10	5	7	4	100	6.25
3. Hamirpur	8	6	11	4	11	1	7	95	5.94
4. Kangra	4	3	3	3	12	12	10	80	5.00
5. Kinnaur	8	6	12	9	2	11	8	108	6.75
6. Kullu	8	6	2	2	10	8	1	83	5.19
7. Lahaul & Spiti	8	6	10	12	8	10	11	120	7.50
8. Mandi	7	5	9	7	3	9	3	84	5.25
9. Shimla	5	5	1	8	6	3	6	69	4.31
10. Sirmaur	2	2	7	1	9	6	2	86	5.38
11. Solan	1	1	8	11	1	4	12	92	5.75
12. Una	3	4	5	5	7	5	9	79	4.94

SA-Environment-5

Stress Analysis by Ranking Method (Secondary parameters) (continued)

Secondary Parameters									
	<i>Growth rate</i>	<i>Gross density</i>	<i>Per cent forest area as compared to geographical area</i>	<i>Per cent agricultural area as compared to geographical area</i>	<i>Per cent decrease in agriculture lands</i>	<i>Per cent increase in current fallow</i>	<i>Per cent increase in other fallow</i>	<i>Per cent increase in cultural waste</i>	<i>Per cent decrease in pastures</i>
	1	2	3	4	5	6	7	8	
1. Bilaspur	8	2	3	11	5	12	2	4	2
2. Chamba	2	9	8	3	–	7	7	5	11
3. Hamirpur	11	1	4	12	2	3	8	11	6
4. Kangra	10	4	7	8	1	2	9	12	1
5. Kinnaur	7	11	2	2	–	8	6	2	4
6. Kullu	1	12	10	4	–	11	9	10	12
7. Lahaul & Spiti	12	18	1	1	–	9	6	8	10
8. Mandi	6	6	9	9	–	5	7	3	9
9. Shimla	5	8	12	5	–	1	4	6	3
10. Sirmaur	4	7	11	6	–	6	5	9	7
11. Solan	3	5	5	7	3	4	3	1	8
12. Una	9	3	6	10	4	10	1	7	5

Stress Analysis by Ranking Method (secondary parameters) (concluded)

Secondary Parameters								
	<i>Per cent increase in non-agriculture</i>	<i>Urbanisation</i>	<i>Total of secondary parameters</i>	<i>Average of secondary parameters</i>	<i>Weightage to secondary parameters</i>	<i>Average of primary parameters</i>	<i>Sum of averages (primary and secondary parameters)</i>	<i>Ranking</i>
	9	10	11	12	13	14	15	
1. Bilaspur	10	3	62	5.64	8.45	4.63	13.08	3
2. Chamba	5	5	62	6.20	9.30	6.25	15.55	10
3. Hamirpur	7	2	67	6.09	9.14	5.94	15.07	9
4. Kangra	8	6	68	6.18	9.27	5.00	14.27	5
5. Kinnaur	1	7	50	5.00	7.50	6.75	14.25	4
6. Kullu	6	8	83	8.30	12.45	5.19	17.64	11
7. Lahaul & Spiti	2	7	74	7.40	11.10	7.50	18.60	12
8. Mandi	3	8	65	6.50	9.75	5.25	15.00	8
9. Shimla	9	1	54	5.40	8.10	4.31	12.41	2
10. Sirmaur	2	4	61	6.10	9.15	5.38	14.53	7
11. Solan	4	4	47	4.27	6.41	5.75	12.16	1
12. Una	11	4	70	6.36	9.55	4.94	14.48	6

SA-Environment-6

District-wise Changes in Requirement of
Different Sources of Energy under Different Scenarios

Source of energy/ District	Bilaspur	Chamba	Hamirpur	Kangra	Kinnaur	Kullu	Labaul & Spiti	Mandi	Shimla	Sirmaur	Solan	Una	Himachal Pradesh
Scenario I													
Electricity (mln. kWh)	48.11	23.15	11.63	23.72	2.64	9.90	1.07	11.58	28.52	70.78	119.09	17.12	341.03
LPG (mln. kg)	0.38	0.29	0.67	1.73	0.14	0.36	0.64	0.99	1.40	0.60	0.91	0.68	8.92
Kerosene (mln. kltr)	0.60	0.98	0.72	2.67	0.81	0.20	0.09	1.56	1.63	0.80	1.28	0.80	12.07
Coal (tonnes)	0.00	785.52	0.00	0.00	2667.89	0.00	3503.58	0.00	3305.90	0.00	0.00	0.00	10773.30
Fuel Wood (thousand tonnes)	275.65	616.10	303.69	1249.39	121.93	476.62	49.37	718.01	658.98	366.22	390.32	328.42	7418.45
Scenario II													
Electricity (mln. kWh)	48.11	23.15	11.63	23.72	2.64	9.90	1.07	11.58	28.52	40.78	119.09	17.12	341.03
LPG (mln. kg)	0.42	0.32	0.74	1.90	0.16	0.39	0.71	1.08	1.55	0.66	1.00	0.75	9.81
Kerosene (mln. kltr)	0.66	1.08	0.79	2.94	0.89	0.22	0.10	1.71	1.80	0.88	1.40	0.88	13.27
Coal (tonnes)	0.00	0.08	0.00	0.00	0.27	0.00	0.35	0.00	0.33	0.00	0.00	0.00	1.08
Fuel Wood (thousand tonnes)	265.58	604.53	288.51	1204.23	113.86	469.93	39.26	692.02	626.27	351.55	367.47	312.44	7198.08

continued

Source of energy/ District	Bilaspur	Chamba	Hamirpur	Kangra	Kinnaur	Kullu	Labaul & Spiti	Mandi	Shimla	Sirmaur	Solan	Una	Himachal Pradesh
Scenario III													
Electricity (mln. kWh)	48.11	23.15	11.63	23.72	2.64	9.90	1.07	11.58	28.52	40.78	119.09	17.12	341.03
LPG (mln. kg)	0.46	0.35	0.81	2.07	0.17	0.43	0.77	1.18	1.69	0.71	1.10	0.82	10.71
Kerosene (mln. kltr)	0.72	1.18	0.86	3.20	0.97	0.24	0.11	1.87	1.96	0.96	1.53	0.96	14.48
Coal (tonnes)	0.00	0.08	0.00	0.00	0.27	0.00	0.35	0.00	0.33	0.00	0.00	0.00	1.08
Fuel Wood (thousand tonnes)	255.51	592.96	273.33	1159.07	105.79	463.24	29.16	666.03	593.55	336.89	344.63	296.45	6977.70
Scenario IV													
Electricity (mln. kWh)	48.11	23.15	11.63	23.72	2.64	9.90	1.07	11.58	28.52	40.78	119.09	17.12	341.03
LPG (mln. kg)	0.50	0.38	0.87	2.25	0.18	0.46	0.84	1.28	1.83	0.77	1.19	0.89	11.60
Kerosene (mln. kltr)	0.78	1.28	0.93	3.47	1.05	0.26	0.12	2.02	2.12	1.04	1.66	1.04	15.69
Coal (tonnes)	–	0.00	0.08	0.00	0.00	0.27	0.00	0.35	0.00	0.33	0.00	0.00	1.08
Fuel Wood (thousand tonnes)	245.44	581.39	258.14	1113.91	97.73	456.55	19.05	640.04	560.84	322.23	321.78	280.46	6757.33

SA-Environment-7

Reduction of Fuel Wood Consumption under Different Scenarios

<i>District</i>	<i>Reduction in fuel wood consumption (thousand tonnes)</i>			
	<i>Scenario I</i>	<i>Scenario II</i>	<i>Scenario III</i>	<i>Scenario IV</i>
1. Bilaspur	no reduction	10.07	20.14	30.21
2. Chamba	no reduction	11.57	23.13	34.70
3. Hamirpur	no reduction	15.18	30.36	45.54
4. Kangra	no reduction	45.16	90.32	135.47
5. Kinnaur	no reduction	8.07	16.14	24.21
6. Kullu	no reduction	6.69	13.38	20.07
7. Lahaul & Spiti	no reduction	10.11	20.22	30.33
8. Mandi	no reduction	25.99	51.98	77.97
9. Shimla	no reduction	32.72	65.43	98.15
10. Sirmaur	no reduction	14.66	29.32	43.99
11. Solan	no reduction	22.85	45.70	68.55
12. Una	no reduction	15.99	31.97	47.96
13. Himachal Pradesh	no reduction	220.38	440.75	661.13

Statistical Tables

Table-1

District Profile: Census 2001

District	Population			Literacy Rate			Sex Ratio (females per 1000 males)	%age urban population	Population density (persons per sq. km.)	Population growth rate 1991-2001
	Persons	Male	Female	Persons	Male	Female				
1	2	3	4	5	6	7	8	9	10	11
Bilaspur	3,40,735	1,71,074	1,69,661	78.80	87.13	70.53	992	6.44	292	(+) 15.35
Chamba	4,60,499	2,34,812	2,25,687	63.73	77.22	49.70	961	7.50	71	(+) 17.09
Hamirpur	4,12,009	1,95,971	2,16,038	83.16	90.96	76.41	1102	7.32	369	(+) 11.62
Kangra	13,38,536	6,60,224	6,78,312	80.68	88.19	73.57	1027	5.39	233	(+) 14.01
Kinnaur	83,950	45,353	38,597	-	-	-	851	-	130	(+) 17.79
Kullu	3,79,865	1,97,035	1,82,830	73.36	84.55	61.24	928	7.92	69	(+) 25.60
Lahaul & Spiti	33,224	18,413	14,811	-	-	-	804	-	2	(+) 6.17
Mandi	9,00,987	4,47,271	4,53,716	75.86	86.67	65.36	1014	6.77	228	(+) 16.05
Shimla	7,21,745	3,80,244	3,41,501	79.68	87.72	70.68	898	23.12	141	(+) 16.90
Sirmaur	4,58,351	2,41,109	2,17,242	70.85	79.73	60.93	901	10.38	162	(+) 20.72
Solan	4,99,380	2,69,451	2,29,929	77.16	85.35	67.48	853	18.26	258	(+) 30.64
Una	4,47,960	2,24,299	2,23,668	81.09	88.49	73.85	997	8.80	291	(+) 18.43
Himachal Pradesh	60,77,248	30,85,356	29,91,992	77.13	86.02	68.08	970	9.79	109	(+) 17.53

Table-2

District-wise PDS Off-take of Food Grain Per Capita

(quintals)

Sl No. District		1991			1996-97			1997-98			1998-99			1999-2000		
		Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.	Bilaspur	0.24	0.24	0.48	0.25	0.25	0.50	0.24	0.24	0.48	0.21	0.21	0.42	0.14	0.14	0.28
2.	Chamba	0.24	0.24	0.48	0.35	0.35	0.70	0.30	0.30	0.60	0.45	0.45	0.90	0.26	0.26	0.52
3.	Hamirpur	0.32	0.32	0.64	0.37	0.37	0.74	0.35	0.35	0.70	0.29	0.29	0.58	0.20	0.20	0.40
4.	Kangra	0.16	0.16	0.32	0.19	0.19	0.38	0.23	0.23	0.46	0.27	0.27	0.52	0.14	0.14	0.28
5.	Kinnaur	0.70	-	0.70	0.63	-	0.63	0.58	-	0.58	0.65	-	0.65	0.48	-	0.48
6.	Kullu	0.52	0.52	1.04	0.64	0.64	1.28	0.36	0.36	0.72	0.63	0.63	1.26	0.38	0.31	0.69
7.	Lahaul & Sipti	0.60	-	0.60	0.83	-	0.83	0.55	-	0.55	0.71	-	0.71	0.58	-	0.58
8.	Mandi	0.38	0.38	0.76	0.41	0.41	0.82	0.38	0.38	0.76	0.44	0.44	0.88	0.28	0.28	0.56
9.	Shimla	0.28	0.28	0.56	0.44	0.44	0.88	0.37	0.37	0.74	0.45	0.45	0.90	0.24	0.24	0.48
10.	Sirmaur	0.23	0.28	0.51	0.42	0.42	0.84	0.29	0.29	0.58	0.37	0.37	0.74	0.16	0.16	0.32
11.	Solan	0.28	0.28	0.56	0.31	0.31	0.62	0.28	0.28	0.56	0.18	0.18	0.36	0.15	0.15	0.30
12.	Una	0.16	0.16	0.32	0.12	0.12	0.24	0.15	0.15	0.30	0.13	0.13	0.26	0.10	0.10	0.20
Himachal Pradesh		4.11	2.86	6.97	4.96	3.50	8.46	4.08	2.95	7.03	4.78	3.42	8.20	3.11	1.98	5.09

Source: Food and Supplies Department, Himachal Pradesh, Shimla.

Table-3

District-wise Fertiliser Consumption per hectare (m.t.)

<i>Sl. No.</i>	<i>District</i>	<i>1981-82</i>	<i>1991-92</i>	<i>1996-97</i>	<i>1997-98</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1.	Bilaspur	0.020	0.035	0.037	0.036
2.	Chamba	0.010	0.008	0.015	0.014
3.	Hamirpur	0.020	0.039	0.036	0.033
4.	Kangra	0.019	0.032	0.034	0.035
5.	Kinnaur	0.016	0.011	0.014	0.013
6.	Kullu	0.117	0.030	0.026	0.029
7.	Lahaul & Spiti	0.122	0.090	0.067	0.076
8.	Mandi	0.013	0.030	0.032	0.032
9.	Shimla	0.027	0.045	0.045	0.043
10.	Sirmaur	0.013	0.029	0.027	0.026
11.	Solan	0.022	0.039	0.044	0.046
12.	Una	0.022	0.053	0.053	0.055
	Total	0.421	0.441	0.430	0.438

Source: Department of Economics and Statistics, Himachal Pradesh, Shimla.

Table-4

District-wise Crop Intensity

<i>Sl. No.</i>	<i>District</i>	<i>1981-82</i>	<i>1991-92</i>	<i>1996-97</i>	<i>1997-98</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1.	Bilaspur	189.9	190.5	191.3	192.9
2.	Chamba	150.7	153.5	140.8	156.5
3.	Hamirpur	194.8	195.1	190.7	196.7
4.	Kangra	157.9	181.2	182.8	186.9
5.	Kinnaur	134.7	120.2	125.8	131.1
6.	Kullu	160.4	175.2	177.6	172.4
7.	Lahaul & Spiti	100.0	106.3	104.4	102.5
8.	Mandi	174.6	171.8	172.6	179.6
9.	Shimla	152.5	142.6	144.6	150.7
10.	Sirmaur	180.2	186.3	183.1	185.9
11.	Solan	154.8	166.6	158.8	166.5
12.	Una	171.3	168.6	179.3	186.8

Source: Department of Economics and Statistics, Himachal Pradesh, Shimla.

Table-5

District-wise Percentage Area under Food Crops (in hectares)

<i>Sl. No.</i>	<i>District</i>	<i>1981-82</i>	<i>1991-92</i>	<i>1996-97</i>	<i>1997-98</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1.	Bilaspur	97.6	98.1	98.5	98.7
2.	Chamba	95.4	95.8	95.3	95.5
3.	Hamirpur	97.3	99.4	99.3	99.4
4.	Kangra	92.0	92.4	93.2	93.6
5.	Kinnaur	97.8	99.3	99.2	99.4
6.	Kullu	98.7	98.6	98.9	98.7
7.	Lahaul & Spiti	98.3	93.0	94.3	95.4
8.	Mandi	98.3	98.5	98.2	98.3
9.	Shimla	99.4	99.2	98.8	98.8
10.	Sirmaur	96.2	94.1	96.0	95.8
11.	Solan	93.7	95.5	94.6	94.6
12.	Una	94.1	94.3	94.5	94.7

Source: Department of Economics and Statistics, Himachal Pradesh, Shimla.

Table-6

District-wise Gross Cropped Area (in hectares)

<i>Sl. No.</i>	<i>District</i>	<i>1981-82</i>	<i>1991-92</i>	<i>1996-97</i>	<i>1997-98</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1.	Bilaspur	60,079	60,039	59,568	59,351
2.	Chamba	62,343	64,133	59,493	66,337
3.	Hamirpur	77,214	73,523	70,802	71,654
4.	Kangra	1,86,355	2,16,950	2,18,068	2,22,580
5.	Kinnaur	10,795	8706	9480	9970
6.	Kullu	55,600	64,027	65,337	63,108
7.	Lahaul & Spiti	3175	3363	3361	3318
8.	Mandi	1,61,869	1,64,240	1,62,044	1,63,669
9.	Shimla	1,09,823	1,07,381	1,05,164	1,07,065
10.	Sirmaur	78,791	79,732	77,730	78,437
11.	Solan	70,296	67,245	64,281	65,666
12.	Una	72,734	71,549	72,889	75,183
	Himachal Pradesh	9,49,074	9,80,888	9,68,217	9,86,608

Source: Department of Economics and Statistics, Himachal Pradesh, Shimla.

Table-7

District-wise Cultivable Land (in hectares)

<i>Sl. No.</i>	<i>District</i>	<i>1981-82</i>	<i>1991-92</i>	<i>1996-97</i>	<i>1997-98</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1.	Bilaspur	34,288	34,829	33,772	33,585
2.	Chamba	44,233	43,938	44,634	44,620
3.	Hamirpur	48,092	45,279	45,824	44,980
4.	Kangra	1,25,956	1,33,605	1,28,050	1,28,050
5.	Kinnaur	9660	9478	9366	9312
6.	Kullu	37,593	38,702	39,477	39,387
7.	Lahaul & Spiti	3472	3349	3393	3415
8.	Mandi	95,294	97,938	97,698	97,255
9.	Shimla	78,570	84,377	85,355	84,965
10.	Sirmaur	47,591	47,982	47,626	47,621
11.	Solan	49,529	45,918	44,575	45,162
12.	Una	55,646	55,902	60,198	59,921
	Himachal Pradesh	6,29,924	6,41,297	6,39,978	6,38,270

Source: Department of Economics and Statistics, Himachal Pradesh, Shimla.

Table-8

District-wise Forest Area (in hectares)

<i>Sl. No.</i>	<i>District</i>	<i>1981-82</i>	<i>1991-92</i>	<i>1996-97</i>	<i>1997-98</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1.	Bilaspur	11,473	11,668	12,449	12,449
2.	Chamba	2,52,438	2,71,609	2,71,611	2,71,611
3.	Hamirpur	14,028	19,926	20,009	20,206
4.	Kangra	1,84,617	2,24,414	2,21,621	2,21,621
5.	Kinnaur	8294	22,259	37,880	39,163
6.	Kullu	-	-	-	-
7.	Lahaul & Spiti	43,540	1,10,049	1,35,514	1,35,382
8.	Mandi	1,50,967	1,69,680	1,73,751	1,74,146
9.	Shimla	48,880	1,07,987	1,14,617	1,14,579
10.	Sirmaur	48,321	48,252	48,459	48,507
11.	Solan	19,603	20,204	20,124	20,289
12.	Una	28,650	28,650	28,598	28,595
	Himachal Pradesh	8,10,811	10,34,700	10,84,633	10,86,548

Source: Department of Economics and Statistics, Himachal Pradesh, Shimla.

Table-9

District-wise Net Irrigated Area — Source-wise (in hectares)

<i>Sl. No.</i>	<i>District</i>	<i>Source</i>	<i>1981-82</i>	<i>1991-92</i>	<i>1996-97</i>	<i>1997-98</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
1.	Bilaspur	Canals	—	—	—	—
		Tanks	28	—	—	—
		Wells & Tubewells	214	257	194	194
		Other sources	2475	2631	2970	2970
		Total	2717	2888	3164	3164
2.	Chamba	Canals	—	—	—	—
		Tanks	—	—	—	—
		Wells & Tubewells	—	—	—	—
		Other sources	3542	5669	6165	6165
		Total	3542	5669	6165	6165
3.	Hamirpur	Canals	—	—	—	—
		Tanks	—	—	—	—
		Wells & Tubewells	25	10	51	58
		Other sources	1501	1756	1715	1732
		Total	1526	1766	1766	1790
4.	Kangra	Canals	—	—	—	—
		Tanks	—	—	—	—
		Wells & Tubewells	184	—	2056	2056
		Other sources	32,227	32,511	30,138	30,138
		Total	32,411	32,511	32,194	32,194
5.	Kinnaur	Canals	—	—	—	—
		Tanks	—	—	—	—
		Wells & Tubewells	—	—	—	—
		Other sources	3591	4120	4337	4335
		Total	3591	4120	4337	4335
6.	Kullu	Canals	—	—	—	—
		Tanks	—	—	—	—
		Wells & Tubewells	—	—	—	—
		Other sources	2121	2393	2690	2502
		Total	2121	2393	2690	2502

continued

Table-9 continued

Sl. No.	District	Source	1981-82	1991-92	1996-97	1997-98
1	2	3	4	5	6	7
7.	Lahaul & Spiti	Canals	—	—	—	—
		Tanks	—	—	—	—
		Wells & Tubewells	—	—	—	—
		Other sources	3175	3152	3208	3318
		Total	3175	3152	3208	3318
8.	Mandi	Canals	—	—	—	—
		Tanks	—	—	—	—
		Wells & Tubewells	—	305	202	202
		Other sources	14,965	13,192	13,530	12,937
		Total	14,965	13,497	13,732	13,139
9.	Shimla	Canals	1510	—	—	—
		Tanks	38	—	—	—
		Wells & Tubewells	—	—	—	—
		Other sources	5037	4485	4012	2509
		Total	6585	4485	4012	2509
10.	Sirmaur	Canals	—	—	3574	3398
		Tanks	557	13	71	1
		Wells & Tubewells	190	1727	747	750
		Other sources	10,123	12,305	9860	9970
		Total	10,870	14,045	14,072	14,119
11.	Solan	Canals	—	—	—	—
		Tanks	—	650	—	—
		Wells & Tubewells	1200	1412	2058	2058
		Other sources	6939	7548	9562	9562
		Total	8139	9610	11,620	11,620
12.	Una	Canals	—	—	—	—
		Tanks	—	—	254	254
		Wells & Tubewells	2394	—	6522	6502
		Other sources	282	5600	1056	1006
		Total	2676	5600	7832	7762

Source: Department of Economics and Statistics, Himachal Pradesh, Shimla.

Table-10

District-wise Percentage Area under Irrigation

<i>Sl. No.</i>	<i>District</i>	<i>1981-82</i>	<i>1991-92</i>	<i>1996-97</i>	<i>1997-98</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1.	Bilaspur	9	–	10	10
2.	Chamba	–	–	12	11
3.	Hamirpur	4	–	5	5
4.	Kangra	–	–	30	30
5.	Kinnaur	–	–	60	59
6.	Kullu	95	–	4	4
7.	Lahaul & Spiti	95	–	100	–
8.	Mandi	16	–	16	15
9.	Shimla	–	–	6	6
10.	Sirmaur	18	–	33	33
11.	Solan	28	–	26	25
12.	Una	–	–	17	16

Source: Department of Economics and Statistics, Himachal Pradesh, Shimla.

Table-11

District-wise *Pucca* Roads/100 sq. km.

Sl. No.	District	1981		1991		1996-97		1997-98		1998-99	
		Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	2	3	4	5	6	7	8	9	10	11	12
1.	Bilaspur	23.66	n.a.	36.19	431.03	42.19	537.36	44.54	604.02	47.41	658.05
2.	Chamba	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3.	Hamirpur*	17.08	-	33.54	-	44.00	-	47.14	-	50.18	-
4.	Kangra	n.a.	n.a.	27.34	n.a.	28.92	n.a.	28.81	n.a.	29.23	n.a.
5.	Kinnaur	4.97	-	5.81	-	6.91	-	7.14	-	7.14	-
6.	Kullu	n.a.	n.a.	5.25	n.a.	6.83	n.a.	7.01	n.a.	7.29	n.a.
7.	Lahaul & Spiti	0.60	-	1.51	-	1.94	-	1.97	-	2.52	-
8.	Mandi	12.89	-	17.67	-	23.85	-	24.73	-	-	-
9.	Shimla	-	-	17.25	-	19.23	21.50	20.15	22.50	20.75	23.29
10.	Sirmaur	13.45	219.94	18.83	316.32	24.03	318.38	25.12	545.94	26.58	598.64
11.	Solan	n.a.	-	26.83	-	30.61	-	31.65	-	33.21	-
12.	Una	23.00	86.00	36.00	97.00	45.00	97.00	48.00	97.00	51.00	97.00

Note: n.a. = not available.

* Rural and Urban information are combined.

Source: Department of Economics and Statistics, Himachal Pradesh, Shimla.

Table-12

District-wise Percentage of Villages having a Post Office within a Distance of 1 k.m.

<i>Sl. No.</i>	<i>District</i>	<i>1981</i>	<i>1991</i>	<i>1996-97</i>	<i>1997-98</i>	<i>1998-99</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
1.	Bilaspur	44.58	57.68	60.21	60.63	60.63
2.	Chamba	50.00	55.00	55.00	55.00	58.00
3.	Hamirpur	5.45	25.45	26.42	26.55	26.79
4.	Kangra	45.19	67.29	70.82	70.82	71.04
5.	Kinnaur	59.00	21.00	32.00	32.00	32.00
6.	Kullu	58.58	76.16	87.20	87.20	87.20
7.	Lahaul & Spiti	30.21	31.41	35.08	37.40	37.40
8.	Mandi	13.54	14.27	15.86	15.90	15.93
9.	Shimla	—	48.51	48.51	48.51	48.51
10.	Sirmaur	14.26	15.60	17.36	17.36	17.46
11.	Solan	29.81	31.94	35.78	35.99	35.99
12.	Una	10.14	10.51	11.23	11.05	11.05

Source: Department of Economics and Statistics, Himachal Pradesh, Shimla.

Table-13

District-wise Percentage of Villages having Banks within a Distance of 1 k.m.

<i>Sl. No.</i>	<i>District</i>	<i>1981</i>	<i>1991</i>	<i>1996-97</i>	<i>1997-98</i>	<i>1998-99</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
1.	Bilaspur	2.12	23.58	24.00	24.00	24.00
2.	Chamba	1.50	2.00	3.00	3.00	3.00
3.	Hamirpur	2.78	6.18	6.42	6.55	6.55
4.	Kangra	11.51	22.32	23.09	24.19	23.86
5.	Kinnaur	18.00	7.00	8.00	8.00	8.00,
6.	Kullu	10.65	20.35	20.93	20.93	22.09
7.	Lahaul & Spiti	2.51	7.35	7.35	11.40	11.40
8.	Mandi	2.71	6.32	7.38	7.38	7.52
9.	Shimla	—	—	18.64	18.79	19.71
10.	Sirmaur	3.10	5.89	6.82	6.82	6.92
11.	Solan	4.68	10.86	11.50	11.71	11.71
12.	Una	4.89	11.59	12.68	13.04	13.41

Source: Department of Economics and Statistics, Himachal Pradesh, Shimla.

Table-14

District-wise Percentage of Households Electrified

Sl. No.	District	1981		1991		1996-97		1997-98		1998-99	
		Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	2	3	4	5	6	7	8	9	10	11	12
1.	Bilaspur	70.70	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2.	Chamba	55.00	100.00	97.00	100.00	97.00	100.00	97.00	100.00	98.00	100.00
3.	Hamirpur	91.17	n.a.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
4.	Kangra	85.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
5.	Kinnaur	68.00	—	78.00	—	92.00	—	100.00	—	100.00	—
6.	Kullu	58.22	98.00	77.20	99.00	91.05	99.00	92.94	99.00	95.50	99.00
7.	Lahaul & Spiti	32.45	—	58.40	—	100.00	—	100.00	—	100.00	—
8.	Mandi	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
9.	Shimla	87.00	90.00	92.00	93.00	95.00	98.00	96.00	98.00	98.00	99.00
10.	Sirmaur	n.a.	86.00	64.00	100.00	95.00	100.00	95.00	100.00	96.00	100.00
11.	Solan*	n.a.	—	97.32	—	99.85	—	98.91	—	98.80	—
12.	Una	n.a.	n.a.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Note: * Rural and Urban information are combined.

Source: Department of Economics and Statistics, Himachal Pradesh, Shimla.

Table-15

District-wise Crimes/Atrocities against Women

Sl. No.	District	1981			1991			1996-97		
		Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
1	2	3	4	5	6	7	8	9	10	11
1.	Bilaspur	14	–	14	30	–	30	57	2	59
2.	Chamba	6	–	6	46	6	52	41	–	41
3.	Hamirpur	–	–	–	–	–	–	2	–	2
4.	Kangra	13	–	13	68	5	73	100	8	108
5.	Kinnaur	5	–	5	25	–	25	22	–	22
6.	Kullu	12	1	13	25	7	32	35	5	40
7.	Lahaul & Spiti	1	–	1	1	–	1	2	–	2
8.	Mandi	–	–	–	1	2	3	–	–	–
9.	Shimla	14	8	22	52	55	107	84	29	113
10.	Sirmaur	10	3	13	44	11	55	70	16	86
11.	Solan	23	1	24	48	4	52	81	11	92
12.	Una	26	1	27	17	4	21	47	3	50
	Himachal Pradesh	124	14	138	357	94	451	541	74	615

Sl. No.	District	1997-98			1998-99			1999-2000		
		Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
1	2	12	13	14	15	16	17	18	19	20
1.	Bilaspur	71	1	72	63	1	64	61	1	62
2.	Chamba	58	9	67	57	8	65	65	6	71
3.	Hamirpur	2	–	2	1	–	1	1	1	2
4.	Kangra	73	9	82	132	10	142	134	5	139
5.	Kinnaur	19	–	19	11	–	11	24	–	24
6.	Kullu	35	6	41	31	–	31	34	1	35
7.	Lahaul & Spiti	3	–	3	2	–	2	2	–	2
8.	Mandi	–	1	1	2	–	2	–	–	–
9.	Shimla	86	34	120	75	21	96	99	42	141
10.	Sirmaur	63	23	86	91	14	105	74	17	91
11.	Solan	83	6	89	85	14	99	64	9	73
12.	Una	32	2	34	58	1	59	40	1	41
	Himachal Pradesh	525	91	616	608	69	677	598	83	681

Source: Department of Home, Himachal Pradesh, Shimla.

Table-16

District-wise Workforce in the Organised Sector

<i>Sl.No.</i>	<i>District</i>	<i>1996-97 (31.12.97)</i>	<i>1997-98 (31.12.98)</i>	<i>1998-99 (31.12.99)</i>	<i>Latest (30.6.2000)</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1.	Bilaspur	14,383	14,642	14,595	14,683
2.	Chamba	7,426	15,236	21,130	20,338
3.	Hamirpur	14,121	15,818	15,317	15,632
4.	Kangra	50,011	51,128	51,436	51,480
5.	Kinnaur	7,219	7,416	6,338	6,613
6.	Kullu	12,343	12,994	12,523	12,079
7.	Lahaul & Spiti	6,870	6,870	6,870	3,686
8.	Mandi	39,292	39,263	41,176	40,432
9.	Shimla	41,701	41,489	42,760	41,987
10.	Sirmaur	17,208	17,889	18,264	18,561
11.	Solan	17,358	17,666	17,595	18,312
12.	Una	12,086	12,659	12,969	12,968
	Himachal Pradesh	2,40,018	2,53,070	2,60,973	2,56,771

Source: Labour Commissioner-cum-Director Employment, Himachal Pradesh, Shimla.

Table-17

District-wise Percentage of Villages having a PHC within a Distance of 1 k.m.

<i>Sl. No.</i>	<i>District</i>	<i>1981</i>	<i>1991</i>	<i>1996-97</i>	<i>1997-98</i>	<i>1998-99</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
1.	Bilaspur	1.27	4.21	8.42	7.16	7.16
2.	Chamba	0.01	0.05	0.08	0.08	0.09
3.	Hamirpur	0.73	1.21	1.70	2.30	2.18
4.	Kangra	1.38	3.42	4.19	5.52	5.30
5.	Kinnaur	5.00	3.00	5.00	5.00	7.00
6.	Kullu	7.10	10.47	12.21	13.37	12.79
7.	Lahaul & Spiti	n.a.	5.75	7.85	9.95	9.95
8.	Mandi	0.86	1.99	2.70	3.26	3.12
9.	Shimla	–	2.39	4.24	4.24	4.24
10.	Sirmaur	1.24	1.65	2.17	2.69	2.69
11.	Solan	0.85	2.98	3.83	4.26	4.26
12.	Una	2.54	3.80	3.99	3.99	3.90

Source: Department of Economics and Statistics, Himachal Pradesh, Shimla.

Table-18

District-wise Percentage of Villages having a CHC within a Distance of 1 k.m.

<i>Sl. No.</i>	<i>District</i>	<i>1981</i>	<i>1991</i>	<i>1996-97</i>	<i>1997-98</i>	<i>1998-99</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
1.	Bilaspur	nil	0.42	1.26	2.11	2.11
2.	Chamba	–	–	0.01	0.01	0.01
3.	Hamirpur	–	0.24	0.36	0.48	0.48
4.	Kangra	–	0.33	0.99	1.10	1.32
5.	Kinnaur	4.00	1.00	1.00	1.00	1.00
6.	Kullu	–	2.33	2.91	4.07	5.81
7.	Lahaul & Spiti	n.a.	0.73	0.73	2.57	2.57
8.	Mandi	–	0.14	0.25	0.25	0.32
9.	Shimla	–	1.00	1.00	1.00	1.00
10.	Sirmaur	nil	nil	0.21	0.21	0.31
11.	Solan	n.a.	0.21	0.21	0.43	0.64
12.	Una	0.54	0.54	0.72	0.72	1.63

Source: Department of Economics and Statistics, Himachal Pradesh, Shimla.

Table-19

District-wise Percentage of Villages having Health Sub-centres within a Distance of 1 km.

<i>Sl. No.</i>	<i>District</i>	<i>1981</i>	<i>1991</i>	<i>1996-97</i>	<i>1997-98</i>	<i>1998-99</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
1.	Bilaspur	16.14	40.00	49.25	49.68	49.68
2.	Chamba	–	51.00	56.00	59.00	63.00
3.	Hamirpur	10.29	16.48	18.18	18.79	18.79
4.	Kangra	3.00	42.00	46.00	49.00	49.00
5.	Kinnaur	19.00	5.00	15.00	15.00	14.00
6.	Kullu	32.54	58.14	59.30	61.05	61.63
7.	Lahaul & Spiti	n.a.	26.18	30.37	33.51	33.51
8.	Mandi	9.74	20.01	21.29	22.21	22.29
9.	Shimla	–	25.18	29.80	29.80	29.80
10.	Sirmaur	4.13	12.84	14.98	15.60	15.60
11.	Solan	n.a.	34.92	36.41	38.12	38.12
12.	Una	28.44	36.23	38.59	39.31	40.40

Source: Department of Economics and Statistics, Himachal Pradesh, Shimla.

Table-20

District-wise Basic Village-level Data (1991)

<i>Sl. No.</i>	<i>District</i>	<i>Total villages</i>	<i>Inhabited villages</i>	<i>Uninhabited villages</i>	<i>Villages with drinking water facilities</i>	<i>Villages approachable by pucca road</i>	<i>Villages electrified</i>	<i>Census villages</i>
1	2	3	4	5	6	7	8	9
1.	Bilaspur	1044	950	94	950	303	931	1,11,107
2.	Chamba	1591	1144	447	1144	161	1036	1,45,334
3.	Hamirpur	1650	1617	33	1617	431	1615	1,44,408
4.	Kangra	3869	3620	249	3619	1142	3587	3,97,728
5.	Kinnaur	662	228	434	228	49	187	39,351
6.	Kullu	172	172	–	172	60	170	1,23,455
7.	Lahaul & Spiti	403	272	131	270	53	240	14,521
8.	Mandi	3338	2818	520	2818	428	2746	3,13,362
9.	Shimla	2630	2311	319	2311	326	2262	2,66,871
10.	Sirmaur	968	965	3	965	207	961	1,50,990
11.	Solan	2501	2348	153	2347	505	2343	1,39,261
12.	Una	600	552	48	552	296	550	1,29,538

Technical Note

I. Computation of Human Development Index (HDI)

A slight deviation from the standard methodology for calculating Human Development Indices for the districts and for the State has been adopted. The methodology for calculating HDI as adopted by the UNDP covers three indicators viz., (i) Longevity Index measured by the life expectancy at birth, (ii) Educational Attainment Index measured as the combination of adult literacy rate and combined enrolment ratio (primary and secondary) and (iii) the Standard Of Living Index measured by the real GDP per capita expressed in Purchasing Power Parity dollars (US) i.e. PPP\$. The methodology for obtaining indicators (ii) and (iii) has been identical with that used by the UNDP in various Human Development Reports. There is a deviation from the standard methodology in calculating health index. Infant Mortality Rate in place of Life Expectancy at Birth has been used to arrive at health index as data on life expectancy at birth by districts is not available. Construction of life tables was also not possible as the Census data on district wise population by single year of age has not been made available by the Registrar General of India.

a. Health/Life Index

Infant Mortality Index has been arrived at by using actual, maximum and minimum values of Infant Mortality Rate which then, has been connected into life index by taking the former's distance from unity.

Steps for calculating Health/Life Index:

$$\text{Infant Mortality Rate Index} = \frac{X_i - X_{\min}}{X_{\max} - X_{\min}}$$

where

$$X_i = \text{Infant Mortality Rate}$$

$$X_{\max} = 166$$

$$X_{\min} = 22$$

Health index or life index = 1 – Infant mortality rate index.

Maximum and Minimum values for Infant Mortality Rate have been taken as 166 (Damoh, Madhya Pradesh) and 22 (Hyderabad, Andhra Pradesh) respectively.

b. Educational Attainment Index

The Educational Attainment Index has been worked out by combining the adult literacy ratio and combined enrolment ratio for primary and secondary levels of education. (Classes I to X). Enrolment ratios for tertiary level of education could not be incorporated because of non-availability of the same. Enrolment ratios for primary and secondary enrolment ratios have been worked out by the Planning Department, Himachal Pradesh based on the enrolment figures provided by the Directorates of Primary and Secondary Education, Government of Himachal Pradesh. Actual enrolments have

been divided by the population in that particular age group to arrive at enrolment ratios.

Steps for calculating Educational Attainment Index:

$$i. \text{ Adult literacy rate index} = \frac{X_i - X_{\min}}{X_{\max} - X_{\min}}$$

where

$$X_i = \text{Adult literacy rate}$$

$$X_{\min} = 0$$

$$X_{\max} = 100.$$

$$ii. \text{ Combined enrolment ratio index} =$$

$$\frac{X_i - X_{\min}}{X_{\max} - X_{\min}}$$

where

$$X_i = \text{Combined enrolment ratio (I to X)}$$

$$X_{\min} = 0$$

$$X_{\max} = 100$$

$$iii. \text{ Educational attainment index} =$$

$$\frac{2}{3} \times (\text{Adult literacy rate index}) +$$

$$\frac{1}{3} \times (\text{Combined enrolment ratio index})$$

Maximum and minimum values for both adult literacy rate and combined enrolment ratio have been taken as 100 and 0 respectively.

c. Income Index

As a first step to arrive at income index, per capita district domestic product has been converted into its Purchasing Power Parity in dollars by taking the ratio of per capita district GDP to that of the country in rupees and multiplying this by the per capita GDP for the country in PPP\$ (1220 for 1991). The maximum income level of 40,000 PPP\$ has been discounted using Atkinson's formula to 5385 PPP\$.

As per capita GDP of no district of Himachal exceeds threshold income i.e. per capita GDP of the World, no adjustments following Atkinson's formula were required.

Income Index then has been calculated by using the following formula:

$$\text{Income index} = \frac{[(\text{DDP}/\text{GDP}) \times 1220] - X_{\min}}{X_{\max} - X_{\min}}$$

where DDP = Per capita GDP of the district
 GDP = Per capita GDP of India (5427)
 X_{\min} = 100 PPP\$
 X_{\max} = 5385 PPP\$

d. Human Development Index (HDI)

$$\text{HDI} = \frac{1}{3} \times (\text{Income Index} + \text{Health/life index} + \text{Educational attainment index})$$

II. Computing Gender Related Development Index (GDI)

While computing GDI, all the three components of the HDI have been adjusted for the average achievement of each district in accordance with the disparities in achievement of men and women. In fact GDI is HDI discounted for Gender inequality. Methodology for calculating GDI also deviates from the standard methodology to the extent that IMR in place of LEB has been used to work out Health/Life Index. Following indicators are required to calculate GDI:

- i. Percentage shares of males and females in total population.
- ii. Infant Mortality rate for male and female child.

- iii. Adult literacy rate for males and females.
- iv. Combined primary and secondary enrolment ratio for males and females.
- v. Share of males and females in economically active population.
- vi. Agricultural wage rate for males and females.

b. Equally distributed educational attainment index

i. Adult Literacy Rate Index

$$\text{Males} = \frac{X_i - X_{\min}}{X_{\max} - X_{\min}}$$

$$\text{Females} = \frac{X_i - X_{\min}}{X_{\max} - X_{\min}}$$

ii. Combined Gross Enrolment Ratio Index

$$\text{Males} = \frac{X_i - X_{\min}}{X_{\max} - X_{\min}}$$

$$\text{Females} = \frac{X_i - X_{\min}}{X_{\max} - X_{\min}}$$

iii. Educational Attainment Index

$$\text{Males} = \frac{2}{3} \times (\text{Male adult literacy rate index}) + \frac{1}{3} \times (\text{Male combined enrolment ratio index})$$

$$\text{Females} = \frac{2}{3} \times (\text{Female adult literacy index}) + \frac{1}{3} \times (\text{Female combined enrolment index})$$

iv. Equally distributed educational attainment index = [(female population share) × (female educational attainment index)^{1-ε} + (male population share) × (male educational attainment index)^{1-ε}]^{1/(1-ε)}

Extent of Inequality Aversion Adopted

The Gender Equity Sensitive Indicator (GESI) methodology has been used, utilizing the 1 – ε averaging. The value of ε = 2. In the context of the Gender based index this is a measure that indicates the contribution of a one-unit increase in *female achievement* to the X_{ede} i.e. to the equally distributed equivalent achievement. *Female achievement*, because their achievement values are lower than those of men, the implication is that in conditions where male achievement is lower than that of females’ ε will measure the contribution of a unit increase of male achievement to the X_{ede}. It (ε) indicates social preference for equality because it is the elasticity of the marginal social valuation of achievement (Anand and Sen, 1995).

Following are the steps for calculating GDI:

a. Equally distributed Health/Life Index

- i. Female health/life index = $\frac{X_i - X_{\min}}{X_{\max} - X_{\min}}$
- ii. Male health/life index = $\frac{X_i - X_{\min}}{X_{\max} - X_{\min}}$
- iii. Equally distributed health/life index = [(female population share) × (female life index)^{1-ε} + (male population share) × (male life index)^{1-ε}]^{1/(1-ε)}

c. Equally Distributed Income Index

1. *Proportional income share*

- i. Average wage (w) = [(female share of economically active population) × (ratio of female wage to male wage) + (male share of economically active population) × 1]

- ii. Female wage to average wage = (female proportional income share)^{1-ε} +
ratio of female wage to male wage/average (male population share) ×
wage (w) (male population share) (male proportional
income share)^{1-ε}]^{1/1-ε}
- iii. Male ways to average ways = 1/average ways (w)
- iv. Female share of earned income = [Equally distributed proportional
(female wage rate to average wage) × income share] ×
(percentage share of the female economically [adjusted GDP per capita PPP\$]
active population)
- v. Male share of earned income = Per capita GDP for Himachal PPP\$ equivalent
(male wage to average wage) × is 1038.
(percentage share of the male economically
- active population
- iii. Equally distributed income index =
(Equally distributed proportional income
PPP\$ - X_{min}) / (X_{max} - X_{min})
- vi. Female proportional income share = where X_{max} = 5385 PPP\$
(female share of earned income)/(female X_{min} = 100 PPP\$
population share)
- vii. Male proportional income share =
(male share of earned income)/(male
population share).

2. Equally distributed income index

- i. Equally distributed proportional income share = [(female population share) ×

d. Gender related Development Index

Gender related Development Index =
 $\frac{1}{3} \times$ (equally distributed health index +
equally distributed educational attainment
index +
equally distributed income index)

Glossary

Births attended by trained health personnel:

The percentage of births attended by physicians, nurses, midwives, trained primary health care workers or trained traditional birth attendants.

Child labourers:

Working children between five and fourteen years.

Crude Birth Rate:

Number of births per 1000 population in a given year.

Crude Death Rate:

Number of deaths per 1000 population in a given year.

Dependency Ratio:

The proportion of population below 14 years and above 60 years to working population.

Disability:

Disability is a restriction or lack of ability (resulting from impairment) to perform an activity in the manner or within the range considered normal for human beings. Impairment is defined as any loss of psychological, physiological or anatomical structure and function.

Dropout rates:

The percentage of the number of children to total enrolment dropping out of the school system in a particular level in a particular year.

Enrolment:

i) Primary education enrolment:

Enrolment of students in Classes I to VII.

ii) Secondary education enrolment:

Enrolment of students in Classes VIII to X.

iii) Higher secondary enrolment:

Enrolment of students in Classes XI and XII.

iv) Tertiary education enrolment:

Enrolment of students in degree colleges, teacher's colleges, universities and higher professional schools.

Enrolment Ratios (gross and net):

The gross enrolment ratio is the number of

students enrolled in a level of education whether or not they belong to the relevant age group for that level – as a percentage of the population in the relevant age group for that level.

The net enrolment ratio is the number of students enrolled in a level of education who belong in the relevant age group as a percentage of the population in that age group.

Female–male gap:

A set of national, regional and other estimates in which all figures for females are expressed in relation to the corresponding figures for males, which are indexed to 100.

Fertility Rate:

Total fertility rate is the average number of children that would be born to a woman if she experiences the current fertility pattern throughout her reproductive span (15–49 years). In a mathematical form different fertility rates are defined as below:

- i. Age specific fertility rate (ASFR) = $\frac{\text{Number of live births in a particular age group}}{\text{Mid-year female population of the same age group}} \times 1000$
- ii. General fertility rate (GER) = $\frac{\text{Number of live births in a year}}{\text{Mid-year female population between 15-49 years}} \times 1000$
- iii. Age-specific marital fertility rate (ASMFR) = $\frac{\text{Number of live births in a particular age group}}{\text{Mid-year married female population of the same age group}} \times 1000$
- iv. General marital fertility rate (GMFR) = $\frac{\text{Number of live births in a year}}{\text{Mid-year married female population between 15 and 49}} \times 1000$

Katcha:*

If both the wall and roof are made of katcha materials, the house could be classified as katcha. Katcha houses may be divided into

two categories: serviceable and non-serviceable.

i) Serviceable katcha houses:*

Serviceable katcha houses are those having walls of solid mud, unburnt bricks or wood and a thatched roof.

ii) Non-serviceable katcha houses:*

If both walls and roof are made of materials like grass, leaves or bamboo the house may be classified as a non-serviceable katcha house. Such houses have to be rebuilt at short intervals.

Pucca:*

If both wall and roof are made of pucca materials like burnt bricks, GI sheets, stone, cement concrete or *ekra* for walls and tiles, slates, single sheets of corrugated iron, with zinc or other material, asbestos or cement sheets, bricks, stone and lime concrete RBC or RCC roofs, the house may be classified as *pucca*.

Semi -Pucca:*

Cases which are not katcha or pucca may be classified as semi-pucca.

* Definitions adopted by the National Building Organization – Government of India in consultation with RGI and NSSO.

Head Count Ratio (poverty):

The ratio of population living below the poverty line to total population.

Gross Domestic Product (GDP):

This represents the sum of the economic value of all goods and services produced within the geographical boundaries of a state or district during a given year, from which are deducted raw material, fuels, lubricants etc., consumed in the process of production counted within duplication. Production originates in the state or district and therefore GDP is said to be 'by origin'.

Net Domestic Product (NDP):

Net domestic product is derived by deducting depreciation from the GDP.

Immunisation:

Vaccination coverage of children under one year of age for the antigens used in the universal child immunisation programme.

Infant Mortality Rate (IMR):

The number of infants dying under one year of age in a year per 1000 live births of the same year.

Labour Force Participation Rate:

The proportion of main and marginal workers and jobseekers to total population.

Life Expectancy at Birth:

Average number of years a new born child is expected to live under current mortality conditions.

Literacy Rate:

It is the ratio of the number of literates above the age of seven years to the total population. Literacy is defined as the ability to read and write with understanding in any language. Till the 1991 Census, literacy was canvassed for all persons above five years of age. A significant departure was made in 1991 by canvassing the question of literacy only for population aged seven and above.

Maternal Mortality Rate:

The number of deaths of women while pregnant or within 42 days of termination of pregnancy from any cause related to pregnancy and childbirth per 1,00,000 live births in a given year.

Mortality Rates:

i) Crude Death Rate = (Number of deaths during the year) / (Mid-year population) × 1000

ii) Age-Specific Mortality Rate (ASMR) = (Number of deaths in a particular age group) / (Mid-year population of the same age group) × 1000

iii) Infant Mortality Rate = (Number of infant deaths during the year) / (Number of live births during the year) × 1000

iv) Neo-natal Mortality Rate = (Number of deaths of infants of less than 29 days during the year) / (Number of live births during the year) × 1000

v) Peri-natal Mortality Rate = (Number of still births and deaths of infants of less than 7 days during the year) / (Number of live births and still births during the year) × 1000

Purchasing Power Parity (PPP\$):

The purchasing power of a country's currency. The number of units of that currency

required to purchase the same representative basket of goods and services (or a similar basket of goods and services) that the US dollar (the reference currency) would buy in the United States.

Real GDP per capita (PPP\$):

The GDP per capita of a country converted into US dollars on the basis of the purchasing power parity of the country's currency.

Safe drinking water-access:

If a household has access to drinking water supply from taps, hand pumps borewells or tubewells within or outside the premises, it is considered as having access to safe drinking water.

Sanitation-access:

Households with reasonable access to sanitary means of excreta and waste disposal including outdoor latrines are considered as having access to sanitation.

Sex Ratio:

Number of females per 1000 males in a population.

Slum:

Slum is a concept area with a collection of

poorly built tenements crowded together usually with inadequate sanitary and drinking water facilities.

Work Participation Rate (WPR): The proportion of total workers (main workers and marginal workers) expressed as percentage of total population is the Work Participation Rate (WPR). This is considered a very crude measure since it does not take into account the age structure of the population. For making specific comparisons, the age specific WPR would be ideal.

Workers:

Workers could be main and marginal.

i) Main workers:

Those who worked for 6 months (183 days or more in a year) are termed main workers.

ii) Marginal workers: Those who have worked for less than 183 days in a year are marginal workers.

Under five mortality rate:

Number of children under five years of age dying in a year per 1000 live births of the same year.

Glossary of Local Terms

Ayurveda:

A traditional Indian system of medicine and healing.

Baori/baoli:

A spring-well, often with a storage tank.

Bazaar:

Market.

Begar:

Unpaid/bonded labour or labourer.

Bethu:

Forced unpaid labourer.

Block:

Administrative and development division.

Bukhari:

A wood or coal burning stove.

Durbar:

Royal court.

Gram Sabha:

Assembly of elected representatives at the village level.

Jagir:

Landholding, earlier given as 'gifts' or retainerships.

Kbund:

An informal division or identity given, or taken by a particular tract.

Kuhl:

A water channel, primarily used for irrigation.

Kuttcha:

Weak; a mud, straw or poor timber structure.

Lok Sabha:

Literally House of the People. Assembly of directly elected representatives at the centre; the 'lower house' of Parliament.

Mabila Mandal:

Women's group; normally a self-help one.

Maidan:

An open ground.

Panchayati Raj:

Decentralised rule; literally the 'panch' (five) headmen of a village.

Pargana:

A territorial division.

Pukka/Pucca:

Strong; a brick or stone structure.

Rajya Sabha:

Literally House of the States. Assembly of indirectly elected representatives at the centre; the 'upper house' of Parliament.

Sanad:

A royal order or edict issued by the rulers of the former princely states.

Tehsil:

Administrative and revenue division.

Unani:

A system of medicine that is regarded to be originally Greek, but was modified in India and is still in use with traditional healers.

Vidhan Sabha:

Assembly of elected representatives in the States.

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