INSTITUTE FOR HUMAN DEVELOPMENT

Government of Mizoram

The land locked north-eastern state of Mizoram after going through a period of turmoil from mid-1960s to mid-1980s, has witnessed significant socio-economic transformation after becoming an independent state in 1987. Although a late starter in the development process, the scale of progress and achievements in human development in the state are remarkable. In fact, Mizoram's achievement in human development is one of the highest in the country. The institutional and societal transformation in the state is largely responsible for its high level of human development.

The Mizoram Human Development Report 2013 provides a comprehensive assessment of the present status of human development in the state. Largely based on data collected from a representative primary survey of over 3600 sample households from both rural and urban areas, the Report covers a wide range of themes such as poverty and inequality, employment and livelihood, health and education, gender equality as well as financing and governance for human development. Keeping in mind its weaknesses as well as strengths, the Report also provides a way forward for enhancing human development in the state, both in the short and long terms.

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Mizoram Human Development Report 2013

Government of Mizoram

INSTITUTE FOR HUMAN DEVELOPMENT

Government of Mizoram

Mizoram
Human Development Report
2013

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LAL THANHAWLA
Chief Minister

सत्यमेव जयते

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MESSAGE

I am very pleased that a comprehensive Human Development Report for Mizoram is being brought out for the first time.

The economic development of a nation is of no use if it does not translate into the welfare of its citizens. The concept of human development has rightly enunciated that the process of human development aims at improving the welfare of the people by enlarging people's choices and increasing human capabilities to lead a long and healthy life, to be educated and to enjoy a decent standard of living.

The realisation of the goal of human development necessitates conscious efforts by the State and the community. In fact, the state government is presently implementing its flagship programme of 'Comprehensive and Integrated Socio-economic Development Programme' under the New Land Use Policy (NLUP). The programme, in its wider perspective, is expected to finally result in the achievement of improving the welfare of the people, increasing their capabilities and enlarging their choices to ultimately realize the goal of 'human development'.

I hope this Report will prove a milestone in the process of development planning of the state. I appreciate the efforts made by Planning Commission, the faculties of IHD, state government officials and all local experts who were involved in the preparation of this Report.

The Report has depicted what we have achieved so far, and the issues relating to different aspects of human development, which the state has to address seriously by setting benchmarks to judge future attainments. I am hopeful that the report will provide valuable inputs and the findings would be of immense use in reorienting our strategy for policy-making and evaluating existing policies towards the goal of ensuring faster economic and human development.

(LAL THANHAWLA)
Chief Minister
Mizoram

H. Liansailova
Minister, Planning

सत्यमेव जयते

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MESSAGE

I have immense pleasure that the first Human Development Report for Mizoram is being released. For sustaining economic growth, the Report has given a roadmap and chalked out a strategy for a broad-based growth, based on its past achievements of high level human development. The Report has emphasized that Mizoram needs to follow the 'high road' to development, which calls for a long time-horizon in investment, involves high levels of skills and knowledge, high technological base, modern forms of organization and professional management and governance.

In order to meet the challenges and capitalize on the opportunities, all sectors of the society need to reflect on and discuss the issues and recommendations proposed in the Report. I am sure that policy-makers, researchers, NGOs and members from civil society organizations would respond to the issues highlighted and the recommendations put forward in the Report.

It is heartening to note that Mizoram has one of the highest Human De-velopm.ent levels in the country. It is the result of our continued effort towards achieving the twin objectives of economic 'development' and 'progress'. I congratulate all those who have taken part in bringing out this commendable report, a milestone against which our achievements, as well as our future development goals and aspirations will be measured. Considering that the very concepts of 'development' and 'progress', designed to bring about higher standards of living defined by improved health and knowledge were foreign concepts a few decades ago, the contribution of each and every citizen of the state towards achieving this present status is indeed laudable. We owe it to ourselves, and to our land to continue building up our capabilities; capabilities born out of improved health and knowledge, and use them for ever increasing productive activities in our social and political affairs.

Meanwhile, we should also take note of the fact that achieving one of the highest levels of human development in the country does not automatically imply that all indicators are rosy. The report of an abysmal share of the state's own revenues in its total revenue receipts, skewed income 85 consumption levels across the State, acute inequalities in land holdings, low Employment and Livelihood Index (ELI), high dropout rates in elementary education, poor representation of women in the organized sector, the less-than-one Gender Parity Index (GPI) indicating that women, as a group are at lower levels of human development, are serious issues to be tackled. The fact that the share of contribution of the tertiary sector to the GSDP vis-a-vis the primary and secondary sectors is also a cause for concern. Even though majority of the population depends on agriculture and allied activities, the share of this sector stands at only 14.32 per cent while the secondary sector accounts for 19.39 per cent. It should be our endeavour that the GSDP shares of the primary and secondary sectors increase over time such that levels of income, consumption, health, knowledge, and general well-being of the major chunk of our population engaged in these sectors increase.

The Report has given some pointers for future course of action. In this, the state government, the civil society and the local institutions would all have to work in tandem. The success of the Report would therefore, depend, to a large extent, upon the follow-up actions that would be taken after the Report is released.

I am very happy that a thorough analysis has been made of developments in the social and economic sectors up to the district level. I would like to commend the IHD and state government for bringing out this Report. It has been prepared with the help and involvement of a wide spectrum of development practitioners both from the government and civil society. I wish you all success in the pursuit of the goals that have been mapped out for the future.

(H.LIANSAILOVA)
Minister, Planning
Mizoram

L. Tochhong
Chief Secretary

सत्यमेव जयते

Mizoram
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MESSAGE

I am glad to learn that the first Human Development Report on Mizoram is being published. I have no doubt that the Report would provide the requisite impetus for an appropriate policy framework for sustainable development in the state. The Report prepared by the Institute for Human Development(IHD), New Delhi , an academic institution of repute, will undoubtedly be a an objective analysis of the state of human development in Mizoram.

There is a dearth of development discourse pertaining to Mizoram. We are confident that the Mizoram Human Development Report would go a long way in filling this void as it comprehensively analyses the human development status within the state. What gives me immense pleasure is the remarkable progress made by the state on the human development front. As the report states, the overall economic health of the state is sound with a decent increase in GSDP and per capita income over the period of time. The Report also stated that the crude death rate, crude birth rate and total fertility is less than the national average indicating a better health status and Mizoram has one of the highest human development levels in the country. And the credit for all these achievements goes as much to the proactive policy of the state government as to the wholehearted cooperation of the people.

Today this state has the potential to become the orchard for the entire North-east, producing and providing flowers, fruits, and vegetables to the region. Our lack of connectivity and communications facilities has also created poor marketing conditions, and acted as a brake on our horticultural expansion. Nature has provided us with abundant resources which are not being exploited due to our geography, topography and the inability to produce for ourselves the infrastructure required for growth. All these, and several other points and aspects are reflected in this Report, making it a good Guide Book for policy-makers, and a valuable document for administrators in this area.

Mizoram is endowed with an extraordinary wealth of natural resources. And the state government is trying hard to explore and exploit the abundant resources scientifically and systematically in a planned manner to improve the quality of life of the people. Once the resources are fully tapped, the state will be able to remove not only backwardness, illiteracy and low life expectancy but also the evils of inequality.

The Institute for Human Development, New Delhi, deserves kudos for taking up this challenging task of preparing such a comprehensive Report. My heartfelt thanks goes to local experts, officials, NGOs and religious groups for their valuable input and contribution to the Report without which the Report could not be materialized. I also thank the Planning Commission for providing financial support for the preparation of this valuable Report.

I am confident that the wealth of information contained in the Report will prove to be a useful guide for experts, planners, policy-makers and the ordinary citizens. I wish this Report great success and hope that the work that has been initiated is taken to its logical end.

(L. TOCHHONG)
Chief Secretary
Mizoram

PREFACE

Mizoram, the picturesque twenty-third state of the Indian Union, is dotted with numerous hills, rivers and lakes. After going through a rather long period of turmoil due to insurgency, today the state is not only very peaceful but has also achieved remarkable progress. It not only has one of the highest literacy levels in the country, but is also one of the highest achievers among the other states in terms of other indicators of human development.

The Mizoram Human Development Report, prepared by the Institute for Human Development (IHD), is a comprehensive document detailing the status of various discussions pertaining to human development such as healthcare, education, income, women's issues and other aspects of socio-economic development in the state. In addition, the Report also highlights the history, topography, socio-economic and demographic characteristics of the state, and how these factors have influenced the economic and human development of the state.

The Report, in addition to the various available secondary data, is largely based on primary data collected from a large sample of 3670 households, drawn from both the rural and urban areas in all the districts of the state. The survey has not only succeeded in filling up an important gap in data, but also provides details and insights on various indicators of human development and related aspects. The Report has calculated the Human Development Index (HDI) for various districts of the state, as also several other indices such as the Gender Development Index (GDI) and the Gender Parity Index (GPI). The report, which is based on survey data, offers several insights at the district level and inter-district variations in terms of health and education outcomes. The report also analyses the issues of governance and other challenges facing Mizoram for enhancing and sustaining higher levels of human development in the state. Last but not the least, the Report delineates the way forward for achieving this important goal while keeping in mind the weaknesses and strengths of the state.

IHD is thankful to the government of Mizoram for providing it with this opportunity of preparing this Report in partnership with it. IHD would also like to express the hope that this Report would prove to be useful to various stakeholders engaged in the task of taking Mizoram to greater heights by promoting prosperity and human development in the state.

Alakh N. Sharma
Professor and Director
Institute for Human Development

April 2014

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This preparation and publication of this Report has been possible because of the support and cooperation offered by several institutions and individuals. The funding provided by the Planning Commission, Government of India, to the government of Mizoram for the preparation of this Report is highly appreciated. A number of institutions, independent academics and researchers, staff and scholars of the Institute for Human Development (IHD) have thus been involved in the preparation of this report.

The task of preparing the report began with an inception workshop organized by IHD, and held in Aizawl in 2009. The Institute gratefully acknowledges the support and hospitality of the government and people of Mizoram in the successful conduct of this event. All the concerned officials of the government of Mizoram, who were either directly or indirectly involved with the preparation of this Report, were invited to attend the workshop. Professor T.S. Papola and Professor K.P. Kannan provided valuable inputs at the workshop that were extremely useful for the preparation of the Report. The Institute would like to offer its gratitude for the contribution of various Mizoram government officials to this Report, including H.E. Shri M.M. Lakhera, the Governor of Mizoram. We are also grateful to him and the Hon. Chief Minister, Pu Lalthanhawla for their messages of encouragement. We would also like to thank all the following eminent people for their contribution to this Report:

Mr. Lalmalsawma, *Commissioner and Secretary, Planning and Finance*

Mr. C. Lalsawta, *Principal Secretary, Planning*

Mr. Yograj Chhetri, *Principal Adviser, State Planning Board*

Mr. Ngunlala Chinzah, *Adviser and Coordinating Officer, State Planning Board*

Mr. Dengzika Zadeng, *Dy. Director (T), Directorate of Economics and Statistics*

Mr. Saihlira, *Deputy Adviser, State Planning Board*

Mr. L. Hrahsel, *Chief Planning Officer, State Planning Board*

Mr. Vanchungnunga, *Director, Social Welfare Department*

Dr. E. Saipari, *Joint Director of Horticulture*

Dr. Lalngura Tlau, *Sub-divisional Magistrate, Lawngtlai*

Ms. Sylvie Z. Ralte, *Civil Judge and Member, Mizo Women Commission*

Ms. B. Sangkhumi, *Chairperson, Mizoram Public Service Commission and Former President, Mizo Hmeichhia Insuihkhawm Pawl (MHIP)*

Mr. Lalzirmawia Chhangte, *Joint Director, Rural Development Department*

The data collection for the study was undertaken at both the primary and secondary levels. The secondary level data and literature provided by the Directorate of Economics and Statistics, Mizoram Government, proved to be very useful for undertaking research for this Report. For the purpose of primary data collection, IHD sought the support of the Statistics Department, Mizoram Government, to facilitate the task of highlighting all the specific issues and characteristics of a unique state like Mizoram in the Report. The Directorate of Economics and Statistics, Mizoram Government, has also been of great help in providing an interface with local investigators for the purpose of collecting data for the Report.

A number of local experts were requested to prepare the background papers for the report. In this context, we would like to offer our gratitude to the following eminent academicians and officials for contributing the highly useful background papers:

Professor Lianzela
Dean, School of Social Sciences, University of Mizoram

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Reader in Education, Mizoram University

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Department of Extension Education and Rural Development, Mizoram University

Dr. Vanlalchhawna
Reader in Economics, Mizoram University

Dr. Lalhriatpuii
Department of Economics, Mizoram University

Dr. Lalrintluanga
Department of Public Administration, Mizoram University

In addition, several other people were involved in the preparation of this Report. While it would not be possible to list all the names, we would like to thank all of them for their valuable contributions and participation in this onerous task.

The Institute for Human Development also constituted a core group for working out the methodology of the data collection, analysis of primary and secondary data, and preparation of the final chapters for the Report.

Finally, all the faculty and staff of IHD, including members of the programme, administration and communication departments, provided tremendous support in the preparation of the Report, and we are extremely thankful to all of them.

Atul Sarma
Visiting Professor,
Institute for Human Development, New Delhi
IHD Team Leader for MHDR

ABBREVIATIONS

AAY	Antyodaya Anna Yojana
ADC	Autonomous District Council
AIBP	Accelerated Irrigation Benefit Programme
AIDS	Acquired Immune Deficiency Syndrome
ANC	Anti-Natal Care
ANM	Auxiliary Nurse and Midwifery
ARWSP	Accelerated Rural Water Supply Programme
ASHA	Accredited Social Health Activist
ATS	Amphetamine-type Stimulants
BCIM	Bangladesh, China, India and Myanmar
BIMSTEC	Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation
BPL	Below the Poverty Line
BSNL	Bharat Sanchar Nigam Ltd.
CADC	Chakma Autonomous District Council
CAGR	Compound Annual Growth Rate
CBR	Crude Birth Rate
CDR	Crude Death Rate
CHC	Community Health Centres
CMR	Child Mortality Rate
CPIAL	Consumer Price Index for Agricultural Labourers
CPIIW	Consumer Price Index for Industrial Workers
CR	Completion Rate
CSO	Central Statistical Organization
CSS	Centrally-Sponsored Schemes
DDP	District Domestic Product
DDT	Dichlorodiphenyltrichloroethane
DISE	District Information System for Education
DOR	Drop-out Rate
EAI	Educational Achievement Index
EBM	Educationally Backward Minorities
EII	Educational Infrastructure Index
ELI	Employment and Livelihood Index
ELIT	English Language Teaching Institute
ER	Employment Rate
FTD	Fever Treatment Depot
GDI	Gender Development Index
GDP	Gross Domestic Product
GEM	Gender Empowerment Measure
GER	Gross Enrolment Ratio
GNP	Gross National Product
GoI	Government of India
GoM	Government of Mizoram
GPI	Gender Parity Index
GPR	Gender Parity Ratio
GSDP	Gross State Domestic Product
HCR	Head Count Ratio
HD	Human Development
HDI	Human Development Index
HDR	Human Development Report
HER	Human Expenditure Ratio
HIS	Health Status Index

HIV	Human Immunodeficiency Virus
HR & LN	Human Rights and Law Network
HYV	High Yielding Variety
ICAR	Indian Council of Agriculture Research
ICDS	Integrated Child Development Services
IDDP	Intensive Dairy Development Project
IDU	Injecting Drug Users
IFOAM	International Federation of Organic Agriculture Movements
IMR	Infant Mortality Rate
ISOPOM	Integrated Scheme of Oilseeds, Pulses, Oilpalm and Maize
ITC	Integrated Training Centre
KVK	Krishi Vigyan Kendra
KWH	Kilo Watt per Hour
LADC	Lai Autonomous District Council
LEB	Life Expectancy at Birth
LPCD	Litres Per Capita Per Day
MADC	Mara Autonomous District Council
MCAB Ltd.	Meghalaya Co-operative Apex Bank Limited
MDG	Millennium Development Goals
MHIP	Mizo Hmeichhe Insuihkhawm Pawl
MIP	Mizoram Intodelhna Programme
MISE	Mizoram Institute of Spoken English
MLA	Member of Legislative Assembly
MMR	Maternal Mortality Rate
MNF	Mizo National Front
MPCE	Monthly Percapita Consumption Expenditure
MPW	Multipurpose Worker
MW	Megawatts
MZP	Mizo Zirlai Pawl or Mizo Student's Association
NABARD	National Bank for Agriculture and Rural Development
NEDFI	North Eastern Development Finance Corporation Limited
NER	Net Enrolment Ratio
NGO	Non-Governmental Organization
NH	National Highway
NLEP	National Leprosy Eradication Programme
NLUP	New Land Use Policy
NPCBB	National Project on Cattle and Buffalo Breeding
NREGS	National Rural Employment Guarantee Scheme
NRHM	National Rural Health Mission
NSSO	National Sample Survey Office
NUEPA	National University of Educational Planning and Administration
OBC	Other Backward Caste
PCI	Per Capita Income
PCNSDP	Per Capita Net State Domestic Product
PDS	Public Distribution System
PER	Public Expenditure Ratio
PGR	Population Growth Rate
PHC	Primary Health Centre
PLRC	Pawi-Lakher Regional Council
PNC	Post Natal Care
PPP	Public Private Partnership
PRISM	People's Right to Information and Development Implementing Society of Mizoram
PSU	Public Sector Undertaking
R&D	Research and Development
RGICL	Reliance General Insurance Company Limited
RMSA	Rashtriya Madhyamik Shiksha Abhiyan

RSBY	Rashtriya Swasthya Bima Yojana
RTI	Right to Information
SAR	Social Allocation Ratio
SC	Scheduled Caste
SC	Sub-Centre
SCERT	State Council of Educational Research and Training
SHP	School Health Programme
SIDBI	Small Industries Development Bank of India
SIEMAT	State Institute of Educational Management and Training
SPR	Social Priority Ratio
SPSE	Social Priority Sector Expenditure
SSA	Sarva Shikhsa Abhiyaan
SSE	Social Sector Expenditure
ST	Scheduled Tribe
STI	Sexually Transmitted Infection
TE	Total Expenditure
TFR	Total Fertility Rate
TPR	Teacher Pupil Ratio
TPS	Teacher Availability per School
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNODC	United Nations Office on Drugs and Crime
USD	United States Dollar
VDC	Village Development Council
VFA	Veterinary Field Assistant
VHSC	Village Health and Sanitation Committee
WEP	Women's Empowerment Policy
WPR	Work Participation Rate
YMA	Young Mizo Association

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EXECUTIVE SUMMARY

The state of Mizoram is situated in the north-eastern part of India. It is a landlocked state and shares its borders with the Indian states of Assam, Manipur and Tripura, and the neighbouring countries of Bangladesh and Myanmar. The state covers an area of 21,081 sq. km with over 80 per cent of its total geographical area being hilly. The state has a tropical humid climate.

Before becoming an independent state on 20 February 1987, Mizoram was a district in Assam. The evolution of Mizoram state is part of a long and violent journey that started in 1966. The insurgency in the state continued for two decades. It inflicted heavy damage on the self-sufficient tribal economy and social structure of the state, causing unspeakable miseries and sufferings to its people. After the signing of the Peace Accord on 30 June 1986, however, the state has been referred to as the most peaceful state in the North-east region.

Socially, the Mizo society, a tribal society with numerous interlinked ethnic tribes, is a very close knit and interdependent society. More than 80 per cent of the households in the state follow Christianity.

Although the overall economic health of the state is decent, there is a wide variation in the economic health among the districts. The Gross State Domestic Product (GSDP) and per capita income of the state have shown a decent increase over a period of time. The composition of the GSDP and DDP for all districts shows a very high share of the tertiary sector, followed by agriculture and allied activities, and then the secondary sector. Agriculture, which once was the chief economic activity in the state, has now taken a back seat with the services sector becoming one of the most important sectors in terms of contribution to the state income and well-being of the people.

Mizoram's performance as an economy and in terms of human development is laudable. The state has one of the highest human development levels in the country. Primary income and economic well-being, even though important pre-requisites for human development, are only the means to an end. The process of human development aims at improving the welfare of the people by increasing not just their incomes, but also their human capabilities, that is, what people are able to do or be. This does not negate the process of economic growth and expansion of per capita incomes. Rather, it considers economic growth as essential for expanding human choices because access to income permits access to various other options.

The HDR 1990 defines human development as having two sides: formation of human capabilities like improved health and knowledge; and the use that people make of their acquired capabilities for leisure, for productive activities, or for being active in social or political affairs. Human development lays an emphasis on freedom as an important aspect of widening capability. Sen (2001) argues, "Development can be seen as a process of expanding the real freedoms that people enjoy."

In order to measure human development quantitatively, the HDR 1990 of UNDP came up with the Human Development Index (HDI) to measure the levels of human development in different parts of the world. This comprises three important components of human life—longevity, knowledge, and decent standards of living. The HDI is a composite index that captures humans as both the means as well as the ends of development. The indicators of HDI—longevity and knowledge—reflect the formation of human capabilities and income per capita, a proxy for decent standard

of living, which indicates the choices that people have in terms of putting their capabilities to use. The HDI for Mizoram, calculated by the Mizoram HDR, which is based on field survey data collected for the year 2008, is 0.65. The district-wise HDI for Mizoram illustrates spatial disparity in the State.

An important component of human development is the well-being of people. The health aspect is important as it entails the ability of the people to live long and healthy lives, which can be assured by providing good healthcare services to the citizens of the state. In Mizoram, the healthcare services are provided at the primary, secondary and tertiary levels by sub-centres, primary health centres (PHCs), community health centres (CHCs) and hospitals. In 2007, there were 19 hospitals under the state government, NGOs and the private sector. At the primary level, there were 9 CHCs, 57 PHCs, and 367 Sub-centres. Records show that only 305 registered allopathic doctors along with 400 nurses and 1100 other health-related workers are working at the government healthcare institutions.

The Eleventh Five Year Plan increased the outlay on health to about one quarter of the Plan outlay. However, at present, the healthcare facilities are less than what are needed and there is a wide spatial disparity. In order to assess the disparity, a health infrastructure index has been calculated by using indicators like the accessibility of the people to health institutions and the availability of facilities and personnel.

The status of human development in the state can be assessed by considering the health outcome of the state. The crude death rate, crude birth rate and total fertility rate are below the corresponding national averages, thereby indicating a better health status in the state. As regards the health profile of women, more than 30 per cent of the pregnant women in the state have not obtained ante-natal care like IF tablets; more than 10 per cent of the pregnant women have not obtained tetanus injections and more than 17 per cent of women have not received any kind of post-natal care. More than 20 per cent of all childbirths in Mizoram are non-institutional, while in about 13 per cent of the cases no trained personnel assisted in delivery. About 92 per cent of the children in the state are immunized with the immunization of boys being marginally better than that of girls. In Mizoram, most sicknesses are treated at home. The morbidity rate in Mizoram is lower than that in most other Indian states.

A Health Status Index for the state based on indicators such as Reproductive Care, Institutional and Assisted Delivery, Immunization, and 'Not Reported Sick' comes out to be 84.7 as against an ideal of 100, indicating universal coverage and zero sickness.

Good healthcare ensures a long and healthy life, but a productive life is ensured by capacity building acquired through education. The present educational system in Mizoram is an outcome of the work of Christian missionaries, who introduced formal education in the state. There are 1567 primary, 1123 secondary and 83 higher secondary schools in the state. Steps have been taken for setting up colleges and universities for higher education in different districts. Relative to the population density of the state, the availability of educational institution is adequate. The spatial spread of schools is important too. About 75 primary schools, 53 middle schools and 4 high schools are available per area of 1000 sq. km. About two-thirds of the population has access to educational institutions within a radius of 1 km of their residences. The Accessibility Index, based on the range of distances of educational institutions, shows a disparity among districts in terms of accessibility to educational institutes.

In terms of human interface in educational facilities, the Teacher availability per school (TPS) is 4 in primary schools, and 8 in upper primary schools. This is lower than the national average. The Teacher–Pupil Ratios (TPRs – or number of teachers per 100 students) in the state, at 6 in primary schools and 8 in upper primary schools, is higher than the corresponding national averages. This may be because the number of students per school in Mizoram is lower than the corresponding national average. A Teacher Availability Index has been constructed to assess the spatial disparity in education.

An Educational Infrastructure Index (EII) has also been computed, which is 0.47

(on a scale of 0 to 1), indicating that the infrastructural support system in the state needs a major improvement. The cost of education is also an important factor in the access of the people to education. In poor economies, governments provide support to students for facilitating their reaching school. However, only 45 per cent of the students aged 6-25 years have managed to obtain this support.

The human capital formation can be seen by the educational achievements of the state. Mizoram ranks second in the country in terms of its literacy level which is an impressive 91.6 per cent as against the national literacy level of 74 per cent, as per the 2011 Census. However, spatially and socially, there is a wide disparity among the districts and tribes in the state. The Net Enrolment Ratio (NER) for the state as a whole is 94 per cent for the primary stages and 52.5 per cent for the upper primary level. In terms of bringing children to school, the state is far ahead of the nation as a whole, especially in terms of upper primary enrolment.

A composite score of the educational achievement dimension has been obtained by preparing the Educational Achievement Index (EAI), which is 89.4 for Mizoram, signifying that the achievements of the state in terms of various dimensions of capacity building in education have been satisfactory and, in fact, better than the national average.

For arriving at a holistic picture of human development in a particular region, it is also important to consider the gender parity perspective in addition to components like health and education. The process of development would be incomplete if women lack access to proper education, healthcare, empowerment and economic independence. The traditional Mizo society is a patriarchal one wherein women lack the power of decision-making, both at home and outside. One of the most important indicators of discrimination against women in traditional Mizo society is that they do not enjoy the right of inheritance.

Sex ratio is an essential indicator for understanding factors like male–female mortality differentials and sex-specific migration. It captures gender parity in the context of reports of female foeticide and infanticide. According to the 2011 Census, the national average for sex ratio is 940 females per 1000 males, whereas in Mizoram, the corresponding figure is 975 females per 1000 males. There are, however, disparities based on districts and tribes.

In terms of morbidity by gender, in rural areas, morbidity is lower for females as compared to males but it is higher in urban areas.

The gender gap in literacy, which as per the 2011 Census is 4.3, is insignificant. The Gender Adjusted Educational Development Index (the population share weighted harmonic mean of gender-specific indices) of the state has lower values than the Aggregate (Unweighted) Educational Development Index.

It is important to take into account the gender dimension of economic activities for assessing the economic independence of women. The Work Participation Rate (WPR) for women in Mizoram is 26 per cent, which is slightly higher than the national average. The employment rate among women is substantially lower than that among males in the state. Much of the women's work is done at home or outside the formal economy. The consequent poor representation of women in the organized sector leads to their exploitation. Although the overall state gender gap in wages is relatively small, the spatial and tribe-wise gender wage gap is substantial. A combined Economic Activity Index has also been prepared by using the different indicators of employment. This has been observed to be 63.6, on an average.

Another important dimension for assessing gender parity is the participation of women in decision-making. The Combined Decision Index shows that the situation is close to optimum. In the political field, however, the participation of women in both leadership and membership is nil. The only way in which women participate in politics is by supporting their husbands or relatives at the time of the latter's election campaigns. Only one Mizo woman has so far been elevated to the post of Minister of State in the Mizoram Legislative Assembly.

The Gender Development Index (GDI) is calculated for assessing the gender situation

of the state. For Mizoram, it is 80.1, with the ideal value being 100. A Gender Parity Index (GPI) has also been calculated to assess the disparity between development of males and that of females within the state. The GPI is less than 1 in all the districts of the state, indicating that women enjoy lower human development levels as compared to the males in the state. There is thus a need to strengthen the State Commission in order to improve the status of women in Mizoram.

It is also essential to devise more effective strategies for assessing the vulnerable population below the poverty line. The head count measure, which is the most widely accepted measure of poverty, has been used for this purpose. A poverty line is needed for assessing the head count ratio (HCR). According to the Tendulkar report, the poverty lines for Mizoram should be Rs. 639 for rural areas and Rs. 699 for urban areas. Therefore, the HCR for Mizoram is 23.0 and 7.9 per cent, respectively, for the rural and urban areas. and 15.3 per cent in the aggregate for the year 2004-05. Using the more stringent norm of defining the poverty line at 1 US$ per person per day, as used by the UNDP in its Human Development Reports (HDRs), further raises the poverty estimates to 96 per cent for rural areas, 76 per cent for urban areas, and 85 per cent in aggregate. Within the state too, substantial disparity exists in estimates across districts.

Besides income/consumption poverty, other measures of deprivation like asset-ownership show that land ownership is skewed and landlessness is a major problem in rural areas. More than 40 per cent of the surveyed people in the rural areas do not own any homestead land and more than 27 per cent do not own any cultivated land. About 38 per cent of the rural population does not have any agricultural asset, 86 per cent of the people do not have any non-agricultural asset, and 79 per cent do not have any transport asset. The situation is even worse in terms of financial assets.

The assessment of inequality has been done by using the GINI coefficient. The inequality in landholdings is acute in the rural areas of Mizoram. While the top 20 per cent of the rural population owns more than 80 per cent of the cultivated land, the bottom 20 per cent owns only 0.2 per cent of land. This results in a high Gini Coefficient of 0.80. In order to assess the inequality in income/consumption, inequality in the Monthly Per capita Consumption Expenditure (MPCE) has been is used. The top 20 per cent of people have around 45 per cent share in the MPCE while the share of the poorest 20 per cent is only around 5.5 per cent. The Gini Coefficients obtained are 0.38 for rural areas and 0.41 for urban areas, respectively.

As regards the employment and livelihoods situation, as revealed by the 2001 Census, 52.6 per cent of the population constituted workers, with the proportion of workers being higher in the rural areas (57.2 per cent) as compared to the urban areas (47.9 per cent). Among the workers, 57.2 per cent of the total were male. About 60.6 per cent of the total workers were engaged in agricultural activities, while 1.5 per cent were engaged in household industries. The employment rate has been observed to be about 95-97 per cent of the workforce, that is, about 40 per cent of the total population is working. However, unemployment rates increased from about 1 per cent in 1993-94 to about 3 per cent in 2004-05, and the prevalence of unemployment among youth is high.

Workers are predominantly engaged in the primary sector, followed by trade and commerce, and the construction sector. Over time, the share of the primary sector in the workforce has been decreasing while that of the manufacturing sector has been consistently increasing. A majority of the workers are either self-employed or constitute family labour. Only about 27 per cent of the workers are employed in regular salaried jobs, with most of them being in the public sector. Spatial and social disparity also exist in the sphere of employment.

An Employment and Livelihood Index (ELI) has also been constructed for the state, using various parameters like the Type of Job, Occupational Pattern, Regularity of Job, and Livelihood Levels represented by the level of per capita consumption expenditure. The ELI value arrived at for the state is 0.54, that is, in a range of 0 to 1, which does not indicate a desirable situation.

An important source of employment for a majority of the people in Mizoram is agriculture and its allied activities, including

forestry (Socio-economic Review, Mizoram, 2000-01).The share of agriculture and the allied sector in the GSDP has been observed to be very low: at 1999-2000 constant prices, it was 17 per cent in 2005-06, falling to 14.32 per cent in 2009-10 (Economic Survey, Mizoram, 2009). Land utilization statistics show that a very small area of land in the state is utilized for cultivation. The net sown area is only 4.4 per cent of the total area. Even the landholdings on which cultivation is done are very small. As per the 2000 Agriculture Census, about 44.6 per cent of the landholdings in the state are marginal holdings (covering an area of less than 1 ha).

The practice of agriculture in Mizoram is still based on traditional methods with only 13.2 per cent of the sown area being under irrigation and only 6 per cent of the sown area under High Yielding Variety (HYV) of seeds. The traditional farming practice of Jhum or shifting cultivation is still widely practised with 50 per cent of the total land area in Mizoram being under Jhum cultivation and only 20 per cent being under permanent cultivation.

Paddy is the principal crop cultivated under both shifting cultivation and wet rice cultivation, and consequently, a majority of the cropped area in the state is under paddy production. In 2008-09, the area under paddy was 74 per cent of the total crop area. In terms of production, at 70 per cent, paddy accounts for the largest share in total crop production. After paddy, maize is grown widely in Mizoram. The performance of the state in terms of crop production is, however, not very impressive, as the state is not self-sufficient in food and even has to import rice for its consumption, though it is widely produced in the state.

Agricultural development is constrained mainly due to the difficult terrain of the state, the widespread practice of Jhum cultivation and the existence of poor irrigation facilities. Also, the hilly terrain of the state prevents the establishment of a smooth transport and communication network that is essential for promoting a competitive market system. Marketing facilities in the state are, in fact, among the poorest in the country as a whole. The state government also initiated the New Land Use Policy measure in 2009.

The topography of the state prevents the setting up of large industries and the climatic conditions too influence agricultural practices. Thus, it is important to explore the existing potential of the state in the form of horticulture, fisheries, and forestry, and to promote the diversification of these activities so as to create more avenues for increasing incomes.

Good governance is also essential for ensuring development for all and gender equality among all social groups. In recent times, the inter-relationship between governance and human development in Mizoram has also acquired significance.

The evolution of governance systems in Mizoram is a post-Independence phenomenon. Mizoram had a system of tribal chieftainship until the advent of the British rule, and the democratic institution, Mizo District Council, was inaugurated in 1952. Further, there are two decentralized institutions operating at two levels in Mizoram, namely the District Councils and Village Councils. The Village Council is assigned numerous functions but without the requisite powers and authority to discharge these functions. The functions of the Village Councils can broadly be divided into three groups—administrative, executive and judicial. Various community organizations also operate in Mizoram, providing significant inputs for the governance of the state. Church organizations, for one, have made many laudable contributions such as in the field of education and in promoting peace in times of insurgency. Among the other organizations operating in the state are the Young Mizo Association, the students' organization, and the Mizo Women's Association. It is imperative to strengthen programme management and the engagement of non-government organizations (NGOs) in policy-making to further improve the governance status in Mizoram.

Apart from good governance, ensuring adequate financing is also an important condition for increasing the human development levels. includes adequate financing for human development. It must be reitereted, that people in developing countries do not spend their primary income on basic healthcare, sanitation,

drinking water or education because their incomes are low or because such activities are not accorded priority. This also results in a divergence between the desirable and attained levels of human development. Although the state has made considerable progress in achieving the desired level of human development, a lot more still needs to be done. It would have to ensure the provision of optimal outlays on human development and ensure efficiency in spending in order to achieve the Millennium Development Goals (MDGs).

Government spending on social services is a critical input for helping the poor and marginalized population to overcome the insufficiency of their primary incomes for meeting their basic human needs. Public spending on human development could be analysed through four ratios: (a) Public Expenditure Ratio (PER); (b) Social Allocation Ratio (SAR); (c) Social Priority Ratio (SPR); and (d) Human Expenditure Ratio (HER).

In most of the North-eastern states including Mizoram, the PER is high because the GSDP is low and a considerable portion of their expenditure is driven by transfers in the form of grants-in-aid from the Centre. Hence, if during any particular year, the Central transfers are high, the public expenditure for these states would also shoot up and vice versa.

Mizoram has not only a high HER, but also a high per capita human development expenditure. However, apart from attaining a high HER, how efficiently and judiciously this is spent is also a critical factor that determines how well it is doing in terms of human development. A large part of the social sector spending in Mizoram is incurred on education, healthcare, and water supply and sanitation.

Although its level of human development spending is appreciable, the state still needs to raise additional resources. For a state like Mizoram, which is heavily dependent on Central transfers, the options for generating additional resources to meet these requirements, is very limited. The share of the state's own revenues in its total revenue receipts is very low at 10 per cent. There are a number of ways in which Mizoram government can mobilize additional resources such as raising the tax GSDP/GDP ratio, the non-tax revenues, and resources through the public–private partnership (PPP) mode. On the expenditure side, some of the options that the state can resort to include restructuring of the state's public sector undertakings, rationalizing subsidies, and reducing interest liabilities by curtailing debt.

An assessment of the present status of human development in Mizoram and its evolution over time indicates a way forward for increasing the level of human development in the state. Keeping in mind its weaknesses and strengths, the short-term goal before Mizoram today is to look beyond the present situation and optimize its potential and possibilities in order to achieve greater levels of both economic as well as human development and maximize the benefits accruing to its people. And in the long run, the state needs to explore the possibility of becoming the gateway to South-East Asia by establishing a link with Myanmar. This would also help promote a maritime access for the state, which, in turn, would diversify production outcomes and help increase the primary incomes of the people of the state.

1

Introduction

This chapter introduces the concept of Human Development, discusses its components and methodology, and plots the scope of the Report. The chapter presents a composite Human Development Index (HDI) as well as estimations of the relevant index values for each of the human development components: life expectancy, education and income for both the state as well as the district levels. It also discusses the Gender-related Development Index (GDI), which measures inequalities in terms of achievements between women and men.

Concept of Human Development

What is meant by development in a country? Does it mean higher economic growth or a move towards the process of industrialization? Or higher living standards for all the people? The answer lies in the approach to the concept of development, that is, the success of any process of development depends on the development approach. A holistic approach to development is thus needed to ensure that its benefits are distributed to all. It is very important for a process of development to bring prosperity for all, especially for the underprivileged people of a nation. The process of economic development as defined by the World Bank aims at increasing the Gross National Product (GNP) per capita, that is, the income and average material well-being of a country's population. It is closely linked with the process of economic growth, which is defined as 'a quantitative change or expansion in a country's economy' while economic development implies a qualitative change.[1] The process of development based on the expansion of economic growth focuses on the 'economy' and aims at the enhancement of 'income'. Needless to mention, the enhancement of income is intended to benefit the people of the nation. However, on the basis of this approach to development, nations usually treat economic growth as the ultimate goal, when economic development is only a means rather than an end. The ultimate goal is the welfare of people, who represent the true wealth of a nation. The economic growth or development of a nation is of no use if it does not translate into the welfare of its citizens.

The specific concept of human development was introduced for the purpose of eliminating any confusion between means and ends, and to particularly focus on human beings, the ends. The process of human development aims at improving the welfare of the people by increasing not just their incomes, but also their human capabilities, that is, what people are able to do or become. Under this approach, people are put first. The United Nations Development Programme (UNDP) defines human development as a process of enlarging people's choices, among which the most critical ones are to lead a long and healthy life, to be educated, and to enjoy a decent standard of living (HDR, 1990, Chaper 1). This concept is not new and has been proposed by various philosophers and scholars for centuries. Aristotle pointed out, "Wealth is evidently not the good we are seeking for it is merely useful and for the sake of something else."(ibid.) Time and again, philosophers, academicians and economists have stressed on the importance of human beings over wealth and the need to treat wealth as a ladder to make human beings happy and prosperous. Thus, the concept of human development based on the augmentation of human capability and choices goes beyond merely the growth of income and economic development. Without a doubt, economic growth and expansion of per capita incomes are essential for expanding human choices as access to income permits access to various other options. However, treating income as the only means to enhance human capability is an inefficient way of enhancing human development. Haq (1995) argues that the link between income expansion and widening of human choices depends on the quality and distribution of economic growth and not just on the quantity of growth. The translation of growth into human welfare necessitates conscious efforts by the State and the community. Moreover, human development is about widening choices in all the spheres—economic, social, political and cultural—and therefore, economic growth as the only means is not enough to create valuable ends. Thus, the expansion of income is a necessary and not sufficient condition for enlarging human development. The HDR 1990 defines human development as having two sides: formation of human capabilities like improved health and knowledge; and the use that people make of their acquired capabilities, as for instance, for leisure, for productive activities, or for being active in social or political affairs.

Prof. Amartya Sen's capability approach provides the philosophical base to the human development approach. The focus of the capability approach is on what people

are effectively able to do and to be, that is, on their capabilities. Sen (1993) defines 'functionings' as various things that a person may value doing and being, and 'capability' as various combinations of functionings that a person can achieve. Thus, capability reflects the person's freedom to lead one type of life or another or to choose from a set of possible set of ways of living. Sen (1993) describes 'capabilities' as real and actual possibilities that are open to a given person. Some important points arise here in terms of the human development approach based on functionings and capabilities. The first is the question of value, priorities and trade-offs. People in different societies hold differing views, and what is valuable to people in one society may or may not be valuable to people in other societies. Therefore, people themselves are in a better position to shape their respective societies (Alkire, Sabina and Deneulin, 2009). For example, in the specific context of Mizoram, the people of Mizo society and from North-east India are quite different culturally and socially from the rest of the Indians. Mizoram is inhabited by the indigenous people, whose cultural, social and economic needs differ from those living in other parts of the country. The community of indigenous people is very different from other communities and what is valued by them may differ from that which is valued by people in other communities. Human development does not simply mean providing for the material needs of people, but entails the broad concept of widening one's choices, which includes giving people the voice and freedom to take the decisions that are most suited to their own community. Freedom here indicates the opportunity or liberty to live a valuable life. For Mizo society, giving freedom in this context entails giving people the freedom to create value and fulfil their needs as per their traditions and culture. A good way to achieve this kind of human development is to involve indigenous people in policy-making and considering their suggestions and ideas to make policies for their development.

The second point to be noted is whether the focus of human development is on expanding the functionings, and if so, whether that can be achieved by force or coercion or domination. Examples which can be cited in this context include forced sterilization as a means of family planning, or a dictated system of education imparting specific knowledge or skills based on the whims of a dictator or on the needs of the times. However, human development cannot take place under a forced system of functioning. Continuing the above example, in a dictated education system, where a particular kind of education is forced on the citizens, some may not be able to perform well after joining the job market, probably because they are more capable in some other field but at the same time they possess some knowledge and skills, and hence can be called educated. Such an education does not help in building capability as the person concerned is not able to create value through his capability. Therefore, human development lays an emphasis on freedom as an important aspect of widening capability. Sen (2001) argues, "Development can be seen as a process of expanding the real freedoms that people enjoy." He asserts that the freedoms enjoyed by the members of the society depend not just on income expansion but also on other determinants of social and economic arrangements as well as on civil and political rights. An important point mentioned by Sen (1999) emphasizes the removal of major sources of 'unfreedom' (like poverty, tyranny, social deprivation, inaccessible public facilities, and repressive state) for development.

The concept of freedom under the human development approach can be illustrated in the context of Mizoram. The conservation of biodiversity, for example, can be done by forcing members of the Jhumia community to stop practicing shifting agriculture, which would render them without any means of livelihood. However, as per the human development approach, it is important to give the indigenous people the freedom to decide how to preserve the biodiversity, since this is their own land and they value it more than anyone else. For example, if they are provided with an alternative means of employment, then the tribes may give up the Jhum practice or follow the original and traditional way of shifting agriculture, which is, leaving the land fallow for 15-20 years. In this way, they would be able to earn their livelihoods while also practicing a traditional means of agriculture that would help preserve biodiversity.

Measurement of Human Development

The human development concept, which was introduced in 1990, has now been accepted worldwide and its broad definition helps capture the complexity of human life by considering people's concerns in all spheres—economic, political, cultural and social. However, a broad definition of human development also entails resolving the problem of finding the right indicators to measure or quantify human development. In order to obtain a comprehensive picture of human development based on its theoretical concept, it is important to include as many indicators as possible. However, various constraints like the non-availability of data for certain variables, difficulty in quantifying some variables like freedom, and non-reliability of data for variables based on perception, prevent the successful creation of a comprehensive index for measuring human development.

Now the question arises, what are the indicators needed to measure human development? Since human development is about widening people's choices and their overall sense of well-being, the indicators that measure the choices and functionings of people may adequately reflect the level of human development. However, people's choices are infinite and can change over time; therefore, it is difficult to have a measure that incorporates too many indicators. Also, an index that is too comprehensive tends to sway the emphasis from the overall trends, blurs its focus, and is difficult to interpret. Thus, it is important to have an index of human development that focuses on the essential elements of human life.

Scholars and policy-makers argue in favour of income as a measure of development. The proponents of the development model based on economic growth claim that the access to income permits exercise of every other option (HDR, 1990). Nevertheless, the above discussion clearly reflects the inadequacy of income in measuring human development. Added to this are the experiences from various countries with high income levels and low human development, as also the experiences of countries that have low income levels yet high levels of human development. For example, Sri Lanka is a country with modest GNP per capita but a high level of human development and Saudi Arabia, a country with high GNP per capita and low level of human development. Therefore, the HDR 1990 of UNDP came up with the Human Development Index (HDI) to measure the levels of human development in different parts of the world, which has three important components of human life, that is, longevity, knowledge, and decent standards of living.

The HDI is a composite index that captures human beings as both the means as well as the ends of development. The indicators of HDI—longevity and knowledge reflect the formation of human capabilities and income per capita, a proxy for decent standard of living, which, in turn, reflects the choices that people have in putting their capabilities to use.

The indicator of the first component of HDI, that is, longevity, implies life expectancy at birth. The rationale for using life expectancy as a proxy for longevity is that a long life is valuable in itself and that it correlates closely with adequate nutrition, good health and education, good personal hygiene, and other valued achievements. A long life, *per se*, may not be the only objective but the ambitions and plans that one wants to pursue are often spread over the whole course of life, keeping in mind a reasonably long life. The importance one attaches to a long life and the value one derives from a long life, therefore, make longevity a good indicator for measuring capability building.

The indicator of the 'knowledge' component of HDI is given by literacy levels. UNESCO defines literacy as the "ability to identify, understand, interpret, create, communicate, compute and use printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society." The definition of literacy clearly shows that being literate is the first step on the path of learning and knowledge building. However, this measure is a crude one as literacy levels do not reflect the quality of education and do not differentiate between primary and higher

level education. To start with, literacy was the only indicator for knowledge in HDI. However, its inadequacy was addressed in HDR 1991, which argued that there is more to knowledge and communication than just literacy. Thus, the mean years of schooling and adult literacy rates were combined to form an education index for HDI, with two-thirds weight being given to literacy and one-third to the mean years of schooling. Further improvement was effected in the education index by using combined enrolment rates with literacy rates to form the index. In this case, two-thirds weight is given to literacy and one-third to combined enrolment rates.

Lastly, the income per capita is used as a proxy for decent standards of living. The command that people enjoy over other resources like land, and access to credit and capital can also provide a decent living. Data considerations and simplicity of the index demand a straightforward indicator and hence, the income per capita is used in the HDI. The GDP per capita at purchasing power parity is used to facilitate international comparisons. This provides a better approximation of one's relative power to gain a command over the requisite resources. A further modification is required in view of the need to consider the fact that people do not need excessive income

Box 1.1: Construction of the Human Development Index

The Human Development Index has the following three main indicators of life:

Longevity	Measured by life expectancy at birth
Knowledge	Measured by the adult literacy levels and combined enrolment rates
Decent standard of living	Measured by real GSDP per capita

The index is constructed by identifying a minimum and a maximum value for each indicator, as follows:

Life expectancy at birth	25 years and 85 years
Adult literacy	0% and 100%
Combined enrolment ratio	0% and 100%
GSDP per capita	Rs. 11,294 (Bihar) and Rs. 75,619 (Goa)

The formula for computing the index for any of the three components of HDI is given by:

Index = (Actual value – Minimum value)/(Maximum value – Minimum value)

Life Expectancy Index = (Actual Life Expectancy – Minimum Life Expectancy)/(Maximum Life Expectancy – Minimum Life Expectancy)

Education Index = 2/3 (Adult Literacy Index) + 1/3 (Combined Enrolment Index)

where, Adult Literacy index = (Actual Adult Literacy – Minimum Adult Literacy)/(Maximum Adult Literacy – Minimum Adult Literacy)

Combined Enrolment Index = (Actual Combined Enrolment – Minimum Combined Enrolment)/(Maximum Combined Enrolment – Minimum Combined Enrolment)

GSDP Per Capita Index = [log (Actual GSDP Per Capita) – log (Minimum GSDP Per Capita)]/ [log (Maximum GSDP Per Capita) – log (Minimum GSDP Per Capita)]

for a decent living and thus, the indicator should reflect the diminishing returns to transforming income to capabilities. For this reason, the natural logarithm of GDP per capita at purchasing power parity is taken in the HDI.

The income index is constructed in three steps. The first step is to define the country's measure of deprivation for each of the three indicators. A maximum and a minimum value are identified for each of the three variables. The deprivation measure is calculated by the difference between the maximum value and the country's actual value.

The overall HDI is calculated by aggregating the three indices, that is, the health index, the education index, and the income index. All the three indices are given equal weight in HDI because people want a long and healthy life, while at the same time, they just do not want to be alive but want to be knowledgeable as well, and the life they lead should be a decent life without any poverty and deprivation (Box 1.1). Thus, UNDP proposed an unweighted average of the three indicators of HDI, as follows:

HDI = 1/3(Health Index) + 1/3(Education Index) + 1/3(Income Index)

These are the indicators and formulae used by UNDP for constructing the HDI for global reports.

Measuring HDI in Mizoram

However, in a state level human development report, there is a minor change. Although the indicators and formulae remain the same, the maximum and minimum values change according to the national values for the overall state index, whereas for the district level index, these values depend on the district level values.

The Human Development Index for Mizoram, which has been calculated by using the above methodology, has been shown in Table 1.1. It brings out the wide variations of different indicators of human development across the districts.

Gender Development Index

The Human Development Report 1995 introduced the Gender-related Development Index (GDI). It measures achievement in the same basic capabilities as the HDI does, but takes note of inequality in achievement between women and men. The methodology used imposes a penalty for inequality, such that the GDI falls when the achievement levels of both women and men in a country go down or when the disparity between their achievements increases. The greater

Table 1.1: The Three Components of Human Development Index and the HDI for Mizoram

District	Life Expectancy Index	Education Index	Income Index	HDI
Aizawl	0.770	0.857	0.613	0.747
Champhai	0.865	0.808	0.339	0.671
Kolasib	0.697	0.813	0.486	0.665
Lawngtlai	0.550	0.717	0.386	0.551
Lunglei	0.763	0.806	0.508	0.692
Mamit	0.755	0.78	0.624	0.720
Saiha	0.643	0.828	0.446	0.639
Serchhip	0.773	0.838	0.587	0.733
Mizoram	0.765	0.822	0.366	0.651

Source: Author's calculation.

the gender disparity in basic capabilities, the lower a country's GDI as compared with its HDI. The GDI is simply the HDI discounted, or adjusted downwards, for gender inequality.

The GDI uses the same three indicators, namely Life Expectancy at Birth, Adult Literacy Rate and Gross Enrolment Rate, and the real GDP per capita in terms of the purchasing power used in the construction of HDI but focuses on the inequality between the sexes. Gender-specific HDI is calculated by using the Male and Female LEB, Education, and Income indices separately. The GDI is then calculated as the Weighted Harmonic mean of the two gender-specific HDIs, by using the gender share in the population as weights.

The methodology used for calculating is different from that of UNDP human development reports. Due to non-availability of reliable gender-disaggregated data at the district level, this report has used a different methodology to construct GDI. The GDI is prepared by using the Educational Development Indicator, Health Development Indicator, Employment and Livelihood Index, and the Decision Power Indicator.

To reveal the disparities within genders in a particular region, a Gender Parity Index (GPI), is constructed. A higher score of such a GPI would imply that development is relatively more evenly spread across men and women in the region. The GPI, as constructed here, has four components—social, economic, educational and healthcare. The GPI is a comparative measure, and indicates the situation of women vis-à-vis men as regards the three chosen areas of education, economic activities, and decision-making and vis-à-vis the optimum score of 100 for the Health Index.

Construction of Gender Development Index[2]

Health Development Index (HDI): The HDI is obtained as an average of percentages of women who obtained reproductive care, percentage of institutional deliveries, percentage of births aided by trained personnel, proportion of girls immunized, and proportion of women not reporting any illness during a year prior to the survey period.

Educational Development Index (EDI): The EDI is obtained as an average of Female Literacy Rate, Female Enrolment Rates, and Female Retention Rates.

Economic Activity Index (EAI): The EAI is obtained as an indexed average of the female employment rate, percentage of women in regular employment, percentage of women workers having more than 200 days of employment in a year, and the female wage rate.

Decision Making Index (DMI): The DMI is obtained as an average of percentages of decisions taken by women in terms of marketing, retaining income, and consumption.

Gender Development Index (GDI): The GDI is obtained as an average of the Health, Educational, Economic, and Decision-making Indices.

Gender Parity Index GPI): The GPI is the ratio of the GDI for females and the GDI computed for males.

The Gender Development Index (GDI), which has been calculated by using the above methodology, has been shown in Table 1.2. It is useful to know that both GDI and GPI do not vary widely across the districts.

Table 1.2: Gender Development Index and Gender Parity Index by Districts

District	GDI	GPI
Aizawl	84.9	0.94
Champhai	79.5	0.88
Kolasib	81.4	0.86
Lawngtlai	69.0	0.82
Lunglei	74.4	0.84
Mamit	71.7	0.79
Saiha	78.0	0.86
Serchhip	78.0	0.88
Mizoram	80.1	0.89

Source: Author's calculation.

Database

This Report is largely based on the data collected from a large and representative primary survey of 3671 sample households (including 1812 rural and 1859 urban households) taken from all the districts of the state (see Appendix Table A for details of the sampling methodology). This large survey was carried out in 2009 with the purpose of obtaining comprehensive and reliable data on some critical aspects of human development which did not earlier exist in the state. The important areas on which information was sought in the survey questionnaire included demographic characteristics, educational attainments, household characteristics, the incomes and expenditures of households, and their assets such as landholdings, among other things. In addition to this primary data, the Report has also used the available data from the various secondary sources.

Structure of this Report

The introductory chapter introduces the concept of Human Development, discusses its components and methodology in detail, and sets to plot the scope of the report. A composite Human Development Index (HDI) as well as relevant index values for each of the human development components of life expectancy, education and income are estimated both for the state in general, as well as at the district levels. This chapter also discusses the Gender-related Development Index (GDI), which measures both the achievements in terms of HDI as also inequalities of achievement between women and men.

Chapter 2 presents a brief history of the state, the salient features of the state's economy and the contribution of each sector to its Gross Domestic Product (GSDP). It also discusses the constraints that hamper the development of the economy and the initiatives taken for the development of the state.

Chapter 3 depicts the poverty and inequality situation in Mizoram. Largely based on the survey data, this chapter analyses various aspects such as access to land and housing, household amenities, ownership of assets and the prevalent socio-economic inequalities. Chapter 4 highlights the employment and livelihood situation in the state and provides an overview of both the current employment scenario as well as the nature and forms of employment in the state. It also constructs an index of employment and livelihood for the state.

Chapter 5 provides an in-depth discussion of the various aspects of agriculture such as farming practices, cropping pattern, livestock, horticulture, and biodiversity, and the potential of the agriculture sector for generating sustainable development and livelihoods in the state.

Chapter 6 provides details about the health infrastructure, health outcomes as well as the food and nutrition situation along with the recent policy initiatives for improving the health situation.

Chapter 7 analyses the various aspects of education in Mizoram, including the availability of educational institutions and their accessibility to the people, the costs of education, and the initiatives taken by the state government for facilitating improvements in the education sector in the state.

Chapter 8 provides an account of the system of governance that contributes to the improvement of human development in the state. In this context, the role of decentralized institutions, tribal chieftainship, church organizations and the Right to Information (RTI) Act have been analysed in detail in this chapter.

Chapter 9 discusses the construction of the Gender Development Index (GDI) and the Gender Priority Index (GPI), and analyses the crucial gaps that remain in the human development indicators between men and women.

Chapter 10 analyses the pattern of expenditure on various aspects of human development while also assessing the potential of generating additional resources. The last chapter presents the summary and conclusions of the Report and also offers some policy recommendations that would go a long way in taking the state forward by enhancing the human development indicators of its citizens.

Notes

1. http://www.worldbank.org/depweb/english/beyond/global/glossary.html
2. The methodology for calculating GDI is varied from the standard UNDP methodology due to non-availability of reliable gender dis-aggregated data for various indicators. A different methodology has been devised for calculating the GDI. It gives a comprehensive picture of the gender situation in the state. A more detailed analysis and construction of each component of GDI and GPI is given in Chapter 9 of this report.

2

The Economy of Mizoram

This chapter highlights the salient features of Mizoram's economy and the contribution of each sector to its Gross State Domestic Product (GSDP). The tertiary sector in the state is the largest contributor to the GSDP while the share of agriculture and allied sectors is the lowest among all sectors, with its share steadily declining over the years. The share of industry too is modest and did not show any improvement over the period 2005-06 to 2009-10. In 2009-10, the GSDP of Mizoram was Rs. 2,80,891 lakh, registering a growth of 12.5 per cent over the previous year's GSDP at 1999-2000 prices. The GSDP has shown a decent increase over a period of time. Mizoram has a huge potential for growth in the allied agricultural activities of horticulture and floriculture. The major constraints to economic development in the state include reduced availability of credit, especially in the agricultural sector, poor infrastructure that mars industrial development, a small market size and lack of entrepreneurial initiatives.

Topography and Geography of the State

The state of Mizoram lies in the north-eastern part of India and is situated between 92.15 East to 93.29 East longitude and 21.58 North and 24.35 North latitude. It is a landlocked state. In India, Mizoram is bounded by the states of Assam, Manipur and Tripura, and the length of its borders with these states extends over 123 km, 95 km and 66 km, respectively. On the west side, it is bounded by the Chittagong Hill Tracts of Bangladesh, spanning a distance of 318 km, while on the east and south side, its borders with Myanmar extend to a distance of 404 km. The state covers a total area of 21,081 sq. km and has a very difficult terrain; over 80 per cent of the total geographical area is hilly, and is separated by rivers flowing from the north and south. The average height of hills is 1000 metres in the west and about 1300 metres in the east. The highest peak in Mizoram is Phawngpui (Blue Mountain), which is 2157 metres high. The state has various rivers and streams. The important rivers are Barak, Tuivai, Sonai and Daleshwari in the north and Chhimtuipui in the south. The Kolodyne River connects Mizoram to Myanmar. The rivers and water resources of the state have a huge potential but are largely unexploited. The hydro potential of the rivers of the state has been marginally utilized for the generation of energy. The banks of 16 major rivers in the state are recorded as riverine reserves, that is, the area cannot be utilized for agricultural production.

The state has a tropical humid climate and the maximum average temperature in the summer is 30ºC, while in the winter, the minimum average is around 11ºC. The state receives an average annual rainfall of 2455 mm. There is plenty of rainfall in a concentrated period of six months, leaving rest of the months relatively dry and water-scarce. A good management of rainwater can prove to be helpful in meeting the need for water during the dry months. The soils of Mizoram, which are derived essentially from secondary rocks, can be classified into alluvial and residual soils. The soils in the state are acidic and rich in organic carbon but are porous with poor water-holding capacity, and deficient in potash, phosphorous, nitrogen, and even humus. The fertility of soils is affected by the cultivation practices employed by the people and landslides (Jha, 1997b).

History of the State

In the absence of any records on the history of Mizos, it is difficult to present any evidence on their origin. It is, however, generally accepted that Mizos came from Sinlung or Chhinlungsan located on the banks of Yalung River in China and then settled in Mizoram.

In 1895, the Mizo Hills, also known as Lushai Hills, were declared a part of British India. Before becoming an independent state, Mizoram was a part of Assam. In 1919, under the process of consolidation of the British administration in the tribal-dominated area of Assam, the Lushai Hills region was declared as a Backward Tract, while in 1935, it was declared as an Excluded Area. During the British Regime, the Mizos in Lushai Hills formed their first political party, the Mizo Common People's Union (also known as Mizo Union) on 9 April 1946. The Mizo Union submitted a resolution demanding the inclusion of the Mizo-inhabited area adjacent to the Lushai Hills to a sub-committee formed to advise the Constituent Assembly on the tribal affairs in North-east India. Following the sub-committee's suggestions, the Lushai Hills Autonomous District Council came into being in 1952.

Insurgency and Evolution of Mizoram as an Independent State

The Mizo Cultural Society, which was formed in 1955, took active part in the relief work for the people affected by the Mautam Famine in 1959. Later, the society adopted the name Mizo National Famine Front in 1960, and gained popularity as a

large number of Mizo youth assisted in the relief work undertaken by it. In 1961, the Mizo National Famine Front was integrated into a new political organization called the Mizo National Front (MNF) under the leadership of Laldenga. The goal of MNF was to achieve the sovereign independence of Greater Mizoram. Large-scale violence broke out on 28 February 1966, and the MNF attacked several places throughout Mizoram, in the process taking control of almost all the important centres including Aizawl (the capital of the state) and Lunglei (the second capital) in the state. However, on 4 and 5 March 1966, some jets (jet fighters) strafed MNF positions and dropped rockets and light bombs. But the advancing Army column reached Aizawl on 6 March 1966 and recaptured Aizawl from MNF occupation. Lunglei could, however, be recaptured only on 13 March 1966. During the following months after the outbreak of violence in February 1966, the law and order situation in Mizoram was extremely critical. The two-decade long political conflict in Mizoram inflicted heavy damage to the self-sufficient tribal economy and social structure of the state. The once peaceful hill district of Assam, viz. Mizoram, was thrown into a period of unspeakable miseries and sufferings. Ambushes and retaliatory operations disrupted normal life extensively and all development activities came to a standstill. During this long period of insurgency (1966–1986), Mizoram experienced all sorts of serious problems, including loss of lives and property, rapes, burning of houses, school buildings and grouping of villages, frequent imposition of long hours of curfew, and so on. Women and children were perhaps the worst victims of this insurgency. Gross violations of human rights were reported from all corners of Mizoram during the insurgency. Fortunately, the dark period of two long decades has now become a thing of the past after the signing of the Peace Accord or Memorandum of Settlement 30 June 1986. Mizoram was inaugurated as a separate state on 20 February 1987 and since then, it has often been referred to as the most peaceful state in the North-east region.

The People of Mizoram

It is believed that the Mizos constitute part of a great wave of the Mongolian race and they came to their present abode from southern China by gradual migration through northern Myanmar. It appears that the Mizos of Mizoram arrived at their present settlement in the late seventeenth and eighteenth centuries.

There are numerous ethnic tribes in Mizoram that are linked with each other either culturally or linguistically. The umbrella term for the myriad ethnic groups in Mizoram is Lushais or Mizos. This includes a number of Mizo tribes like Hmar, Lusei, Mara, Lai, Ralte and Paite. The Riangs, a sub-tribe of Tripuri and the Chakmas of Arakanese origin, comprise a non-Mizo tribe living in Mizoram.[1] Of these tribes, the Luseis are the most prominent. More than 60 per cent of the households[2] belong to this tribal group. The Lusei tribe was also a dominant group in the political and economic sphere, and a particular clan of the Luseis called Sailos wielded political power for several years (Nunthara, 1996).

Languages Spoken

For a majority of the people, the term ‘Mizo’ refers to all those people who are fluent in the use of the Lusei language, which serves as a pan-Mizo tribal language. The Mizos are broadly divided into Luseis and Awzias (non-Luseis) on the basis of dialects. The Awzias comprise mainly those who speak dialects of their own that are different from Lusei, and each clan of Awzias has a separate dialect while the clans of the Lusei group speak the Lusei language (Nunthara, 1996). However, English and Mizo (Lusei) are the two major languages spoken in contemporary Mizoram.

Culture and Religion

As regards religion, animism was the core of the Mizo traditional religious practices. The practice of animism and the doctrine that all events are predetermined by fate and, therefore, unalterable by man

(fatalism) taxed the Mizos heavily, for in order to please evil spirits or correct past misdeeds, they had to sacrifice their domestic animals—pigs, goats, hens, etc. This can be a very costly affair for the poor people if it is done repeatedly.

In the past, the institution of 'Zawlbuk' was integral to the Mizo culture. It literally means 'Bachelor's Dormitory', where all the young boys of the village slept together at night. The institution of 'Zawlbuk' was a centre of recreation and discipline for the young boys as well as the children of the village. It was also a centre where young boys received training for life, and where traditional practices were learnt and handed down from one generation to another.

The introduction of Christianity into Mizo society in 1894 via the Welsh missionaries led to a wide variety of changes in the cultures, beliefs and practices of Mizos. The institution of 'Zawlbuk' and the practice of animism gradually ended with the spread of formal education and Christianity in Mizoram. Today, a majority of the Mizos are Christians. The Luseis have forsaken their tribal religion in favour of Christianity. Only minor tribal groups like the Chakmas and Reangs follow other religions like Hinduism and Buddhism. They, however, form a very small group. According to household data of 2008, about 87.6 per cent of the households in Mizoram are Christians, while the Buddhist and Hindu households comprise less than 12 per cent of the total.

The Christian missionaries have directly or indirectly contributed a lot to the Mizo society. The missionaries opened schools and took the responsibility of spreading education among the people. This resulted in Mizoram attaining a very high rate of literacy in India. The first high school ever established was started in 1944 and the first undergraduate college was established in 1958. The first university campus, viz. the North-eastern Hill University Mizoram Campus was started in 1979. Finally, Mizoram University, a central university, was established in 2001. Along with education, Christianity also brought in the Western style of thinking and dressing, especially among the youth of the state. Christianity has also fostered a lot of changes in the Mizo society with respect to the position of women. Mizoram has always been a patriarchal society wherein the women have negligible or minimal rights. However, Christianity has gradually transformed the entire Mizo family life and society, wherein divorce is now rare, husbands are less dominating and more helpful to their wives, and love and kindness are found in family relationships. Women now possess a much higher status in the society. They now also enjoy an equal chance of acquiring education vis-à-vis men. Their literacy percentage is quite impressive, and, in fact, the highest among all the north-eastern states. The state has also already witnessed the elevation of a woman to the post of Minister of State in the Mizoram Legislative Assembly. Thus far, the state has seen four or five female members in the Mizoram Legislative Assembly. Besides, there are three or four lady Directors in their Directorates. It is, therefore, quite clear that Christianity has played a highly significant role in Mizoram and in the life of its people.

Administrative Set-up

Mizoram was granted statehood in 1987 and became the 23rd state of India. Like other Indian states, Mizoram has a unicameral legislature. The Chief Minister is the elected head of the state that holds the executive power. The Mizoram State Legislative Assembly has 40 seats and the Village Councils are operational at the grassroots.

Mizoram is divided into eight districts, namely Aizawl, Lunglei, Lawanglai, Champai, Saiha, Mamit, Kolasib, and Serchhip. A district is headed by a Deputy Commissioner who is overall in charge of administration and performs the triple function of Deputy Commissioner, District Magistrate and the Collector.[3] In order to decentralize the authority, a district is divided into one or more sub-divisions. Mizoram has a total of 23 sub-divisions, which are further divided into 26 Rural Development Blocks. Further, there are three Autonomous District Councils for the ethnic tribes in Mizoram, including the Chakma Autonomous District Council for the Chakma tribe located in south-western

Mizoram, the Mara Autonomous District Council for the Mara people situated in the southernmost corner of the state, and the Lai Autonomous District Council for the Lai tribe set up in the south-eastern part of the state. These autonomous councils are given varying degrees of autonomy by the Central Government within the state legislature. Each of the Autonomous District Councils in Mizoram is headed by a Chief Executive Member.[4]

Political Set-up and Governance

A traditional administrative system and an integral part of the socio-political life of the Mizos is chieftainship. Each independent village was earlier generally inhabited by a distinct tribe/clan, and was ruled by an independent chief. In the traditional Mizo social structure under the Chief, certain social obligatory duties had to be performed by persons who were officially appointed by the Chief himself. Among them, the highest in the hierarchy was the LALUPA or ELDER, who assisted the Chief in all matters of village administration. Inter-tribal, inter-clan or inter-village warfare was very common. The Chief usually directed in war, and had to be the first to attack and the last to retreat.

The position of the Chief remained unaltered even after the end of the British rule in 1947. The British did not interfere in the matters of the region and left the authority of villages to the chiefs. At the same time, the Christian missionaries were also active in this area in spreading education and awareness. Due to differences in the traditional customs and habits followed by the various tribal chiefs and Christian missionaries, there was animosity between them and they failed to work together.

A large proportion of the population converted to Christianity and also acquired a political consciousness and broad outlook. Somewhere along the way, this resulted in the discarding of traditional beliefs and the establishment of a uniform pattern of ritual practices throughout Mizoram (Nunthara, 1996).

In 1954, under the Lushai Hills District Act, the system of hereditary Chieftainship was abolished. This came into force in the Assam Lushai Hills District Area and the Pawi Lakher Region, and around 259 chieftainships in the first area and 50 in the second area were abolished, and their rights were vested in the government. Since then, the administration of villages has been taken over by the village councils (Prasad and Chakraborty, 2006).

Role of Village Councils

After the abolition of chieftainship, the village councils became the democratic representative institutions. The first Village Council election was held during 27 April to 6 July 1954 and saw a high degree of political activity. The Village Councils started functioning from 16 August 1954. The administration of the village remained autonomous and was carried on by the Village Council under the supervision of the District Council (Patnaik, 2008). The Executive body of the Village Council has a President, a Vice-President and a Secretary. As of February 2006, there were 556 Village Councils in Mizoram with a total of 2036 members (ibid.). This new system brought about a significant change in the traditional village administration and also in the political outlook of the people.

Every Village Council has a Village Council Fund in which all the collections by or on behalf of the Village Council are paid. The main function of a Village Council is to ensure that every villager enjoys liberty in every sphere of life. The Village Council also has the power to allot land within its boundaries for Jhum cultivation each year by a draw of lots. Earlier, this function was performed by the Chief on the basis of the need and draw system to ensure equitable distribution. The Village Council also specifies the period for cutting of forests and undertaking preparatory activities for Jhum as well as for burning the Jhum land. The Council also maintains a register for animals in the village and collects animal tax. Each Village Council is responsible for maintaining sanitation in the village. Further, the Village Council Courts are responsible for providing speedy justice to the villagers at marginal costs.

Major Political Parties in Mizoram

The Mizo National Front (MNF) was formed as a revolutionary party on 22 October 1961 under the leadership of Laldenga. The party was formed for gaining independence for Mizoram and was converted into a political party in 1986 with the signing of a peace accord between the MNF and the Indian Government, and Laldenga was appointed as the then Chief Minister of Mizoram. Zoramthanga was elected as its president after Laldenga's death. The MNF contested the 1987 elections in the state and won with a majority.

The Indian National Congress (INC), which was established by A. Thanglura in 1961, is another major political party in Mizoram. The INC has been playing an important role in the affairs of the state either as a ruling or opposition party.

The Mizoram People's Conference was formed under the leadership of Brig. T. Sailo, and has clear objectives with regard to the development of the region. The conference was set up as a Human Rights Committee, and for playing an effective role in the state's affairs it was set up as a political party. The party won the Mizoram Assembly elections in 1978 and Brig. T. Sailo became the Chief Minister.

Civil Society Organizations

In addition to the political parties and organizations, there are various social organizations in Mizoram, which were established with diverse aims intended to protect the interests of the natives of the area. The Young Mizo Association (YMA), which was founded in 1935, is one of the oldest social institutions in Mizoram. It is a non-political, voluntary organization, registered under the Societies Registration Act (Act XXI of 1960). The headquarters of the YMA are Aizawl while Lunglei serves as its sub-headquarters. It has played a pivotal role in the preservation of traditional values and useful customs, and in the maintenance of law and order. However, its conservative approach at times tends to infringe on individual liberties.

The Mizo Zirlai Pawl (MZP) or Mizo Student's Association was established in 1935 and was originally concerned with the interests and welfare of the Mizo students, especially as part of an endeavour to forge understanding and unity among them. In addition, it has now been transformed into a non-partisan political pressure group on various issues affecting not only the student community but the entire state as a whole.

The Mizo Hmeichhe Insuihkhawm Pawl (MHIP) is an association of Mizo women founded in the early 1950s and has since then spread its membership all over the state. It tends to concentrate on women's issues, and is engaged in effective social work and charitable activities in the rural areas.

The Human Rights and Law Network (HR & LN) was founded in September 2003. It is the first non-governmental organization in Mizoram that is dedicated solely to the protection and promotion of human rights. The HR & LN is a purely voluntary, non-profit and non-political organization.

The church organizations also play a very central role in Mizo society. Among the various denominations of Christianity in Mizoram, the Presbyterian Church has a wider influence on Mizo society. The church organizations make social, political and economic contributions in the state. They are actively involved in spreading education, providing healthcare, and supporting the under-privileged. These organizations have also always made an effort to create harmony in Mizoram.

There are other small civil society organizations in Mizoram, all of which are collectively responsible for ensuring the smooth functioning of the government machinery.

Demographics

Mizoram is a small state with a modest population and low density of population. According to the 2011 Census, the population of Mizoram is 10.91 lakhs. The density of population in the state is 52 persons per sq. km, while in India as a whole, it is 382 persons per sq. km. the growth rate of population in the state was

28.8 per cent from 1991 to 2001 and from 2001 to 2011 is 22.78 per cent. The figures for the rural and urban population are fairly similar to each other with the size of the rural population being marginally higher than that of the urban population. The sex ratio of 975 females per 1000 males in the state, though low, is better than that of many other states in India.

Since Mizoram is a tribal state, the statistics for the Scheduled Tribes (STs) are highly significant. According to Census 2001, the size of the tribal population in the state is 8,39,310, which accounts for 94.5 per cent of the state's total population.[5] Within the tribes, the Lushai or Mizo tribe constitutes 77 per cent of the total tribal population in the state. The decadal growth rate of the Lushai tribal population during the period 1991-2001 was 29.2 per cent. The Chakmas comprise the second largest tribe with a proportion of 8.5 per cent in the total tribal population. The percentage of tribal population in urban areas is 48.7. For the tribal population as a whole, the sex ratio at 984 females per 1000 males is much higher than the state average. However, the Chakma tribe has a sex ratio of 929 females per 1000 males, which is lower than that of the state figure.

The child sex ratio in Mizoram in 2001 for the age group of 0-6 years was 964 females per 1000 males, and was not vastly different from the child sex ratio (for the age group of 0-6 years) for the Scheduled Tribe (ST) population at 966 females per 1000 males. Again, this ratio for the Mizo tribe was 974 females per 1000 males, whereas the corresponding figure for the Chakma tribes stood at 944 females per 1000 males.

The birth rate in 2008 was 17.8, while the death rate was 5.1, and the female death rate (3.9) was much lower than that of males (6.3). The infant mortality rate in 2008 was 37, with the female infant mortality rate (38) being slightly higher than that of males (37).

Mizoram has the second highest literacy rates in the country after Kerala, and the highest literacy rates among the STs in India. The overall literacy rate is 88.8 per cent while the female literacy rate is 86.13 per cent in 2001. According to Census 2011, the literacy rate in Mizoram has gone up to 91.58 per cent, with female literacy at 89.4 per cent.

Within the tribes, the Mizo tribe has the highest literacy rate at 95.6 per cent in 2001 with the female literacy being at 94.4 per cent. The gender gap in literacy is wider for the Chakma and Kuki tribes. The Chakma tribe has the lowest literacy rate in the state at 45.3 per cent and a female literacy rate of 33.6 per cent. In the field of education, Mizoram still needs to improve the overall quality and specifically the availability of higher education.

The work participation rate in Mizoram is 52.6 per cent, while among the STs, 51.7 per cent of the population comprises workers. The proportion of male and female workers within the STs is 53.3 per cent and 48.1 per cent, respectively, indicating a relatively equitable distribution. The proportion of main workers is around three-fourths of that of the total number of workers. The percentage of ST females as the main workers is 67.2 per cent while the percentage of ST male main workers is 84.5 per cent.

Economic Structure

For assessing the economic health of an economy, the Gross State Domestic Product (GSDP) and the composition of the GSDP prove to be useful indicators. The GSDP of Mizoram in 2009-10 at 1999-2000 prices was Rs. 2,80,891 lakh, registering a growth of 12.5 per cent from the previous year's GSDP. The Compound Annual Growth Rate (CAGR) from 1999-2000 to 2009-10 has been 6.2 per cent. The per capita income of Mizoram in 2005-06 was Rs. 24,029, which rose to Rs. 30,292 in 2008-09 and to an estimated figure of up to Rs. 32,634 in 2009-10.

Table 2.1 shows the composition of the GSDP in Mizoram over the years. The share of the tertiary sector is the largest and has been consistently increasing over the years. The share of industry, however, is modest and has not shown any improvement from 2005-06 to 2009-10. Agriculture and the allied sector, which employs a majority of the population in the state has the least contribution in GSDP and its share has been falling over the years.

Table 2.1: Composition of the GSDP, Mizoram

Year	Agriculture and Allied Sector		Industry Sector		Services Sector	
	Current Price	Constant Price (1999-2000)	Current Price	Constant Price (1999-2000)	Current Price	Constant Price (1999-2000)
1999-2000	22.52	22.52	16.13	16.13	61.35	61.35
2005-06	17.14	17.02	18.83	19.66	64.03	63.32
2006-07	15.92	16.15	18.57	19.27	65.51	64.58
2007-08	14.72	15.51	18.68	19.32	66.56	65.17
2008-09	13.78	14.91	18.61	19.34	67.61	65.75
2009-10	12.83	14.32	18.64	19.39	69.53	66.29

Source: Economic Survey, Mizoram, 2009.

Table 2.2 shows the District Domestic Product (DDP) for the eight districts in Mizoram at current prices. It is quite clear that Aizawl, the capital city, is the richest in terms of the DDP as well as the per capita income. Aizawl is one of the main urban centres in Mizoram and thus, the share of agriculture in DDP is the least for this district.

Potential of the Economy

An economy can have broadly three sectors, namely, the primary, secondary and tertiary sectors. The primary sector in Mizoram consists mainly of agriculture and allied practices. The potential of the state lies in harnessing the natural resources that it possesses. The topography and climatic conditions of the state favour the production of some exotic horticultural crops, bamboo and exotic flowers. These products possess a high export potential within the country as well as outside the nation.

In addition to these physical resources, Mizoram possesses abundant skilled and cost-effective labour. The state has a very high literacy rate of more than 88 per cent, implying that the human resources are equipped with basic knowledge and skills. Greater educational attainment among a majority of the people is one the reasons for the growing tertiary sector in the state.

Changes in Economic Structure

Since ancient times, the life of Mizos has revolved around agriculture, especially Jhum cultivation, as the main economic activity. As the process of modernization and development expanded in the state, economic transformation in Mizoram started taking place. From being an agrarian state using traditional technology and producing for its own consumption, Mizoram has made tremendous progress. Today, the services sector in the state has become one of the most important sectors contributing both to the state income and the well-being of the people. The composition of the GSDP clearly suggests the increasing importance of the services and secondary sectors in the economy and the declining importance of the primary sector.

The trends seen in Table 2.1 suggest that the services sector is the main driver of the state economy, which also reflects the all-India trend. The services sector has a share of 68.5 per cent in the GSDP, while the share of agriculture is only 14.3 per cent. The declining share of agriculture in the GSDP in Mizoram is a very important issue that needs to be explored. The following reasons can be cited for this trend:

- Declining productivity and resulting decline in incomes from agricultural production;
- Shift of employment away from

Table 2.2: DDP at Factor Cost in 2006-07

District	DDP at Factor Cost (at Current Prices) (in Rs. Lakhs)	Per Capita Income (at Current Prices) (in Rs.)	% Share in DDP		
			Agriculture and Allied Sector	Industry Sector	Services Sector
Mamit	20,938	30,245	22.97	28.28	48.75
Kolasib	20,712	23,277	28.71	10.01	61.28
Aizawl	1,35,074	30,249	10.26	21.46	68.28
Champai	27,427	19,427	18.6	16.50	64.9
Serchhip	18,798	28,385	37.32	9.75	52.93
Lunglei	42,021	23,561	15.26	17.16	67.58
Lawngtlai	21,249	21,266	10.61	18.37	71.02
Saiha	19,701	23,893	16.79	11.94	71.27

Source: Economic Survey, Mizoram, 2009.

agriculture to the secondary and tertiary sectors; and

- Low levels of investment in agricultural infrastructure, and research and development resulting in a low level of use of technology in agricultural production.

In addition to the above suggested explanations and the potential employment and incomes offered by the services sector, it has been observed that a large proportion of the people, especially youth, in Mizoram seek employment in the tertiary sector. Thus, from being an agrarian economy with agriculture making the main contribution to the growth of the economy and livelihood of a majority of the people, Mizoram is gradually becoming a modernized economy with the services sector acquiring a significant position in the economy. However, there is still high dependence on agriculture for livelihood in the state.

Sectoral Performance

Agriculture and Allied Activities

Land, one of the most important resources in agriculture, is owned by communities and controlled by village councils in Mizoram. As such, there is no land tenure system in Mizoram. Land is distributed by the village councils under the lottery method for farming, mainly as Jhum cultivation. Terrace and valley cultivation have some tenancy arrangements due to the concentration of land in the hands of private owners. A majority of the landholdings in the state are small or marginal.

The main type of cultivation practice followed in Mizoram is Jhum cultivation, which is also known as shifting cultivation. It is a traditional cultivation practice in which a patch of forest is cleared and burnt to cultivate the land and then that patch is abandoned for 8-10 years to enable it to regain its fertility for being cultivated again. Besides being an agricultural practice, Jhum is also an important part of the traditional ceremonies in Mizo society. Jhum cultivation covers a major chunk of the total cropped area. In 2007-08, about 43.7 per cent of the total cropped area was under Jhum cultivation and 90 per cent of the total cultivator families were Jhum families. The high presence of Jhum as a practice of cultivation can also be attributed to the geography of the state. The settled cultivation practices involve wet rice cultivation, and terrace and valley farming.

The main crops cultivated in Mizoram are rice, pulses, maize, soyabean and oilseeds. Paddy or rice is the principal crop covering the highest proportion of land area under cultivation. The yield of paddy, especially the paddy cultivated under Jhum, is low in the state. Crops like paddy and maize have shown a higher yield when better technology is used. The use of high yield

variety (HYV) seeds and better irrigation have resulted in far better yields for these crops as compared to the ones cultivated traditionally.

Besides agricultural production, horticulture is a growing field in the state and has a tremendous potential. The climatic condition of the state is highly favourable for the production of some horticultural crops like fruits, vegetables and spices. These horticultural crops have a great demand in the national and international markets and signify a high earning capacity, thereby providing a good source of livelihood for the people of Mizoram. Moreover, their cultivation is also desirable for maintaining the ecosystem of the state as the cultivation of horticultural crops prevents soil erosion.

The main fruits produced in the state are oranges, passion fruit, grapes and bananas, while the main vegetables are chow-chow and cabbage. Another high potential horticultural item produced in Mizoram is that of spices like ginger, turmeric, cardamom and cinnamon. The area under these crops as well as their production has increased tremendously during the last few years. The impetus to increase their production has come from increased marketing facilities. However, a huge potential still remains to be explored and harnessed.

Another significant branch of agriculture practised in Mizoram is floriculture. Anthurium and rose are the main flowers produced and exported from the state. A few other varieties like gladiolas, orchids and bird-of-paradise also grow well in the state and have a huge domestic and international demand.

Livestock-rearing is a very old practice in Mizo society and the consumption of livestock products is quite high in the state. The main animals that are reared in Mizoram include pigs, cattle, hens, mithuns, goats and buffaloes.

The state has a notable potential in animal husbandry, yet it is not self-sufficient in livestock production. It has to import eggs and milk to fulfil the domestic demand. The utilization of livestock potential in the state can be beneficial for substituting the agricultural incomes of the Mizo people.

The other allied activities under agriculture practised in Mizoram are sericulture and pisciculture. The state has an immense potential for fisheries and this activity can generate extra incomes as well as help the people become self-sufficient in fish consumption. The promotion of sericulture can help promote employment in the small-scale industry.

Forests and Their Products

The state has vast forest coverage as around 90 per cent of its area is covered by forests. However, the dense forest cover constitutes only 30 per cent of the total forest area while the rest comprises open forests. The different types of forest cover in Mizoram are: tropical semi-evergreen, tropical moist deciduous, subtropical broad-leaved hill, and sub-tropical pine forest. More than 70 per cent of the forest cover is tropical semi-evergreen and around 29 per cent is tropical moist deciduous forest cover. The areas under reserved and protected forests area are 47.31 per cent and 21.34 per cent, respectively. They are under the control of village and district councils. The forests in Mizoram constitute a good source of bamboo, timber, medicinal plants, canes, charcoal, broomsticks, sungrass, fuel wood and other non-timber forest products. The forests and natural vegetation are also a source of livelihood for many people in the state.

Bamboo is one of the most important resources growing in the forests of Mizoram. It has a wide variety of uses and a huge demand in the domestic as well as international markets. Bamboo can be used for various purposes like making baskets, brooms, arrows, boats, fences, ornaments, handicrafts, mats, construction of buildings for making walls and ceilings, construction of small bridges and roads, and chopsticks. Bamboo also serves as a substitute for teak, which is becoming a progressively rare resource. In addition, bamboo also has medicinal uses. Given all the uses of bamboo and the demand for products made with it, the development of the bamboo industry would be highly beneficial for the development of the state.

The Secondary Sector

The secondary sector forms a miniscule part of the entire Mizo economy, thereby making it an industrially backward state. The main activities practised in the secondary sector in Mizoram are mining and quarrying, manufacturing, construction, and the generation of electricity, water supply and gas.

There are no major industries in the state barring some small-scale industries. As on 30 September 2007, the number of small-scale units in Mizoram was 6443, generating employment for 22,471 persons.

The fifth Economic Census (2005) reports that there were 47,730 enterprises in the state engaged in different economic activities other than crop production and plantation. They employ a total of 106,706 persons. Of these enterprises, 77.5 per cent are non-agricultural enterprises.

The major industries in Mizoram are discussed below:

- The handloom and handicrafts industry is one of the traditional industries in Mizoram and provided employment to about 4700 persons up to 2008-09 (Economic Survey, Mizoram, 2009).
- The bamboo-based industry is one of the main industries in Mizoram.
- The food processing industry is an essential part of an agrarian economy. Mizoram has two food processing units, namely a food processing plant at Sairang, and a fruit juice concentrate plant at Chhingchhip. Together they have an annual capacity of processing 2690MT and process orange, passion fruit, pineapple, and bamboo shoots.

The development of the agro-processing industry in Mizoram has a vast potential in terms of diversification and the commercialization of cash crops, while generating employment and increasing the incomes of people.

The Tertiary Sector

The tertiary sector has a very important role in Mizoram. It contributes the maximum share to the GSDP and is increasingly becoming the most sought after sector for employment by the youth in Mizoram. Within the tertiary sector, the role of public sector employment is highly significant. The Census of Government Employees, 2008, shows that the number of regular employees working under the state government as on 1 April 2008 was 55,665, out of which 48,453 are regular employees.

The Status of Infrastructure in Mizoram

The major indicators of infrastructural development and their components are as follows:

- Transport—availability, type and quality of roads, rail network, air and water transport system;
- Communications—telephone lines, post and telegraph offices, mobile phone networks;
- Energy—power generation, distribution and consumption capacities;
- Irrigation—availability and coverage of irrigation facilities;
- Water Supply and Sanitation—capacity of water supply plants, access to potable drinking water, drainage system;
- Banking—number of banks, credit and loan facilities available;
- Education—number of primary and secondary schools, vocational education institutes, higher education institutes, teacher-student ratio; and
- Healthcare—number of hospitals and hospital beds, doctor-patient ratio.

The infrastructure status in Mizoram varies from one indicator to another. Some of these indicators are performing well while the performance of others is way below decent standards. The transport network within the state as well as the state's connectivity with other states are quite well developed. The state is connected through the National Highways—(NH)–54, NH–150 and NH–40A—to Assam, Manipur and Tripura, respectively. Mizoram had a road density of 0.2407 km/sq. km in 2002, which is well below the North-east average of 0.6608 km/sq. km and an all-India average

of 0.755 km/sq. km. There has been slight progress since then and the road density in 2007-08 in Mizoram went up to 0.274 km/sq. km but the total road length in Mizoram stayed constant from 2007-08 to 2008-09 at 5783.31 km. The state transport covers 22 routes along a distance of 3806 km, thereby providing connectivity throughout the state. There is also a rail link at Bairabi rail station but it is primarily meant for goods traffic. The nearest accessible railway station for boarding trains to Mizoram is at Silchar in Assam, which is approximately six hours drive from Aizawl. The rail density in Mizoram (0.09 km per '000 sq. km) is way below the averages of the North-east (11.12 km per '000 sq. km) and all-India (19.31 km per '000 sq. km). Mizoram has one operational airport at Lengpui, which has daily air connectivity. The waterway connectivity is in the process of development and the state government is also in the process of establishing connectivity with Myanmar through the Kolodyne River to facilitate trade, and other waterway connectivity links.

The per capita power consumption in Mizoram was quite high at 140.3 KWH in 2003-04 as compared to the North-east average of 120.3 KWH. The per capita power consumption went up to 186.23 KWH in 2008-09. The total power consumption in 2008-09 for Mizoram was 165.38 million units,[6] and this was lower than the power consumption in 2007-08. The state is not self-sufficient in power and at present only 3 per cent of the total energy demand of the state is met within the state while the rest 97 per cent is met by importing from the Central grid and the neighbouring states. There is a high potential for generating hydel power in the state, which is estimated to be 2424 MW but only 2 per cent of that is actually utilized. Presently, the power generation in the state is only achieved through minor power projects, including partly hydro projects and partly diesel and thermal projects. The electricity generation in 2007-08 was worth 18.92 million units, which went down to 10.926 million units in 2008-09. The installed power capacity in the state increased from 37.17 MW in 2006-07 and 2007-08 to 40.77 MW in 2008-09. However, it was still less than the power peak load requirement of 90 MW in 2008-09. As per the 2001 Census, only 570 out of 707 villages were electrified in Mizoram and as of March 2008, 137 villages still needed to be electrified.

The telecom infrastructure is developing and spreading rapidly throughout the state. As of December 2007, the tele-density in Mizoram was 23.32, which is close to the national average of 23.9 and far better than the north-eastern average of 16.65. As of March 2006, 55,222 landline connections had been provided by the North-east circle of Bharat Sanchar Nigam Ltd. (BSNL) in the state. The number of mobile connections is, however, going up rapidly and as of December 2009, there were 5,17,724 mobile connections in the state. Broadband service is also available in the state.

Irrigation is essential for the development of agriculture and farming practices. The irrigation potential created in the state in 2007 was 21,260 hectares, out of which the utilized land was only 14,950 hectares.

The urban and rural areas have been assessed separately for water supply in the state. In the urban areas, the minimum water supply level is 70 lpcd. As per the Economic Survey 2009-10, the status of the water supply level in the urban areas of Mizoram is as follows: (i) three towns are not covered under the water supply level; (ii) ten towns have a water supply level of 20–60 lpcd; and (iii) ten towns have water supply levels of 70 lpcd. Therefore, a large area in the state still needs to be covered for ensuring adequate water supply levels. As per data generated in 2008–09, there are a total of 777 rural habitations in Mizoram, out of which 68 were not covered (and have less than 10 lpcd of water supply), 183 were partially covered (with 10 lpcd to 40 lpcd of water), and 526 were fully covered (with 40 lpcd and above of water supply).

In a developing economy, it is imperative for the banking sector to increase its penetration and play an active role. In Mizoram, up to February 2009, there were 108 branches of various financial institutions, consisting of 36 commercial bank branches, 60 branches of a rural bank (the Mizoram Rural Bank), and 11 branches of a cooperative bank (MCAB Ltd.). In addition to banks, financial institutions like the National Bank for Agriculture and Rural Development (NABARD), Small Industries Development Bank of India (SIDBI), and North-Eastern

Development Finance Corporation Ltd. (NEDFI) also have a presence in the state. The population served per bank branch was around 8304 during 2009, as compared to 15,000 at the all-India level. The credit performance of the banks and deposits, and the credit-deposit ratio for the years 2007-08 and 2008-09 are given in Table 2.3.

Mizoram also has an appreciable educational infrastructure and its performance in terms of ensuring its children access to education compares well with other states in India. Table 2.4 shows the number of schools and number of teachers in school by type of schools for the years 2007-08 and 2008-09.

Out of a total of 3623 schools in the state in 2008-09, 45 per cent were managed by the Centre/state government, 27 per cent were private unaided schools, and 17 per cent were private aided schools. Some schools are also managed by local bodies. However, higher education opportunities are quite restricted in the state. It has only one central university— the Mizoram University— and twenty colleges including one law college and two teacher training colleges. Among the other higher educational institutes in the state are the College of Veterinary Sciences and Animal Husbandry, the Regional Institute of Para-medical and Nursing Sciences, open universities, and two Polytechnic institutions.

While education enables people to widen their choices and capabilities, the availability of healthcare facilities, on the other hand, ensures a healthy and reasonable lifespan for a person. Mizoram has performed well in the provision of healthcare services and creation of a health infrastructure. The public health sector in Mizoram is quite dynamic, and presently, there are 12 hospitals, 12 Community Health Centres (CHCs), 57 Primary Health Centres (PHCs), and 370 sub-centres in the state, with total bed strength of 1841.

Table 2.3: The Credit Performance of the Banks in Mizoram

Agency	2007-08			2008-09		
	Deposits	Advances	CD Ratio	Deposits	Advances	CD Ratio
Commercial Banks	1190.15	662.69	55.68	1372.42	854.77	62.28
Mizoram Rural Bank	283.15	161.06	56.87	326.14	177.11	54.3
MCAB Ltd.	184.15	122.83	66.7	216.27	127.11	58.92
Total	1657.49	946.58	57.1	1914.83	1158.99	60.53

Source: Economic Survey, Mizoram, 2009.

Constraints to the Development of the Economy

Mizoram has come a long way since the attainment of statehood. However, it still needs to achieve a lot more in order to attain a high level of human development and economic development. There are some natural as well as unnatural constraints hindering the state's development process. The commercial cultivation of cash crops, setting up of large and medium size industries and trade are restrained by the constrictions that the state faces.

Geographically, Mizoram is located in a hilly area, with the terrain being young and immature, and the rock system being weak, loose and prone to seismic influences. Less than 5 per cent of the land mass in the state is flat or laid out in the form of gentle slopes. This makes the development of infrastructure, industry and trade quite difficult.

Due to loose soil and heavy rainfall, the region is susceptible to severe soil erosion and landslides. This becomes a major constraint in the development of agriculture, while obstructing mobility and trade transactions both within the state,

Table 2.4: Education Infrastructure in Mizoram

Level of Education	Particulars	2007-08	2008-09)
Primary (1 to 4)	No. of Schools	1752	1783
	No. of Teachers	8002	8716
	Teacher-Pupil Ratio	1:17	1:17
Middle (5 to 7)	No. of Schools	1090	1253
	No. of Teachers	6846	7754
	Teacher-Pupil Ratio	1:08	1:08
High School (8 to 10)	No. of Schools	508	502
	No. of Teachers	3935	3886
	Teacher-Pupil Ratio	1:11	1:11
Higher Secondary (11-12)	No. of Schools	82	86
	No. of Teachers	941	1058
	Teacher-Pupil Ratio	1:14	1:14
Total	No. of Schools	3432	3623
	No. of Teachers	19,724	21,414

Source: Economic Survey, Mizoram, 2009.

and between the state and other regions. The topography of the state is also a natural constraint to development and is unavoidable. Therefore, the government needs to devise policies and reforms by keeping these constraints in mind.

In view of the comparative advantage that the state enjoys in the cultivation of horticultural crops and the importance of agriculture in the Mizo economy, it is essential to identify the constraints to agricultural development and devise alternatives for the overall advancement of the state. Broadly, the main constraints to agriculture, as discussed above, are the topography of the state, difficulty in establishing connectivity and the resultant problems in accessing markets, low density and scattered nature of the population in the state, and low investment in agricultural research and development (R&D).

Due to the hilly terrain of the state, its large forest cover and the pursuance of age-old traditions by its tribal population, Jhum becomes the first preference as a cultivation practice. However, the increase in population and the rise in the demand for food are making this practice of shifting cultivation more and more unsustainable. Nevertheless, in the absence of an alternative means of livelihood, this mode of cultivation is still practised by a majority of the farming population, resulting in soil degradation, low productivity, and loss of forest cover in the state. The paddy cultivated under Jhum has the lowest yield. Further, the development of agriculture suffers in the state due to the low population density, dispersed habitations and inaccessible markets. The focus of Mizo society has been on self-sustenance partly due to the low concentration of the population and the resulting poor domestic (local) market, and partly due to poor connectivity and the unavailability of feasible transport options for producers to market their surplus in distant places. Moreover, market risks like volatile prices hamper the production decisions pertaining to the generation of surplus outputs.

Agricultural marketing is highly under-developed in this region. The marketing system is unregulated and dominated by traders and middlemen. Various factors like the seasonality of production, perishable nature of the produce, and lack of market information compel farmers to sell their

produce at low prices. Poor marketing infrastructure is thus one of the major deterrents to the development of a market economy in Mizoram.

Due to the community ownership of land, people have no sense of belonging for the land, and coupled with the fact that under Jhum cultivation, one cultivator does not have access to the same plot of land over time, this prevents the people from enjoying any incentive to invest in the improvement of land. Thus, the potential of the farming sector gets limited.

Further, the agricultural infrastructure in the state is inadequate for ensuring the all-round development of the sector. Agriculture is also hampered by the lack of electricity supply, which limits the use of technology in farms. Further, poor and limited irrigation facilities restrict farming in the lean season (the non-rainy season) and also make the use of HYV crops difficult, as they need lots of irrigation. The state has a good irrigation potential but only a fraction of that has so far been utilized. The building of water reservoirs and other means of irrigation in Mizoram is also affected by the hilly terrain of the state.

In spite of having the potential to generate surpluses, Mizoram has not even been able to attain self-sufficiency in major crops and livestock products. It has thus become essential to increase productivity to fulfil the increasing demand for food in the state and to generate enough marketable surpluses to help the people earn substantial incomes. It is essential to offer agricultural extension support for educating farmers, bringing new technology to farms, and consequently increasing productivity. The extension support system in Mizoram is largely ineffective and the extension staff is provided little research and technical support and only modest in-service training. Shifting cultivation, which is frequently practised by the hill farmers, is not included in the training, leaving the staff with a poor understanding of this practice and of the ways to introduce improvements in shifting cultivation.

Another major constraint restricting investment in agricultural development is the lack of credit facilities. The banking sector and cooperative banks are hardly functional in this area, thereby reducing the availability of credit. Formal institutions occasionally offer lending facilities in this region, mainly due to the absence of collateral security. Land is a community resource and farmers, especially poor farmers, have nothing to offer for collateral. Therefore, they have to turn to private moneylenders or take credit from friends/ relatives at very high interest rates.

Mizoram is an industrially backward state. Various initiatives for industrial development have not been able to bring the desired results. Again, industry is constrained by the topography, poor infrastructure and market size in the state. Industrial development in Mizoram is highly significant for facilitating agricultural development, creation of employment and modernization of the economy. There is also a wide scope to build the agro-processing industry, the small and medium size bamboo processing industry, and the handloom industry in the state.

The lack of entrepreneurship initiatives also constrains the development of industry in the state. People in Mizoram are not accustomed to taking risks related to markets, which hampers their initiative in starting a new venture.

Given the various constraints facing the economy of Mizoram, the Government has introduced various policies to accelerate the process of development. Some of the reforms have been successful while others have not been able to bring the desired results and necessitate more investigation.

Policies and Reforms Undertaken

The policies initiated in the various sectors of the Mizo economy range from agricultural reforms to infrastructure development. Since the attainment of statehood, which was concomitant with the Seventh Five-Year Plan, Mizoram has been included in the Five-Year Plans. The state has made considerable progress under the last four Five-Year Plans but this prosperity has been inequitable. The progress has been lopsided, and rural areas have benefited less as compared to the urban areas. In keeping

with its agenda for the entire country, the Eleventh Five-Year Plan is aiming to achieve inclusive development in the state. Some important targets for the Eleventh Five-Year Plan in the state are:

- 30,000 hectares of Jhum area to be treated under control of shifting cultivation;
- 5000 hectares of fresh land to be developed for wet rice cultivation and 3000 hectares of Jhum land to be converted into terrace farms;
- 2,00,000 soil health cards to be issued to farmers;
- Promotion of farm mechanization and water harvesting systems;
- Construction of 1000 km of road; and
- Distribution of quality HYV seeds to farmers.

Besides the Five-Year Plans and annual plans, various ongoing policies and past development initiatives have also been addressing the problems of poverty, declining agricultural productivity, industrial backwardness, Jhum cultivation, deforestation, among other things.

Past Development Initiatives

Among the development initiatives taken in the state in the past was the Land Use Policy, 1985-91, which was intended to achieve the poverty alleviation of farmers, particularly Jhumia families. It was a modest programme, confined to four rural development blocks, and aimed at creating sustainable livelihood opportunities in the agriculture and allied sector, besides offering encouragement to the small-scale industry for promoting livelihood options in this sector as well. The scheme had various shortcomings and was not able to have a widespread impact. Therefore, the government introduced another initiative, the Mizoram Intodelhna Programme, in 2002. These initiatives, however, suffered from various constraints that limited their potential and impact.

Ongoing Initiatives for Economic Development in Mizoram

One of the most important initiatives taken by the Mizoram government recently was the introduction of the New Land Use Policy in 2009. The main objective of this policy is to improve the livelihoods of vulnerable groups in the state, especially the Jhumia families. The programme aims to contribute to the protection and restoration of the eco-system of the region through natural resource management. It is also intended to reduce the practice of shifting cultivation and provide productive alternative employment to Jhum farmers. Besides these initiatives, this policy also targets improvement in infrastructure like roads, and research and development in agriculture. The promotion of horticultural crops and animal husbandry is also one of the objectives of this reform. Deriving lessons from past initiatives, this programme is attempting to implement reforms in a more sustainable way.

Another programme, viz. the scheme for oil palm development, known as the Integrated Scheme of Oilseeds, Pulses, Oilpalm and Maize (ISOPOM), has been launched in the state to help farmers attain self-sufficiency in edible oil and to provide employment alternatives to Jhumia families. This scheme aims to motivate small and marginal farmers to augment their incomes by adopting modern technology in cultivation practices. Under this scheme, oil palm plantations were created in the Lunglei, Kolasib, Mamit and Serchhip districts during the year 2008-09, covering an area of 4936 hectares.

In order to provide better connectivity and mobility of inputs and farm produces, the state government is also taking an initiative to build Potential Area Connectivity Roads. This scheme is designed to help improve access to markets, to increase agricultural productivity to facilitate surplus generation for markets, and to reduce transportation costs. Under this programme, the total motorable potential area connectivity road length was increased to 377 km by the year 2008-09.

It is essential to implement optimal irrigation policies to develop the potential of wet rice cultivation and terrace farming,

especially in the dry months. Medium-sized irrigation projects are difficult to construct due to the hilly terrain of the state. However, minor irrigation projects have a vast potential and can be constructed easily. The state government implemented and completed 320 minor irrigation projects by 2008-09 with a gross command area of 14,126 hectares and created an irrigation potential of 25,880 hectares in the state. The funding for minor irrigation schemes is being done by the Accelerated Irrigation Benefit Programme (AIBP), under which 90 per cent of the finances come from the Central Government and 10 per cent from the state government. The AIBP includes various on-farm and off-farm development works like land levelling, contour binding, and construction of farm roads and field drains.

Efforts are also being made to wean away farmers from Jhum cultivation under the Watershed Development Programme. This scheme comprises the treatment of arable and non-arable land, natural resource management, and the enhancement of eco-friendly living. During 2008-09, the area under Jhum cultivation decreased by 9 per cent and about 11 per cent of the Jhumia families left the practice of shifting cultivation to take up alternatives. This clearly suggests that the farmers are willing to give up less productive Jhum cultivation if alternative means of livelihood are made available to them. Thus, the state is focusing on creating lucrative alternatives for farmers to help them earn a decent income and break out of their poverty.

The modernization of cultivation practices and livestock breeding through the adoption of the latest knowledge and technology is one of the top priorities for the government. For this purpose, the government has set up a number of institutions for imparting training and research in agriculture. During the year 2009-10, the government also took initiatives to establish a seed certification agency for ensuring the availability of quality seeds in the state. The funding to the Integrated Training Centre (ITC), which was established in 1981, increased substantially from Rs. 7 lakhs in 2008-09 to Rs. 92.74 lakhs in 2009-10. This institute imparts basic agricultural training to the untrained village level workers. As a part of the agriculture extension service, seven Agriculture Science Centres (Krishi Vigyan Kendras) have also been set up in the state. They are responsible for imparting vocational training to the practising farmers and field extension functionaries, among other agricultural workers. Along with these centres, soil-testing laboratories have also been set up at two locations.

The Central Government has been sponsoring another scheme, the setting up of a National Technology Mission, for the development of horticultural crops in the north-eastern region of India, since 2001-02. Under this scheme, various programmes targeting horticultural crops and expanding the area under them are being implemented. This mission is also taking initiatives to expand irrigation facilities, and provide post-harvest management and marketing facilities to the farmers.

The Horticulture Department of Mizoram has started implementing yet another scheme, the National Mission on Medicinal Plants, since 2008-09. This scheme was launched by the National Medicinal Plant Board, under the Ministry of Health and Family Welfare.

Although bamboo is one of the most important resources in the forests of Mizoram, it has hitherto not been used judiciously to earn profits. The National Bamboo Mission, a Central Government-sponsored scheme, has thus been launched to mainly focus on the plantation and development of bamboo in the state. Under this scheme, efforts are also being made to establish a bamboo industry in various parts of the state.

In order to help the state attain self-sufficiency in the production of milk and meat from cattle, a National Project on Cattle and Buffalo Breeding (NPCBB) was launched in Mizoram in 2001. Under this project, a total of 4501 artificial inseminations were performed on cattle and pigs in the year 2008-09. The state is also availing of assistance from the Central Government to implement the Intensive Dairy Development Project (IDDP). This project envisages the establishment of infrastructure for the collection, cold storage and distribution of good quality milk. The total milk production under the IDDP scheme in 2008-09 was 26,89,532 litres.

The Mizoram Agricultural Marketing Corporation Limited was established in 1993 by the state government under the Trade and Commerce Department, in order to promote agricultural marketing in the state. The main aim of the project is to establish proper market channels to ensure that farmers get remunerative prices for their produce. The Corporation has constructed 10 wholesale markets and 87 rural primary markets all over the state.

Finally, both the state and Central Governments are making consistent efforts to uplift the poor farmers in the state. The initiatives taken in the past suffered from various flaws that restricted the welfare impact of the schemes. However, the new and ongoing policies are taking lessons from the past initiatives and trying to maximize the benefits accruing to farmers from the projects.

Notes

1. http://mizoram.nic.in/about/history.htm
2. Author's calculation from household data.
3. http://mizoramonline.in/profile/districts/
4. http://en.wikipedia.org/wiki/Mizoram#Administration
5. Provisional tables from the 2011 Census do not have detailed data. In some cases where the 2011 Census data is not available, 2001 Census data has been used.
6. 1 million unit = 1 Gigawatt/hour or 1000 Megawatt/hour.

3

Obstacles to Human Development: Poverty and Inequality

The official estimates of poverty indicate a severe under-estimation of the HCR for Mizoram. After adjusting the official poverty lines, the present study finds a high incidence of income/consumption poverty in the state relative to India. There is also a significant incidence of inequality in the state. The other material forms of poverty and inequality in Mizoram are manifested in terms of other indicators such as the average landholding size, access to toilets and drinking water facilities, and asset ownership. Inter-district analyses show that the districts of Champhai and Saiha can be rated as low-poverty low-inequality districts while the Lawngtlai district lies on the other extreme of this poverty radar. The other districts in the state report mixed results regarding the levels of poverty and inequality.

Background

The concept of human development aims at ensuring the well-being of the citizens *en masse*, and a strong egalitarian flavour is built into the concept. Consequently, the removal of social deprivation and discrimination that restrict the capabilities of, and deny opportunities for, participating in normal economic and social activities becomes a major thrust area of any human development programme. In recent times, this has also been reflected in the preparation of Human Development Reports and the emphasis is now on the 'outcomes of development', not only in terms of achieving a higher per capita income, but also simultaneously, ensuring that the benefits of such growth are shared among more people. Naturally, the issues related to distributional aspects, particularly inequalities in the parameters of human development, have come to the fore, and human poverty and inequalities are issues that cannot be skirted in the course of preparation of the Human Development Reports (HDRs).

How to Measure?

While poverty has many dimensions, and can be perceived as not merely material deprivation and a low standard of life, but also deprivation in relation to health indicators, education and culture, one particular dimension that is believed to be the most crucial one is the (in)ability to access a minimum nutrition level expressed in terms of a norm of daily energy intake in calories, which is required for maintaining working health. This index is generally converted into a corresponding expenditure level, and people having an expenditure level that is lower than this critical level are thought to be 'absolutely poor'. This Head Count Ratio (HCR) is the most widely accepted measure of poverty and has been used herein. In addition to the aspect of income/consumption poverty, the deprivational aspects of some other dimensions such as landlessness, lack of material and financial assets, and lack of proper housing facilities, among other factors, were also examined.

Apart from absolute poverty, relative poverty or the degree of inequality is also a fundamental issue for human development since growth at the expense of a worsening distribution ultimately becomes unsustainable and creates social tensions. Inequalities in opportunities have a direct bearing on not only what people 'are' but also on what people 'can be', that is, on the human capabilities and conditions of future generations. In an unequal society, children inherit disadvantages and, therefore, inequalities not only spill over to the next generation but are further reinforced, thereby violating the basic principles of human development. Hence, the measurement of inequalities also becomes an important part of preparation of HDRs, and here the focus is on inequalities in living conditions, measured by Gini Coefficients of the expenditure level, landholdings, asset ownership, and housing conditions, in the following section.

The Poverty Situation in Mizoram

Overview of Income/Consumption Poverty

Poverty has generally been measured in India by using the concept of the Poverty Line and by estimating the proportion of people with monthly expenditures below such levels. It is thus linked with the Monthly Per-capita Consumption Expenditure (MPCE), state and sector-specific poverty lines, and necessitates regular updating of the latter as prices change. National poverty estimates are obtained from the periodical NSSO Surveys on Consumption Expenditure in India and according to the last large sample survey (61st Round, 2004-05), the MPCE of Mizoram was Rs. 778 for rural areas and Rs. 1201 for urban areas. The corresponding national averages were Rs. 559 and Rs. 1052, respectively. This indicates a relatively better income/consumption situation in the state as compared to the country as a whole, especially in the rural areas.

The Planning Commission determined the state-specific poverty line as Rs. 350.17 for rural areas and Rs. 409.22 for the urban areas of Mizoram for the year 2004-05. The overall state-specific poverty line was calculated by assigning appropriate weights to the rural and urban poverty lines equivalent to their respective shares in the total population of the state, and emerged as Rs. 376.70 per capita per month. With the application of this criterion, the Head Count Ratio (HCR) for Mizoram was 22.5 per cent in rural areas, 3.3 per cent in urban areas, and 12.6 per cent in the aggregate, as compared to the corresponding percentages of 28.3, 25.7, and 27.5, respectively, at the national level. Thus, the occurrence of poverty in Mizoram seems to be lower than the national average. However, this has been strongly contested by the state, which claims much higher poverty figures for itself in the year 2004-05—about 56 per cent of the families are reported to be Below the Poverty Line (BPL). According to the state administration, the poverty figures for Assam are generally applied for Mizoram as well by national agencies because of the low sample observations from the state, thereby leading to such erroneous results.

These poverty lines used by the Planning Commission in its official estimation of poverty came under criticism and the Expert Group under the chairmanship of Suresh Tendulkar has revised the poverty lines upward in its report (GoI, 2009). This has resulted in higher estimates of poverty for the country—41.8 per cent in rural areas, 25.7 per cent in urban areas, and 37.2 per cent in the aggregate. According to this report, for the year 2004-05, the poverty lines for Mizoram should be Rs. 639 for rural areas and Rs. 699 for urban areas. These new poverty lines for Mizoram do, in fact, reflect the higher cost of living in a hill economy, and by applying them, the Expert Group computed the HCR percentages for Mizoram to be 23.0 and 7.9 in the rural and urban areas, respectively, and 15.3 per cent in the aggregate for the year 2004-05.

The revised state-specific poverty lines have been applied to the field data to arrive at poverty levels for the state in 2009.

Current Situation of Income/ Consumption Poverty

The field data for the year 2009 indeed seem to indicate that the occurrence of poverty in Mizoram is much more than what has been reported (Table 3.1). The (unrevised) poverty lines used by the Planning Commission in 2004-05 mentioned earlier were updated to reflect price changes during the period 2004-2009 by using the Consumer Price Index for Agricultural Labourers (CPIAL) for rural areas and the Consumer Price Index for Industrial Workers (CPIIW) for urban areas. This resulted in poverty lines of Rs. 597 for rural areas and Rs. 527 for urban areas in 2009. It has been observed that about 63 per cent of the rural population and 21 per cent of the urban population of the state have per capita monthly consumption levels that are below these critical levels. The state average thus comes to around 41 per cent. If these revised poverty lines are used and updated to the 2009 prices as earlier, the following poverty figures are derived for Mizoram for the year 2009: 86 per cent in rural areas, 56 per cent in urban areas, and 70 per cent in the aggregate.

A more stringent norm of defining the poverty line as US$1 per person per day is sometimes used by UNDP in its Human Development Reports (HDRs). Using this norm further raises the poverty estimates for Mizoram to 96 per cent in rural areas, 76 per cent in urban areas, and 85 per cent in the aggregate. It thus appears that income poverty, as conventionally measured, signifies a major problem in Mizoram with almost three-fourths of the surveyed population living below the poverty line. The incidence of poverty is higher in the rural areas as compared to the urban areas.

Substantial regional disparity exists in poverty estimates across the districts. While Aizawl and Saiha are in a relatively better position, the incidence of urban poverty is lower than the state average in Lunglei too. At the other extreme, poverty is most severe in Lawngtlai, where more than 90 per cent of the surveyed population is estimated to be poor, according to the revised and updated poverty lines. The incidence of poverty is also high in the districts of Mamit and Serchhip.

Table 3.1: Average Per Capita Expenditure and Poverty Rates in Mizoram

Districts	MPCE (Rs)			Services								
				Old Poverty Line[a]			New Poverty Line[b]			One Dollar a Day[c]		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Aizawl	671	1339	1189	55.6	16.0	24.1	78.8	49.8	55.7	98.4	69.0	74.9
Champhai	556	906	709	60.5	19.3	42.5	91.7	66.1	80.6	97.8	92.1	95.3
Kolasib	674	805	746	47.9	44.6	46.3	74.4	80.0	77.2	87.9	96.5	92.2
Lawngtlai	434	-	434	80.2	-	80.2	94.9	-	94.9	98.4	-	98.4
Lunglei	584	1242	876	75.2	24.9	51.5	93.8	47.5	72.0	98.4	71.3	85.7
Mamit	485	1133	622	72.3	58.4	72.1	83.0	93.7	83.2	91.5	100.0	91.7
Saiha	840	946	871	30.8	17.4	26.1	69.5	68.2	69.0	94.0	89.2	92.3
Serchhip	665	688	677	51.4	50.9	51.1	86.1	79.2	82.6	97.6	91.4	94.5
Mizoram	**598**	**1187**	**910**	**62.6**	**21.5**	**40.8**	**85.9**	**55.7**	**69.8**	**96.3**	**75.7**	**85.4**
Mizoram[d]	**778**	**1201**	-	**22.5**	**3.3**	**12.6**	**23.0**	**7.9**	**15.3**			
All India[d]	**559**	**1052**	-	**28.3**	**25.7**	**27.5**	**41.8**	**25.7**	**37.2**			

Source: Economic Survey, Mizoram, 2009.

Notes: a) Old Poverty Line as per the Expert Committee of the Planning Commission for 2004-05 updated to 2009 prices using Price Indices; b) New Poverty Line as per the Tendulkar Committee Report submitted to the Planning Commission for 2004-05, updated to 2009 prices using Price Indices; c) As per the UN Norm of $1 a day; district-specific figures are derived from Field Data, 2009; d) Figures from the NSSO Survey, 2004-05; Figures of 'd' are not comparable with others because of definitional differences. MPCE is the Monthly Per Capita Expenditure at current prices. Poverty rates are given as percentages of the total population.

Other Measures of Deprivation

While the poverty percentages measured through income/consumption levels are widely used and universally acknowledged, they are by no means exhaustive, especially in a developing society with various dimensions of deprivation and well-being. In order to explore such issues, various other deprivations including lack of asset ownership, lack of proper housing, lack of housing amenities like electricity, drinking water, toilets, etc., and lack of landholdings (in rural areas), have also been examined.

Landholding in Rural Areas

The average landholding figures in rural Mizoram are reported in Table 3.2. It has been observed that the Per Capita Cultivated Landholding is 3.7 tin (1 tin = 1.023 acres) and the Per Capita Irrigated Landholding is only 0.3 tin. More than 40 per cent of the surveyed people in rural areas do not own any homestead land and more than 27 per cent do not own any cultivated land (Table 3.3). Only 3 per cent of the rural people own irrigated land. Thus, land ownership in Mizoram is skewed and landlessness is a major problem in rural areas.

Among the districts, the problem of landlessness is more severe in Lawngtlai, Lunglei and Serchhip, while being relatively lesser in Aizawl, Mamit and Saiha.

Housing Status

The type of house and amenities available to a household are both important factors in indicating the deprivation status of a family. It has been observed that about 70 per cent of the rural population and 85 per cent of the urban population lives in *pucca* houses (Table 3.4). At the other end, 12 per cent of the rural people and 0.3 per cent of the urban people live in thatched and *kutcha* houses. The remaining people have semi-*pucca* houses. The average homestead land area per capita is 185 square metres in rural areas and 61 square metres in urban areas. Among the districts, *kutcha* and thatched houses are more commonly found in Lawngtlai and Mamit, but rare in Serchhip, Kolasib and Saiha.

Table 3.2: Average Land holding in Mizoram

State	Per Capita Homestead Land (square metres)			Per Capita Cultivated Land (Tin)			Per Capita Irrigated Land (Tin)		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Aizawl	273	23	79	4.6	3.1	3.4	0.000	0.014	0.011
Champhai	190	67	136	1.1	3.9	2.3	0.000	0.000	0.000
Kolasib	421	259	331	13.4	0.2	6.1	0.000	0.000	0.000
Lawngtlai	17	-	17	7.2	-	7.2	0.008	-	0.008
Lunglei	7	50	26	2.7	0.0	1.5	0.006	0.000	0.003
Mamit	328	532	371	1.9	7.5	3.1	0.023	0.000	0.018
Saiha	419	46	310	0.0	0.0	0.0	0.000	0.000	0.000
Serchhip	56	50	53	22.2	0.0	11.1	9.073	0.000	4.523
Mizoram	**185**	**61**	**119**	**5.2**	**2.4**	**3.7**	**0.557**	**0.008**	**0.266**

Source: Survey data, 2008.

Table 3.3: Landlessness in Rural Mizoram (% of Population)

Indicator	By Districts								
	Aizawl	Cham-phai	Kolasib	Lawn-gtlai	Lunglei	Mamit	Saiha	Ser-chhip	**State**
No Homestead Land	19.7	27.2	8.9	81.1	64.1	13.4	19.2	74.4	**41.1**
No Cultivatable Land	14.2	25.3	46.8	21.9	29.6	31.1	46.0	21.2	**27.0**
No Irrigated Land	98.3	98.0	99.4	96.5	93.0	99.5	100.0	96.6	**97.2**

Source: Survey data, 2008.

Table 3.4: Housing Status in Mizoram (% of Persons Living in Different Types of Houses)

	Rural			Urban			Aggregate		
	KT[a]	SP[b]	*Pucca*	KT[a]	SP[b]	*Pucca*	KT[a]	SP[b]	*Pucca*
	By Districts								
Aizawl	10.5	12.9	76.6	0.4	15.9	83.7	2.7	15.2	82.1
Champhai	4.3	10.9	84.8	0.0	4.9	95.1	2.4	8.3	89.3
Kolasib	1.8	28.5	69.8	0.1	25.0	74.9	0.8	26.6	72.6
Lawngtlai	33.9	16.5	49.5	-	-	-	33.9	16.5	49.5
Lunglei	3.1	28.5	68.4	0.0	11.9	88.1	1.7	21.1	77.2
Mamit	32.1	24.2	43.7	0.0	37.1	62.9	25.3	27.0	47.8
Saiha	1.6	22.4	76.1	0.0	19.4	80.6	1.1	21.5	77.4
Serchhip	0.3	13.8	85.8	0.9	8.4	90.7	0.6	11.1	88.3
Mizoram	11.9	18.9	69.1	0.3	15.1	84.7	5.8	16.9	77.4

Source: Survey data, 2008.
Notes: a) *Kutcha* and Thatched; b) Semi-*pucca*.

Household Amenities—Electricity, Drinking Water, Sanitation

An examination of the amenities available to the households shows that most of the houses have electricity and hence electrification is not an area of deprivation in Mizoram (Table 3.5). Only 11 per cent of the rural homes and 1 per cent of the urban homes do not have electricity.

Toilet facilities are also poor as more than two-thirds of the rural homes and one-fourth of the urban homes do not have toilets. In all, half of the houses in Mizoram do not have toilets within the premises and the administration must take immediate steps to improve this situation.

Spatial disparities do exist in the availability of household amenities as well with the districts of Lawngtlai and Mamit being the worst sufferers. In addition, the availability of electricity is poor in rural Aizawl; the unavailability of toilets is more severe in the rural Lunglei and urban Kolasib districts; while the problem of lack of drinking water facilities within the house is more acute in the rural areas of Aizawl and Lunglei.

Table 3.5: Lack of Housing Amenities in Mizoram (% of Persons)

State	Without Electricity			Without Toilet			Without Drinking Water within Premise		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
					By Districts				
Aizawl	26.5	0.5	6.3	66.2	24.4	33.7	99.9	58.5	67.8
Champhai	5.1	0.0	2.9	72.5	20.0	49.6	92.4	38.8	69.0
Kolasib	0.2	1.1	0.7	44.2	67.0	56.8	77.2	81.1	79.3
Lawngtlai	17.9	-	17.9	80.3	-	80.3	95.4	-	95.4
Lunglei	4.7	3.4	4.1	72.9	27.3	52.7	97.5	56.7	79.4
Mamit	11.6	0.2	9.2	69.3	55.7	66.4	99.6	97.9	99.3
Saiha	1.1	0.6	1.0	66.3	28.4	55.3	95.1	26.3	75.1
Serchhip	2.2	2.5	2.4	61.0	23.2	42.1	100.0	38.4	69.1
Mizoram	**10.9**	**1.0**	**5.6**	**69.2**	**28.1**	**47.5**	**95.5**	**56.4**	**74.8**

Source: Survey data, 2008.

Asset Ownership

Another indicator of material deprivation may be the lack of assets owned by the people. The following types of assets have been considered—agricultural assets (for example, traditional implements, bullock carts, tractors, etc.), non-agricultural assets (for example, oil/sugarcane crushers, looms, sewing machines, etc.), transport assets (for example, cycle, motorcycle, jeep, etc.), and financial assets (for example, bank/post office savings, fixed deposits, ornaments, etc.). It has been observed that the asset position in Mizoram is not very encouraging. While 38 per cent of the rural population does not have any agricultural assets, 86 per cent of the people do not have any non-agricultural asset, and 79 per cent do not have any transport asset (Table 3.6). The situation is even worse in the case of financial assets – 96 per cent do not have even any bank or post office deposits. The incidence of lack of assets is much more frequent in rural areas as compared to urban areas. Among the districts, the people of Lawngtlai and Lunglei are relatively more deprived in terms of agricultural assets, those of Champhai and Langtlai are deprived in terms of transport assets, those of Saiha and Serchhip lack non-agricultural assets, and financial assets are more sparse in the Mamit and Kolasib districts.

Table 3.6: Lack of Assets in Mizoram (% of population) across Districts

District	Aizawl	Cham-phai	Kolasib	Lawn-gtlai	Lunglei	Mamit	Saiha	Ser-chhip	State
Rural									
No Agricultural Asset	24.4	22.9	48.6	60.6	48.1	47.6	30.5	13.3	38.0
No Non-agro Asset	79.0	83.1	84.2	87.0	91.8	88.2	91.3	97.7	86.7
No Transport Asset	86.8	97.4	79.2	90.3	84.2	86.9	82.0	75.2	86.9
No HH Appliances	7.4	19.9	1.1	14.6	10.5	17.6	1.4	2.2	10.6
No Financial Asset	93.5	99.8	99.9	99.4	97.6	99.9	98.0	99.1	98.0
Urban									
No Agricultural Asset	76.1	54.9	59.3	-	92.4	59.7	87.2	69.9	57.2
No Non-agro Asset	85.1	78.8	86.6	-	85.1	81.6	100.0	94.9	86.1
No Transport Asset	58.4	85.9	83.6	-	65.9	79.3	68.4	73.0	75.7
No HH Appliances	1.1	0.4	0.4	-	2.5	1.9	0.3	2.2	5.6
No Financial Asset	86.7	99.3	100.0	-	95.9	99.5	100.0	100.0	94.6
Aggregate									
No Agricultural Asset	64.5	36.9	54.5	60.6	67.8	50.2	47.0	41.7	51.1
No Non-agro Asset	83.8	81.2	85.5	87.0	88.9	86.8	93.8	96.3	86.3
No Transport Asset	64.7	92.4	81.6	90.3	76.1	85.3	78.1	74.1	79.3
No HH Appliances	2.5	11.3	0.7	14.6	6.9	14.3	1.1	2.2	7.2
No Financial Asset	88.2	99.6	99.9	99.4	96.9	99.8	98.6	99.6	95.7

Source: Survey data, 2008.

It is thus evident that material poverty is a serious problem in Mizoram, in terms of the aggregate income/consumption level as well in terms of other material conditions like ownership of land, housing, and household assets. Since human poverty is the evidence of lack of human development, any effort to improve the human development level in the state should attach the greatest importance to the eradication of such deprivations.

Inequality in Mizoram

It has already been noted that apart from absolute poverty, relative poverty or inequality is also an important issue to be examined. Inequality has been examined in terms of inequality in landholding, inequality in asset ownership, and the conventional income/consumption inequality. Both the Gini Coefficients and relative shares of the top and bottom 20 per cent of the population have been used to measure the extent of inequality.

Inequality in Landholdings

The incidence of ownership of landholdings shows highly unequal figures in rural Mizoram (Table 3.7). While the top 20 per cent of the rural population owns more than 80 per cent of the cultivated land, the bottom 20 per cent owns only 0.2 per cent of land. This results in a high Gini Coefficient of 0.80. Inequality in landholding is most severe in the districts of Champhai and Saiha, and relatively less so in those of Serchhip and Aizawl. It may be noted that while in rural Aizawl, the average is also low, indicating that all the people are equally poor, in Serchhip, the average is on the higher side, a sign of equally rich landholders existing in the district. In fact, the incidence of landlessness is also the lowest in Serchhip.

Inequality in Asset Ownership

It has already been noted that asset ownership is sparse in Mizoram. Even with a low base, inequality in the value of assets owned is highly unequal (Table 3.8). Except in terms of household appliances, and agricultural assets, the Gini Coefficients for all other types of assets are more than 0.90.

Table 3.7: Inequality in Landholding in Rural Mizoram

District	Share in Land of		Gini Coefficient
	Bottom 20% Population	Top 20% Population	
Aizawl	2.0	44.0	0.44
Champhai	0.3	95.0	0.89
Kolasib	0.3	69.0	0.70
Lawngtlai	0.2	53.0	0.55
Lunglei	0.1	61.0	0.62
Mamit	0.2	58.0	0.61
Saiha	0.1	80.0	0.82
Serchhip	2.0	44.0	0.43
Mizoram	**0.2**	**79.5**	**0.80**

Source: Survey data, 2008.

Inequality is the highest for financial assets, in both rural and urban areas. At the spatial level, inequality in asset ownership is most acute in Lawngtlai for all types of assets, in Champhai for transport assets, and in Aizawl for household appliances.

If the per capita value of all the assets owned by a household is examined, the situation still remains quite aggravating (Table 3.9). In the rural areas, 66 per cent of all assets are owned by the top 20 per cent of the population while the bottom 20 per cent own only 1 per cent of the assets. The corresponding urban percentages are 68 and 1.8, respectively. This has resulted in Gini Coefficients of more than 0.6 in both the rural and urban areas. The problem is relatively more severe in the Lawngtlai, Mamit, and urban Saiha districts. Relatively

Table 3.8: Inequality in Ownership of Assets in Mizoram (Gini Coefficients)

District	Aizawl	Champhai	Kolasib	Lawngtlai	Lunglei	Mamit	Saiha	Serchhip	State
Rural									
Agricultural Assets	0.42	0.73	0.81	0.92	0.79	0.81	0.61	0.48	0.76
Non-agro Assets	0.90	0.92	0.92	0.94	0.94	0.92	0.91	0.97	0.94
Transport Assets	0.94	0.96	0.92	0.96	0.92	0.94	0.93	0.90	0.94
HH Appliances	0.56	0.56	0.45	0.56	0.51	0.58	0.38	0.37	0.51
Financial Assets	0.95	1.00	1.00	0.99	0.99	0.99	0.98	0.99	0.95
Urban									
Non-agro Assets	0.91	0.90	0.82	0.94	0.27	-	0.97	0.91	0.92
Transport Assets	0.79	0.92	0.86	0.79	0.79	0.85	0.90	0.79	0.85
HH Appliances	0.44	0.37	0.36	0.50	0.30	0.36	0.38	0.44	0.44
Financial Assets	0.97	0.99	-	0.98	-	-	-	0.97	0.95

Source: Survey data, 2008.

lower inequality in asset ownership is observed in rural Lunglei, where, it may be recalled, asset ownership itself is low, indicating a situation that is somewhat akin to sharing of poverty.

Table 3.9: Inequality in Ownership of Assets in Mizoram—All Assets

District	Aizawl	Champhai	Kolasib	Lawngtlai	Lunglei	Mamit	Saiha	Serchhip	State
Rural									
Share of Bottom 20%	2.0	1.0	2.0	1.0	2.0	1.0	4.0	4.0	1.0
Share of Top 20%	54.0	60.0	63.0	70.0	64.0	75.0	58.0	59.0	66.1
Gini Coefficient	0.54	0.60	0.61	0.68	0.61	0.72	0.53	0.54	0.64
Urban									
Share of Bottom 20%	2.0	3.0	4.0	-	2.0	0.0	2.0	2.0	1.8
Share of Top 20%	65.0	62.0	53.0	-	62.0	41.0	69.0	71.0	68.2
Gini Coefficient	0.61	0.57	0.50	0.62	0.30	0.63	0.66	0.61	0.65

Source: Survey data, 2008.

Income/Consumption Inequality

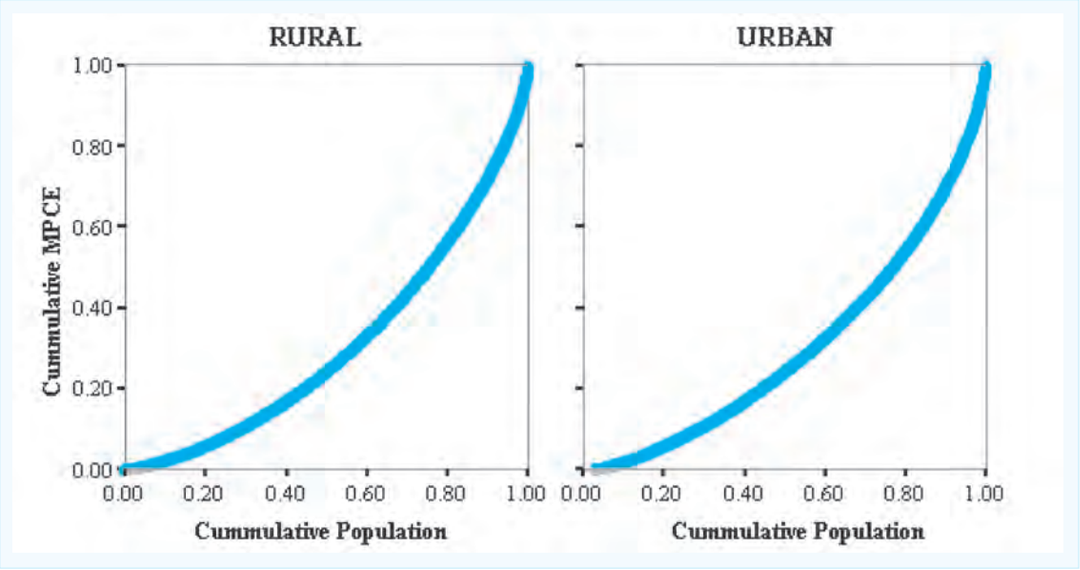
The most common measure of inequality is that in PCI or MPCE, reflecting inequality in living standards and well-being. It has been observed that the top 20 per cent of the population in Mizoram has around 45 per cent share in the MPCE while the share of the poorest 20 per cent is only around 5.5 per cent (Table 3.10). The Gini Coefficients obtained are 0.38 for rural areas and 0.41 for urban areas, respectively. This inequality is relatively higher in Lawngtlai, the rural areas of Mamit and Kolasib, and the urban areas of Serchhip and Aizawl. Figure 3.1 depicts the Lorenz Curve for MPCE in the rural and urban areas of Mizoram, respectively.

Table 3.10: Inequality in Living Standard in Mizoram (MPCE)

District	Aizawl	Champhai	Kolasib	Lawngtlai	Lunglei	Mamit	Saiha	Serchhip	State
Rural									
Share of Bottom 20%	8.0	7.0	6.0	8.0	9.0	3.0	10.0	12.0	5.6
Share of Top 20%	37.0	39.0	44.0	41.0	40.0	64.0	33.0	33.0	44.1
Gini Coefficient	0.32	0.33	0.39	0.34	0.32	0.61	0.24	0.22	0.38
Urban									
Share of Bottom 20%	4	10	10	-	6	0	10	6	5.5
Share of Top 20%	47.0	38.0	34.0	-	47.0	34.0	35.0	44.0	46.2
Gini Coefficient	0.42	0.29	0.26	0.42	0.25	0.26	0.39	0.42	0.41

Source: Survey data, 2008.

Figure 3.1: Lorenz Curves for MPCE, Rural and Urban Mizoram



Source: Authors' calculations based on earlier tables.

Poverty – Inequality – Well-being: Pooled Observation

If the poverty and inequality figures as obtained in terms of the MPCE are combined, certain interesting results crop up. It has been observed that as compared to the state average, the districts of Champhai and Saiha both have lower poverty as well as lower inequality. At the other extreme is Lawngtlai, where the incidence of both poverty and inequality is higher than the state averages. In Aizawl and Lunglei, the occurrence of poverty and inequality is generally lower than average except the incidence of relatively higher urban inequality in Aizawl and of relatively higher rural poverty in Lunglei. In Kolasib, while rural poverty and urban inequality levels are lower than the corresponding state averages, the levels of rural inequality and urban poverty are relatively higher. In Mamit, the incidence of both poverty and inequality are relatively higher than the average figures while urban inequality levels are relatively lower. Finally, in Serchhip, the incidences of poverty and inequality are relatively lower in rural areas but both are higher than the state averages for the urban areas. Figure 3.2 depicts the Lorenz Curves of MPCE for various districts of Mizoram.

Read along with the average MPCE figures, the following inferences can be drawn.

In the urban areas of Lunglei and the rural areas of Aizawl and Saiha, both relatively higher average standards of living and relatively lower poverty and inequality levels are observed. In urban Aizawl, and the rural areas of Kolasib and Mamit, the average is high but the incidence of inequality is also relatively high. In Champhai, the rural areas of Serchhip, and the urban areas of Kolasib and Saiha, the average is lower but so also is the poverty and inequality levels, that is, the distributional situation is better. At the extreme lie Lawngtlai, the rural areas of Lunglei, and the urban areas of Serchhip and Mamit, where the average is low but poverty and inequality levels are relatively higher.

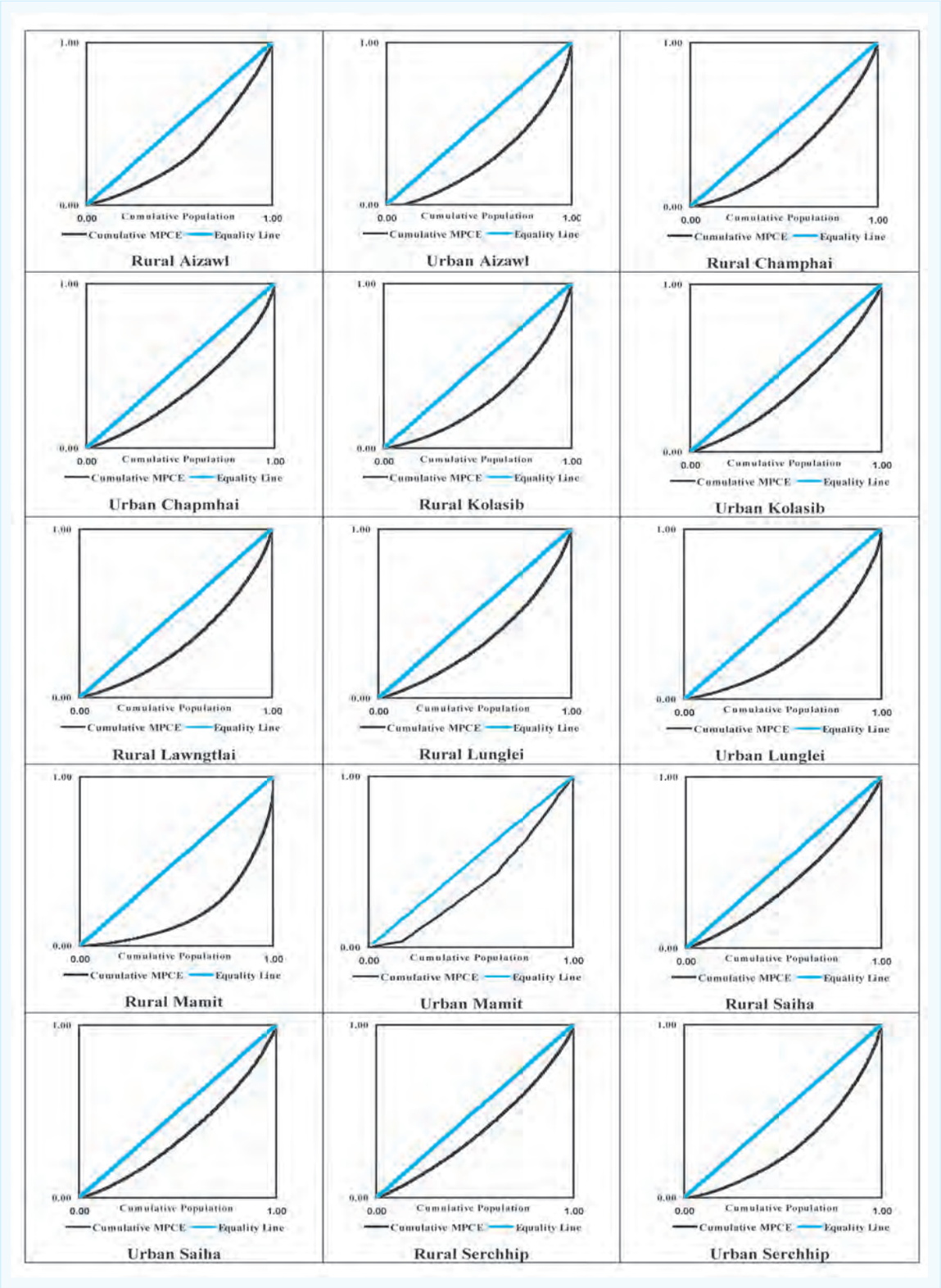
Non-material Inequality

Apart from the material aspects of income/consumption and assets, non-material issues like education and awareness are also important factors in determining the capabilities of the people. Hence, the spread of education and awareness must also be included in studies of human development and their lacunae in this section on poverty and inequality.

Inequalities in Education

Deprivation in educational attainment may operate along two dimensions—some sections of the population may be

Figure 3.2: Lorenz Curves of MPCE in Districts of Mizoram



Source: Authors' calculations based on earlier tables.

lacking educational achievements, and, there may be substantial gender gaps in the indices of educational attainment. It has been observed that in Mizoram, the basic measure of education, that is, literacy levels, are generally high, as about 90 per cent of the people are literate. This is surely commendable in that the people in the state are able to read simple instructions and express themselves. However, the transition to higher levels of education seems to be rather constricted. About 40 per cent of the people do not enter middle schools and only about 15 per cent have had some type of post-secondary education (Table 3.11). Although the gender gap is not significant in Mizoram, the females are under-represented at the higher levels of education, especially in the secondary and post-secondary stages. However, substantial inequality exists at the spatial level. Districts like Lawngtlai and Mamit have relatively more people without literacy and lower proportions of people with secondary or post-secondary education. The gender gaps are also significantly higher than the state averages in these two districts.

Health Situation and Government Health Facilities

Another major component of human capabilities and, therefore, of human development is the health situation of the people. Factors like institutional delivery, pre- and post-natal care, immunization, etc., play an important role in determining the people's capacity to remain healthy and productive. This is reflected in the Infant Mortality Rates (IMRs) and Child Mortality Rates (CMRs) used as standard indicators of the health situation in a society.

Table 3.11: Inequality in Educational Achievements in Mizoram across Districts

Percentage of People	Aizawl	Champhai	Kolasib	Lawngtlai	Lunglei	Mamit	Saiha	Serchhip	State
Males									
Illiterate	8.3	11.2	11.1	15.6	10.5	14.2	11.5	10.0	10.4
Literate below Primary Level	9.0	11.7	8.9	13.2	11.6	14.9	12.2	12.3	10.8
Primary Level	18.9	19.5	14.7	23.7	15.7	21.8	18.1	19.0	18.7
Middle Level	25.3	28.6	34.2	25.8	25.3	28.0	24.5	23.9	26.4
Secondary Level	18.9	18.9	17.1	12.8	19.0	9.6	21.9	21.0	18.1
Higher Secondary and Above	19.6	10.1	14.1	8.9	17.8	11.5	11.7	13.8	15.5
Females									
Illiterate	9.5	11.1	10.7	18.0	12.0	16.2	10.4	9.0	11.2
Literate below Primary Level	14.3	13.8	9.6	16.8	14.0	15.9	12.8	13.0	13.9
Primary Level	16.1	25.0	20.3	30.2	25.7	27.1	20.8	21.4	21.2
Middle Level	23.8	27.1	33.4	21.5	23.0	22.8	29.4	25.0	25.0
Secondary Level	17.0	14.7	18.6	8.2	12.1	10.9	19.1	20.0	15.4
Higher Secondary Level and Above	19.2	8.3	7.4	5.3	13.2	7.0	7.5	11.5	13.2

Source: Survey data, 2008.

It has been observed that the service delivery system related to childbirth is relatively good in Mizoram with more than 65 and 80 per cent of the mothers and children getting the benefits in rural and urban areas, respectively (Table 3.12). However, it is still lower than the Millennium Development Goal (MDG) targets of full immunization and full institutional coverage. Associated with the good facilities performance, the CMRs and IMRs are also lower than the national average figures. However, there is considerable spatial disparity and institutional coverage is relatively poor in Lawngtlai, Lunglei, and Mamit, especially in the rural areas of these districts. On the other hand, the CMRs and IMRs are relatively higher in Serchhip, Saiha, Lunglei, rural Champhai and urban Kolasib. Surprisingly, in Aizawl too, the CMRs are high, especially in the urban areas. This may be due to the high incidence of urban poverty in the capital city, or perhaps the high referral of critical cases from elsewhere in the state to hospitals in the capital city and associated high number of reported child deaths.

People's perception about the government's health facilities or lack of them is also an important factor in determining the 'health poverty' of the people, especially in low-income developing societies. Since expenses on medical treatment constitute a major cause for indebtedness and the poverty of the people, it is crucial to establish an accessible and efficient public health system for ensuring their improved health standards. It has been observed that the most crucial problem regarding the public health centres, as reported by the respondents, is that these centres lack doctors and facilities (Table 3.13). The distance from the residence and lack of availability of medicines are also factors cited by more than 15 per cent of the people.

At the regional level, distance signifies

Table 3.12: Spatial Inequality in the Health Situation in Mizoram

Schemes		Aizawl	Champhai	Kolasib	Lawngtlai	Lunglei	Mamit	Saiha	Serchhip	State
Institutional Delivery	Rural	72.9	86.9	65.8	44.5	46.6	67.0	78.1	91.3	65.7
	Urban	79.2	94.0	91.6	-	83.6	85.2	96.3	98.5	83.9
Delivery by Trained Nurse	Rural	87.4	97.2	86.2	60.6	61.6	70.8	91.4	98.8	78.8
	Urban	94.0	95.7	100.0	-	94.6	91.1	98.3	99.6	95.1
Pre-natal Care	Rural	99.0	88.4	100.0	70.6	76.6	97.1	83.4	78.7	85.4
	Urban	90.1	98.1	95.5	-	95.8	88.8	99.6	96.1	92.7
Post-natal Care	Rural	72.1	66.0	98.3	78.0	82.8	98.1	64.5	64.6	77.6
	Urban	85.0	90.1	89.4	-	92.2	86.6	99.6	95.5	87.9
Children Immunized	Rural	87.6	98.5	85.3	95.1	91.3	75.1	96.7	100.0	91.8
	Urban	88.8	96.4	98.4	-	99.3	96.1	84.7	98.6	91.8
Treatment at Govt Facilities	Rural	90.9	86.7	60.6	96.2	90.1	71.7	93.7	80.4	87.3
	Urban	53.6	85.2	100.0	-	75.4	100.0	97.2	97.8	66.1
IMR<1 Week	Rural	6.3	2.5	0.0	1.5	2.5	3.1	3.7	11.5	3.6
	Urban	7.0	0.0	0.0	-	0.0	0.0	4.2	0.0	4.4
IMR	Rural	6.3	0.0	0.0	9.2	9.6	2.0	4.8	7.1	5.3
	Urban	15.4	0.0	0.0	-	0.0	9.1	0.0	0.0	9.4
CMR	Rural	0.0	9.5	5.6	8.1	0.0	4.8	7.8	0.0	4.6
	Urban	3.8	0.0	11.3	-	7.8	0.0	0.0	3.6	4.1

Source: Survey data, 2008.
Note: IMR and CMR are Infant and Child Mortality Rates, respectively, per thousand Live Births; All others are in percentages.

more of a problem in Mamit and Serchhip, the problem of lack of doctors and staff is relatively more acute in Lawngtlai and Aizawl, while the lack of facilities and medicines is a crucial factor in Lunglei, Kolasib and Lawngtlai.

Lack of Awareness about Development Schemes

One of the important instruments of development in the country's socio-political set-up is public awareness about various developmental schemes. If people are not aware of the dues and benefits which they are entitled to, these schemes will not succeed in improving their conditions. Several developmental schemes have been considered, all of which are implemented at the local self-government level, and people's awareness of these schemes was also assessed.

It has been observed that apart from the National Rural Employment Guarantee Scheme (NREGS), the Sarva Shiksha Abhiyan (SSA), and the Integrated Child Development Scheme (ICDS), most people are not aware about the other schemes (Table 3.14). Schemes that are the most heard of are Total Sanitation Campaign (TSC)/Swajaldhara and Accelerated Rural Water Supply Programme (ARWSP) for water supply. Thus, the schemes related to two most important aspects of basic human needs—safe drinking water and sanitary toilets—are issues that people of the state are aware of. However, most people are unaware of the NREGS and ICDS, that is, schemes related to livelihood promotion and the healthy development of children. Awareness about the maternity benefit scheme is also poor. This has serious implications for the health deprivations in the state. In tune with the earlier observations, Lawngtlai, Lunglei, and Mamit are areas where there is relatively low awareness about almost all the schemes.

Table 3.13: People's Perception Regarding Government Health Facilities in Mizoram

Problems	Aizawl	Champhai	Kola-sib	Lawn-gtlai	Lunglei	Mamit	Saiha	Ser-chhip	State
1. Rural									
Facilities Too far	8.3	9.1	16.7	14.3	12.5	33.3	17.6	33.3	16.3
Lack of Doctors	16.7	18.2	16.7	28.6	12.5	16.7	17.6	33.3	20.0
Lack of Facilities	16.7	18.2	33.3	21.4	25.0	33.3	17.6	33.3	22.5
No Medicines	25.0	18.2	16.7	21.4	25.0	0.0	11.8	0.0	16.3
Others	0.0	9.1	16.7	7.1	12.5	16.7	11.8	0.0	8.8
2. Urban									
Facilities Too far	11.1	22.2	33.3	NA	50.0	NA	15.4	0.0	16.0
Lack of Doctors	11.1	22.2	33.3	NA	0.0	NA	23.1	40.0	20.0
Lack of Facilities	16.7	22.2	33.3	NA	50.0	NA	23.1	40.0	24.0
Poor Attitude of Staff	16.7	11.1	0.0	NA	0.0	NA	7.7	20.0	12.0
No Medicines	16.7	11.1	0.0	NA	0.0	NA	23.1	0.0	14.0
Others	11.1	0.0	0.0	NA	0.0	NA	7.7	0.0	6.0

Source: Survey data 2008.
Note: All figures are in percentages to total respondents.

Table 3.14: Awareness Poverty in Mizoram—Percentage of People NOT Aware of Schemes

Schemes	Aizawl	Cham-phai	Kolasib	Lawn-gtlai	Lunglei	Mamit	Saiha	Serchhip	State
SGSY	75.8	75.7	62.7	67.5	67.8	63.4	74.9	78.0	72.5
NREGS	79.2	78.8	75.1	77.7	77.3	77.6	79.1	80.6	78.4
IAY	74.4	74.4	70.6	69.8	68.3	70.6	77.3	79.9	73.1
TSC/Swajaldhara	68.0	67.7	57.1	63.1	63.7	60.4	62.3	64.2	65.2
ARWSP	69.4	68.4	70.5	66.3	66.3	71.1	64.7	67.3	68.3
SSA	79.4	78.7	74.2	74.2	75.2	77.1	78.6	80.5	77.8
ICDS	79.3	78.7	74.9	76.3	75.8	77.4	79.1	80.5	78.1
Old Age/Widow Pension	77.7	78.3	69.7	66.2	67.3	70.6	76.9	79.8	74.4
Maternity Benefit	76.7	76.7	68.7	64.2	66.6	70.6	74.7	77.6	73.2
State Health Insurance	77.9	78.1	73.1	70.2	70.6	71.9	78.5	80.3	75.8

Source: Survey data, 2008.

Concluding Comments

This chapter focuses on the deficiencies pertaining to human development in Mizoram in order to facilitate the identification of the problem areas and initiation of the necessary steps to tackle them. It has been observed that the income/consumption situation in the state is relatively better as compared to that of the country as a whole, especially in the rural areas. However, these average levels do not reveal the true picture. The poverty levels are quite high—almost double those of the national average figures—indicating severe inequality in income/consumption levels. Other material conditions are also just moderate and basic amenities like drinking water and sanitation facilities are absent in most of the households. The ownership of physical and financial assets is also quite scarce. Inequality, as mentioned earlier, is quite high, both in terms of income/consumption and in asset holdings. Non-material deprivations like the lack of higher education and health facilities are also quite common though the basic literacy level is significantly high. Awareness poverty is also acute in the sense that most of the people are either unaware of the various developmental schemes or have not benefited from them. Substantial regional variations exist with the districts of Lawngtlai, Lunglei, and Mamit being at the bottom rung of the ladder while Aizawl and Saiha are at the top end.

It is evident that a lot more ground needs to be covered to ensure fair and sustainable human development in Mizoram. People suffer from the lack of material assets, high inequality levels, and non-accessibility of facilities, and the society seems to be trapped at a low level of equilibrium. Unless this is immediately addressed, growth and development will bypass a large mass of the people and create a minefield of social tension and grievance in the state. This is a challenge that the policy-makers will have to address on a priority basis.

4

Employment and Livelihood

The workforce in the state is predominantly engaged in the primary sector, which is mostly agricultural in nature, followed by other sectors including construction, trade and commerce, hotels, etc. The structural transformation of the workforce in the state is still in the primary stage. The Work Participation Rates (WPRs) and Employment Rates (ERs) are higher in Mizoram as compared to the national average, specifically because of the higher participation of women in the labour force. However, the incidence of unemployment, specifically youth unemployment, constitutes a serious problem in Mizoram. The state level Employment Livelihood Index (ELI), which has been constructed in the chapter, conceals a great deal of district level variation. Even at the state level, an index of 0.54 indicates that there is a large potential for improvement.

Background

During the past decade, development literature has become more people-centric with human development being projected as one of the 'ends' of development planning. In addition, human development (HD) is also seen as human capital formation, which is nowadays acknowledged as a critical 'means' towards growth. Naturally, this dual role of HD has catapulted it to the centre-stage of research and discussion.

It has come to be recognized that improvements in human beings—in their capabilities, skills and opportunities—are important targets by themselves. Moreover, this has substantial 'spillover' effects as greater capabilities lead to higher productivity levels, increased income levels, and a wider scope for further human capital formation. Thus, uplifting of a single generation of citizens propels all future generations on to a higher growth trajectory. The 'trickledown' effects are also significant as better living standards lead to greater care for the environment and resources, a healthy and democratic civic society, and a lower discrimination based on gender, race and caste. The importance of HD is much more pronounced in a developing nation like India. Here development would mean improving the condition of human life—an end in itself—and the growth of income or spread of industries or the expansion of agriculture are to be seen as only means towards achieving that end. In this regard, the role of employment and livelihood is perhaps most significant and direct—and it would not be too out of place to comment that employment and livelihood are important instruments for achieving the central objective of human development (Ranis and Stewart, 2001). Thus, employment opportunities, especially wage employment, the nature of such employment, and associated trends in remuneration are factors that are important for eliminating poverty and inequality, and for ushering in well-being in a holistic manner. Therefore, employment and livelihood patterns form an important component of a Human Development Report (HDR).

Specialities of a Hill Economy

More than 10 per cent of the world's population lives in hills and mountains. The hilly regions produce water, energy, minerals, and forest and agricultural products; are spots of tourism; and also store the biological diversity necessary for the sustainability of human life. In spite of such richness, the hill regions are characterized by some very special physical, ecological and socio-cultural features, which, unless specifically taken into account, do not permit development planning for the regions. Any development of the hilly regions has to proceed in a way that the eco-system constituting the hills and the plains, is not irreversibly damaged, but is preserved in a suitable condition for future generations. In India, most of the hilly regions are based on agriculture and other primary sector activities because of the terrain and geo-physical barriers to development of industry and infrastructure. In the hills, the tribal population has, for generations adopted shifting (Jhum) cultivation but this mode has kept productivity low and contributed to deforestation and erosion of soil. In the historical past, shifting cultivation had a long shifting cycle, which was enough to revitalize the soil. But with rising population density, pressures on land increased, and the cycle was reduced, leading to enormous environmental damage. With low and declining productivity of land, the economic returns from agriculture have also become unsustainable for the tribals. In order to increase productivity, and improve the incomes and living conditions of the tribal population, it is, therefore, necessary to gradually move to settled cultivation in the hilly regions. But till that happens, the incomes and living standards of the people of the hill economy would remain low and would restrict broader human development. In addition to the limited scope for economic activities and constricted income generation opportunities, the hill economy also suffers from higher costs of living. Physical distances and obstacles to smooth transport facilities lead to higher delivery charges, for both inward and outward commodities.

All these lead to considerable restrictions on the people of hill economies regarding economic and human upliftment. This background should help us in understanding the discussions in this chapter in the proper perspective.

Profile of the Region

The North-east of India is said to be a region of 'Seven Sisters and a Brother' consisting of eight States, namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, and Sikkim. It has a population of 39.04 million as per the 2001 Census of India. Among these eight states, Mizoram has a population of 8,88,000, most of whom (almost 95 per cent) belong to various tribal groups, following unique traditions, economic structure, and festivals. The state, as with the region itself, is characterized by low market development, very little manufacturing activity, and a per capita income that is substantially lower than the national average. However, the region has huge potentials in hydropower, oil and gas, coal, limestone and forestry industries, not to mention stunning natural beauty and cultural diversity that makes it a tourism paradise.

Overview of the Employment Situation

The Census of 2001 reveals that out of the total population of about 8,88,000 in the state of Mizoram at that time, 52.6 per cent or about 4,67,000 were workers (Table 4.1). The proportion of workers was higher in the rural areas (57.2 per cent) as compared to that in urban areas (47.9 per cent). Of the total, 57.2 per cent of the total workers were male; 60.6 per cent of the total workers were engaged in agricultural activities (as cultivators and agro labourers); 1.5 per cent were engaged in household industries; and the rest were working in the other sectors.

The employment scenario in Mizoram can also be explored in terms of the trends in the Work Participation Rate (WPR), Employment Rate, and Unemployment Rate over the last 15 years (Table 4.2). It has been observed that throughout the period 1993-2004, about 45 per cent of the population have been in the workforce. The WPR is higher in rural areas as compared to urban areas. A consistent rise has also taken place in the WPR during this time, more so in the rural areas.

The employment rate has been about 95-97 per cent of the workforce, that is, about 40 per cent of the total population are working. Employment rates in the rural areas have been consistently rising but those in the urban areas declined during the 1990s, followed by a rise during the last decade. Aggregate employment rates have also increased during this period.

However, the rise in employment has not been able to keep pace with the increase in the workforce, and, as a result, the unemployment rates increased from about 1 per cent of the workforce in 1993-94 to about 3 per cent of the workforce in 2004-05. This is solely due to the high and rising unemployment rates in the urban areas because rural unemployment is relatively lower and also declined during 1993-2004.

If the Fifth Economic Census held in 2005 is considered, which provides estimates of workers outside cultivation, it can be seen that a total of about 1,07,000 persons were employed in the 47,730 enterprises enumerated in the state. Out of this, 12.6 per cent were employed in agricultural enterprises and the remaining 87.4 per cent in non-agricultural enterprises. While 31.2 per cent of these workers were in rural areas, 68.8 per cent were engaged in the urban areas. In all, there were about 64,000 hired workers in both agricultural and non-agricultural enterprises, including about 45,000 in the urban areas, and the remaining 19,000 in rural areas.

Trends in Industrial Distribution of Workers

An important element of the development process is the occupational distribution of the workforce and structural shifts occurring in it. It is generally argued that the workforce shifts from the primary to the secondary and then to the tertiary sectors as development occurs. Structural shifts in the pattern of the workforce in Mizoram can

Table 4.1: Population and Labour Force in Mizoram

District	Population – 2001					
	Male	Female	Total	Male	Female	Total
Aizawl	166.9	158.8	325.7	94.5	68.5	163.0
Champhai	55.8	52.6	108.4	36.2	31.9	68.1
Kolasib	34.6	31.4	66.0	20.3	15.2	35.5
Lawngtlai	38.8	34.8	73.6	19.7	14.4	34.1
Lunglei	71.4	65.8	137.2	40.9	30.9	71.8
Mamit	33.1	29.7	62.8	19.4	15.8	35.2
Saiha	31.2	29.8	61.1	14.9	12.1	27.0
Serchhip	27.4	26.5	53.9	17.1	15.4	32.5
Mizoram	459.1	429.5	888.6	263.0	204.2	467.2

Source: Census of India, 2001.
Note: Figures are in thousands..

be understood if we look at the industrial distribution of the workforce. It is observed that the workers are predominantly engaged in the primary sector, which is mostly agricultural in nature (Table 4.2). Another major arena of employment has been trade and commerce including hotels, etc., and the construction sector. Over time, however, the share of the primary sector in the workforce has been decreasing while that of the manufacturing sector has been consistently increasing. It is thus evident that the structural transformation of the workforce is still in its primary stage in Mizoram.

Although figures from the 2001 Census or the 2004-05 National Sample Survey Organization (NSSO) Survey provide an important backdrop to the prevalent situation in Mizoram, in order to understand the employment and livelihood situation in the state in the context of human development, there is a need to look at the more recent district level statistics of magnitude, nature, regularity, and the resultant livelihood patterns of the people of Mizoram. This is attempted in this chapter by using data obtained from a field survey conducted across the state in 2009.

Methodology Adopted

In the following sections, the magnitude and nature of employment and livelihood patterns, as evident from the data obtained through the field survey conducted in 2009, are discussed. Since the focus of this chapter is on employment and livelihood, an attempt has also been made to construct an Employment and Livelihood Index (ELI) for the districts as well as for the state as a whole. This index consists of both the employment parameters and indicators of quality of living. The details are given below.

The employment parameters included reflect the type and regularity of employment. The following three employment indicators have been included: a) proportion of workers having regular salaried employment; b) percentage of workers in the secondary and tertiary sectors; and, c) percentage of workers having at least 200 days of employment during the preceding year. While these reflect the labour market situation, the stability or otherwise of the livelihood pattern has to be examined in terms of the income/ consumption level of the people. Higher income/consumption levels indicate a fruitful livelihood pattern while low levels are indicators of unsustainable livelihood. Therefore, along with the three employment indicators, the Average Monthly Per Capita Consumption Expenditure (MPCE) has been included to reflect the livelihood level of the people. These four components are combined by using the (Modified) Principal Component Method to arrive at the Employment and Livelihood Score. After that, these scores are converted into the Employment and Livelihood Index (ELI) by using the UNDP Goalpost Method.

Table 4.2: Employment Situation in Mizoram over the Years

Indicators	NSS 1993			NSS 1999			Census 2001			NSS 2004		
	R	U	T	R	U	T	R	U	T	R	U	T
WPR[a]	42.1	37.4	39.8	45.5	36.5	41.0	47.1	42.2	44.6	51.2	39.9	45.6
Employment Rate[a]	41.5	37.2	39.4	44.8	35.1	40.0	45.0	36.5	40.8	50.7	37.9	44.3
Unemployment Rate[b]	1.4	0.5	1.0	1.5	3.8	2.6	4.4	13.5	8.6	1.0	5.0	2.9
Industrial Division of Workers												
Agriculture	88.6	41.1	67.7	84.1	30.1	60.3	84.4	31.2	60.8	87.5	36.2	64.9
Mining, etc.	0.0	0.1	0.1	0.3	1.5	0.8	0.0	0.6	0.3	0.0	0.1	0.1
Manufacturing	0.6	4.3	2.2	1.0	3.8	2.2	1.1	6.0	3.3	0.8	5.1	2.7
Electricity, etc.	0.2	0.3	0.3	0.0	0.0	0.0	0.5	3.0	1.6	0.0	0.0	0.0
Construction, etc.	1.2	4.6	2.7	1.0	9.1	4.6	0.8	6.5	3.3	1.0	4.9	2.7
Trade & Hotels	2.0	14.4	7.5	3.3	17.9	9.7	1.5	14.0	7.0	3.5	17.1	9.5
Financial Services	0.1	1.4	0.7	0.2	3.0	1.4	0.6	4.7	2.4	0.5	2.6	1.4
Other Services	0.1	0.1	0.1	0.1	2.1	1.0	1.0	3.2	2.0	0.2	1.2	0.6

Sources: Calculations based on Census of India (2001), NSSO (1994, 2000, 2005).
Notes: a) Work Participation and Employment Rates are as percentages of the Total Population; b) Unemployment Rate is as a percentage of the workforce. R=Rural; U=Urban; T=Total.

It must be noted, however, that the ELI, as with the other indices constructed by using the UNDP Goalpost Method, is a relative ranking index, which provides a descending list of the districts in terms of the employment and livelihood situation. The magnitude of the index is of little consequence.

The Current Employment Situation

Field data from the 2009 survey reveals that the WPR in the state is 55.7 per cent for males and 39.8 per cent for females, aggregating to 47.6 per cent in total (Table 4.3). The WPR is the highest in Lawngtlai and the lowest in Saiha. Employment Rates (ERs), expressed as a percentage of the population, are 37 per cent, including 48 per cent for males and 26 per cent for females. The ER is the highest in Mamit and the lowest in Aizawl.

Unemployment is a serious problem in Mizoram—about 23 per cent of the persons in the workforce are without any gainful employment. In the Kolasib and Mamit districts, the unemployment rates are below 10 per cent whereas in all the other districts, the rates are close to or above 20 per cent, with the highest being in Aizawl (29 per cent). The unemployment rates are substantially higher for females (34 per cent) as compared to males (14 per cent). In fact, for Aizawl and Lawngtlai, the unemployment rates for females are above 40 per cent—an alarming situation indeed.

It has been observed that the WPR, when disaggregated across age groups and gender, is the highest for the bottom two age groups—16-24 years and 25-40 years (Table 4.4). The employment rates are the highest for the age group of 41-60 years. However, while the WPRs are lower for the females, the employment rates are further lower, which is why the unemployment rates for them are higher than for the males. Of greater concern, however, is the

Table 4.3: Labour Force Participation and Employment Situation in Mizoram, 2009

District	Work Participation Rate			Employment Rate			Unemployment Rate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Aizawl	53.4	40.0	46.5	42.8	24.0	33.1	19.7	40.1	28.7
Champhai	55.4	44.8	50.0	50.4	32.6	41.3	9.1	27.3	17.5
Kolasib	61.7	31.8	45.9	58.3	28.7	42.6	5.6	9.7	7.1
Lawngtlai	61.9	41.9	52.4	53.4	23.9	39.4	13.6	43.1	24.8
Lunglei	59.6	37.8	48.7	51.3	23.8	37.5	14.0	37.0	22.9
Mamit	55.1	39.4	47.5	51.8	35.6	44.0	6.0	9.6	7.5
Saiha	51.6	37.4	44.7	47.1	25.8	36.7	8.8	30.9	17.8
Serchhip	50.4	43.2	46.7	43.3	26.9	34.9	14.1	37.9	25.4
Mizoram	55.7	39.8	47.6	47.8	26.3	36.9	14.1	34.1	22.6

Source: Survey data, 2008.
Notes: Work Participation and Employment Rates are as percentages of the Total Population; Unemployment Rate is as a percentage of the Workforce.

unemployment situation of the youth (age group of 15-24 years). About one-third of the young males and more than half of the young females in the workforce are without employment. This is an alarming situation and would be discussed later in the report.

If we combine this situation with that obtained from the 2004-05 NSSO survey, certain important observations can be made. First, the WPRs and ERs were higher in Mizoram as compared to the national average, specifically because of the higher participation of women in the labour force and in employment. Thus, the participation of women in the labour market in Mizoram is wider than in the country as a whole, which is perhaps a direct fallout of the social structure of the tribal population of the state. Second, over the 2004-2009 period, labour force participation has increased in Mizoram whereas employment opportunities have narrowed down, leading

Table 4.4: Gender and Age-wise Work Participation and Employment Situation in Mizoram, 2009

Age Group	Work Participation Rate		Employment Rate		Unemployment Rate	
	Male	Female	Male	Female	Male	Female
15-24 Years	52.4	36.9	35.1	17.6	33.1	52.2
25-40 Years	95.6	67.6	84.1	46.5	12.0	31.1
41-60 Years	96.7	64.2	93.0	48.3	3.8	24.8
Above 60 Years	5.3	7.4	2.4	NA	55.2	NA

Source: Calculations based on field survey in 2009.
Notes: Work Participation and Employment Rates are as percentages of the Total Population; Unemployment Rate is as a percentage of the Workforce.

to a rise in the WPR and a fall in the ER (though the two figures are not strictly comparable, the trend is clear). This highlights the deteriorating labour market situation in the state over the recent past which has to be carefully addressed.

Nature and Type of Employment

Status of Workers

In the context of human development, the nature, regularity, and returns from work are more important than the availability or otherwise of the job itself. As is often commented by development economists, the poor can ill afford to remain idle, and so both the WPRs and ERs are observed to be higher in poorer societies, though most of the workers in these cases are engaged in low-paying work, which leads to working poverty. It is, therefore, important to assess the nature and type of the job as is evident from the field data collected in this survey.

It has been observed that more than half the workers are either self-employed or constitute family labour (Tables 4.5 and 4.6). Only about 27 per cent of the workers are engaged in regular salaried jobs, most of them in the government sector. The largest proportion of workers is self-employed, mostly in the agricultural sector. Another substantial section of workers is engaged as family labour in the agricultural sector. About one-fifth of the workers are casual workers, mostly in the private sector.

The situation is notably different in Aizawl, where about 40 per cent of the workers are engaged in regular salaried jobs. The share of self-employed workers in the agricultural sector is also low here as compared to the state average, while that of family workers in the non-agricultural sector is quite high. The development level of the state capital and the surrounding region, which is expected to have a vibrant economy and a plethora of government and private sector jobs, may have caused this. In Lunglei and Saiha too, the predominance of self-employed and family workers is somewhat less strong. But here the prevalent work type is that of casual jobs—a section that is often the most vulnerable due to the irregularity of job availability and low wages. At the other extreme lies the Lawngtlai district, where more than 80 per cent of the workers are either self-employed or family workers. It thus emerges that self-employment and family labour—the possible signs of distress and primordial employment opportunities— dominate the labour market in Mizoram.

When the gender and age distribution is studied, it can be observed that though the predominant form of work in aggregate is self-employment and regular jobs, this is not uniform across gender and age categories. The greatest number of females are engaged as unpaid family labourers (which is different from domestic duties), especially the two youngest age groups. This is also true for the males belonging to the 15-24 years age group also. For the rest, the general trend holds good.

Livelihood Situation across Work Status

The working statuses of the workers have a direct relation with their living standards in terms of their MPCE. The regular and salaried workers, in both the government and private sectors, belong mostly to the top 20 per cent of the population in terms of MPCE (Table 4.7). The same is true for those who are self-employed in the non-agricultural sector. As opposed to this, workers who are self-employed in the agricultural sector and the casual wage labourers belong mostly to the bottom 40 per cent of the expenditure stratum. The average MPCE levels (both mean and median) are the highest for the government employees, which is quite expected. The self-employed and family workers in the agricultural sector have the lowest average MPCE. It is thus clear that workers having regular jobs or those in the services sector enjoy a better living standard as compared to those in the primary sector or those with irregular jobs.

Occupational Pattern

Another important indicator of the employment and livelihood situation in an economy is the occupational pattern. It

Table 4.5: Work Status in Mizoram—Types of Jobs

	Self-employed		Family Labour		Regular Salaried		Casual Worker	
District	Agro	Non-agro	Agro	Non-agro	Govt.	Pvt.	Govt.	Pvt.
Aizawl	12.1	1.2	13.7	11.4	26.8	15.4	3.2	16.0
Champhai	21.2	2.3	31.2	5.7	12.1	3.0	13.5	11.1
Kolasib	26.2	1.7	23.0	6.1	10.3	4.5	2.1	26.0
Lawngtlai	38.7	1.8	31.8	7.2	7.2	1.9	5.7	5.7
Lunglei	17.6	1.6	18.5	8.6	20.2	8.8	17.6	7.1
Mamit	31.0	0.5	39.3	1.5	10.1	4.3	2.3	11.1
Saiha	18.5	2.0	21.6	10.9	13.5	5.0	9.6	19.0
Serchhip	24.1	1.5	32.4	12.2	15.2	3.6	7.2	3.8
Mizoram	19.6	1.5	22.2	8.8	18.4	8.7	7.6	13.2

Source: Survey data, 2008.

Table 4.6: Gender and Age-wise Work Status in Mizoram—Types of Jobs

	Male				Female			
Age Group	Self-employed	Family Labour	Registered Worker	Casual Worker	Self-employed	Family Labour	Registered Worker	Casual Worker
15-24 Years	19.1	39.6	13.3	28.0	15.6	50.8	12.2	21.4
25-40 Years	34.9	14.2	31.3	19.6	17.9	29.7	23.9	28.5
41-60 Years	46.0	7.5	37.0	9.5	29.6	22.8	26.1	21.5
Above 60 Years	52.7	5.9	22.6	18.8	20.8	17.0	18.0	44.1
All Age Groups	36.8	15.9	29.8	17.6	21.7	29.8	22.8	25.8

Source: Survey data, 2008.

is generally argued that the development process entails a shift of workers from the primary to the secondary sector, and thereafter, from the secondary to the tertiary sector. In India too, there has been a shift of workers from the primary to the secondary and tertiary sectors—the share of the primary sector in the total number of workers has been decreasing from about 70 per cent in 1983-84 to less than 60 per cent in 2004-05, while the share of the secondary and tertiary sectors has been increasing from 12 and 19 per cent to 13 and 28 per cent, respectively, during the same period.

Mizoram is, however, an exception to the national trend in this regard. It has a substantial tertiary sector—almost 34 per cent of the workers are engaged in this sector— and relatively smaller (vis-à-vis national figures) primary and secondary sectors (Table 4.8). In fact, the occupational distribution is rather polarized among the primary and tertiary sectors with a marginal presence of the secondary, especially the manufacturing sector. About 54 per cent of the workers are engaged in agriculture, 8 per cent in government jobs, and 17 per cent in other services. Even within the secondary sector, the share of manufacturing is low and most of the workers are engaged in construction activities. Since the state has an exceptional topography and resource base, such an occupational pattern should not be construed as a worry spot; rather

Table 4.7: Living Standard of Different Working Statuses

Working Status	MPCE Groups					Mean MPCE	Median MPCE
	A	B	C	D	E		
Self-employed in Agriculture and Allied Activities	28.7	23.5	16.8	18.1	12.9	596	494
Self-employed in Non-agricultural Activities	14.7	16.0	15.7	20.6	33.1	1138	939
Unpaid Family Worker in Agriculture	31.3	33.0	19.0	12.4	4.3	486	413
Unpaid Family Worker in Non-agriculture	28.1	22.2	26.5	9.0	14.2	779	636
Regular Salaried/Wage Employee (Govt)	11.1	9.1	18.4	21.6	39.8	1463	1083
Regular Salaried/Wage Employee (Private)	10.1	17.1	20.8	20.5	31.5	1233	932
Casual Wage Labour in Public Works	25.2	18.6	17.7	20.7	17.8	794	688
Casual Wage Labour in Other Types of Work	11.7	25.0	25.9	19.2	18.2	900	718
All Occupations	19.3	21.5	18.6	18.7	21.9	940	717

Source: Survey data, 2008.
Notes: MPCE Groups are as follows: A—Bottom 20%; B—21-40%; C—41-60%; D—61-80%; E—Top 20%. Mean and Median MPCE are in Rs. per capita per month.

it appears to be in concordance with the sustainable development pattern of the state. What is worrisome, however, is that the returns from the agricultural sector are quite low and that the challenge is to improve productivity and incomes from the primary sector activities rather than push for structural shifts in the occupational pattern. There are, however, notable differences among the districts. As expected, tertiary sector jobs are predominant in the districts of Aizawl, along with Saiha and Serchhip. The engagement in the primary sector, on the other hand, is quite high in the Lawngtlai, Mamit and Kolasib districts. Likewise, the engagement in the secondary sector, mostly in construction, is higher than the state average in the Champhai, Lunglei and Saiha districts.

Minor differences also exist between genders and age groups as regards the occupational pattern (Table 4.9). While for the males, government service is the second most important occupation after agriculture and livestock, for the females, the second most predominant occupation is Unclassified and Others. This is true even for the males belonging to the first two age groups. This implies that young males and females, apart from working in the farms, are taking up sundry jobs to meet their livelihood challenges. When the data is cross-tabulated across educational categories, it is observed that workers with little or no formal education (that is, those who are illiterate and those with up to middle school education) are mostly engaged in agriculture (Table 4.10). On the other hand, those with education above high school or those with technical/vocational/professional degrees are mostly engaged in government services.

Regularity of Employment

Regularity of employment is perhaps the most important indicator of livelihood

Table 4.8: Occupational Pattern in Mizoram—Broad Industrial Divisions

Occupational Group	Aizawl	Champhai	Kolasib	Lawngtlai	Lunglei	Mamit	Saiha	Serchhip	State
Cultivators	37.7	59.0	65.0	76.9	62.0	63.2	46.8	60.6	54.6
Animal Husbandry	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.0	0.2
Mining	0.3	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.1
Primary	38.0	59.0	65.0	77.4	63.0	63.2	47.4	60.6	54.9
Manufacturing	4.3	0.0	2.2	1.2	2.0	0.9	0.0	0.0	2.0
Electricity & Gas	1.6	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.6
Construction	4.3	15.4	8.1	5.7	11.5	6.3	15.8	7.6	8.8
Secondary	10.2	15.4	11.6	6.9	13.5	7.2	15.8	7.6	11.4
Trade	2.9	1.0	4.1	5.2	9.5	3.1	5.9	9.9	4.4
Hotel & Rest	1.1	0.9	1.8	0.0	0.7	0.2	1.5	0.0	0.9
Transport	1.9	1.3	1.1	0.0	0.0	2.6	3.3	4.7	1.5
Financial Services	1.2	0.4	0.0	0.1	0.0	0.0	3.4	1.4	0.7
Personal Services	4.1	1.1	0.0	1.1	0.0	0.8	1.0	0.4	1.8
Govt. Services	13.0	6.4	2.4	1.6	5.5	2.8	2.3	5.5	7.1
Others	27.6	14.6	14.0	7.6	7.9	20.1	19.3	9.9	17.4
Tertiary	51.8	25.7	23.4	15.6	23.6	29.6	36.8	31.8	33.6

Source: Survey data, 2008.
Notes: Work Participation and Employment Rates are as percentages of the Total Population; Unemployment Rate is as a percentage of the Workforce.

Table 4.9: Gender and Age-wise Industrial Distribution of Workers

Educational Groups	Industrial Groups							
	A	B	C	D	E	F	G	H
Males								
15-24 Years	53.3	0.1	2.9	8.1	3.3	2.2	8.7	21.4
25-40 Years	37.7	0.7	6.3	8.9	4.2	4.8	17.1	20.3
41-60 Years	45.1	0.1	2.1	3.7	5.4	0.6	30.5	12.7
Above 60 Years	47.2	1.0	3.2	6.1	8.2	0.0	17.9	16.5
All Age Groups	43.3	0.4	4.2	6.8	4.6	2.7	20.3	17.7
Females								
15-24 Years	57.8	0.1	2.1	10.2	6.5	0.0	3.9	19.3
25-40 Years	37.2	0.0	3.8	13.7	5.9	1.3	15.1	22.9
41-60 Years	39.9	0.0	1.5	8.0	9.9	0.6	18.2	21.9
Above 60 Years	28.0	0.0	3.2	23.4	9.3	0.0	15.1	21.1
All Age Groups	40.6	0.0	2.8	11.7	7.5	0.8	14.6	22.0

Source: Survey data, 2008.

Table 4.10: Industrial Distribution of Workers among Different Educational Groups

Educational Groups	Industrial Groups							
	A	B	C	D	E	F	G	H
Illiterate	69.3	0.0	0.0	6.8	7.4	1.2	13.7	1.6
Literate below Primary Level	67.1	0.0	6.0	13.3	4.7	1.3	5.8	1.8
Primary Passed	78.4	0.0	0.9	9.9	3.7	0.9	3.9	2.3
Middle Passed	59.6	0.1	6.3	12.2	5.8	1.7	9.1	5.1
High School Passed	39.5	0.8	6.0	11.1	9.0	4.4	21.5	7.8
Higher Secondary Passed	13.1	0.0	1.7	6.4	10.9	5.7	54.8	7.4
Graduate Degree (General)	7.1	0.6	1.8	3.8	7.1	1.3	69.5	8.8
Post-graduate Degree (General)	1.2	0.0	2.7	1.2	2.9	2.0	69.1	21.0
ITI Certificate	4.3	0.0	0.0	0.0	35.8	0.0	37.4	22.5
Polytechnic (Diploma)	22.5	0.0	0.0	24.5	24.9	0.0	23.7	4.4
Management/Vocational degree	0.0	0.0	0.0	0.0	0.0	0.0	70.3	29.7
Technical/Professional Degree	0.0	0.0	3.3	2.4	1.7	0.0	92.6	0.1
All Groups	49.4	0.3	4.2	10.0	6.6	2.4	21.1	5.9

Source: Survey data, 2008.
Notes: Industrial Groups are as follows: A—Agriculture and Livestock; B—Mining etc; C—Manufacturing; D—Construction; E—Trade; F—Transport, etc; G—Government Service; H—Others.

opportunities enjoyed by people in an economy. It provides a measure of the labour market situation and the surety of earning prospects in the region. It has been observed that about 42 per cent of those who are employed have more than 300 days of work in a year, on an average, while another 37 per cent have 200-299 days of work each year, on an average (Table 4.11). The average number of employment days generated per worker during the year 2008-09 was 257 days for main employment and another 75 labour days for secondary employment. Thus, the situation is quite satisfactory and those who are employed have more or less regular jobs.

As far as the districts are concerned, however, the situation is uncomfortable in Mamit, where more than 42 per cent of the workers had less than 200 days of work during the last year and only 12 per cent had more than 300 days of work, leading to a low average of 211 workdays last year. The situation is also uncomfortable in Lawngtlai, where the average number of employment days generated per worker was just 226 during the previous year. It thus emerges that in Mizoram, the irregularity of employment is not a serious threat. The divide is much wider between those who are employed and the unemployed while those who have been absorbed into the workforce enjoy regular work.

Table 4.11: Regularity of Employment in Mizoram

Duration of Work	Aizawl	Champhai	Kolasib	Lawngtlai	Lunglei	Mamit	Saiha	Serchhip	State
Main Employment—Percentage of workers having worked during the last year for:									
Less than 100 Days	3.7	4.3	6.2	1.2	3.7	6.3	8.6	8.7	4.5
100 to 199 Days	5.5	17.8	29.7	25.3	23.8	35.7	13.4	1.9	15.6
200-299 Days	31.2	47.7	48.7	51.8	35.7	46.2	23.1	26.4	37.4
More than 300 Days	59.6	30.2	15.5	21.7	36.9	11.8	54.9	63.0	42.5
Average Days of Employment Generated per Worker during the Last Year from:									
Main Employment	292	241	217	226	241	211	254	269	257
Secondary Employment	54	88	61	94	94	55	75	62	75
Aggregate	346	329	279	319	334	266	329	331	332

Source: Survey data, 2008.

Situation of Casual Workers

About one-fifth of the workers in the state are casual workers, who are engaged either in private sector jobs or in casual work in the government sector. It is essential to examine the kinds of jobs done by them and the remunerations they receive in order to understand their situation. It has been observed that most of the casual work generated during the last one year has been through the NREGS, wherein 63 per cent of the casual workers were engaged, getting about 67 days of work per worker per year on an average (Table 4.12). The non-agricultural sector also generated more than 100 days of work per worker per year and about 23 per cent of the casual workers were engaged in such activities. The average wage rate varied from Rs. 108 to Rs. 136 per day, except in Serchhip, where the agricultural wage for casual workers was Rs. 202 during the last year.

Home-based and Self-employed Workers

It has already been noted that about 1.5 per cent of the working population in Mizoram consists of self-employed workers outside the agricultural sector, who are engaged in setting up various informal enterprises. Another 8 per cent of the workers are engaged in these enterprises as home-based or family workers. Thus, about 10 per cent of the workers are engaged in non-agricultural enterprises, mostly informal in nature. The economic situation of these people needs to be examined closely.

Condition of Enterprises

It has been observed that the surveyed enterprises provide employment to about 1,63,000 family workers and about 1,75,000 hired workers; therefore, a total of about 3,38,000 persons are engaged in the surveyed units (Table 4.13). Thus, roughly 10 per cent of all workers and 17

Table 4.12: Casual Employment in Mizoram

Indicator	Aizawl	Champhai	Kolasib	Lawngtlai	Lunglei	Mamit	Saiha	Serchhip	State
Casual Employment—Percentage of Casual Workers Having Worked during the Last Year in:									
Agriculture	9.8	13.4	19.3	8.1	7.0	23.9	3.6	3.4	12.2
Forestry, etc.	1.1	0.9	0.4	0.2	1.7	4.0	2.4	1.0	1.4
NREGS	68.7	61.9	47.7	69.8	71.3	43.7	75.9	90.8	63.2
Non-agro sector	20.4	23.9	32.6	21.9	20.1	28.4	18.0	4.7	23.1
Average Days of Employment Generated per worker during the Last Year from:									
Agriculture	75	61	41	52	45	29	118	242	52
Forestry, etc.	90	60	93	39	25	80	55	53	66
NREGS	39	84	33	97	101	28	77	63	67
Non-agro sector	136	97	107	87	65	75	193	130	103
Average Wage Rate in:									
Agriculture	112	114	120	109	111	108	118	202	114
NREGS	111	111	110	108	111	110	111	110	110
Non-agro sector	134	130	137	119	113	123	114	136	127

Source: Survey data, 2008.

per cent of the non-agricultural workers are absorbed in these family enterprises. These shares are higher in the Saiha and Serchhip districts. While their role in job creation is acknowledged, the sustainability and viability of these units are frequently questioned on grounds of low productivity and profitability. However, in Mizoram, this sector is doing well, on an average. These enterprises have a labour productivity of 92,000 per worker per year, or about 7,500 per month. The accrued profit per family labour is about 91,000 per year or about 7000 per month. These enterprises are thus working satisfactorily.

The regional disparity is, however, quite noticeable. Productivity is the highest in Mamit, followed by Saiha and Kolasib, while it is the least in Lawngtlai, followed by Lunglei and Champhai. To be more specific, productivity levels in Mamit are more than five times of that in Lawngtlai. Similarly, profitability is also relatively higher in Mamit (more than 30,000 per month per family worker), Aizawl and Kolasib, while being only 2500 per month in Lawngtlai. It, therefore, seems that in districts like Lawngtlai and Lunglei, most of the family enterprises are distress-driven where people have taken up home-based economic activities because of a lack of alternate employment opportunities. As a result, these units have low productivity and profitability, and are unviable in the medium to long run. On the other hand, the units in Aizawl, Saiha, Kolasib and Mamit are dynamic units with satisfactory levels of productivity and profitability.

Income of Workers in Self-employment

Since a substantial number of workers in Mizoram are self-employed, it is necessary to examine their income levels. It has been observed that the average annual net income from self-employment is just about Rs. 1500 per month (Table 4.14). At the spatial level, the average income levels are relatively higher in Saiha, Aizawl and Serchhip, and significantly lower in Lawngtlai, Kolasib and Champhai. If

Table 4.13: Self-employment in Mizoram (outside the Agricultural Sector)

Indicator	Aizawl	Champhai	Kolasib	Lawn-gtlai	Lunglei	Mamit	Saiha	Serchhip	State
Household Labour	69,706	21,627	4242	7710	30,291	926	15,888	13,030	1,63,420
Hired Labour	1,58,588	3825	513	1956	2909	2790	624	3903	1,75,109
Total Employment	2,28,294	25,452	4755	9666	33,200	3716	16,513	16,933	3,38,529
Productivity per Worker (Rs)	84,705	82,681	1,74,771	49,979	78,184	2,56,343	1,78,298	1,04,637	91,633
Profitability per HH Worker (Rs)	1,28,553	40,973	1,07,167	31,120	51,541	3,84,971	92,494	74,407	91,166

Source: Survey data, 2008.
Notes: Values are in Rs. per year.

different industries are considered, then it can be observed that trade, mining and transport are the most remunerative self-employment avenues. Surprisingly, self-employment in the manufacturing sector is found to be the least remunerative with an average income of only Rs. 2000 per month. This may be due to the nature of the manufactured items produced by the home-based workers in Mizoram, which mostly include cane and bamboo-based products. Income from construction-related works is also quite low.

Education and Employment

It is generally argued that human capital embodied in a person is the main determinant of his livelihood situation. In

Table 4.14: Net Income from Self-employment in Mizoram

Industrial Group	Annual Income	Districts	Annual Income
Agriculture and Livestock	3307	Aizawl	24,700
Mining, etc.	67,164	Champhai	7636
Manufacturing	25,201	Kolasib	6530
Construction	8719	Lawngtlai	3717
Trade	1,00,694	Lunglei	12,647
Transport, etc.	59,466	Mamit	7915
Others	15,656	Saiha	24,618
		Serchhip	19,819
Aggregate	16,039	Aggregate	16,039

Source: Survey data, 2008.
Notes: Values are in Rs. million per year.

this regard, education is often accepted as an important tool for human development through its interaction with labour market opportunities. Let us now explore this interaction in the context of Mizoram. The field survey data for 2009 reveals that at the aggregate level, 77 per cent of the working age group persons declare themselves to be engaged in some remunerative work or other while the remaining 23 per cent declare themselves as 'unemployed'. These figures are substantially higher than those obtained from the NSSO or the Census of India, and this is perhaps because of under-reporting of working status by the respondents during the field survey. Such under-reporting occurs when the respondents are infrequently employed and consider themselves to be unemployed for all practical purposes, though technically they may not be so. The difference of about 20 per cent between the NSSO 2004 unemployment figures and the field data 2009 figures may be attributed as 'under-employment' in Mizoram.

It has been observed that the employment–unemployment trends discussed earlier are quite dissimilar across educational

Table 4.15: Employment Scenario among Different Educational Groups

Educational Groups	Emp. Rate	Unemp. Rate	Occupational Groups				
			A	B	C	D	E
General Education							
Illiterate	50.1	19.8	23.4	8.2	37.3	16.2	14.9
Literate below Primary Level	57.2	10.8	36.4	7.9	27.4	8.9	19.4
Primary Passed	63.2	19.7	35.7	5.5	33.3	6.2	19.4
Middle Passed	53.8	22.8	24.6	8.9	24.4	14.3	27.8
High School Passed	50.4	26.8	16.8	11.3	21.6	30.8	19.6
Higher Secondary Passed	36.5	29.1	7.4	13.5	5.9	59.7	13.5
Graduate Degree (General)	64.5	13.5	3.9	6.2	2.6	80.1	7.2
Post-graduate Degree (General)	73.6	12.5	0.0	4.7	1.4	89.2	4.6
Technical/Vocational Education							
ITI Certificate	56.3	33.6	9.5	3.8	5.3	47.2	34.1
Polytechnic (Diploma)	47.2	0.0	0.0	2.6	0.0	75.7	21.6
Management/Vocational Degree	96.3	0.6	3.6	0.6	0.0	77.9	17.8
Technical/Professional Degree	66.6	13.5	0.0	0.0	0.0	100.0	0.0
All Groups	53.8	22.6	21.7	8.7	21.9	27.3	20.4

Source: Survey data, 2008.
Note: Emp.=Employment; Unemp.=Unemployment

groups. As expected, the incidence of unemployment is substantially lower among those with technical/professional/ management/ vocational degrees (Table 4.15). Those holding diplomas from polytechnics are, in fact, all employed. Similarly, unemployment is also lower among graduates and post-graduates. It is thus evident that education helps in securing jobs for the workers and higher achievements are associated with lower unemployment.

It must be noted that the lower incidence of unemployment among the illiterate and the non-primary educated persons is not because they enjoy greater opportunities but because of the fact that they mainly

Table 4.16: Living Standards of Different Educational Groups

Educational Groups	MPCE Groups					Mean MPCE	Median MPCE
	A	B	C	D	E		
General Education							
Illiterate	28.8	27.7	16.7	15.7	11.0	644	493
Literate below Primary Level	21.2	35.9	19.1	13.7	10.0	654	569
Primary Passed	28.6	24.7	17.6	15.3	13.8	666	508
Middle Passed	20.5	23.1	20.1	18.7	17.6	812	625
High School Passed	16.6	22.4	20.3	19.0	21.8	958	782
Higher Secondary Passed	14.6	14.7	17.6	22.2	31.0	1256	932
Graduate Degree (General)	11.3	10.0	13.5	19.8	45.3	1412	1139
Post-graduate Degree (General)	8.9	4.1	10.5	24.0	52.5	2299	1604
Technical/Vocational Education							
ITI Certificate	3.1	0.0	9.2	48.5	39.2	1332	1124
Polytechnic (Diploma)	0.0	9.3	9.0	31.1	50.5	2195	1850
Management/Vocational Degree	0.0	8.4	25.3	25.0	41.3	1497	1417
Technical/Professional Degree	0.0	1.0	1.0	31.4	66.6	2051	1731
All Groups	19.3	21.5	18.6	18.7	21.9	940	717

Source: Survey data, 2008.
Notes: MPCE Groups are as follows: A—Bottom 20%; B—21-40%; C—41-60%; D—61-80%; E—Top 20%. Mean and Median MPCE are in Rs. per capita per month.

belong to the lower socio-economic strata and cannot afford to remain unemployed. Hence, they take up some sort of work to maintain their livelihood. This becomes clearer if the occupational distribution is studied. It can be observed that the incidence of employment may be relatively higher among persons with little or no education, but they are engaged mostly as self-employed workers in both the agricultural and non-agricultural sectors and as unpaid family workers. In contrast to this, those who have acquired higher education or some type of vocational/technical training are engaged mostly as regular salaried workers.

The importance of education in determining employment and livelihood standards is reconfirmed if the quality of life of people with different educational backgrounds is examined in terms of their MPCEs (Table 4.16). Five equi-sized groups of the population have been formed according to their MPCE levels. While those with little or no education are mostly in the bottom two MPCE groups, that is, they belong to the bottom 40 per cent of the population in terms of the expenditure levels, those with higher educational levels are in the top two groups, that is, they belong to the top 40 per cent of the population. The median and mean MPCE levels also increase systematically along with arise in educational achievement.

It is thus amply clear that an improvement in the employment and livelihood status of the people of Mizoram depends heavily on the spread of education, especially vocational and technical education. With education being a primary component of the Human Development Index, the link between economic well-being and human development is once again underlined.

Employment and Livelihood among Youth

The moving force of any society is its youth. The demographic dividend that India is poised to reap during the coming years depends on the effective utilization of its young population for production, growth and development. In this context, the situation of the youth (people who are 15-24 years of age) in Mizoram needs to be examined.

The educational achievements of the young people in Mizoram are quite commendable (Table 4.17). Almost all of them are literate and have some formal education. About 40 per cent of them have completed middle school level education and another 29 per cent have passed the high school level. While 17 per cent have passed twelfth class, about 5 per cent are graduates or have higher degrees. Such an educational distribution is among the best in the country and much above the national averages. At the regional level, educational attainments are the best in Aizawl because of its urban nature and its position as the state capital. The districts of Serchhip, Saiha, Kolasib and Lunglei are also frontrunners with zero illiteracy among their youth. At the other end lie Lawngtlai and Mamit districts, wherein the distribution is more skewed towards levels of education that are lower than the middle and primary stages.

How are the youth doing in the labour market in Mizoram? It has been observed that about 60 per cent of the young people in Mizoram are employed, implying a youth unemployment rate of about 41 per cent, which is significantly high (Table 4.18). The problem of youth unemployment is much more severe in Lawngtlai, Lunglei, Serchhip and Aizawl. The first two districts are disadvantaged according to almost all the parameters and hence suffer from a high degree of unemployment. The high rate of unemployment in Aizawl may be because of its attraction as a developed region and the centre of economic activities, leading to large-scale migration to the capital territory from the rural hinterland. Such a high unemployment situation among the youth makes the social atmosphere of the state both vulnerable and challenging. It leads to an increase in social tensions, a rise in various social evils like addictions, and may even make the state a fertile underbelly for extremist groups in the north-eastern region of the country.

The employment patterns among the youth reveal that most of them are unpaid family workers or casual wage workers. Another 17 per cent of the working youth are self-employed, mostly in agricultural

Table 4.17: Educational Pattern among Youth in Mizoram

Educational Groups	Aizawl	Champhai	Kolasib	Lawngtlai	Lunglei	Mamit	Saiha	Serchhip	State
Illiterate	0.9	0.4	0.0	0.9	0.0	1.2	0.2	0.0	0.6
Literate below the Primary Level	0.5	0.0	0.4	2.8	0.5	2.5	1.1	0.8	0.8
Primary Passed	4.4	7.6	5.3	17.5	9.1	22.2	5.4	6.1	7.8
Middle Passed	39.9	45.0	39.0	48.6	38.5	36.8	34.6	33.3	40.4
High School Passed	25.6	32.5	33.5	21.9	31.2	20.6	38.2	33.6	28.6
Higher Sec Passed	20.6	10.8	19.4	6.7	16.1	12.7	17.7	24.6	16.8
Graduate and Above (G)	6.7	3.7	2.5	1.4	4.3	4.0	2.7	1.6	4.5
Vocational/ Technical	0.5	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.6

Source: Survey data, 2008.

activities. The rate of youth employment in regular salaried jobs is about 13 per cent, though it ranges from about 3 per cent in Lawngtlai to about 24 per cent in Aizawl. The industrial distribution of youth workers also confirms that a majority of them are engaged in agricultural or livestock-related activities. In fact, in the district of Lawngtlai, it is above 75 per cent while in Kolasib, it is above 65 per cent. About 27 per cent of the youth workers are also engaged in the unclassified sectors and in petty services. The construction sector is another area where there is substantial youth employment—about 9 per cent of the young workers are engaged in this sector. The share of such workers is relatively higher in the Champhai and Saiha districts (about 15 per cent). The trade and transport sectors also engage about 6 per cent of young people. The services sector is accorded more importance in Aizawl, as expected, and also in Saiha and Mamit. On the other hand, the rate of employment of youth in the services sector is relatively lower in the Lawngtlai, Lunglei and Serchhip districts. Barring the districts of Aizawl and Kolasib, the share of youth workers in the manufacturing sector is generally quite low in Mizoram.

It can thus be seen that the rate of employment of youth in Mizoram is far from the desired level—the rate of unemployment is high, and most of the young workers are either self-employed or engaged as unpaid family labourers or casual labourers, and predominantly in primary sector. This area must, therefore, be addressed immediately and special programmes must be introduced for promoting employment among the youth, especially in manufacturing and services sectors, in order to tap the potential of educated young people in Mizoram. In this context, it may be suggested that such a literate young labour force with English-speaking abilities is best suited for the information technology (IT)-enabled services sector and the state needs to come up with concrete proposals for the setting up of Knowledge Processing Organizations (KPOs) and Business Process Organizations (BPOs) for the young people of Mizoram.

Table 4.18: Educational Pattern among Youth in Mizoram

Indicators	Aizawl	Champhai	Kolasib	Lawngtlai	Lunglei	Mamit	Saiha	Serchhip	State
Employment Rate	19.7	34.6	34.4	33.8	27.4	40.9	22.3	20.8	26.4
Unemployment Rate	45.8	35.9	19.1	48.1	42.8	24.9	38.0	47.8	40.9
Distribution of Youth Workers across Occupational Groups									
Self-emp. in Agri., etc	10.9	14.9	2.3	19.5	14.1	13.3	13.5	11.7	12.7
Self-emp. in Non-agri.	6.6	1.7	3.6	4.4	7.0	1.0	5.8	13.1	5.2
Unpaid Family Worker	25.7	42.0	67.1	61.7	53.6	52.0	39.3	50.1	43.3
Reg. Salaried Worker	23.5	9.9	8.5	3.0	7.0	9.6	9.5	9.7	12.9
Casual Wage Worker	33.2	31.5	18.5	11.4	18.3	24.1	31.9	15.5	25.8
Distribution of Youth Workers across Industrial Groups									
Agri. & Livestock	37.7	59.0	65.0	77.4	63.0	63.2	46.8	60.6	54.8
Mining, etc.	0.3	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.1
Manufacturing	5.9	0.0	3.5	1.2	2.0	0.9	0.0	0.0	2.7
Construction	4.3	15.4	8.1	5.7	11.5	6.3	15.8	7.6	8.8
Trade	2.9	1.0	4.1	5.2	9.5	3.1	5.9	9.9	4.4
Transport, etc.	1.9	1.3	1.1	0.0	0.0	2.6	3.3	4.7	1.5
Other Services	19.3	8.8	4.2	2.8	6.3	3.9	8.3	7.3	10.4
Others (Not Classified)	27.6	14.6	14.0	7.6	7.9	20.1	19.3	9.9	17.4

Source: Survey data, 2008.

Employment and Livelihood Index

The construction of the Employment and Livelihood Index (ELI) using the parameters of Type of Job, Occupational Pattern, Regularity of Job, and Livelihood Level represented by the level of per capita consumption expenditure has already been discussed above. The results are provided in Table 4.19. It has been observed that the value of this index comes out to be 0.54 for the state as a whole. Given that the score may vary from 0 to 1, this is not a very comfortable situation. Only the district of Aizawl has an index value that is above the state average. Saiha and Lunglei also have ELIs that are relatively higher than those of the other regions. On the other hand, employment and livelihood conditions are alarmingly unimpressive in the Champhai, Serchhip, Mamit and Lawngtlai districts. While much should not be read from the magnitude of the index values, the ranking is important. It appears that the state should focus on the four lagging districts as emerging from this study for the expansion of employment opportunities, by creating more regular salaried jobs, making self-employment and home-based enterprises more dynamic and viable, and creating better livelihood opportunities for the people, in the process.

Table 4.19: Employment and Livelihood Index (ELI) for Mizoram

District	Proportion of People with			MPCE (Rs)	ELI	Rank
	Salaried Job	Jobs in Non-primary Sector	At least 200 Days Employment			
Aizawl	42.2	62.0	90.8	1189	1.00	1
Champhai	15.1	41.0	77.9	709	0.35	5
Kolasib	14.8	35.0	64.2	746	0.24	6
Lawngtlai	9.1	22.6	73.5	434	0.00	8
Lunglei	29.0	37.0	72.6	876	0.46	3
Mamit	14.4	36.8	58.0	622	0.20	7
Saiha	18.5	52.6	78.0	871	0.53	2
Serchhip	18.8	39.4	89.4	677	0.37	4
Mizoram	27.1	45.1	79.9	910	0.54	

Source: Survey data, 2008.
Notes: The ELI has been calculated by using the Modified Principal Component Method and thereafter by using the UNDP Goalpost Method to transform the Principal Component Factor Scores into indices.

5

Agriculture and Sustainable Development

There has been a steep decline in the share of agriculture in the state's GSDP in contrast to a more gradual fall in its contribution to employment. Agriculture in Mizoram continues to be based on traditional methods, except in some areas in the plains that lie adjacent to rivers and streams. The poor spread of irrigation facilities has restricted the cultivation of high-yield variety (HYV) seeds. Although paddy and maize are two of the most important crops cultivated in the state, the poor productivity of these crops necessitates the import of food for consumption. Mizoram, which has been blessed with plenty of flora and fauna, has a lot of potential for developing non-agricultural activities within the primary sector. However, in order to optimize productivity, the state needs to address the severe challenges facing this sector including the steep hilly terrain, delicate ecological balance and high rate of population growth.

Introduction

Located in the north-eastern part of India, the hilly state of Mizoram has a rich and diverse base of vegetation, trees, flora and fauna. The tropical location of Mizoram as well as the tropical humid climate in the state favours the growth of a variety of vegetation and supports a diverse range of flora and fauna. The state has a wide forest cover, as approximately 91 per cent of its area is covered with forests. However, of the total forest cover, only 0.64 per cent represents thickly dense forests while 29.6 per cent represents moderately dense forests, and the rest 61 per cent consists of open forests (Forest Survey Report, 2009). The high proportion of open forests implies that there is a scope for vast afforestation in the country. The dense forests of the state constitute a source of bamboo, medicinal plants, timber, firewood, cane, etc.

Importance of Agriculture in Mizoram

Agriculture is the traditional means of livelihood as well as an activity closely related to various rituals practised by the people of the state. This gives agriculture a very important place in Mizo society. This factor, along with the fact that other means of livelihood, mainly in the industrial sector, are not doing very well due to various inhibiting factors like poor infrastructure, make agriculture the mainstay of Mizoram. Thus, a majority of the people in Mizoram are directly or indirectly dependent on agriculture for their livelihood (Socio-Economic Review, Mizoram, 2000-01). As per the Census 2001, about 60.7 per cent of the total workforce in Mizoram is engaged in agriculture. This figure is not vastly different from the all-India figure of 58 per cent (Census, 2001).

Share of Agriculture in the State Domestic Product

Although agriculture occupies the main place in the economy of Mizoram, the share of the agriculture and allied sector in the Gross State Domestic Product (GSDP) is very low. At 1999-2000 constant prices, it was 17 per cent in 2005-06, 15.51 per cent in 2007-08, 14.9 per cent in 2008-09, and 14.32 per cent in 2009-10 (Government of Mizoram, 2009). The trend clearly shows a decline in the share of agriculture in the GSDP. The average annual growth rate of agriculture (a change in the GSDP from agriculture) in Mizoram for 2009-10 is

Table 5.1: GDP and GSDP from Agriculture for India and Mizoram, Respectively and Their Annual Growth Rate from 2000-01 to 2009-10

All-India Agricultural Growth										
Year	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**2007-08***	**2008-09***	**2009-10***
GDP (agriculture)	4,45,403	4,73,249	4,38,966	4,82,676	4,82,446	5,11,013	5,30,236			
Growth rate of GDP (agriculture)	NA	6.25	-7.24	9.96	-0.05	5.92	3.76	4.7	1.6	-0.2
Mizoram Agricultural Growth										
Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08^	2008-09^	2009-10^
GSDP (agriculture)	32,368	32,607	33,923	33,470	34,927	36,189	37,327			
Growth rate of GSDP (agriculture)	NA	0.74	4.04	-1.34	4.35	3.61	3.14	3.4	4.3	4.3

Source: Agricultural Statistics, Department of Agriculture and Cooperation, Government of India.
* Statistics taken from Economic Survey India 2009-10, CSO.
^ Government of Mizoram, 2009.

4.3 per cent, which is same as the previous year's growth (Table 5.1). And for India as a whole, the agricultural growth rate for 2008-09 is 1.6 per cent and for 2009-10 is -0.2 per cent (Table 5.1). There has been a tremendous decline in the agriculture GDP at the factor cost for India after 2007-08. For the period 2008-09 to 2009-10, the growth of agriculture in Mizoram has been far better than the country's average growth of agriculture. However, it would not be wise to consider the country's agricultural growth rate as a standard because in some parts of India, agriculture may not be as important as it is for the economy of Mizoram.

It is very important to accelerate agricultural growth and diversify agriculture to boost the potential of cash crops, animal husbandry and horticulture in Mizoram, as agriculture is the mainstay of a majority of the people in the state. The increase in agricultural production would help the state attain self-sufficiency as well increase incomes.

Institutional Background

Land Tenure System in Mizoram

According to the customs and traditions of most of the north-eastern states in India, land is under the ownership of communities and controlled by the village council. As a part of the customary practice, land is distributed to villagers for either Jhum cultivation or other farming practices. Before village councils acquired control of the land, the chiefs used to control and regulate the distribution of land in Mizoram. It was in 1954 that under the Lushai Hills District Act, the system of hereditary chieftainship was abolished and their rights were vested in the government, and since then the administration of villages including the control of farming land has been taken over by the village councils.

Tenancy arrangements are followed in terrace and valley land mainly because of the emergence of private rights over these lands, which have led to the concentration of these lands in the hands of a few prosperous persons. Most of the tenants from the neighbouring state of Assam work on such land at the cost of the local people's livelihood. All the tenancies are on a crop-sharing basis with the rents fixed at the rate of 33-50 per cent of the produce.[1]

Land Use Pattern

Distribution of Land to Different Users

Of the total available land, the area utilized for cultivation is very small, leaving the vast potential of the land unutilized. Around 6.3 per cent of the total area is not available for agriculture, most of it is put to non-agricultural use and some of it is barren. Cultivable waste, groves and pastures constitute 3.7 per cent of the land area, while 10 per cent of the land is fallow and thus not cultivated. The net sown area in 2007-08 forms only 4.4 per cent of the total land area (Table 5.2). Given the significance of agriculture in Mizo society as well as its importance as a source of livelihood, the land under cultivation should be increased to meet the increasing demand for employment.

Average Landholding Size

The land use pattern of any region depends on various factors related to nature as well as on social and legal factors like the land tenure system. The statistics emerging from the household data show that the total area sown during the last one year was 2788 hectares. However, the average area sown is just 2.26 hectares.[2] Table 5.3 clearly shows that the maximum sowing has been done on land area of up to two hectares and about 60 per cent of the households have landholdings of sizes up to one hectare.

As per the 2000 Agriculture Census, the total number of holdings in Mizoram is 75,523 and the average area of one holding is approximately 1.24 hectares. The total operated area is 93,298 hectares; this implies that of the total landholdings, most of the area is under operation. Out of the total landholdings, 44.6 constitute marginal holdings (less than 1 hectare), 37 per cent small holdings (1–2 hectares), 16 per cent semi-medium holdings (2–4 hectares), 1.6 per cent medium holdings (4–10 hectares), and 0.7 per cent large holdings (10 hectares and above) (Agriculture Census, Economics and Statistical Department, Mizoram, 2000). More than 80 per cent of the total landholdings are marginal and small landholdings. Clearly, it is very difficult to

Table 5.2: Total Area and Cultivated Area under Various Types of Lands

Particulars	2006-07	% of Total Area	2007-08	% of Total Area
1) Geographical Area	2108.7	100%	2108.7	100%
2) Reporting Area for Land Utilization Statistics (total a to e)	2108.7	100%	2108.7	100%
a) Forests	1593.7	75.5%	1593.7	75.5%
b) Not Available for Cultivation (i+ii)	134.04	6.3%	134.05	6.3%
i) Land Put to Non-agricultural use	125.42	5.95%	125.43	5.95%
ii) Barren and Uncultivable Land	8.62	0.41%	8.62	0.41%
c) Other Uncultivated Land Excluding Fallow Land (i+ii+iii)	79.23	3.76%	77.209	3.66%
i) Permanent Pastures and Other Gazing Land	5.235	0.25%	5.23	0.25%
ii) Land under Miscellaneous Tree-Crops and Groves Not Included in Net Area Sown	68.765	3.26%	66.749	3.17%
iii) Cultivable Waste	5.23	0.25%	5.23	0.25%
d) Fallow Lands (i+ii)	207.543	9.84%	210.928	10%
i) Fallow Lands Other than Current Fallows	166.078	7.88%	165.981	7.87%
ii) Current Fallows	41.465	1.97%	44.947	2.13%
e) Net Sown area	94.187	4.47%	92.813	4.40%
f) Total Crop Area	105.575	5.01%	102.903	4.88%
g) Area Sown More than Once	5	0.24%	1.437	0.07%
3) Total Irrigation Area	16.36	0.78%	14.169	0.67%
4) Area Irrigated for the Year	11.388	0.54%	9.446	0.45%

Source: Statistical Handbook 2008.

reap economies of scale when a majority of the cultivation is on marginal and small-sized landholdings.

Land under Irrigation and HYV of Technology

Although the state of Mizoram gets plenty of rainfall, an average of 2455.9 mm,[3] irrigation is required during the dry season. The irrigation facilities are very poor and only a small proportion of the whole area has sufficient irrigation facilities. This picture becomes clear if one looks at the ratio of the irrigated area to the sown area, which is just 0.132, that is, only 13.2 per cent of the sown area is well irrigated (Table 5.4).

Another point emerging from Table 5.4 is that the use of technology is very low in Mizoram. Only 6 per cent of the area sown is under HYV crops, implying that the use of high yield variety of crops is also very low.

Table 5.3: Percentage of Households by Area Sown, Irrigated Area and Area under HYV Seeds during the Last One Year

Area in Ha	Area Sown	Area Irrigated	Area Under HYV
	% of Households		
Up to 0.5 Ha	27.38	25.17	18.03
0.5 to 1 Ha	33.89	27.21	22.95
1 to 2 Ha	28.11	31.97	29.51
2 to 3 Ha	7.84	12.24	18.03
3 to 5 Ha	1.13	1.36	1.64
More than 5 Ha	1.66	2.04	9.84
Total	100	100	100

Source: Survey Data 2008
Note: % of Area Sown with Irrigation:-7.6; % of Area Sown under HYV Seeds: -5.6

Agriculture—Farming Practices

The agricultural practices and cultivation of land in any region depend on the type of the natural settings like land, soils and climate. Mizoram is a hilly state and its tall green hills have moats filled with free flowing rivers. In general, the soils in Mizoram are fertile and the surface sub-soil is highly porous and has a poor water retention capacity. The soils are acidic and fertility is affected by cultivation practices and landslides (Jha, 1997a). The climate ranges from sub-tropical to temperate, and the region receives pretty heavy rainfall (Maithani, 2005). The natural features and agro-climatic conditions of Mizoram are suitable for the cultivation of paddy, maize, pulses and horticultural crops covering vegetables, fruits, ornamental crops and spice crops.

Jhum Cultivation

The state of Mizoram, like the other north-eastern hilly areas of India, follows the traditional method of shifting cultivation, also known as Jhum cultivation, as the main form of cultivation. From the very beginning, shifting cultivation has been practised in Mizoram mainly because of the hilly terrains in the region. Shifting cultivation is, in fact, regarded as the first step in the transition from food-gathering and hunting to food production, and is nearly a 9000-year old practice (Maithani, 2005).

In shifting cultivation, a patch of forest area is selected and vegetation on that area is cleared to cultivate that land for usually one year, or a maximum of about two to three years, and then it is abandoned for 5-7 years for the natural forest to grow back and the soil to regain its fertility, and cultivation is shifted to a new patch/area of forest. This cycle of cultivation, leaving the land fallow and coming back to it for cultivation, is known as the Jhum cycle. Hence, this practice involves the rotation of land instead of the rotation of crops. The crops grown in the plots are generally mixed, with paddy being the principal crop. Besides paddy, pulses and vegetables are also commonly grown for household consumption.

Shifting cultivation is practised under the system of community or clan ownership of the land or forest. According to the old

Table 5.4: Percentage of Irrigated Land and Land under HYV in the Total Area Sown

Irrigated Landholdings as % of Total Sown Land Holdings	Irrigated Land Area as % of Total Sown Land Area
9.20%	13.20%
Land holdings under HYV seeds as % of total sown land holdings	Land area under HYV as % of total sown land area
4.12%	6.40%
Land holdings under HYV seeds as % of total irrigated land holdings	Land area under HYV as % of total irrigated land area
44.90%	48.50%

Source: Survey data, 2008.

customs and traditions, the chief of the village owns the land and decides on the rotation of land in order to ensure that all members of the community enjoy security of livelihood and to guarantee equity in economic and social status (Maithani, 2005). In return, the chief is paid a tribute in terms of the paddy or crop produce. However, now the ownership of land is vested in the government since all the lands of chiefs became the property of the village district council (Jha, 1997a). Now, the lottery method is adopted by the village council for land allotment (Maithani, 2005). The size of the plots used to vary between 1.5 to 3 hectares per family. However, the plot size has reduced in recent years due to allotment being made to individuals (IDE, Mizoram).

The district-wise presence of Jhumias is given in Table 5.5, and for the whole state, about 90 per cent of the cultivator families are Jhum families (Table 5.5). In the year 2007-08, the total cropped area was 1,02,903 hectares, out of which 43.7 per cent is under Jhum cultivation (Government of Mizoram, 2009). The over-presence of Jhumias in Mizoram is due to its geography, that is, the hostility of slopes and its extensive forest cover. The statistics from the household data show that approximately 50 per cent of the total land area is under Jhum cultivation and only 20 per cent is under permanent cultivation (Table 5.6).

Wet Rice Cultivation and Terrace Cultivation

Wet rice cultivation in Mizoram is practised mainly in the plain areas. This cultivation practice is generally carried out adjacent to rivers or streams, as this method of cultivation requires lots of irrigation. The yield of paddy under this practice is almost double the yield of paddy under Jhum cultivation. For example, in 2008-09, the production of paddy under wet rice cultivation included 35.45 per cent of the total paddy production with a yield rate of 2.181 MT/hectare while the production of paddy under Jhum cultivation was 64.55 of the total paddy production with a yield of 1.091 MT/hectare. The lack of plain areas and poor irrigation facilities in Mizoram acts as a deterrent to the development of wet rice cultivation.

On the hilly slopes and mountains, terrace farming is the main cultivation practice. Terrace cultivation makes it easier to cultivate slopes and also prevents soil erosion. In Mizoram, mainly plantation crops are cultivated under terrace farming. These crops have longer crop cycles and the banding of their roots in the ground prevents soil loss. Most of the annual crops are grown during the monsoon season due to the lack of irrigation facilities for terrace cultivation.

Various ongoing policies are targeting the potential of the state to develop wet rice cultivation and terrace farming for promoting settled cultivation practices.

Table 5.5: District-wise Details of Jhumia/Cultivator Households

District	Total No. of Households	Total No. of Jhum Families	Total No. of WRC Families	Total No. of Cultivator Families	Total No. of Jhum and WRC Families	% of Jhum Families in Total Cultivator Families	% of Jhum Families in Total No. of Households
Aizawl	60,863	18,378	453	18,831	254	97.6	30.2
Champhai	21,134	8368	2630	10,998	NA	76.1	39.6
Kolasib	16,402	6201	1709	7910	492	78.4	37.8
Lawngtlai	20,966	14,031	546	14,577	170	96.3	66.9
Lunglei	30,097	14,897	1139	16,036	2376	92.9	49.5
Mamit	15,370	8051	392	8443	109	95.4	52.4
Saiha	9494	4794	422	5216	78	91.9	50.5
Serchhip	10,528	5240	1568	6808	NA	77.0	49.8
Total	1,84,854	79,960	8859	88,819	3,479	90.0	43.25

Source: Statistical Handbook 2007-08, Department of Agriculture, Mizoram.

Table 5.6: Total Area and Cultivated Area under Various Types of Lands

Jhum Land				**Permanent Land**			
Total	% of Total Land	Cultivated	% of Total Cultivated Land	Total	% of Total Land	Cultivated	% of Total Cultivated Land
9221.1	61.55	6416.18	70.45	5590.4	37.32	2653.97	29.14
Homestead Land				Leased out Land			
Total	% of Total Land	cultivated	% of Total Cultivated Land	Total	% of Total Land	Cultivated	% of Total Cultivated Land
131.2	0.88	4.01	0.04	25.58	0.17	23.53	0.26
Leased in Land				Total of All Kinds			
Total	% of Total Land	Cultivated	% of Total Cultivated Land	Total	Cultivated		
12.28	0.08	9.72	0.11	14980.55	9107.4		

Source: Survey data, 2008.

Cropping Pattern

Types of Crops Grown

The main crops cultivated in Mizoram are cereals. Rice is the principal crop for both Jhum cultivation and settled practices. Other important crops include maize, pulses, oilseeds, cotton and sugarcane. Pulses like cowpea, and rice beans and oilseeds like sesame, mustard and soybean are also grown in the state.

Relative Importance of Different Crops

The importance of paddy as a principal crop is reflected by the fact that a majority of the cropped area is under paddy production. In 2008-09, the area under paddy was 51,990 hectares (Table 5.7), which accounts for 74 per cent of the total crop area for that year. Table 5.7 shows that the area under paddy cultivation is more than 70 per cent of the total area cultivated for all the years from 2003-04 to 2008-09.

The production of paddy accounts for the largest share in total crop production. In 2007-08 and 2008-09, paddy production accounted for more than 70 per cent of the total food production. Although the area under paddy production remained more or less the same from 2003-04 to 2006-07 (a difference of 6000 hectares), the production of paddy fell sharply in 2006-07, and it was less than half the production in 2003-04. Further, in 2007-08, though the area under paddy increased, yet the production of paddy declined even more, signifying a fall of 62 per cent over the preceding year. The main cause of this dramatic fall in paddy production and overall crop production was bamboo flowering,[5] which led to the destruction of major crops by the rodents. The production of paddy was recieved from a low of 15,688 MT in 2007-08 to 68,917 MT in 2008-09, signifying an increase of more than 300 per cent.

After paddy, maize is the second most widely grown crop in Mizoram. On an average, more than 12 per cent of the total cropped area is under maize. The area under maize declined by around 32 per cent from 2006-07 to 2007-08, whereas the production fell by 96 per cent during the same period. The production of maize declined significantly in 2007-08 mainly because of bamboo flowering. The production of maize, however, recovered significantly in 2008-09 (Table 5.7).

Pulses, oilseeds and sugarcane together cover a noteworthy area under cultivation. The production of sugarcane fluctuates radically from year to year. While one year, the production is above 40,000 Metric Tonnes (MT), the next year it comes down to less than half of the previous year's production. The area under sugarcane production remains more or less the same. The production of pulses increased to almost double from 2003-04 to 2004-05. However, the year 2005-06 saw a steep decline in the production of pulses. The increase in the area under cultivation of pulses led to an increase in production in 2006-07 but with falling yields, the production halved in the corresponding year. The yields as well as production, however, recovered once again in 2008-09.

Performance of Different Crops

Even though rice is the primary crop and it is cultivated on a large scale in Mizoram, still the state is not self-sufficient in this crop and has to import it. The yield of paddy is not very high and consistently fell over the period under study. It was 1.8 MT/Ha (hectare) in 2005-06 and fell drastically during the next two years. The yield of paddy recovered from 0.3 MT/hectare in 2007-08 to 1.32 MT/hectare in 2008-09. A comparison of the paddy yields in Mizoram with the all-India yield of rice (Table 5.8) shows the relatively lower productivity of paddy in Mizoram.

For the period before bamboo flowering in 2006, that is, in 2004 and 2005, the yield of maize in Mizoram was around 1.9 MT/hectare,[6] which is close to the all-India yield of maize, that is, 1.9 MT/Ha (Table 5.8). However, in 2008-09, the yields of maize in Mizoram could not recover much after the bamboo flowering destruction caused by rodents and stayed at a low of 0.98 MT/Ha (Table 5.7), which is drastically lower than the all-India yield of 2.355 MT/Ha (Table 5.8).

Sugarcane has shown impressive though fluctuating yields. The yield of sugarcane

Table 5.7: Area, Production and Yield of Important Crops in Mizoram

	2003-04					2004-05				
Name of Crop	Area Ha.	% of Total Area	Production (MT)	% of Total Production	Yield	Area Ha.	% of Total Area	Production (MT)	% of Total Production	Yield
Paddy	59,196	70.9	1,14,630	63.37	1.9	57085	70.04	107661	69.77	1.9
Maize	10,481	12.55	20,282	11.21	1.9	10505	12.89	19788	12.82	1.9
Pulses	4892	5.86	4313	2.38	0.9	6741	8.27	7971	5.17	1.2
Oilseeds	7532	9.02	5478	3.03	0.7	5817	7.14	5321	3.45	0.9
Sugarcane	1393	1.67	36,174	20	26	1357	1.66	13565	8.79	10
Total	83,494		1,80,877			81505		154306		
	2005-06					2006-07				
Paddy	55,754	72.72	99,021	56.31	1.8	52,847	71.33	42,091	49.62	0.8
Maize	11,742	15.32	22,703	12.91	1.9	10,775	14.54	20,969	24.72	2
Pulses	2972	3.88	2737	1.56	0.9	5054	6.82	5833	6.88	1.2
Oil Seeds	4816	6.28	5429	3.09	1.1	4075	5.5	3755	4.43	0.9
Sugarcane	1383	1.8	45,953	26.13	33	1340	1.81	12,187	14.37	9.1
Total	76,667		1,75,843			74,091		84,835		
	2007-08					2008-09				
Paddy	54,541	71.5	15,688	76.06	0.3	51,990	74.2	68,917	70.2	1.32
Maize	7328	9.61	729	3.53	0.1	9558	13.6	9318	9.4	0.98
Pulses	5048	6.62	2632	12.76	0.5	3931	5.6	3646	3.7	0.93
Oil Seeds	8485	11.12	748	3.63	0.1	3275	4.6	2514	2.6	0.77
Sugarcane	883	1.16	828	4.01	0.9	1342	1.9	13,696	14	10.2
Total	76,285		20,625			70,096		98,091		

Source: Statistical Handbook 2008, * Government of Mizoram, 2009.

saw a high of 33 MT/Ha in 2006-07 and a low of 0.9 MT/Ha in 2007-08, and in 2008-09, but recovered to 10.2 MT/Ha. The yield of pulses maintained a more stable pattern, and on an average, stayed at 0.9 MT/Ha.

Constraints to Agricultural Development in Mizoram

Agricultural growth in Mizoram is constrained due to various reasons, amongst which the terrain of the state is an important one. Most of the slopes in Mizoram are pretty steep and the farming practised on such steep gradients is harmful for soil stability. Thus, the steep terrain leads to low productivity. Only 22 per cent of the area (excluding forests) in Mizoram is suitable and available for cultivation, and of this land area, some part is under pastures and grazing (Government of Mizoram, 2004).

The poor irrigational facilities in Mizoram restrict the development of any permanent cultivation practice. Only 14 per cent of the total cropped area is under irrigation (Government of Mizoram, 2004). Both wet rice and terrace cultivation practices require good irrigation for thriving. However, due to the lack of irrigation, crops are mostly grown during the monsoon season only.

Most of the rivers in Mizoram are rain-fed. Therefore, the rivers have a limited potential to cater to the demand for water during the dry months. This problem can be addressed by constructing water reservoirs for rainwater harvesting. However, the topography of the state is not suitable for the construction of major reservoirs. The hilly terrain poses a major constraint in exploring the irrigation potential of the state, especially in terms of setting up major irrigation projects. Additionally, hilly terrains and steep slopes in Mizoram restrict the creation of a smooth transport and communication network, which is very important for the development of a competitive market system.

Jhum cultivation, a common cultivation practice in Mizoram, has become a low productive practice due to a reduction in the Jhum cycle from 10-15 years to 2-3 years.

Table 5.8: A Comparison of the Yield Rate of Major Crops in Mizoram with the National Yield Rate

Crops	Yield (MT/Ha)					
	Mizoram			India		
	2004-05	2005-06	2008-09	2004-05	2005-06	2008-09
Rice/Paddy	1.9	1.8	1.32	1.98	2.1	2.18
Maize	1.9	1.9	0.98	1.9	1.93	2.355

Sources: Statistical Handbook, Mizoram, 2008; Government of Mizoram, 2009; Agricultural Statistics at a Glance, 2009, Department of Agriculture and Cooperation, Government of India

During the last five or six decades, the equation between man and the environment has changed due to the population growth and large-scale urbanization, thereby causing excessive pressure on land, especially agricultural land. Due to the shortening of the Jhum cycle, there has been an unsatisfactory natural regeneration of soil fertility. This has resulted in soil degradation as a consequence of which productivity has fallen, causing a decline in the incomes of the farmers. As per the Economic Survey 2008-09, Mizoram, during 2005-06 the yield rate of Jhum rice was 1.101 MT/Ha, the yield rate of rice under WRC was 1.876 MT/Ha, and the yield rate of rice under HYV was 2.122 MT/Ha. The productivity of Jhum rice and wet rice cultivation is far below the national yield of 2.1 MT/Ha whereas the yields from HYV are a little higher than the national average. The lower productivity of paddy can be attributed to various issues, of which Jhum cultivation is an important one as paddy is the main crop cultivated under the Jhum practice.

In addition, the practice of Jhum cultivation has caused an increase in the number and variety of weed species, loss of forest cover, soil erosion, and flooding in rivers, thereby causing an ecological imbalance. Annually, an average area of two lakh acres of forests is cleared for the practice of shifting cultivation. The clearing of forests destroys the diverse and sometimes very useful flora and fauna. It obliterates various animal and insect species, their habitat, and food supply, and thus affects all animals in the ecological food chain ranging from herbivores to carnivores (Lianzela, 1997).

There has been a decline in Jhum practice and area under Jhum cultivation has decreased during the last ten years (Table 5.9), yet a majority of the cultivators in Mizoram are still Jhum cultivators. Jhum cultivation is a traditional agricultural practice and does not employ modern technology. This implies that a majority of the cultivators in Mizoram are using primitive and old techniques to cultivate land. There is very low use of HYV seeds,[7] fertilizers,[8] and pesticides in the state. Further, investment in the research and development of agriculture is also quite limited as reflected by poor extension services on farms, and the use of primitive tools and knowledge.

Marketing facilities are among the poorest in Mizoram and are responsible for the poor agricultural performance of the state. In the absence of market information, the produce is sold locally at low prices. Moreover, there is no incentive to produce large quantities or to specialize in production. It is thus necessary to improve the marketing facilities in order to make agriculture remunerative.

The state is definitely not self-sufficient in agricultural consumption. For example, paddy, the principal crop, is imported into the state to meet the needs of the local populace. There is thus a need to identify the dark areas in agriculture in Mizoram and take corrective actions. It is important to diversify agricultural crops cultivated in the state and to explore and enter areas in which the state has a comparative advantage, by increasing the use of modern technology and building more capacity for irrigation in order to increase the farmers' incomes and reduce poverty.

Table 5.9: The Area Utilized for Jhum Cultivation in the last Ten Years

Year	Area under Jhum (in Ha.)
1997-1998	68,114
1998-1999	68,392
1999-2000	36,285
2000-2001	35,798
2001-2002	40,305
2002-2003	41,356
2003-2004	43,447
2004-2005	40,969
2005-2006	40,100
2006-2007	41,465

Source: Statistical Handbook, 2008.

Corrective Measures to Promote Sustainable Agricultural Development

Jhum cultivation as an agricultural practice is becoming less sustainable and needs to be replaced by more sustainable and settled forms of cultivation. Time and again, initiatives have been taken to reduce and gradually stop the practice of shifting agriculture. In 1985, a land use policy initiative was introduced particularly for Jhumia families to provide them with an alternate means of livelihood and wean them away from shifting cultivation. It was implemented on a very modest scale and was confined to only four rural development blocks. The main aim of the policy was to create sustainable livelihood opportunities in the areas of agriculture, animal husbandry, sericulture, and forestry, and also in the non-farm sector by promoting cottage industries and processing units. However, this policy was not a notable success and did not generate the desirable results. Many families continued to practise shifting cultivation due to the non-availability of alternative employment opportunities. The following were the shortcomings of the land use policy for 1985-91:

> The monitoring was poor.

> The permanent activities under the programme did not give adequate returns.

> There was a delay in providing inputs for season-bound agricultural activities.

In 2002, a new policy called the Mizoram Intodelhna Programme (MIP) was launched, but it also suffered from various implementation and operational flaws. Some of the main constraints of the past development initiatives are: the use of a top-down approach with little involvement of the community and little emphasis on the development of village institutions, inadequate training and support to farmers, and less emphasis on a market-led approach for the selection of crops, resulting in the promotion of crops with limited market opportunities.

In spite of policy initiatives taken in the past, Jhum practice persists in Mizoram to a large extent, leading to a loss of bio-diversity, ecological imbalance, and lower incomes for the Jhumia families. Therefore, in 2009, a New Land Use Policy (NLUP) initiative was introduced to accelerate growth in the stagnated economy of Mizoram, to significantly reduce Jhum cultivation in order to preserve the precious forest resources and ecosystem, and to provide the people of Mizoram better and relatively high earning means of livelihood. The target group of the project mainly comprises the vulnerable populations or those who are heavily dependent on Jhum cultivation and suffer due to a continuous decline in Jhum yields.

The NLUP has taken lessons from the past development initiatives in Mizoram. Therefore, this project aims to follow a holistic approach to develop the economy of Mizoram. In a state where 95 per cent of the population is tribal, it is important to consider both the needs and traditions of the indigenous people. Thus, the use of policies based on community participation and technical research are considered in NLUP. The project support would be demand-driven. And its basic thrust is to empower the poor households in both rural as well as urban areas to enable them to directly

deal with diverse problems hampering their livelihoods.

One of the main strategies of the project is to address the institutional constraints hindering the development of the state. The focus of the policy is on adapting an approach that is more responsive to community needs and perceptions, involving communities in decision-making, and making them more responsible. This approach would also focus on building a self-reliant community to manage and sustain the implementation of the programme and the development process in the long run. For a successful implementation of the project and for optimizing participation in it at the community level, the policy will establish a Village Development Council (VDC) with all NLUP beneficiaries as members. It is like an arm of the traditional village council, which will function in accordance with the local customs of the community. The VDC intends to ensure greater focus on the vulnerable groups and will have a broader representation of women, youth and the marginalized groups. The policy also aims to provide infrastructure, training and communication to the VDCs in order to strengthen the local level institutions and to enable them to work effectively.[9]

The overall aim of the policy is to improve the conditions and livelihoods of the vulnerable groups in a sustainable manner, and at the same time, protect and restore the ecosystem. Some of the main objectives of the NLUP are to:

> Stop Jhum practice in order to reduce deforestation and keep 60 per cent of the land area under rain forests;

> Wean away farmers from Jhum practice and create sustainable economic opportunities for them;

> Create and promote sustainable farming and non-farming activities and micro-enterprises, thereby increasing the incomes of the farmers;

> Encourage settled cultivation in valleys and terrace cultivation on slopes, and provide irrigation facilities to support a permanent cultivation practice;

> Promote the cultivation of horticulture, floriculture, crops and medicinal plants to help increase the incomes of the poor farmers; and

> Improve infrastructure like the road network and provide the local populations better access to electricity, transport and communication.

It is important to provide good irrigation facilities for the all-round development of agriculture and promotion of intensive farming to help the state attain food security. Under the NLUP, projects costing Rs. 78.75 crores have been submitted to irrigate around 6638 hectares of land.[10] Along with irrigation, it is also proposed to put up five water harvesting systems[11] in order to utilize the excess water that accumulates during the rainy season for use in the dry season.

If the surplus is not distributed in the areas of shortage or the areas from where the demand arises, then the use of agricultural food and other produce gets limited. Therefore, it is necessary to supplement the existing road network with a network of agri-roads connecting the prospective farming areas. The NLUP has proposed the construction of agri-roads covering all 750 villages in Mizoram. The expenses worked out for this project are estimated to be Rs. 85,800 lakh.[12] Access to power and good quality telecommunication facilities will also facilitate upliftment of the rural population and will be helpful in promoting the poverty alleviation programme.

A more holistic picture of the market would enable the farmers to select the right crop, which is highly remunerative. Some of the products of agriculture and horticulture have a very high potential in international markets. The implementation of an efficient marketing system can help boost the growth of exports, which, in turn, can promote the overall economic progress in the state. The NLUP consists of various programmes to improve marketing facilities in Mizoram, including the creation of marketing outlets for agro-horticulture crops, encouraging organic farming for it to fetch premium prices in world markets, and helping with processing, storage and packaging for transport outside the state.[13]

A lot of the potential of the state is yet to be explored. The tropical forests of Mizoram are endowed with various valuable resources like bamboo, cane and medicinal plants (Exim Bank, 2009). The state has

more than 400 varieties of medicinal plants, 9 species of cane, 23 species of bamboo, 244 species of orchids, and an equally huge variety of fauna. This policy would focus on developing areas in which the state has a lot of potential to provide sustainable livelihoods to its people while also preserving the bio-diversity of the state.

Since the success of the policy depends on cooperation between the government, NGOs and the local community, it aims to help NGOs and government service organizations coordinate and focus their efforts towards improving resource management options and developing alternative livelihood activities for the community members.

Livestock

Animal husbandry is a non-farming practice and is a good way of substituting farm incomes. The livestock population in Mizoram is moderate. However, the practice of rearing of animals for commercial production of milk, eggs and meat is less prevalent.

Animal husbandry and agriculture are interlinked, for if agriculture provides food to the livestock, the livestock provides draught power and their waste is a good form of manure that can be used to increase the fertility of the soil. Almost every household in Mizoram owns pigs and poultry,[14] still that is not sufficient in relation to the recommended requirement for eggs, meat and milk. In 2007, the total livestock population in Mizoram was 16,05,565 (Table 5.10), that is, there were nine animals per household. Cattle constitutes around 10 per cent of the total livestock excluding poultry and the total population of cattle in 2007 was 34,988, that is, two out of every ten households own a cow. Pigs comprise 72 per cent of the total livestock excluding poultry and the population of pigs in 2007 was 2,67,361, that is, there were fifteen pigs per ten households (Table 5.10).

Livestock Products

The main products obtained from livestock that are readily consumed in Mizoram include milk, mainly from cattle and some from buffalo, eggs, meat, that is, largely pork and some meat from other animals like cattle, mithun and goat.

The production of milk was about 16,882 metric tonnes in 2008-09 (Table 5.11) from both cows and buffaloes. The production of milk increased by 5.5 per cent from 2006-07 to 2008-09 (calculated from Table 5.11). The per capita availability of milk in 2008-09 was 17.4 kg per annum or 48 gms per day (Table 5.11), though the Indian Council of Medical Research recommends the consumption of 240 gms of milk per day to maintain good health (Government of Mizoram, 2009). The state has been implementing the Intensive Dairy Development Project (IDDP) under the assistance of the Central Government and four projects have been implemented under this scheme at Aizawl, Lunglei, Kolasib, and a new one at Champhai.

The production of eggs went up by 18 per cent from 2006-07 to 2008-09, but the per capita availability of eggs remains low at 42 eggs per year (Table 5.11), whereas the recommended number is 180 eggs per year (Government of Mizoram, 2009).

The consumption of meat is very high in Mizoram due to the large number of non-vegetarians in the state. The amount of meat produced from pigs in 2008-09 was 7894 metric tonnes (Table 5.11), that is, 16 per cent more than the quantity produced in 2006-07. Pork accounts for more than 63 per cent of the total meat production, followed by poultry meat and beef. The other kinds of meat consumed in the state include mithun, buffalo, and goat.

The state has to import milk, meat and eggs to meet the demands of the local population, clearly suggesting that the demand is greater than production. In 2008-09, Mizoram imported 3242 cattle worth Rs. 551,144,000. During the same year, the import of eggs was worth Rs. 26,088,930, and the import of goats and poultry together amounted to Rs. 16,418,700. These huge import figures imply that the state is not self-sufficient in livestock products. At the same time, it is important to highlight that the state has the potential to attain self-sufficiency in most of the livestock items if adequate attention is paid to the development of this sector.

Table 5.10: Livestock and Poultry Population in Mizoram in 2007-08

DISTRICT	Crossbred	Indigenous	Total	Cows per Household	Buffaloes	Buffaloes per Household	Goats	Goats per Household	Sheep	Sheep per Household
Mamit	135	1972	2105	0.172	208	0.017	1780	0.145	77	0.006
Kolasib	2017	3947	5964	0.424	112	0.008	2244	0.160	43	0.003
Aizawl	5891	1486	7377	0.114	263	0.004	1576	0.024	86	0.001
Champhai	572	6556	7128	0.323	3183	0.144	706	0.032	564	0.026
Serchhip	436	1263	1699	0.168	985	0.097	571	0.056	31	0.003
Lunglei	1293	2360	3653	0.131	112	0.004	2799	0.100	4	0.000
Lawngtlai	183	2943	3126	0.225	147	0.011	5231	0.376	125	0.009
Saiha	217	3717	3934	0.354	822	0.074	803	0.072	44	0.004
MIZORAM	10,744	24,244	34,988	0.199	5832	0.033	15710	0.089	974	0.006

DISTRICT	Horses & Ponies	Horses per Household	Pigs	Pigs per Household	Fowls	Fowls per Household	Mithun	Mithuns per Household	Dogs	Dogs per Household
Mamit	8	0.001	23,351	1.906	1,09,823	8.963	0	0.000	2662	0.217
Kolasib	0	0.000	25,132	1.788	93,023	6.619	11	0.001	1936	0.138
Aizawl	142	0.002	74,340	1.148	3,09,312	4.777	107	0.002	12435	0.192
Champhai	831	0.038	36,705	1.664	2,65,884	12.053	1105	0.050	4139	0.188
Serchhip	128	0.013	23,692	2.342	84,116	8.315	171	0.017	1825	0.180
Lunglei	65	0.002	37,384	1.340	1,75,412	6.290	0	0.000	6215	0.223
Lawngtlai	0	0.000	24,901	1.791	92,601	6.661	0	0.000	4200	0.302
Saiha	201	0.018	21,856	1.967	1,03,979	9.360	545	0.049	2160	0.194
MIZORAM	1375	0.008	2,67,361	1.518	12,34,150	7.007	1939	0.011	35,572	0.202

Table 5.10: Livestock and Poultry Population in Mizoram in 2007-08 (Contd.)

DISTRICT	Duck	Ducks per Household	Turkey	Turkey per Household	Others	Other Animals per Household	Total	Total Livestock per Household
Mamit	499	0.041	2	0.000	0	0.000	1,40,517	11.468
Kolasib	2843	0.202	58	0.004	0	0.000	1,31,366	9.348
Aizawl	1445	0.022	246	0.004	431	0.007	4,07,760	6.297
Champhai	502	0.023	3	0.000	2	0.000	3,20,752	14.541
Serchhip	39	0.004	9	0.001	0	0.000	1,13,266	11.197
Lunglei	183	0.007	0	0.000	0	0.000	2,25,827	8.097
Lawngtlai	906	0.065	4	0.000	38	0.003	1,31,279	9.443
Saiha	128	0.012	11	0.001	315	0.028	1,34,798	12.134
MIZORAM	6545	0.037	333	0.002	786	0.004	16,05,565	9.116

Source: Statistical Handbook, 2008.

The development of the practice of animal husbandry and its commercial promotion will ultimately help the people of the state become self-sufficient and also develop a comparative advantage in the production of livestock products, especially meat and eggs, besides also enabling them to export it to the neighbouring states, and across the border to Bangladesh, Myanmar, China and Thailand. Simultaneously, there is a very good scope for generating employment and increasing incomes by promoting the commercial practice of animal husbandry. Further, the development of this practice will help reduce the practice of Jhum cultivation by providing a good employment alternative to the Jhumia families. Thus, there is need to exploit the growing population of livestock in the state for promoting animal husbandry and strengthening the agricultural and allied sector in Mizoram.

Horticulture in Mizoram

The geography, particularly the climatic conditions of Mizoram, are suitable for the production of horticulture crops like fruits, vegetables and spices including medicinal plants. There has been a shift in emphasis from foodgrain cultivation to the production of fruits and vegetables as a sustainable means of livelihood. The cultivation of horticulture crops on the gentle slopes is a good land use option and also prevents soil erosion and improves soil fertility, thereby helping to maintain the ecological balance. The important fruit crops that can be grown include orange, passion fruit, arecanut, grapes, avocado and bananas. The major vegetables grown in Mizoram include *chayote* squash (Iskut), brinjals, beans, cabbage, tomatoes, okra, bitter gourd, broccoli, capsicum and peas. Table 5.12 shows the area, production and yields of major fruits, vegetables and spices in Mizoram. Some of the fruits grown in Mizoram have a very high market potential and can thus become an important source of income for the state if cultivated on a larger scale. Therefore, the on-going programme under the Technology Mission along with NLUP focuses on the selected crops that have a higher economic potential and provides easy access to markets.

The scope of trading of fruits or vegetables is constrained due to their perishable nature. Thus, the fruits or vegetables need to be converted into preserved forms before

Table 5.11: Production of Eggs, Milk and Meat in Mizoram

Items	2006-07			2007-08			2008-09		
EGGS	No. in Lakhs	No. per Household	Per Capita Availability	No. in Lakhs	No. per Household	Per Capita Availability	No. in Lakhs	No. per Household	Per Capita Availability
(i) Desi	204	116	22	229	130	24	236	134	24
(ii) Imported	144	82	15	173	98	10	175	99	18
TOTAL	348	198	37	402	228	42	411	233	42
MILK									
(A) COW	in '000 Kilograms								
	Total	No. per Household	Per Capita Availability (kgs)	Total	No. per Household	Per Capita Availability (kgs)	Total	No. per Household	Per Capita Availability (kgs)
(i) Crossbred	12,666	72	13.4	12,871	73	13.4	13,019	73.9	13.4
(ii) Indigenous	2,638	15	2.8	2,819	16	2.9	2,988	17.0	3.1
SUB-TOTAL:	15,304	87	16.2	15,690	89	16.4	16,007	90.9	16.5
(B) BUFFALOES	694	4	0.7	815	5	0.9	875	5.0	0.9
TOTAL	15,998	91	16.9	16,505	94	17.2	16,882	95.8	17.4
MEAT									
	in '000 Kilograms								
	Total	No. per Household	Per Capita Availability (kgs)	Total	No. per Household	Per Capita Availability (kgs)	Total	No. per Household	Per Capita Availability (kgs)
(i) Cattle	1,842	10.00	1.95	1,931	11	2.02	2,201.92	13	2.27
(ii) Buffaloes	32	0.00	0.03	69	0	0.07	39.35	0	0.04
(iii) Mithun	13	0.00	0.01	7	0	0.01	30	0	0.03
(iv) Goats	64	0.00	0.07	68	0	0.07	78.16	0	0.08
(v) Pigs	6,810	40.00	7.20	7,355	42	7.68	7,894	45	8.14
vi) Poultry	1492	8.5	1.6	2000	11.4	2.1	2236	13	2.31
TOTAL	8,761	50.00	9.26	9,430	54	9.84	10,244	58	10.56

Sources: Statistical Handbook 2008; Government of Mizoram, 2009; and Census, India.

being transported to distant places or to nearby regions with cold storage facilities. The state, however, lacks good processing facilities, cold storage facilities and transport infrastructure. Thus, the NLUP 2009 is focusing on setting up essential infrastructure like agri-link roads, minor irrigation facilities and processing units. The horticulture department of Mizoram is investing in research and development pertaining to fruit and vegetable crops in order to increase production and productivity, and prevent any spoilage due to diseases.

If the state succeeds in developing good processing and cold storage facilities, along with transport under cold storage, and better roadways and ports, it can exploit the great opportunity available to develop a niche trade in fruits and vegetables with the neighbouring regions like the other north-eastern states of India, as also the countries of Bhutan, Bangladesh, Myanmar, China and Thailand. Further, a trade in processed fruits with Western countries like USA, UK, UAE, and France can also be developed.

Mandarin orange grows well in the tropical climate of Mizoram. The area under orange cultivation is quite large and increased by more than 50 per cent from 2006-07 to 2008-09. The demand for oranges in both the local as well as international markets is very high. In order to cater to this demand, however, the present level of production must increase manifold, but that is constrained by the unavailability of proper irrigation facilities during the dry spell (Exim Bank, 2009). In order to harness the potential of Mandarin orange, proper irrigation facilities and improved management practices should be made available to farmers growing oranges. Also, the availability of processing facilities for oranges can help promote the export of the processed fruit in the form of juices, jams and other products to international markets.

Passion fruit is a highly lucrative horticultural crop and is popular in Western countries. It is consumed mainly in the form of juice and as an ingredient in multi-vitamin drinks, and forms the fastest growing segment of the juice market. The north-eastern region of India including Mizoram is one of the few regions where passion fruit is grown mainly due to the suitable tropical climate. Most of the passion fruit cultivated in Mizoram is organic (Exim Bank, 2009). Both the golden yellow and purple varieties of passion fruit grow in Mizoram. There is tremendous scope for exploiting the potential of passion fruit as it has a good international market. Earlier, it was grown as a garden fruit. The large-scale cultivation of passion fruit started in Mizoram since the 1990s. The area under passion fruit production in Mizoram increased by more than 700 per cent between 2006 and 2007. However, in 2008-09, the area under passion fruit declined by more than 50 per cent and kept declining till 2010-11 due to a market problem. There is a potential for farmers to earn Rs. 30,000– 40,000 per acre by selling passion fruit @ Rs. 10 per kg (Government of Mizoram, 2009). In order to harness the potential of passion fruit, the government of Mizoram has two food processing plants at Aizawl and Chhingchhip, which have an annual capacity of processing 1350 MT of passion fruit. However, this capacity remains under-utilized until today as there is a shortage of raw materials available to the processing industry due to lack of surplus that can be processed (Exim Bank, 2009). The government of Mizoram has also imported a processing plant for the extraction of passion fruit juice to further utilize the potential of this fruit and create a wider market. Therefore, it is important to increase the production of passion fruit in the state with an assured market to the farmers by the state government.

Banana is one of the traditionally grown fruit crops in Mizoram. The area and production under banana cultivation is very high and consistently rose during the period 2006-07 to 2008-09, making the yield of bananas one of the highest among all other fruit yields, mainly because the climatic conditions in the state are highly conducive for the production of bananas.[15] However, as compared to the all-India yield of bananas, the yield is lower in Mizoram (Exim Bank, 2009).

Among the vegetables, chow chow (Iskut) and cabbage are grown extensively in Mizoram. Iskut is a perennial crop and is grown in most of the Mizo households. There is also an Iskut-growing association called the 'Iskut Growers Association of Mizoram', which cultivates Iskut on a large scale. Since the inception of the technology

Table 5.12: Area, Production and Yield of Major Fruits, Vegetables and Spices in Mizoram

Fruit Name	2006-07			2007-08			2008-09			2009-10			2010-11		
	Area (Ha.)	Production (MT)	Yield	Area (Ha.)	Production (MT)	Yield	Area (Ha.)	Production (MT)	Yield	Area (Ha.)	Production (MT)	Yield	Area (Ha.)	Production (MT)	Yield
Orange	5395	34,366	6.37	6395	11,567	1.8	8275	10,757	1.3	5348	13,265	2.48	6515	19,700	3.02
Banana	5020	1,19,676	23.84	6220	98,800	15.88	7220	66,424	9.2	8660	84,810	9.79	10,040	1,18,600	11.81
Grapes				372	10,416	15.5	1172	9962	8.5	1232	13,736	11.15	1575	20,400	12.95
Passion Fruit	1109	4979	4.49	8944	44,720	5	4084	13,530	3.3	3150	16,411	5.21	1522	5910	3.88
Ginger	3426	55,432	16.17	3587	57,010	15.89	10,391	1,58,878	15.29	6200	31,000	5	6500	31,950	4.92
Birdeye Chilies	792	1077	1.36	100	200	2	7185	24429	3.4	8700	47850	5.5	8700	47850	5.5
Turmeric	535	10074	18.83	4175	83500	20	9625	164972	17.14	4500	22500	5	4780	23970	5.01
Chow Chow	664	24455	36.8	714	26418	37	3200	48000	15	2250	34875	15.5	3500	56849	16.24
Cabbage	236	3684	15.6	200	5000	25	2985	38805	13	2400	21600	9	2600	33569	12.91

Sources: Statistical Handbook 2008 and Economic Survey 2009, Mizoram.

mission, the department of horticulture has been assisting in the production of chow chow and in the recent past, the area under chow chow cultivation increased by 380 per cent from 2006-07 to 2008-09. Iskut is mainly consumed as a vegetable and also in the form of juice. It is also found to have medicinal properties, which increase its value and demand. Among the vegetables produced in Mizoram, Iskut accounts for highest rate of sale to neighbouring states. The total income generated by Iskut amounts to more than Rs. 2 crore per annum (Government of Mizoram, 2009). There is also considerable scope for exporting Iskut to USA, Europe and South American countries.

The Department of Horticulture introduced the cultivation of off-season cabbage, a Japanese variety called 'Ryozeki', which can be cultivated successfully during the rainy season in Mizoram in order to help the state attain self-sufficiency in vegetable production. With the introduction of this Japanese variety of the vegetable, the state can now ensure the supply fresh cabbages to consumers even during the off-season.[16] Also, the area under cabbage cultivation increased by more than 1000 per cent from 2006-07 to 2008-09. Therefore, there is a vast potential of investment in off-season cabbage production in Mizoram.

Another important area that has a high potential is the production of spices due to favourable climatic conditions and the non-perishable characteristic of spices. This attribute of spices as opposed to fruits that are perishable makes the former more competitive, especially for trade transactions to distant places like the interiors of the country or to the Western nations. The main spices cultivated in Mizoram are ginger, turmeric and chilies.

The area under turmeric cultivation in the state has increased by 1700 per cent in the recent past. The main reason for this huge increase in cultivation of turmeric is the gregarious flowering of bamboo and the need to provide incentives to the farmers. Since turmeric is a short gestation crop and utilized in dry/powdered form, it can be easily transported even to and from remote areas.

The area under ginger cultivation in Mizoram also increased by 200 per cent from 2006-07 to 2008-09. The ginger yield per hectare in Mizoram has always been higher than the all-India level (Exim Bank, 2009). The state of Mizoram produces a ginger surplus every year, indicating the notable scope for exporting the surplus.

The production and area under bird eye chilies (dry) as also the yield of this spice too increased tremendously in 2008-09 after declining in 2007-08.

Floriculture

Another emerging area of tremendous commercial potential is floriculture. The production of flowers has increased during the last few years and the important flowers produced in the state include rose, anthurium, gladioli, bird-of-paradise and orchids (Table 5.13).

Table 5.13: Area, Production and Yield of Major Flowers in Mizoram

	2007-08			2008-09			2009-2010			2010 - 2011		
Name of Crop	**No. of Plants**	**No. of Flowers**	**Flower per Plant**	**No. of Plants**	**No. of Flowers**	**Flower per Plant**	**Area (Ha.)**	**Prodn (MT)**	**Yield**	**Area (Ha.)**	**Prodn (MT)**	**Yield**
Anthurium	2,39,800	12,56,000	5.24	20,80,000	75,00,000	3.61	28	79 lakhs	2.82	29	79.7 lakhs	2.75
Rose	4,47,680	25,00,000	5.58	4,80,000	27,00,000	5.63	6	28 lakhs	4.67	6	28.8 lakhs	4.8

Source: Government of Mizoram, 2009.

The climatic conditions in Mizoram are highly favourable for growing anthurium, a beautiful and long-lasting flower. Moreover, there is a vast market for anthurium at both the domestic and international levels. Under the technology mission, the Department of Horticulture, Mizoram, has undertaken the commercial cultivation of anthurium. Starting with 24 growers of anthurium, the number has gone past 300 during the last few years.[17] The potential for the cultivation of this flower is immense as each plant produces more than five flowers on an average, though this yield went down to 3-5 flowers per plant in 2008-09. The area under anthurium production went up by almost 500 per cent from 2007-08 to 2008-09. The tourism department of Mizoram organizes the anthurium festival every year to boost its sales (Government of Mizoram, 2009). During the period April-December 2009, a local company, Zopar Export Pvt. Ltd. earned Rs. 48,46,432 by selling anthurium flowers to countries like the US, UK, UAE and Australia (Ibid.).

More than ten varieties of roses are grown commercially in Mizoram, and the demand for the flower is very high both domestically and internationally. The yield of the flower also went up significantly from 2007 to 2008. Each plant produces 5-6 flowers of rose and yield has gone up from 2007 to 2008. During the period April-December 2009, 12,12,600 numbers of rose cut flowers were exported through Zopar Export Pvt. Ltd., accounting for an amount of Rs. 36,37,800 (Government of Mizoram, 2009).

The government is also promoting the cultivation of horticulture and floriculture crops as a strategy for encouraging farmers to give up Jhum cultivation and produce crops of a high market potential. This is done as part of a programme to reduce poverty in the state by increasing the incomes of poor farmers, especially Jhumia families, and to save the bio-diversity in Mizoram, which constitutes a major strength of the state.

The government of Mizoram can harness the potential of horticulture and floriculture crops by using the Bay of Bengal initiative for multi-sectoral technical and economic cooperation, and the Free Trade Area Framework Agreement for trade in horticulture products with the neighbouring regions of Bangladesh, Myanmar, Bhutan, Nepal and Thailand. Given the perishable nature of many horticulture crops, it is easier for farmers in Mizoram to carry on trade with these areas than with areas in the interior regions of India.

Medicinal Plants

Another emerging area of tremendous commercial potential is that of medicinal plants. A number of wild growing medicinal plants are found in Mizoram. Presently, farmers have taken up the cultivation of stevia plants by entering into a buy-back agreement with M/s Anubhav Biotech Ltd., Kolkata, with the help of the state's Horticulture Department. Farmers have already started small-scale production of these plants, which is expected to increase in due course.

Sericulture

The extensive practice of sericulture holds immense commercial potential for the rural population of Mizoram, especially women. Sericulture is an agro-based and labour-intensive industry, and provides employment throughout the year and does not require large financial investments. The produce of sericulture has a good export potential. Thus, sericulture becomes a perfect fit for rural areas, which are characterized by masses of chronic unemployed labour and seasonal unemployed labour. The promotion of sericulture in Mizoram is highly useful for providing alternative employment to Jhumia families, and it is also a good source for generating incomes through the export of silk fabrics. The art of weaving cotton and silk fabric is one of the traditions followed by Mizo women (Government of Mizoram, 2009); therefore, sericulture can also prove to be a good tool for the empowerment of women.

Mulberry sericulture is practised in the districts of Aizawl, Kolasib and Champhai, among others, and a lot of progress has been made in the area expansion and cocoon/raw silk production.[18] The production of mulberry, silk yarns and other cocoons showed a decent increase from 2006-07 to 2008-09; still it has a long way to go, given its potential in the state. Oak trees comprise the main food plant of the oak Tasar silkworm and there are over 30,000 hectares of naturally grown oak trees in the north-

eastern part of the state. However, despite all these advantages that could accrue to the state of Mizoram from the development of its sericulture industry, the growth of sericulture in the state is still taking place at a very slow pace (Government of Mizoram, 2009).

Protected Cultivation

Green houses and shade houses have recently been introduced in the State under technology mission. It has a tremendous scope and very good potential to increase production and productivity per unit area. Protected cultivation in a permanent structure can also be encouraged to do away with shifting cultivation. The commercial scale cultivation of anthurium and rose takes place in greenhouses and shade houses. Vegetables can be cultivated under protected cultivation round the year by selecting suitable crops according to season and even off-season crops can be produced. Therefore, there is a tremendous scope of increasing productivity per unit area with protected cultivation.

Role of Bamboo

The highly useful and multipurpose bamboo grows abundantly in Mizoram. Large areas covered with bamboo, which grows to a height of 40 m to 1520 m. are seen throughout Mizoram. A total area of 12,54,400 hectares is under bamboo forests in the state.[19] Around 59 per cent of the geographical area in the state is under bamboo cultivation, and around 23 species[20] of bamboo are found in Mizoram. The dominant one among these is Melocanna Bacifera (Mautak). Given the fact that bamboo is used for various purposes within the state and also exported out of the state, it thus serves as a major source of revenue for the state economy. In fact, amongst all the forest products, bamboo accounts for the largest revenue for Mizoram. In 2006 and 2007, the average revenue from bamboo was Rs. 112 lakhs (Table 5.14).[21] Bamboo as a resource has a lot of potential, and if managed and utilized in a better way, it can generate a huge surplus for the state.

The usefulness of bamboo has been known for long. Conventionally, bamboo was earlier used for various purposes like making baskets, brooms, arrows, boats, fences, ornaments, handicrafts, mats, etc. Now the uses of bamboo also extend across a wide range of activities. It is widely used in the construction of walls and ceilings, as also of small bridges and roads. Many families in the villages of Mizoram live in houses made from bamboo, which also serves as a substitute for teak in the wake of the rapidly depleting resources of teak. Bamboo is used for making hats, mats, toys, baskets and handicrafts. The shoots of bamboo are also edible and are not only used as a food item for Mizoram but also

Table 5.14: Production of Cocoons and Silk Yarns in Mizoram

Name of Cocoons	Unit	Production		
		2006-2007	2007-2008	2008-2009
Mulberry	MT	48	45	50
Muga	No. (in Lakh)	3.6	2.5	5
Eri	MT	3.8	4	4
Oak Tasar	No. (in Lakh)	1.5	1	5
Silk Yarn	MT	4	4.3	4

Source: Government of Mizoram, 2009, New Land Use Policy (NLUP), Mizoram Government, Available at:http://mizoram.gov.in/home/nlup.html

Table 5.15: Forest Production and Revenue from Forest Produce

Item	Unit	2006-2007		2007-2008		2008-2009		2009-2010		2010-2011	
		Quantity Extracted	Revenue (Rs. in lakhs)	Quantity Extracted	Revenue (Rs. in lakhs)	Quantity Extracted	Revenue (Rs. in lakhs)	Quantity Extracted	Revenue (Rs. in lakhs)	Quantity Extracted	Revenue (Rs. in lakhs)
Bamboo	No. in lakhs	182.00	177.00	23.44	46.89	63.27	102.26	67.70	135.41	35.47	70.07
Sand	Cum.	2,54,819.0	90.00	36,754.00	15.69	24,795.99	10.18	19,243.75	7.73	20,018.00	8.03
Sawn Timber	Cum	1924.00	5.02	21,311.00	18.99	11,712.24	18.11	1129.15	36.00	3690.00	75.05
Broomstick	Qntls.	4430.00	10.70	1500.00	10.50	1125.00	8.50	9000.00	32.16	1780.00	12.09
Fishery	Mt.	0.77	1.37	0.00	0.00	-	-	-	-	-	-
Stone	Cum.	52,409.00	10.93	13,678.00	2.43	10,254.98	1.14	6550.50	0.75	6866.00	0.68

Source: Statistical Handbook, 2008.

exported out of the state. The leaves and fruits of bamboo are used as fodder for animals. Bamboo is also used to make chopsticks, which has a high usage in Mizoram, the nearby north-eastern states and in the neighbouring countries of Bhutan, Nepal, Myanmar and Thailand. Besides all these, bamboo has medicinal uses.

Given the large number of uses of bamboo and its potential to increase the non-farm incomes, the state of Mizoram has established a Bamboo Development Agency for protecting bamboo forests, facilitating regrowth in the areas ruined by Jhum cultivation to restore bio-diversity associated with bamboo forests, and promoting private bamboo plantations and bamboo-based industries at the cottage and medium levels. Bamboo trading could also translate into a highly lucrative commercial enterprise, if the Mizoram government makes use of the Bay of Bengal initiative for multi-sectoral technical and economic cooperation under the Free Trade Area Framework Agreement. The production of other forest-based goods and the revenue generated from forest produce in Mizoram are depicted in Table 5.15.

Table 5.16: Production of Fish and Fish Seeds

Year	Fish Production (Inland) (in MT)	Fish Seed Distribution (in Lakh Nos.)
2006-2007	2765	232.5 (fry)
2007-2008	3803	170 (fingerling)
2008-2009	4090	229 (fingerling)

Source: Statistical Handbook, 2008.

Fisheries

Mizoram has perennial clear water streams with high oxygen content and a temperate climate with moderate rainfall, which offer a highly suitable condition for carrying out commercial fishing activities (Government of Mizoram, 2009). Fisheries in Mizoram exist in the form of fish ponds, traditional paddy-cum-fish culture, and rivers. The state has about 24,000 hectares of potential areas available for fish farming. However, only 2640 hectares of water area has been brought under fish ponds and around 400 hectares under paddy-cum-fish culture in the state.[22] In spite of the high potential for fish farming in the state, fish production is low and the consumption of fish is higher than its production. Table 5.16 provides details of the production of fish and fish seeds in 2007-08 and 2008-09. The state also imports fish to meet its demand for the food product. It is thus imperative to promote fisheries development and fish farming in Mizoram not only to help the state attain self-sufficiency in fish production but also to provide the Jhumia families with an alternate source of permanent settlement and livelihood.

Conservation of Biodiversity as a Means of Sustainable Development

The location and climate of Mizoram support the presence of a wide cover of forests throughout the state. Large portions of these forests are tropical evergreen and semi-evergreen, with the latter covering a majority of the area under forests in the state.[23] Tropical evergreen forests are rich in valuable timber species and their lower slopes have abundant bamboo and cane species. The drier areas of the tropical evergreen and semi-evergreen forests are predominated by deciduous trees (Jha, 1997a). Minor forest products like bamboo, cane and orchids, which grow abundantly in these forests, are sources of high value for the people of Mizoram and of revenue for the state economy. The tribes of Mizoram have traditionally used herbal medicines for healthcare, which is why the medicinal plants growing in the forests of Mizoram are of great worth to the people of the state. The dependence of people on the natural resources has resulted in a rich storehouse of knowledge among the indigenous tribes of Mizoram. The dependence of indigenous people on natural resources has also helped them use these resources more efficiently and optimally. However, the advent of urbanization and commercialization in the state has adversely affected the indigenous way of utilizing the potential of natural diversity, thus leading to the extinction of many species and loss of bio-diversity in the state.

Further, the indiscriminate felling of trees and clearing of forests for Jhum cultivation have led to a massive reduction in the area under forests and degradation of land. Many varieties of plants and trees have become extinct due to the Jhum practice and other human activities. One simple explanation for this destruction is that the ever-increasing demands of the population have led to excessive pressure on land. Being an agrarian economy, Mizoram is highly dependent on land, the single most important resource in agriculture. Thus, the devastation of land has led to lower productivity and reduction in incomes, thereby increasing the incidence of poverty in the state. The bio-diversity found in the forests of Mizoram is its strength and any loss in this biodiversity would be an alarming situation for not only the state but for the whole country. Consequently, steps need to be taken urgently to preserve the natural resources of the state and promote sustainable development.

Overall Issues of Sustainability in the Context of Increasing Incomes

Increasing growth and incomes has been the focus for the Indian economy for the last several years. However, now the attention is shifting to the issue of increasing incomes along with maintenance of the ecosystem and its biodiversity. This focus is especially applicable to Mizoram, as it is a state with plenty of natural resources and a large indigenous population.

Normally economic growth, increasing per capita incomes and development are

Table 5.17: Consumption of Fertilizers and Organic Manures

Type	Unit	Quantity Consumed	
		2007-08	2008-09
Urea	M. Tonnes	2,510	4800
DAP	M. Tonnes	3,000	3350
MOP	M. Tonnes	1,700	2440
Slacked lime	Quintals	4,000	1765
Vermi-composed	Quintals	650	2000
Slaked Lime	Quintals	4,000	-

Source: Statistical Handbook, 2008.

in conflict with the issue of preservation of natural resources and safeguarding the traditions of the indigenous people. However, more and more economies are becoming aware of their roles in protecting the ecological system and conserving the resources that nature has gifted to facilitate sustainable development.

Mizoram, a place of natural biodiversity, which is blessed with plenty of flora and fauna, was traditionally a self-sufficient economy until the population growth and growing demands of the people started exerting pressure on the land and other available resources. In order to feed the growing population and fulfil their demands, more and more land is being brought under cultivation, thus leading to the depletion of forest and natural resources. Moreover, the rise in urbanization and modernization, and consequently in the standards of living of the people are leading to a destruction of the natural resources in Mizoram. In the event of the depletion of its natural biodiversity, which is Mizoram's strength, the state is becoming dependent on other state economies for meeting the demands, especially for food, of its local population. Additionally, the decline in incomes due to a fall in productive agricultural activities leads farmers into a vicious circle of poverty.

At this juncture, the following two issues are important for the growth of Mizoram's economy:

1) Increasing the incomes of poor farmers to pull them out of poverty; and

2) Preserving the biodiversity and use of its potential in the state.

The implementation of the above solutions, however, entails a conflict between growth and sustainability. Various policies and research have shown ways to increase incomes and boost growth while maintaining the natural eco-system. There is thus a need for adopting a holistic approach, which involves using the strengths of the available natural resources to increase incomes and doing so in a sustainable manner.

The first and foremost policy is to reduce Jhum cultivation and find sustainable alternatives for Jhumia families. With a reduction in the Jhum cycle, this practice has become unsustainable and leads to low productivity and poor incomes. It is important to create awareness about the detrimental impact of Jhum cultivation and to substitute this practice with a more settled form of cultivation like wet rice cultivation in flat areas and the lower slopes, and terrace farming on the hilly terrains. The new land use policy is focusing mainly on the process of shifting families involved in Jhum cultivation to other kinds of sustainable livelihoods.

The second most important issue is to identify the area of comparative advantage for Mizoram. Paddy covers the maximum cropped area, yet the yield of paddy in Mizoram is not very high. The agro-climatic conditions prevalent in Mizoram are highly conducive to the production of some fruits, spices and vegetables like passion fruit, oranges, grapes, cabbage, chow-chow, turmeric and ginger. The economic policy for the state should also be directed towards promoting the horticultural activities in the state as it is a highly remunerative

option and also improves soil fertility besides helping to maintain the ecological balance. The growing demand for flowers like rose, anthurium, bird-of-paradise and orchids makes floriculture a potentially remunerative option for farmers in Mizoram.

The introduction of new agro-forestry models based on proper research for tackling the biophysical, socio-cultural and economic needs of the people would be crucial to promote the development of the society and conservation of the state's natural resource base. Agro-forestry models combine agricultural and forestry technologies to create more profitable and sustainable land-use systems. Under this system, crops are grown and livestock is reared on the same piece of land where natural trees and shrubs grow. There is a need is to employ a scientific approach to implement this process. Some induced models of agro-forestry in Mizoram are organic farming, bamboo-based agro-forestry and agro-forestry based on medicinal and aromatic plants. Agro-forestry gives higher incomes to farmers and thus has a huge potential of raising incomes and preserving the state's bio-diversity.

Even today most of the farming done in Mizoram follows the traditional pattern and thus involves negligible or minimal use of synthetic inputs like fertilizers and pesticides. Also low incomes do not allow most farmers to adopt modern technologies in their farming practices. The produce thus obtained is like a boon in disguise. The farming practice in which there is no use of fertilizers, pesticides and other synthetic inputs is called organic farming. Table 5.17 shows a comparison between the consumption of fertilizers and that of organic manures in agricultural cultivation in Mizoram.

The International Federation of Organic Agriculture Movements (IFOAM) defines organic agriculture as 'a production system that sustains the health of soils, ecosystems and people'. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment, and promote fair relationships and a good quality of life for all concerned. By default, a majority of the farming practices in Mizoram fall under organic farming. Organic foods are high in nutrient content, particularly minerals and vitamins, and are free from any poisonous content resulting from the contamination of food through the use of pesticides and herbicides. Organic food is less perishable because of its longer shelf life and tastes better. For all these reasons, there is a very high demand for organic products in both the domestic as well as international markets and also fetches a very high price. Moreover, organic farming involves low input cost and is more drought-resistant. It is also environment-friendly as it avoids the use of synthetic inputs which act as pollutants in the environment. Overall, organic farming in Mizoram is a potential way of increasing incomes and preserving the bio-diversity of the region.

Another option involves the capacity building of the community with the help of its members. The local tribes and the indigenous people of the state have sustained their livelihoods for ages while also preserving the environment. The challenge of promoting the growth of Mizoram's economy while also preserving nature's blessings necessitates policy research that would also take into account the traditional knowledge of the indigenous people for their ultimate benefit.

Notes

1. New Land Use Policy (NLUP), Mizoram Government, Available at:http://mizoram.gov.in/home/nlup.html
2. Author's Calculations based on field survey data.
3. New Land Use Policy (NLUP), Mizoram Government, Available at:http://mizoram.gov.in/home/nlup.html
4. See Tables 5.7 and 5.8 (Total Cropped area = 1,02,903 hectares, Area under paddy = 54,541 hectares, % = (54541/102903)*100 = 53%.
5. Some species of bamboo in Mizoram have a specific lifecycle after which they flower and die. These flowers of bamboo are food to the rodents and an excessive rise in bamboo flowers acts as an invitation to a large-scale rodent population.
6. The yield of maize in Mizoram for 2004-05 = 1.9 MT/Ha and 2005-06 = 1.9 MT/Ha, see Table 5.8.
7. Table 5.3 reflects the small amount of area under HYV seeds.
8. Table 5.17 shows the consumption of fertilizers in Mizoram.
9. New Land Use Policy (NLUP), Mizoram Government, Available at:http://mizoram.gov.in/home/nlup.html
10. New Land Use Policy (NLUP), Mizoram Government, Available at:http://mizoram.gov.in/home/nlup.html
11. Ibid.
12. Ibid.
13. Ibid.
14. Number of pigs per household, 1.5, number of fowls per household, 7, and the total livestock per household, 9 (see Table 5.10).
15. http://www.horticulture.mizoram.gov.in/index.php?option=com_content&task=view&id=13&Itemid=27
16. http://www.horticulture.mizoram.gov.in/index.php?option=com_content&task=view&id=13&Itemid=27
17. http://www.horticulture.mizoram.gov.in/index.php?option=com_content&task=view&id=13&Itemid=27
18. New Land Use Policy (NLUP), Mizoram Government, Available at:http://mizoram.gov.in/home/nlup.html
19. http://mizobamboo.nic.in/mizbamboo.htm
20. Ibid.
21. Table 5.14 (Average Revenue for 2006-07 and 2007-08 = (177 + 46.89)/2 = Rs. 112 lakhs).
22. New Land Use Policy (NLUP), Mizoram Government, Available at:http://mizoram.gov.in/home/nlup.html
23. http://www.forest.mizoram.gov.in/index.php?option=com_content&task=view&id=77

6

Health and Human Well-being

The health outcomes in Mizoram, comprising the crude death rate, crude birth rate and total fertility rate, are below the corresponding national averages. The morbidity rate in Mizoram is also lower than that in most other Indian states. According to the health status index constructed for the state, Mizoram scores 84.7 as against an ideal of 100 indicating universal coverage and zero sickness. However, a lot still needs to be achieved in terms of the institutional reach of reproductive healthcare in the state, especially with regard to institutional births, and ante-natal and post-natal care. There is also a wide spatial disparity in terms of the availability of healthcare facilities in Mizoram, which leaves room for improvement in this sphere.

Background

Human development may be conceptualized as the state of well-being of the people of a region. Such well-being would, in turn, depend significantly on the state of health, hygiene and morbidity of the resident population. In order to make an appraisal of the human development level of Mizoram, it is necessary to adequately understand this aspect of a long and healthy life in the state as a whole and in its various districts.

In the base UNDP method, the measure to capture the health aspect of HD is Life Expectancy at Birth (LEB), which, in a way, quantifies the expected longevity of a child born today. However, while the information needed to prepare a database for calculating the LEB may be available up to the state levels, it is missing at the sub-state levels. Hence, the task here entails figuring out some surrogate indices of a healthy life and concentrating on the aspects that directly or closely influence the expected length and morbidity of life. To this end, three dimensions of health issues are considered important—health infrastructure *in situ*, outreach and coverage of preventive measures, and curative aspects of health or morbidity. In addition, other attributes of a healthy life like nutrition and food security, access to safe drinking water and sanitation, unsafe practices such as substance abuse and the use of intoxicants, and the prevalence of HIV/AIDS have also been explored in this chapter.

Methodology

The right to lead a long, healthy and productive life is fundamental to the idea of human development. As mentioned earlier, while the conventional UNDP HDRs use LEB as the indicator of a long and healthy life, it is difficult to determine LEB at the sub-state level. Therefore, we use some proximate determinants of health and construct a Health Infrastructure Index, Reproductive Health and Child Care Index, Morbidity Index, Food Security Index, and Safe Living Index for examining the various aspects determining a long and healthy life. Various issues like the ante-natal and post-natal care of mothers, immunization of children, duration of sickness, institution and place of treatment, out-of-pocket medical expenses, coverage and dependability of the public distribution system, availability of safe drinking water, improved sanitation facilities, condition of houses, and the use of intoxicants, among others, have been discussed in the context of Mizoram here.

Health Infrastructure

Brief Historical Development of Healthcare in Mizoram

The development of healthcare services in Mizoram can be traced back to the time when the British sent military expeditions in 1889-90 to subjugate the Mizo people who often raided the Cachar plains where tea cultivation was undertaken by the British. The proposal relating to the appointment of a European medical officer with the pay attached to a first class Civil Service was accepted by the government vide Letter No. 1391 of 3 July 1890. Although there was no record of the exact date and names of the qualified Medical Officers who first set foot in the area, Dr. H.B. Melville, Commandant of one section of the Lushai Expedition and Dr. Whitchurch, IMS, a member of the contingent to support the Lushai Expedition of 1889-1890 were, no doubt, amongst the pioneer Medical Officers who started healthcare services in Mizoram. In 1892, Mizoram, then known as Lushai Hills, was annexed to British India and the administration was entrusted to one superintendent. Chieftainship was not abolished and the British administration put the chieftains in charge of local affairs and their position was legitimized by giving them some authority to administer justice according to Mizo customs.

In 1896, a small tent, which had been erected in 1894 at Aizawl to provide medical aid facility to labourers, was converted into a dispensary with some emergency beds. During the period 1896-1920, seven dispensaries, also known as travelling dispensaries with 5-6 emergency

beds at different places in Mizoram, were established. By 1947, there were two hospitals in Mizoram—the Aizawl hospital with 36 indoor beds, and the Lunglei hospital. Under the district administration (1947-1972), health services were brought under one Civil Surgeon (the District Chief Medical and Health Officer), who was posted at Aizawl. In 1966, there were three hospitals, twenty-one dispensaries with emergency beds, and three Primary Health Centres (PHCs) with ten beds each in Mizoram. However, insurgency, which broke out in 1966, disrupted the functioning of nine of the dispensaries. In 1957, the training centre for Auxiliary Nurse and Midwifery (ANM) was started at Aizawl, which was later upgraded into the Multipurpose Health Worker Training School in 1980. After the upgradation of the Mizo district into a Union Territory of Mizoram, the Directorate of Health Services was created with three districts, that is, the Aizawl, Lunglei and Chhimtuipui districts under its purview. Today, healthcare services in the state have been assigned to two separate directorates— the Directorate of Health Services, and the Directorate of Hospital and Medical Education. The state government is presently planning to establish a Medical College and State Referral Hospital in the state, and upgrade the Aizawl Civil Hospital into a State Hospital with 500 beds. The existing School of Nursing at Aizawl is also proposed to be upgraded into a College of Nursing with a capacity of 30 seats wherein students can pursue the BSc. Nursing Programme.

Availability of Health Infrastructure

The state's healthcare services are provided at the primary, secondary and tertiary levels. Primary healthcare is overseen by a sub-centre at the village level and a PHC/CHC at the block/sub-divisional level (Table 6.1). Secondary and tertiary healthcare are provided by district hospitals and the state hospital/referral hospital. In 2007, there were 19 hospitals under the state governments, NGOs and the private sector. At the primary level, there are 9 Community Health Centres (CHCs), 57 PHCs and 367 sub-centres (Table 6.2). In terms of geographical area, the number of healthcare institutions is the highest in the capital district Aizawl, followed by Saiha and Kolasib (Table 6.3). Mamit and Lunglei are the two districts where there are few healthcare institutions in view of the small areas of these two districts. The number of beds in government and private institutions is also quite inadequate—in fact, only 2500 in-patient beds are available all over the state (Table 6.4). The bed-population ratio shows that on an average, only three beds are available per 1000 persons in the state, with the ratio being the highest in Lunglei and the lowest in the border district of Lawngtlai.

Information on human infrastructure is limited, and records show that there are only 305 registered allopathic doctors working at the government healthcare institutions, accompanied by about 400 nurses and 1100 other health-related workers (Table 6.5). Relative to the population, the number of doctors is the highest in Kolasib, followed by Serchhip (Table 6.6). By the same criterion, the number of all health-related personnel taken together is the highest in Serchhip, followed by Mamit and Kolasib. The availability of personnel is relatively low in Lawngtlai and Aizawl (because of the high population density of these districts).

As regards the availability of health infrastructure at the primary level, it should be noted that manpower for healthcare is grossly inadequate at the PHCs and CHCs. The role of the private health sector in providing healthcare services to the people is quite considerable in Mizoram primarily due to the inadequate supply of healthcare staff by the government in relation to the growing demand for this service and the failure of public health providers in meeting this demand. The composition of the private health sector ranges from religious bodies, civil society, individuals, and diagnostic services to pharmacy shops. Private hospitals in the state are managed by a religious body, an individual enterprise and the society (Table 6.7). Their presence provides a substantial back-up to the public health infrastructure in the state and caters to the needs of the people.

Health Finances

The Fifth Five Year Plan (1974-79) is a watershed in the development history of Mizoram as it was the period when

Table 6.1: Health Infrastructure at the CHC/PHC/SC Level, Mizoram

Item	Required	In Position	Shortfall
Multipurpose Worker (Female)/ ANM	423	421	2
Health Worker (Male)/MPW (M)	366	303	63
Health Assistants (Female)/LHV	57	57	0
Health Assistants (Male)	57	57	0
Doctors at PHCs	57	39	18
Surgeons	9	0	9
Obstetricians and Gynaecologists	9	0	9
Physicians	9	0	9
Paediatricians	9	0	9
Total Specialists at CHCs	36	0	36
Radiographers	9	9	0
Pharmacists	66	35	31
Laboratory Technicians	66	31	35
Nurse Midwives	120	243	-

Source: Survey data, 2008.

Table 6.2: Institutions and Facilities

Districts	Hospitals	CHCs	PHCs	SCs	Beds in Goverment Institutions	Beds in Pvrivate Institutions
Aizawl	10	2	11	95	570	627
Champhai	1	2	12	59	210	0
Kolasib	1	1	5	29	132	0
Lawngtlai	1	1	2	27	110	0
Lunglei	2	1	9	70	350	200
Mamit	1	1	6	27	140	0
Saiha	1	-	7	34	132	0
Serchhip	1	1	5	26	130	0
State	19	9	57	367	1784	827

Source: Statistical Handbook, Mizoram, 2008.

Table 6.3: Spatial Accessibility of Health Institutions in Mizoram (per 1000 sq km)

Districts	Hospitals	CHCs	PHCs	SCs	All Institutions
Aizawl	2.8	0.6	3.1	26.6	33.0
Champhai	0.3	0.6	3.8	18.5	23.2
Kolasib	0.7	0.7	3.6	21.0	26.0
Lawngtlai	0.4	0.4	0.8	10.6	12.1
Lunglei	0.4	0.2	2.0	15.4	18.1
Mamit	0.3	0.3	2.0	8.9	11.6
Saiha	0.7	0.0	5.0	24.3	30.0
Serchhip	0.7	0.7	3.5	18.3	23.2
State	0.9	0.4	2.7	17.4	21.4

Source: Statistical Handbook, Mizoram, 2008.

Table 6.4: Availability of Facilities (per 1000 population)

Districts	Government Beds	Private Beds	All Beds
Aizawl	1.5	1.6	3.1
Champhai	1.7	0.0	1.7
Kolasib	1.9	0.0	1.9
Lawngtlai	1.4	0.0	1.4
Lunglei	2.4	1.4	3.8
Mamit	2.8	0.0	2.8
Saiha	2.2	0.0	2.2
Serchhip	2.3	0.0	2.3
State	1.8	0.9	2.7

Source: Statistical Handbook, Mizoram, 2008.

Mizoram came into existence as a separate administrative unit (earlier Mizoram was one of the districts under Assam). Since then, the pattern of Plan allocation clearly shows that a large sum of the Plan fund was allocated for social services sector development, including the health sector. The growth of annual Plan allocation for the healthcare and related sectors clearly reveals the pattern. Although there was a dip in the proportion of the Plan outlay on the health and allied sectors in the Tenth Plan, it again increased in the Eleventh Plan, and became almost one-quarter of the total Plan outlay (Table 6.8). This clearly indicates the importance attached to health services by the state government. The Annual Plan expenditure has also increased considerably since 2001-02, except on account of nutrition, wherein it has experienced a drop in actual expense (Table 6.9).

Another feature that emerges is the predominance of revenue expenditure relative to capital expenditure on the health and allied sectors, indicating small increments in the health infrastructure (Table 6.10).

Health Infrastructure Index

A Health Infrastructure Index has also been constructed at the district level using indicators like accessibility of health

Table 6.5: Medical Personnel Available in Mizoram

Districts	Doctors	Nurses	Pharmacists	Health Workers	Lab Technicians
Aizawl	15	50	34	261	25
Champhai	15	40	12	116	18
Kolasib	28	28	9	59	13
Lawngtlai	7	10	3	44	8
Lunglei	20	28	11	163	24
Mamit	8	16	9	57	10
Saiha	3	16	4	87	8
Serchhip	11	32	8	59	13
State	305	393	108	872	146

Source: Statistical Handbook, Mizoram, 2008.

Table 6.6: Availability of Medical Personnel (per 1000 population)

Districts	Doctors	Nurses	Pharmacists	Health Workers	Lab Technicians	All Medical Personnel
Aizawl	0.04	0.13	0.09	0.68	0.06	1.00
Champhai	0.12	0.32	0.09	0.92	0.14	1.59
Kolasib	0.41	0.41	0.13	0.86	0.19	1.99
Lawngtlai	0.09	0.13	0.04	0.57	0.10	0.94
Lunglei	0.14	0.19	0.08	1.12	0.17	1.70
Mamit	0.16	0.32	0.18	1.15	0.20	2.02
Saiha	0.05	0.26	0.07	1.43	0.13	1.94
Serchhip	0.20	0.57	0.14	1.06	0.23	2.20
State	0.31	0.41	0.11	0.90	0.15	1.88

Source: Statistical Handbook, Mizoram, 2008.

Table 6.7: Hospitals under Private Sector in Mizoram—2008

Name of Hospital	Bed Strength (number)	Type of Management	Location
Presbyterian Hospital	300	Religious	Durtlang/Aizawl
Christian Hospital	100	Religious	Serkawn/Lunglei
Greenwood Hospital	68	Individual	Aizawl
Adventist Hospital	40	Religious	Aizawl
Nazareth Hospital	45	Individual	Aizawl
Bethesda Hospital	80	Society	Aizawl
Aizawl Hospital	77	Society	Aizawl
Care Hospital	17	Individual	Aizawl
Grace Nursing Home	36	Individual	Aizawl

Source: Statistical Handbook, Mizoram, 2008.

institutions and availability of facilities and personnel. The index, calculated by using the UNDP Goalpost Method, shows only a relative score among the districts (Table 6.11). It has been observed that the average situation of the state is at the halfway mark, with the districts of Aizawl and Saiha topping the chart. The situation is precarious in Lawngtlai, and uncomfortable in Mamit.

Although Mizoram has a small population, the coverage of public health institutions might be better than the national average, as the areas covered are relatively vast, considering the topography of the state. Mizoram is full of hilly terrain, marked by a low density of population, scattered villages and inadequate transport and communication facilities. Under these circumstances, people living in remote areas take longer periods to travel to health centres for availing of their medical facilities/services. Moreover, some sub-centres cover more than ten villages in the peripheral districts. It is thus difficult for ANMs in such sub-centres to care for all the target groups in the scattered villages. Therefore, the upgradation of existing health institutions along with the provision of additional manpower is badly needed in the state. The state government is not able to fill up the vacant posts of medical personnel due to the prevailing financial constraints. Since a number of institutions are under-staffed, it is necessary to not only continue the engagement of contract staff to fill in the gaps, but also to employ regular staff immediately. Moreover, the status of training facilities in the state (both in terms of infrastructure and human resources) remains far from satisfactory at all levels. The existing training centres such as ANMTC, GNM training schools/ colleges need to be strengthened. Skilled development training needs to be provided in the state hospital as well as in the district hospitals. The provision of urban health services is also a matter of concern. It should be a priority for the government to set up assured and credible primary health services in urban areas in view of the rapid

Table 6.8: Health Expenditure and Outlay under Five-Year Plan (in crore)

Heads	Fifth Plan 1974-79	Seventh Plan 1985-89	Ninth Plan 1997-2002	Tenth Plan 2002-07	Eleventh Plan 2007-12
Total Plan Expenditure	46.4	367.54	1618.51	2300.01	5534
Total Social Services	10.66 (23.0)	105.56 (28.7)	529.03 (32.7)	917.3 (39.9)	2305.83 (41.7)
Total Health and Allied	5.47 (11.8)	55.53 (15.1)	264.43 (16.3)	276.28 (12.0)	1023.52 (18.5)
of which					
Medical and Public Health	2.39 (5.1)	15.57 (4.2)	112.01 (6.9)	123.7 (5.4)	269.66 (4.5)
Hospitals and Dispensaries	NA	NA	NA	NA	226.26 (4.1)
Water Supply and Sanitation	2.63 (5.7)	36.35 (9.9)	144.76 (8.9)	123.33 (5.6)	480.18 (8.7)
Nutrition	0.45 (1.0)	3.61 (1.0)	8.66 (0.5)	29.25 (1.3)	47.42 (0.9)

Source: Planning and Programme Implementation Department, Government of Mizoram.
Note: Figures in parentheses are percentages to the total Plan expenditure/outlay.

Table 6.9: Trends in Annual Plan Expenditure on Health and Allied Sectors in Recent Years (in lakh)

Year	Medical and Public Health	Water Supply and Sanitation	Nutrition
2001-02	2512.89	3257.83	811.00
2002-03	2726.00	2919.00	658.00
2003-04	4186.00	3208.00	680.00
2004-05	2950.00	3845.00	682.00
2005-06	3378.00	4613.00	682.00
2006-07	4093.00	7204.00	763.00
2007-08	4275.00	6820.00	713.00

Source: Planning and Programme Implementation Department, Government of Mizoram.

Table 6.10: Trends in Revenue and Capital Expenditure on Health and Allied Sectors in Recent Years (in lakh)

Year	Revenue Expenditure (crore)			Capital Expenditure (crore)	
	Health and Family Welfare	Water Supply and Sanitation	Nutrition	Health and Family Welfare	Water Supply and Sanitation
2001-02	61.7	46.9	8.4	10.5	28.9
2002-03	66.3	33.6	6.8	4.1	43.3
2003-04	82.2	37.4	7.0	9.4	57.0
2004-05	71.7	42.0	7.1	6.4	44.5
2005-06	74.5	54.7	10.5	2.5	58.4
2006-07	82.0	55.9	7.8	0.6	77.9
2007-08	103.8	106.3	12.8	0.2	76.4

Source: Annual Financial Statement (Budget), Government of Mizoram, Various Years.

growth of the urban population. The Urban Health Centres (UHCs) were established on the outskirts of the cities to make health facilities easily accessible to poor people living in the fringe areas of the cities. These UHCs have proved to be very useful and beneficial, especially for the urban poor communities that are not able to access the district hospital. This network, therefore, needs to be expanded and strengthened.

Table 6.11: Health Infrastructure Index

Districts	Inststitution per '000' sq km	per 1000 population		Health Infrastructure Index
		In-patient Beds	Health personnel	
Aizawl	33.0	3.1	3.1	0.75
Champhai	23.2	1.7	3.8	0.46
Kolasib	26.0	1.9	3.6	0.52
Lawngtlai	12.1	1.4	0.8	0.01
Lunglei	18.1	3.8	2.0	0.53
Mamit	11.6	2.8	2.0	0.29
Saiha	30.0	2.2	5.0	0.73
Serchhip	23.2	2.3	3.5	0.52
State	21.4	2.7	2.7	0.48

Source: Authors' calculations based on earlier tables.

HEALTH OUTCOMES

The health infrastructure put in place by the state is expected to act on two fronts— prevention and cure. Hence, the health outcomes too can be discussed in terms of these two aspects. Following is an assessment of the reproductive and preventive healthcare outcomes, followed by that of the status of curative healthcare. As a backdrop, however, we may look at the demographic position of Mizoram vis-à-vis the national average (Table 6.12). The Crude Death Rate (CDR), Crude Birth Rate (CBR), and Total Fertility Rate (TFR) are all lower in Mizoram as compared to the national aggregate, indicating a relatively better demographic situation in the state. The Infant Mortality Rate (IMR) is almost half of the national average, signalling a better reproductive and childcare condition in the state. The sex ratio is also higher and the proportion of the population below the poverty line is lower relative to the corresponding national averages. Thus, it seems that the health and allied situation in Mizoram is better than that prevalent in the country, on an average.

Reproductive and Preventive Health

Marriage and childbirth take place relatively early in Mizoram with the mean age at marriage being 21 years and mean age at the first pregnancy being 22 years. The average number of live births also exceeds three in most districts. It has been observed that more than 30 per cent of the pregnant women in the state do not obtain ante-natal care like the administration of iron-folate (IF) tablets while more than 10 per cent of the pregnant women do not take the tetanus injection. More than 17 per cent of the women do not receive any kind of post-natal care (Table 6.13). Only about 68 per cent of the pregnant women received both ante-natal and post-natal care during the last childbirth. Thus, the coverage of health facilities for women needs urgent attention. The situation is the worst in Mamit where just 50 per cent of the pregnant women receive both ante- and post-natal care. The situation is relatively better in Kolasib.

Another aspect of reproductive healthcare concerns the institutional delivery of babies in the presence of trained personnel. It has been observed that more than 20 per cent of all childbirths are non-institutional while in about 13 per cent of the cases, no trained personnel assist in the delivery. The situation is the worst in Lawngtlai where more than 50 per cent of all childbirths have been seen to take place outside institutions and more than 40 per cent took place without any assistance from trained personnel. The situation is relatively better in the Serchhip and Champhai districts in this regard.

The immunization of children and the gender dimension also merit a detailed

Table 6.12: Demographic Profile of Mizoram

Indicators	Mizoram	India
Total Population (Census 2001) (in million)	0.89	1028.61
Decadal Growth (Census 2001) (%)	28.82	21.54
Crude Birth Rate (SRS 2007)	17.8	23.5
Crude Death Rate (SRS 2007)	5.5	7.5
Total fertility rate (NFHS-3)	2.85	2.9
Infant Mortality Rate (SRS 2007)	25	57
Maternal Mortality Ratio (SRS 2001 - 2003)	163	301
Sex Ratio (Census 2001)	935	933
Population below Poverty line (%)	19.47	26.10

Source: GOI, 2007.

Table 6.13: Health Outcome—Reproductive Healthcare Coverage

Districts	Percentage of Pregnant Women Received				Child Delivery Status	
	ANC		Post-natal Care	ANC and PNC	Institutional Delivery	Delivery by TP
	IF Tablet	Tetanus Injection				
Aizawl	69	82	82	67	88.0	94.0
Champhai	84	95	76	74	90.0	96.0
Kolasib	79	97	94	77	81.0	93.0
Lawngtlai	65	74	78	63	47.0	60.0
Lunglei	74	88	87	72	65.0	75.0
Mamit	52	81	96	50	73.0	74.0
Saiha	61	97	77	59	86.0	93.0
Serchhip	61	96	79	59	95.0	99.0
State	70	87	83	68	80.0	87.0

Source: Survey data, 2008.

analysis. It has been observed that on an average, about 92 per cent of children are immunized in the state (Table 6.14). The immunization rate for boys is marginally better than that for girls, except in Aizawl where the immunization rate for girls lags substantially behind that for boys. In Mamit too, more than 20 per cent of the girls are not immunized, and there is little solace in the fact that even among the boys, only 77 per cent are immunized here. The quality of ante- and post-natal care and the working condition of the mother are two significant factors, which play a significant role in determining the maternal mortality rate. Interestingly, however, the maternal

Table 6.14: Health Outcome—Preventive Healthcare Coverage

Districts	% of Boys Immunized	% of Girls Immunized
Aizawl	90.8	86.6
Champhai	98.0	97.6
Kolasib	91.9	91.1
Lawngtlai	95.1	95.1
Lunglei	91.5	96.1
Mamit	77.2	80.3
Saiha	92.2	95.1
Serchhip	100.0	98.7
State	92.3	91.2

Source: Survey data, 2008.

mortality rate in Mizoram is distinctly lower than the national average.

Morbidity and Health Expenses

The morbidity rate is the number of persons (per 1000 population) reporting some kind of ailment during fifteen days preceding the date of the survey. This information is relevant both for the assessment of health situation of the people and for the formulation of appropriate health policies and programmes. It helps in identifying vulnerable groups that face a high risk of morbidity and are in need of health services.

In Mizoram, the morbidity rate is quite low as compared to that in the other Indian states. The morbidity rate for 2004 in the rural areas for males and females was 23 per 1000 and 18 per 1000, respectively, whereas in the urban areas, it was 17 per 1000 and 18 per 1000, respectively. Data from the NSSO 60th Round reveal that the national averages of morbidity rates for males and females in the rural areas are 83 and 93 per 1000 population, respectively, whereas the corresponding figures in urban areas are 91 and 108 per 1000 population, respectively. The substantially low levels of morbidity suggest a significantly healthier population in Mizoram as compared to the national average. Also significant in terms of gender issues is that the morbidity is lower for females as compared to males in rural areas but higher in urban areas.

The field survey data of 2008, though not comparable with the NSSO 2004 data reported above, indicates that the morbidity rates among men and women are 2.9 per cent and 4.7 per cent, respectively. Female morbidity is higher than male morbidity in almost all the districts except Champhai, Mamit, and Saiha. Contrary to the morbidity levels, the rate of hospitalization among the sick is higher for males as compared to females and the average out-of-pocket health expense is also substantially higher for males.

Table 6.15: Morbidity Rates and Cost of Treatment

Districts	Reported Sick	Mean Days of Sickness	Hospitalized among Sick	Average Health Expense (Rs. per year)	
				Total	Out of Pocket
Aizawl	5.3	16.5	32.1	4931	3900
Champhai	4.2	20.7	27.4	3128	3128
Kolasib	2.6	10.4	14.3	2307	1715
Lawngtlai	5.2	15.2	24.4	1198	1170
Lunglei	4.3	17.6	37.3	4442	4382
Mamit	4.2	19.9	8.2	1752	1600
Saiha	4.8	15.2	42.0	3626	1833
Serchhip	4.9	21.5	40.6	6351	5787
State	5.0	17.1	30.9	3538	3424

Source: Survey data, 2008.

This is perhaps an indicator of the inherent bias in the society's perception of women's health wherein sickness among the males is given more importance and substantially more money is spent on the treatment of men as compared to that of women.

Concentrating on the health issues at the aggregate level, we find that morbidity is relatively higher in Lawngtlai, Aizawl, and Serchhip (Table 6.15). The number of mean days of sickness is higher in Serchhip and Champhai. The incidence of hospitalization is high in Saiha, Serchhip, and Lunglei. One of the major reasons for impoverishment and indebtedness, especially in rural India, is the high degree of health-related expenses. In India, most of the medical costs are borne by the people out of their own pockets and Mizoram is no exception. On an average, the medical expense per patient is about Rs. 3500, of which almost the entire sum is met personally by the patients, with Medical Insurance or the State Medical Allowance contributing only a minimum sum towards this expense. The average medical expense is quite high in Serchhip and Lunglei. These expenses seem to be low in Lawngtlai, but that is probably because of the poorer economic conditions of the people here, since the morbidity rate in this district is among the highest in the state.

Place of Treatment

People who fall sick get themselves treated at a variety of institutions and locations. It can be observed that a majority of the episodes of sickness are treated at home, especially in Mamit and Lawngtlai (Table 6.16). Beyond that, people prefer to seek treatment at government healthcare institutions. Only in Aizawl and Lunglei, close to 10 per cent of the patients seek treatment at private institutions, possibly because of the availability of such facilities in the two urban centres. People also tend to get treated within their own village or at the nearby town, with only a small number venturing outside the state for treatment.

Main Diseases

Common flu and fever are the main ailments reported by the respondents (Table 6.17). Among the threatening diseases, malaria is one of the main ailments that plague Mizoram every year, especially in the Lawngtlai, Lunglei and Mamit districts. In addition, the incidence of diarrhoea is also quite common in the state.

Mortality

The Crude Death Rate in Mizoram is 5.5 as compared to 7.5 for the country as a

Table 6.16: Places of Treatment

Districts	Percentage of Sick People Treated at				Location of Treatment		
	Government Institution	Government & Private Institution	Only Private Inst	Home	Within Village	Nearby Town	Outside the State
Aizawl	30.6	22.2	10.2	36.9	44.8	52.2	3.0
Champhai	53.4	8.9	0.0	37.7	66.1	33.3	0.6
Kolasib	23.3	14.7	0.0	62.0	87.5	12.5	0.0
Lawngtlai	25.9	1.0	2.4	70.7	65.7	34.3	0.0
Lunglei	36.9	6.3	8.4	48.4	48.0	52.0	0.0
Mamit	7.1	1.2	2.7	89.0	97.8	2.2	0.0
Saiha	59.5	2.7	1.2	36.6	80.8	19.2	0.0
Serchhip	61.2	5.5	3.2	30.1	67.9	31.3	0.8
State	36.0	13.1	6.4	44.5	57.6	40.9	1.5

Source: Survey data, 2008.

Table 6.17: Main Diseases in Mizoram

Diseases	Aizawl	Champhai	Kolasib	Lawngt-lai	Lung-lei	Mamit	Saiha	Serch-hip	State
Diarrhoea	17.4	21.5	4.4	13.6	8.6	21.2	20.0	31.8	17.1
Flu and Fever	40.4	29.8	45.1	34.9	38.4	25.5	41.0	29.0	37.3
Malaria, Kalazar, Jaundice, Typhoid, Pneumonia	8.4	17.1	7.4	34.5	30.9	31.5	19.4	16.2	16.9
Gynaecological Diseases	2.1	8.2	23.4	8.7	6.0	10.6	0.9	2.6	5.1
Heart Ailments, Cancer, Liver Diseases, Diabetes	8.9	3.3	2.6	2.9	3.5	0.4	1.6	6.0	5.7
Others	22.8	20.1	17.1	5.5	12.7	10.8	17.1	14.5	18.0

Source: Survey data, 2008.

Table 6.18: Health Status Index—Districts

Districts	Reproductive Care			Regularly Immunized	Not Reported Ill	Health Status Index
	ANC/PNC	Institutional Delivery	Trained Personnel			
Aizawl	67.0	88.0	94.0	92.2	94.8	87.2
Champhai	74.0	90.0	96.0	98.2	96.9	91.0
Kolasib	77.0	81.0	93.0	92.3	97.3	88.1
Lawngtlai	63.0	47.0	60.0	95.2	94.3	71.9
Lunglei	72.0	65.0	75.0	94.4	96.2	80.5
Mamit	50.0	73.0	74.0	79.2	97.5	74.7
Saiha	59.0	86.0	93.0	93.6	94.0	85.1
Serchhip	59.0	95.0	99.0	100.0	93.3	89.3
State	68.0	80.0	87.0	93.4	95.3	84.7

Source: Calculations based on earlier tables.

whole, according to the RHS Bulletin of March 2007 released by the Ministry of Health and Family Welfare, Government of India. The death rate in the rural areas of the state varies between 5.67 in Kolasib to 3.95 in Lawngtlai, while the urban death rate ranges between 5.23 in Saiha and 2.24 in Mamit. Malaria and cancer are the two principal causes of death in Mizoram, according to the 2005 data. While malaria was responsible for 13.3 per cent of the deaths, cancer accounted for 13.2 per cent. Other major diseases that have been found to cause death in the state are asthma and bronchitis (9.6 per cent), heart diseases (6.1 per cent), and stomach and duodenum problems (5.2 per cent).

Health Status Index

A Health Status Index (HIS) can be prepared from the indicators of Reproductive Care, Institutional and Assisted Delivery, Immunization, and Not Reported Sick (complementary of Morbidity Rate). The score comes to 84.7 for the state, with the lowest being reached in Lawngtlai and the highest in Champhai (Table 6.18). It needs

to be noted that this score should ideally be 100, indicating universal coverage and zero sickness.

Food And Nutrition

While the health infrastructure and the coverage under reproductive, preventive and curative healthcare indicates the preparedness of the region in combating the emergent needs of the people, one should ideally look at the general health of the population also in the context of human development. This is undoubtedly aided by the nutritional standards of the population and the availability of adequate food.

Nutritional Status and Anaemia

According to the NFHS-3, 30 per cent of the children under the age of three years are stunted (too short for their age) while 9 per cent are wasted (too thin for their height) and one-fifth of the children are underweight (low weight for their age) in Mizoram (Table 6.19). The incidence of malnutrition is higher among children in rural areas as compared to those in urban areas. Adults in Mizoram have a healthy weight for their height as compared to adults in most of the states in India. It has been observed that while 15 per cent of the women and 6 per cent of the men are too thin for their height, 12 per cent of the women and 17 per cent of the men are overweight or obese. Overall, close to 75 per cent of the adults have a healthy weight for their height. While the incidence of people being underweight is more prevalent in rural areas, that of being obese is more common in urban areas, which supports the fact that obesity is actually a disease of the affluent.

Anaemia is a major health problem in Mizoram, especially among women and children. Among children aged 6-35 months, more than 50 per cent suffer or have suffered from anaemia. Close to half of the pregnant women in the state also suffer from this disease. Overall, among adults, nearly two-fifths of the women and one-fifth of the men in the state are seen to suffer from anaemia, which is more common in rural areas than in urban areas.

Nutritional Support for Children—ICDS

The Integrated Child Development Services (ICDS) programme provides nutrition and health services for children under the age of six years and for pregnant or breastfeeding women (in addition to pre-school activities for children in the age group of 3-5 years). These services are provided through community-based *anganwadi* centres. The state government is presently running 23 ICDS projects across the state to provide the minimum nutritional requirements of children for ensuring their all-round development. More than 1,37,000 children were enrolled in 1862 *anganwadi* centres operating under this scheme, in 2007-08. Malnourished children were given nutritional support at the rate of Rs. 2 per day per child and severely malnourished children at the rate of Rs. 2.70 per day per child. Even pregnant and lactating mothers as well as adolescent girls were provided nutritional support. During 2007, the total number of severely malnourished children who benefited from the ICDS project was more than 75,000 in the 0-3 years age group and more than 50,000 in the 3-6 years age group. In addition, more than 28,000 pregnant and lactating mothers benefited from the programme. Up to the year 2007-08, there were a total of 1862 *anganwadi* centres under 23 ICDS projects.

Food Security and PDS

The health conditions of the people depend crucially on the level of food security in the region. Mizoram is a food-deficit state and hence food security has been ensured through the Public Distribution System (PDS), which covers the entire state. Food items distributed through PDS include rice, wheat products, sugar, and kerosene oil. The state has a network of 1205 Fair Price Shops (FPSs) under its PDS and lifted 1,42,457 metric tonnes (MT) of foodgrains from the Food Corporation of India (FCI) during 2007-08. In 2008, more than 2.25 lakh ration cards were issued, covering 1.3 million people in the state.

Following the decision of the Government of India to streamline the PDS with a focus on the poor, the targeted PDS is also operational in the state. The Government

Table 6.19: Nutritional Status in Mizoram—NFHS-3

Indicator	Figures are % to Total		
	Aggregate	Urban	Rural
Child Feeding Practices and Nutritional Status of Children			
Children under 3 years breastfed within one hour of birth	65.4	59.9	70.7
Children age 0-5 months exclusively breastfed	46.1	44.1	48.4
Children age 6-9 months receiving solid or semi-solid food and breast milk	84.6	NA	NA
Children under 3 years who are stunted	30.1	23.0	36.7
Children under 3 years who are wasted	9.2	8.7	9.6
Children under 3 years who are underweight	21.6	13.8	28.8
Nutritional Status of Ever-Married Adults (age 15-49 years)			
Women whose Body Mass Index is below normal	15.3	11.0	20.7
Men whose Body Mass Index is below normal	6.0	5.5	6.7
Women who are overweight or obese	12.0	18.3	NA
Men who are overweight or obese	16.9	22.5	10.6
Anaemia among Children and Adults			
Children aged 6-35 months who are anaemic	51.7	44.4	58.5
Pregnant women aged 15-49 years who are anaemic	49.3	46.4	50.8
Ever-married women aged 15-49 years who are anaemic	38.2	30.2	47.5
Ever-married men aged 15-49 years who are anaemic	19.5	11.0	29.1

Sources: 2005-2006 NHFS-3, Fact Sheet, Mizoram, IIPS, 2009.

of India has fixed 42,000 BPL families and 26,000 AAY family beneficiaries for the state. Under this scheme, 35 kg of rice per month for every family were distributed to the eligible BPL or AAY families identified by the state government at the rate of Rs. 6.16 per kg and Rs. 3.00 per kg. respectively, during 2007-08. Separate ration cards were issued to these families for this purpose.

In spite of such steps being taken at the administrative level, the condition on the ground is considerably different. More than 10 per cent of the people do not avail of PDS in the state, with the proportion of non-beneficiaries touching 20 per cent in Lawngtlai and Lunglei (Table 6.20). Of those who avail of the PDS, more than 13 per cent claim that their demand for foodgrains is not fully met by the PDS and that they are unable to get their full eligible quota from the PDS. The unmet demand is higher in the Aizawl and Champhai districts, which could be an indication of higher awareness among the people in these two areas. On an average, the most important reason for the beneficiaries not getting their full quota from the PDS is low/inadequate supply at the PDS shop—a factor that raises serious questions about the efforts made by the authorities to ensure food security. However, the reasons for this situation at the district level are quite different from each other and except in Aizawl, Champhai, and Kolasib, the most important reason for the unmet demand

from the PDS is the inability of the people to purchase their entitled amount from the PDS shop due to financial problems. Thus, the two main reasons for the PDS failing to meet the people's requirements of foodgrain are either the insufficient supply of grains at the PDS shop or the low purchasing power of the residents, which prevents them from buying foodgrains even at the subsidized rate. This problem, therefore, needs to be addressed immediately by the authorities.

People also have serious complaints against the working of the PDS in their localities. About one-third of the respondents complain about the irregular supply of foodgrain under the PDS, and about one-fifth point to the fact that the PDS supply is rarely available on time (Table 6.21). About 15 per cent of the people also complain about fraudulent measurements by the dealer. Irregular supply is more of a problem in the Lawngtlai, Lunglei, Aizawl, and Saiha districts, while unscrupulousness of the dealers is a serious problem in Champhai; the poor quality of commodities is the main complaint in Kolasib and Serchhip; and insufficient quantity available at the PDS outlet is the topmost complaint in Mamit.

It is thus evident that in spite of serious efforts being taken by the state authorities in strengthening the PDS network in the state, attaining food security is still a distant dream in the state. It has been observed that while about 35 per cent of the PDS beneficiaries are from BPL/AAY families, about one-fifth of them do not get their full quota from the PDS (Table 6.22). Thus, the PDS has failed to address the food security issue among the most deserving sections of the population, that is, those below the poverty line and those under the AAY scheme. Such a high level of unfulfilled demand despite the existence of a targeted PDS is a matter of grave concern.

Table 6.20: Food Security in Mizoram – Status of PDS Coverage

Districts	Avail PDS	Obtained Eligible Amount	Reasons for Not Getting Full Quota			
			Financial Problems	Low Supply at PDS	Dealer Problems	Others
Aizawl	85.4	70.0	19.4	67.0	1.2	12.3
Champhai	86.1	77.4	9.5	89.8	0.0	0.6
Kolasib	95.4	82.4	41.7	47.5	0.0	10.7
Lawngtlai	81.7	87.7	68.6	5.6	0.0	25.8
Lunglei	80.1	85.6	45.8	8.2	8.1	37.9
Mamit	98.2	81.3	66.6	23.5	0.0	9.9
Saiha	94.1	91.1	67.5	27.3	2.2	2.9
Serchhip	90.1	93.7	90.0	10.0	0.0	0.0
State	87.3	79.2	29.7	55.3	1.6	13.4

Source: Survey data, 2008.

Table 6.21: Food Security in Mizoram – Problems with PDS Coverage

Districts	Difficulties Faced with PDS					
	Insufficient Quantity	Poor Quality	Irregular Supply	Not Available on Time	Dishonesty in Measurement	Others
Aizawl	22.8	13.2	32.9	19.4	8.8	2.9
Champhai	4.7	13.4	29.7	18.4	33.5	0.4
Kolasib	22.1	24.0	16.6	15.9	19.6	1.8
Lawngtlai	9.3	6.5	42.2	26.1	2.7	13.2
Lunglei	14.1	5.4	42.7	22.6	6.2	9.0
Mamit	20.1	15.0	12.6	19.7	16.7	15.9
Saiha	5.9	22.7	31.9	14.2	25.3	0.1
Serchhip	8.2	30.9	23.0	13.7	23.8	0.4
State	14.5	13.5	33.3	19.6	14.3	4.8

Source: Survey data, 2008.

Table 6.22: PDS Coverage among BPL-AAY Beneficiaries

Districts	Proportion of BPL / AAY Families	
	Among Total Beneficiaries	Not Getting Eligible Amount from PDS
Aizawl	25.9	11.2
Champhai	40.9	25.0
Kolasib	29.1	33.4
Lawngtlai	56.1	19.4
Lunglei	38.5	25.6
Mamit	23.9	30.0
Saiha	34.4	14.3
Serchhip	34.5	12.8
State	34.2	20.8

Source: Survey data, 2008.

Auxiliary Determinants of Health

Some of the auxiliary determinants of health status have also been examined. It is accepted that the condition and type of houses of the residents also have an impact on their health status. People living in *pucca* or semi-*pucca* houses are less prone to the vagaries of the nature and more protected from seasonal illnesses caused by the rains/ cold. Similarly, the availability of safe drinking water is another crucial ingredient of a long and healthy life, as in India, many of the infectious and chronic diseases are water-borne. Improved sanitation is another important proximate determinant of health standard. These factors are examined in detail below.

Housing Status

Both the types of houses and the amenities available to a household are important factors in indicating the deprivation status of a family. It has been observed that about 70 per cent of the rural population and 86 per cent of the urban population lives in pucca houses (Table 6.23). At the other end, 12 per cent of the rural people and 2 per cent of the urban people live in thatched and *kutcha* houses. The remaining people have semi-pucca houses. The average homestead land area per capita is 38 square metres in rural areas and 19 square metres in urban areas. Among the districts, *kutcha* and thatched houses are more common in Lawngtlai and Mamit, and rare in Serchhip and Saiha.

Household Amenities—Drinking Water and Sanitation

As regards the amenities available to the households, it has been found that most of the houses have electricity. However, the

availability of safe drinking water within the premises is quite infrequent—only about 4 per cent of the rural homes and less than 50 per cent of the urban homes have this facility within their homes (Table 6.24).

The situation regarding toilet facilities in the home is also poor with more than two-thirds of the rural homes and one-fourth of the urban homes not having toilets at all. In all, 50 per cent of the houses in Mizoram do not have toilets within their premises, which indicates the need for the administration to take immediate steps to improve this situation.

Spatial disparities do exist in terms of the availability of household amenities as well with the Lawngtlai and Lunglei districts being the worst sufferers in this regard. The unavailability of toilet facilities is a more severe problem in rural Champhai, urban Kolasib, and urban Saiha. The lack of safe drinking water facilities within the house is a more acute problem in the rural areas of Aizawl, Mamit, Serchhip, Saiha, and the urban areas of Mamit.

Other Challenges

Mizoram also faces several challenges to a safe, long, and healthy life for its residents. The foremost among them is substance abuse and intoxication. While the incidence of intoxication is admitted by the respondents, that of substance abuse is rarely accepted. The available data shows that about 17 per cent of the surveyed people are habituated to taking some form or the other of intoxicants, with more than 14 per cent being addicted to both smoking and drinking (Table 6.25). Both these addictions cause severe damage to the health of the user in the long run, apart from the psychological and financial damages associated with intoxication. On an average, people spend Rs. 350 each month on

Table 6.23: Housing Status in Mizoram (% of Persons Living in Different Types of Houses)

	Rural			Urban			Aggregate		
	KT[a]	SP[b]	*Pucca*	KT[a]	SP[b]	*Pucca*	KT[a]	SP[b]	*Pucca*
	By Districts								
Aizawl	11.9	21.5	66.7	3.1	10.8	85.9	5.0	13.1	81.7
Champhai	3.1	10.4	86.5	0.5	4.1	95.1	1.9	7.6	90.4
Kolasib	4.5	19.9	75.6	1.6	21.7	76.8	3.0	20.8	76.2
Lawngtlai	29.7	16.8	53.6	0.0	0.0	0.0	29.7	16.8	53.6
Lunglei	3.7	23.3	73.1	0.5	11.7	87.9	2.4	18.8	78.8
Mamit	24.3	24.1	51.2	23.3	0.0	76.7	24.3	23.5	51.8
Saiha	0.7	19.4	79.9	2.0	18.2	79.8	1.1	19.0	79.9
Serchhip	0.3	14.4	85.0	2.0	7.3	90.7	0.9	11.8	87.1
Mizoram	11.6	18.7	69.6	2.1	11.8	86.0	7.9	16.1	75.9

Source: Survey data, 2008.
Notes: a—*Kutcha* and Thatched; b—Semi-*pucca*.

Table 6.24: Lack of Housing Amenities in Mizoram (% of Persons)

State	Without Electricity			Without Toilet			Without Drinking Water within Premise		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
	By Districts								
Aizawl	29.2	0.9	7.0	65.9	20.4	30.2	100.0	62.1	70.3
Champhai	3.6	0.1	2.0	67.5	22.6	47.4	90.5	38.6	67.2
Kolasib	0.7	0.9	0.8	56.4	35.2	45.4	96.0	46.3	70.2
Lawngtlai	15.4	-	15.4	75.1	-	75.1	94.6	-	94.6
Lunglei	4.3	3.2	3.8	69.6	22.2	51.3	96.5	66.3	84.9
Mamit	8.1	0.0	7.9	65.8	23.3	64.8	98.9	100.0	98.9
Saiha	1.0	0.9	1.0	63.6	35.6	55.3	97.5	34.1	78.7
Serchhip	2.2	2.5	2.3	58.9	21.9	45.2	100.0	38.9	77.3
Mizoram	7.4	1.2	5.1	66.3	24.8	50.4	96.6	51.7	79.4

Source: Survey data, 2008.

intoxicants. The use of intoxicants is higher than the state average in the districts of Mamit, Lawngtlai, Kolasib, and Champhai.

The first drug-related death was detected in Mizoram in 1984. Drug abuse has since then claimed the lives of about 1183 people, including 121 women, in this state. In 2004, the highest number of drug-related deaths, with 122 males and 21 females dying of this cause during the year, was recorded. Thanks to the Young Mizo Association, which carried out a sustained anti-drug campaign and awareness drive, the incidence of drug abuse and the number of related deaths declined to just 15 in 2010.

While during the initial years, heroin was the prevalent substance of abuse, the scene has now shifted to the intravenous use of pharmaceutical drugs, particularly proxyvon or spasmoproxyvon capsules, and a synthetic analgesic compound known as dextropropoxyphene. Almost 87 per cent of the drug addicts inject 'P' or 'SP', as the capsules are called, by dissolving them in water, which enhances their effect. According to an official spokesperson of the Mizoram government, it is difficult to measure the exact number of intravenous drug users. During the early 1990s, some NGOs and government agencies estimated this number to be around 2000–2500. Another estimate puts the number at 15,000–20,000. The intravenous use of drugs has resulted in increased vulnerability to the transmission of HIV among the local population.

AIDS has become an important health issue in Mizoram, as the youth are increasingly becoming vulnerable. According to the latest data, the number of cases of people who undertook blood tests was about 61,000, out of which the number of HIV-positive people was 2,948 (4.8 per cent), while the number of AIDS cases identified amounted to 258 and the number of deaths due to AIDS was 162 (Table 6.26). The main mode of transmission of AIDS was sexual intercourse. During the period 1990-2008, the number of HIV positive cases that contracted the virus through sexual contact was 1745 (59.2 per cent) followed by persons who were Intravenous Drug Users (32.3 per cent). The district-wise performance of the AIDS control programme indicates that the highest number of cases is recorded in Aizawl. There is almost no gender difference regarding the incidence of HIV/AIDS, indicating that women are equally vulnerable to these problems, thereby multiplying the risk factor for the society through their reproductive role.

It is, however, heartening to note that this menace is declining in the state, and voluntary organizations like the Young Mizo Association have really played a

Table 6.25: Intoxicant Use in Mizoram (% of Persons)

Districts	Percentage of People Habituated to					Average Monthly Expenses
	Drinking	Smoking	Both	Others	Any Form	
Aizawl	0.6	0.4	14.3	1.8	17.0	477
Champhai	0.4	0.5	13.1	4.3	18.4	239
Kolasib	0.0	0.0	18.5	0.5	19.0	309
Lawngtlai	0.9	0.4	18.6	0.8	20.7	172
Lunglei	0.6	1.0	14.5	1.4	17.6	305
Mamit	0.1	0.1	20.3	0.5	21.1	308
Saiha	0.7	1.1	11.5	1.2	14.5	429
Serchhip	0.1	0.5	11.5	0.5	12.6	314
State	0.6	0.4	14.3	1.8	17.0	355

Source: Survey data, 2008.

commendable role in this. It is now the duty of the state authorities to strengthen such civil society movements and encourage the youth to take part in constructive social activities rather than take the escapist path.

Recent Steps for Expanding Healthcare

National Rural Health Mission

The National Rural Health Mission (NHRM) was launched by the Prime Minister on 12 July 2005, to provide effective healthcare to the rural population throughout the country with a special focus on 18 states with weak public health indicators, which include Mizoram. The NRHM aims to ensure the delivery of quality healthcare to people living in the rural and remote parts of the country through a range of interventions at the individual, household, community and most critically, the rural health system levels. Despite considerable gains in the health status over the past few decades in terms of increased life expectancy, and reduction in mortality and morbidity rates, serious challenges still remain in the area

Table 6.26: HIV/AIDS Statistics in Mizoram—2007

	Blood Tested		HIV-positive		AIDS Cases		AIDS Deaths	
District	Male	Female	Male	Female	Male	Female	Male	Female
Aizawl	2507	2487	204	176	17	13	10	11
Champhai	943	536	37	14	6	3	4	3
Kolasib	1145	385	23	9	0	0	0	1
Lawngtlai	495	150	2	4	0	0	0	0
Lunglei	1475	839	14	8	0	0	0	0
Mamit	571	148	4	4	2	2	2	2
Saiha	398	84	2	4	0	1	0	1
Serchhip	353	152	2	4	1	0	0	0
State	7887	4781	288	223	26	19	16	18

Source: Survey data, 2008.

Box 6.1: Drug Use in Mizoram

The state of Mizoram has been facing a problem of increasing drug use (especially injecting drug use). The state's proximity to the Myanmar border, from where amphetamine-type stimulants (ATS) are often sourced into the state and its poor economic conditions contribute largely to the growing number of drug users in Mizoram. A high number of the HIV infections in Mizoram are observed among the injecting drug users (IDUs). The sharing of needles is a common practice resulting in the spread of HIV.

The work of UNODC in Mizoram is part of the joint UN project funded by AusAid in the North-east to support the National AIDS Control Programme, Phase III. The stigma and discrimination faced by drug users at the community level has been a major barrier to the effective delivery of harm reduction programmes in the state. UNODC has been working at the village level to conduct advocacy programmes through village committees to address this issue of stigma and discrimination at the community level.

UNODC sees advocacy as an effective tool that can also be used as a comprehensive harm reduction approach. As part of its advocacy strategy in Mizoram, UNODC approached one of the prominent village locals, Pu Rosiama Sailo, to talk to him about his role in spreading awareness messages on the prevention of HIV, AIDS and drug use among village members. He is popularly known as Pu Siama and is the President of the Young Mizo Association (YMA), a non-political voluntary organization of Vanhne and the largest civil body organization in Mizoram. He is also the Sunday schoolteacher at the local church. He uses both his jobs as vehicles to spread awareness, to disseminate information about HIV and AIDS, and to advocate against drug use among village folk, especially the youth. Sailo comments: "Before the programme was introduced in my village, I felt that the only way to stop people from using drugs and the spread of HIV and AIDS was to send the drug users to prison. Today, I realize that addiction is a disease and cannot be cured by sending anyone to prison; the people who inject drugs and are addicted to it need love and understanding. I have also understood that anyone can be infected with HIV and AIDS and that prevention is possible only if accurate information is disseminated."

During the YMA meetings, Sailo encourages openness in addressing risky behaviours, explains how to reduce stigma and discrimination, and promotes the right practice pertaining to safe sexual behaviours. He emphasizes that availing of the voluntary counselling and testing facilities and provisions for treating opportunistic infections should be seen as a mandatory practice. He also reaches out to the youth and IDUs, educating them on the consequences of drug abuse and how they can be treated. Since religion is an important part of the community in Mizoram, people regularly attend church sermons and Sunday classes at the church. The church and such meetings thus become an ideal ground for Sailo to reach out to the majority of the village folk to reinforce the messages on drug addiction, prevention of HIV and AIDS, and its link with injecting drug use and Sexually Transmitted Infections (STIs).

In addition, Sailo goes from house to house in his village discussing these issues and encouraging the village folk to approach him to seek a better understanding of the preventive measures. Even women, who earlier shied away from learning about STIs and HIV and AIDS, now approach him to understand their role in the prevention process. This is a step forward as educating the women means reinforcing the messages to their family as well. Today Sailo's commitment to see his village progress, his eagerness to help and share information on HIV and AIDS and drug use among his people, especially the youth, have made him a true social advocate.

[Excerpts from http://www.unodc.org/india/en/advocate-from-mizoram.html, accessed on 23 June 2011.]

of healthcare and well-being. The objective targets of the NRHM are the reduction of IMR and MMR; universalization of access to public health services for women's health, child health, water, hygiene, sanitation and nutrition; prevention and control of communicable and non-communicable diseases, including locally endemic diseases; promotion of access to integrated comprehensive primary healthcare; ensuring population stabilization, and a gender and demographic balance; revitalization of local health traditions and mainstream AYUSH; and, promotion of a healthy lifestyle. During the year 2009-10, close to 1000 Accredited Social Health Activists (ASHA) were trained, provided with drug kits, and made functional to bring about an increase in the number of institutional deliveries, and an improvement in maternal and child health, and to facilitate better coordination between the health sector and the community. Village Health and Sanitation Committees (VHSCs) have been formed in all the revenue villages and untied grants of Rs. 10,000 for each VHSC have been sanctioned in all the districts along with untied grants of Rs. 10,000 plus an annual maintenance fund of Rs. 10,000 each for all the Scheduled Castes (SCs) have been released for bringing about an improvement at the village level. PHCs and CHCs have also been provided funds worth Rs. 25,000 and Rs. 50,000 each, respectively for bringing about a physical improvement in these institutions. Rogi Kalyan Samiti, a patient welfare society, is actively working in all the district hospitals and CHCs. The six district hospitals have also been identified for upgradation of their physical infrastructure under NRHM. The construction of a total of 130 sub-centres, and sub-centres-cum-quarters has already been completed, and work at 50 more such centres was taken up during 2009-10. Four new SCs were also undertaken during the year 2008-09 for the politically displaced BRU refugees. A total of seventeen ambulances have been procured for the Patient Referral System and distributed to eight district hospitals and nine CHCs. Another forty ambulances were also procured for distribution to the thirty-two PHCs, which were also supplied with back-up generators for improving the quality of services, especially pertaining to deliveries, and maternal and child health.

Measures to Control Malaria

Under the malaria control programme, the entire state is targeted for surveillance where MPWs and FTDs have been instructed to take the blood smear of any fever cases suspected for providing them presumptive doses, and these blood samples are examined at the microscopic centre/ PHC/CHC/hospital for diagnosis.

Two rounds of DDT spray are regularly administered in the state during a year. The average coverage of room with DDT spray ranges from 80 per cent to 90 per cent in each round of spray every year. For vector control, community bed nets are being impregnated by synthetic pyrethroid to supplement the DDT spray. Fever Treatment Depots and ASHAs are engaged in each village to provide prompt and immediate treatment of malaria.

Water Supply and Sanitation

During the Tenth Five Year Plan (2002-07), the approved outlay for water supply and sanitation sector was Rs. 123.33 crore, out of which Rs 77.72 crore (63 per cent) was allocated for rural water supply and sanitation, and Rs 33.73 crore (27.3 per cent) was for urban water supply and sanitation. The provision of drinking water is being ensured through piped water supply, rainwater harvesting, hand pump tube wells, submersible pumps and improvement in village spring sources. Sanitation facilities for rural habitations are being provided under the Total Sanitation Campaign (TSC) programme. The achievements of the programme include the construction of 47,542 numbers of individual household latrines for BPL families, 2411 numbers of school toilets, 727 numbers of *anganwadi* toilets, and 238 numbers of sanitary complexes for women.

Mizoram State Health Care Scheme

The Mizoram State Health Care Scheme was an insurance scheme initiated by the state government under which a patient (even any non-government employee) could get treated in a government hospital/ facility or a private empanelled hospital. The scheme, which was introduced in 2008, covered a period of twelve months

starting from 1 April 2008. An agreement was signed between the government of Mizoram and Reliance General Insurance Company Limited (RGICL) to this effect. Any person who is a citizen of India and residing in Mizoram with the name of the head of the family in the electoral rolls was eligible. The benefits of the policy could be availed of individually or collectively by the members of the family/dependent (1+5 members) during the policy period.

The sum of Rs. 28.93, that is 95 per cent of the total amount, was payable as a premium to RGICL and the remaining 5 per cent at the end of the third quarter of the policy period upon the full satisfaction of the government of Mizoram's (GoM) parameters. The policy provided coverage to meet the expenses of hospitalization (limited to the general ward) and the surgical procedures of beneficiary members to the limit of Rs. 1 lakh per family in any of the networked hospitals in Mizoram. Treatment outside Mizoram for outpatient and inpatient cases could be allowed subject to the approval of the Medical Board. The minimum period of hospitalization was 24 hours. The Mizoram State Health Care Society was also established for monitoring and governing the scheme, and for overseeing dispute settlements.

The AYUSH Programme

In order to promote the Indian systems of medicines and homoeopathy, namely, Ayurveda, Yoga and Naturopathy, Unani, Sidhha and Homoeopathy (AYUSH) among the people as an alternative means of healthcare, as well as for mainstreaming these systems of medicine in the healthcare system of the nation, the AYUSH programme was initiated in the state. Setting up of the AYUSH Wing in the district allopathic hospitals, outdoor facilities of one or two systems of AYUSH and Drug Testing Laboratory for testing of medicinal plants, for which Mizoram has rich resources, were undertaken. During the year 2009-10, the construction of a ten-bedded AYUSH Hospital in all the district hospitals was completed. Besides this, the Out Patients Department (OPD) building has also been constructed within the Civil Hospital compound at Aizawl adjacent to the OPD of the Civil Hospital. A total of 20 Medical Officers (AYUSH) have been recruited on a contractual basis. During the first half of the year 2009-10, more than 15,000 outpatients were treated under this scheme in the state.

National Leprosy Eradication Programme

The National Leprosy Eradication Programme (NLEP) is based on the strategies of early detection of cases through population surveys, school surveys, contact examination and voluntary referral; short term multi-drug therapy; ulcer and deformity case prevention/ treatment; and rehabilitation activities. The regimens recommended by the WHO have been adapted to suit the operational and administrative requirements. The NLEP provides free domiciliary treatment in the endemic districts through specially trained staff, while in moderate to low endemic districts, it provides services through mobile leprosy treatment units and primary healthcare personnel. The treatment of leprosy cases with MDT has been taken up in a phased manner. As a result, the number of cases discharged after being cured is increasing progressively over the years.

Under the NLEP, phase II project, the state of Mizoram has set for itself the objective of total elimination of leprosy from the state and of bringing down the current prevalence rate of leprosy at 0.10 to 0 by the end of the project. During the year 2009-10, ten new cases were detected, seventeen patients were taking treatment, and the prevalence rate of the disease had been brought down to 0.07.

School Health Programme

The national School Health Programme (SHP) was launched in 1977 as a Centrally-sponsored scheme. In Mizoram, it was started in 1978 in selected PHCs only until the year 1990-1991. After the Centrally-sponsored scheme ended in 1991, the programme was taken up and funded by the state (Table 6.27). Since 1993-1994, the programme has been extended to all PHCs and CHCs, where Medical Officers have been posted, and also in the urban areas of Aizawl, Lunglei and Saiha. The thrust of the programme is based on the concept of

Table 6.27: School Health Check-up in Mizoram—2007

Year	No. of School Visits	No. of Children Examined	Numbers of Children Detected with				
			Refractive Error	Dental Problems	Other Problems	Without Any Problem	Mal-nutrition
2003-04	2303	10,758	2969	5558	8354	62,543	985
2004-05	1820	20,675	801	2291	6063	11,326	194
2005-06	2749	21,108	478	899	1756	3863	112
2006-07	1526	26,005	384	1596	4192	19,740	120
2007-08	1680	21,534	342	21,660	3236	512	156
2009-10	776	42,676	4283	0	0	0	0
2010-11	975	54,623	764	3928	1642	0	2006
2003-11	11,829	1,97,379	10,021	35,932	25243	97,984	3573

Source: Survey data, 2008.

protecting the general health of school-going children in the state and on implementing remedial measures and follow-ups if any disease is detected among the children. The programme specially covers primary schoolchildren. The SHP aims to prepare the younger generation to adopt measures for remaining healthy so that they can make best use of the educational facilities in a productive and constructive manner; and to help the younger generations become healthy and useful citizens. Its operational part aims at the prevention of disease, early diagnosis and follow-up treatment. Towards that end, it attempts to conduct as many health check-ups as possible among the school-going children through school visits in every district, to train more Medical Officers and schoolteachers in every district under the SHP, especially on issues like personal hygiene, and sanitation in households and schools, and to detect health problems among school-going children so that follow-up treatment can be initiated at the earliest. During the period 2003-11, close to 12,000 school visits have been made and approximately 2 lakh children have been examined. About 1 lakh cases of various health problems were detected and the SHP facilitated early diagnosis and treatment in these cases.

Conclusions and Recommendations

From the above discussions, it can be concluded that state policies should focus on improving reproductive and preventive healthcare outreach and delivery systems. Certain important barriers that need to be addressed urgently are listed here. First, the non-availability of adequate health facilities relative to the geographical area and terrain of the state is a major challenge. The number of medical personnel engaged in the healthcare delivery system also needs to be increased immediately to keep pace with the growing population and the needs of the people. The issue of lack of adequate numbers of ANMs for providing timely and quality ANC and PNC services, and the dearth of skilled birth attendants to assist in home deliveries needs to be tackled. The lack of public health facilities providing obstetric and gynaecological care at the district and sub-district levels and in peripheral areas should also be resolved at the earliest. Health finances show a poor mix of revenue and capital account expenditure. This needs rectification in the medium to long run. The existence of poor transport and communication facilities between the rural hinterland and the hospitals and healthcare facilities also affects the delivery of healthcare and needs to be addressed by the authorities.

The high cost of treatment is another major burden on the people and it seems that only a marginal amount of this expense is borne

by the state through medical insurance or healthcare schemes. Appropriate steps thus need to be taken to cover a majority of the people under the Rashtriya Swasthya Bima Yojana (RSBY, a health insurance scheme).

Child nutritional status needs to be taken care of, and proper nutritional supplements should be provided to the children (perhaps through the schools in association with the Sarva Shiksha Abhiyan or SSA) to prevent the spread of anaemia among children. The prevalence of anaemia among pregnant women is another area of concern.

The issue of food security is perhaps the most vulnerable point of human development in Mizoram. A large number of identified BPL families or beneficiaries of the AAY scheme are unable to obtain their designated quota of foodgrain from the PDS due to either irregular/inadequate supply or to lack of purchasing power. This needs to be addressed on a war footing at the earliest.

The lack of proper sanitation and drinking water facilities also needs to be resolved and for that purpose, the coordination and convergence of the Swajaldhara programme and Total Sanitation Programme need to be ensured.

Substance abuse poses another major threat, especially to the lives and health of the young population, and awareness building along with stringent control policies with exemplary punishment to the kingpins behind the sale of the lethal drugs should be the focus for resolving this problem.

7

Capacity Building for Human Development—Education

As per the 2011 Census, Mizoram ranks second in the country in terms of its literacy level, which is 91.6 per cent as against the national literacy level of 74 per cent. The Net Enrolment Ratio (NER) for the state as a whole is 94 per cent for the primary stages and 52.5 per cent for the upper primary level. The Educational Achievement Index (EAI) for the state has been found to be 89.4 as against an ideal of 100. In terms of accessibility to educational institutes, there is widespread disparity among the districts in the state. The Educational Infrastructure Index (EII) value of 0.47 indicates that the infrastructural support system in the state needs major improvement.

Introduction

One of the key ingredients of human development as envisaged by social Scientists, reiterated by UNDP, and accepted by the national, state, and regional governments is education. More specifically, greater access to knowledge in its various dimensions is critical to the building of human capabilities, enhancement of freedom, and empowerment of people. The Millennium Development Goals (MDGs) adopted and ratified by India also speak of universalization of primary education, promoting gender equality in education, and ensuring better health. Therefore, it is important to examine the issues of educational infrastructure, achievements, shortcomings, and policy suggestions as a part of the HDR. Since the focus is on capacity building for human development, we concentrate mainly on elementary education— the primary and upper primary stages of education—with some exploration of tertiary education as well.

Profile of the Educational System in the State

The present set-up of the educational system of Mizoram was undoubtedly the outcome of the work of the Christian missionaries. Formal education for the Mizos was introduced in Mizoram by the Christian missionaries, who came to Aizawl, the capital of Mizoram, for the first time in January 1894. In 1907, the number of primary schools in Mizoram increased to 22 with 781 students. By 1922, the total number of students in the whole of Mizoram increased to 2023, including 1711 male students and 312 female students. And by 1932, the number of schools rose to 130 and the number of students also increased to 3972, including 3200 male and 772 female students. By 1936, there were five middle schools, and 221 primary schools in the state, and the number of pupils on the roll also increased to 9606, including 7313 males and 2293 females. In 1947, there were 258 primary schools, 22 middle schools and 2 high schools in Mizoram. In 1958, the first college, known as Pachhunga Memorial College, was set up. This college was upgraded as a constituent college of the North Eastern Hill University, a Central University, in the year 1979 and later as a constituent college of Mizoram University. The second college in Mizoram was established in 1984 at Lunglei, South Mizoram. By 1999, there was a middle school each for 1.73 primary schools and one secondary school each for two middle schools.

At present, the education system in the state comprises primary schools (classes 1 to 4), junior high schools (classes 5 to 8), high/secondary schools (classes 9 and 10), higher secondary schools (classes 11 and 12), and general, vocational and professional degree colleges. The complete score card for the state's education sector, as in 2009, is depicted in Table 7.1.

The Available Educational Infrastructure

People's access to education depends crucially on ensuring that the educational infrastructure is in place. The number of schools and other institutions, along with certain other factors, including their intake capacity, their spatial spread and distance from habitats, teacher strength, and amenities available in the institutions, are significant elements through which affordable education can be reached to the people. Therefore, the status of the state and its sub-regions needs to be explored in this regard.

Availability of Educational Institutions

Mizoram as a state is highly developed in terms of the availability of educational institutions. There are 1567 primary, 1123 secondary and 83 higher secondary schools in the state (Table 7.2). In addition, colleges and universities have already been set up in different districts for the dissemination of higher education across the state. Relative to population density also, the availability

Table 7.1: Mizoram State Report Card—2009

Indicators	Country Score	State Score	Number of Districts	
			Below Average	Above Average
Primary Schools per 1000 pop	0.61	1.62	3	5
High Schools per 1000 pop	0.13	0.09	6	2
Schools within 1 km (% of pop)	65.0	62.7	2	6
Accessibility Index	0.42	79.0	2	6
School Facility Index	76.4	40.0	4	4
Teacher Availability Index	0.38	26.2	4	4
Educational Infrastructure Index	0.54	0.42	2	6
Literacy (%)	65.0	91.6	4	4
Female Literacy (%)	54.0	89.4	4	4
Gender Gap in Literacy (% point)	22.0	4.3	4	4
Enrolment Ratio in Primary Stage (%)	95.0	94.5	3	5
Drop-out Rate in Primary Stage (%)	9.4	4.5	4	4
Completion Rate in Primary Stage (%)	86.1	90.2	3	5
Literacy Index	0.91	91.5	4	4
Enrolment Index	73.5	96.5	3	5
Retention Index	77.0	80.1	4	4
Educational Achievement Index	76.1	89.4	4	4

Source: Calculations based on data sources mentioned in the text.

of educational institutions in the state is quite adequate (Table 7.3). However, in Mizoram, due to the terrain involved, the spatial spread of schools is also an important factor. About 75 primary schools are available per 1000 sq km, whereas there are 53 middle schools and 4 high schools per 1000 sq km.

It can be observed that the availability of schools relative to the population is high in Mamit and Lawngtlai, and comparatively lower in Aizawl and Champhai for the primary stages. The number of middle schools is comparatively higher in Mamit and Lawngtlai, whereas the number of high schools is higher in Saiha and Aizawl.

The spatial concentration of primary schools is also high in Lawngtlai and Aizawl, as also of middle schools in Kolasib and Aizawl, and high schools in Saiha and Aizawl. The spatial spread is relatively lower in Mamit, and also in Champhai for primary schools, and Lunglei for both middle and high schools. The absence of high schools in Kolasib and Serchhip is also a matter of concern.

Accessibility of Educational Institutions

Apart from the availability of schools/ colleges, accessibility to school for a child is also very important. While urban centres contain educational institutions within their periphery, rural areas often do not, and a substantial number of children are found to have dropped out from school just because of the distance of their homes from school. This is true especially for the girl

Table 7.2: Educational Institutions in Mizoram—2009 (Total)

Districts	Primary Schools	Middle Schools	High Schools
Aizawl	329	342	53
Champhai	173	178	6
Kolasib	102	86	0
Lawngtlai	244	119	1
Lunglei	321	163	8
Mamit	176	87	1
Saiha	115	70	14
Serchhip	107	78	0
State	1567	1123	83

Source: DISE, 2009.

Table 7.3: Educational Institutions—2009 (per 1000 population and per 1000 sq km)

Districts	Per 1000 Population			Per 1000 sq km		
	Primary Schools	Middle Schools	High Schools	Primary Schools	Middle Schools	High Schools
Aizawl	0.85	0.89	0.14	92.00	95.64	14.82
Champhai	1.37	1.41	0.05	54.32	55.89	1.88
Kolasib	1.48	1.25	0.00	73.81	62.23	0.00
Lawngtlai	3.17	1.55	0.01	95.42	46.54	0.39
Lunglei	2.21	1.12	0.06	70.77	35.93	1.76
Mamit	3.55	1.75	0.02	58.18	28.76	0.33
Saiha	1.89	1.15	0.23	82.20	50.04	10.01
Serchhip	1.92	1.40	0.00	75.30	54.89	0.00
State	1.62	1.16	0.09	74.33	53.27	3.94

Source: Calculations based on DISE, 2009.

children. Thus, there is a need to examine the distance of the educational institutions from the residence of the respondents. It has been observed that about two-thirds of the population have educational institutions within 1 km of their residence (Table 7.4). Another two-fifths have some or other educational institution within 2 km of their residence. An Accessibility Index has been prepared on the basis of the range of distances of educational institutions. It appears that accessibility is good in the districts of Serchhip, Saiha, and Mamit, and relatively poor in Aizawl, Lunglei, and Lawngtlai.

Infrastructure in the Schools

In addition to the availability and accessibility of institutions, one must also look at the infrastructure available in those schools—both physical (*pucca* building, availability of drinking water and sanitation facilities, etc.) and human (teacher strength).

(i) Physical Infrastructure: It has been observed that only 8 per cent of elementary schools (primary and upper primary) have *pucca* buildings of their own, while the remaining are either housed in tents or semi-permanent structures (Table 7.5). Drinking water and sanitation facilities are available in almost 80 per cent of the elementary schools. However, separate toilets for girls are available in just about 22 per cent of the schools. The non-availability of girls' toilets is, therefore, a matter of concern, as it has been linked by researchers to the dropping out of many girls from the schools, especially at the upper primary level. The Combined Facility Index shows that Aizawl and Saiha are relatively better-off while

Table 7.4: Accessibility of Educational Institutions

Districts	% of Population with Educational Institutions in the Vicinity				Access Index
	Within 1 km	1km–2 km	– 4 km	Beyond 4 km	
Aizawl	51.8	22.5	8.6	17.0	73.1
Champhai	78.3	6.3	1.2	14.2	83.6
Kolasib	64.8	27.1	1.5	6.7	85.8
Lawngtlai	72.3	9.9	1.8	16.0	80.6
Lunglei	54.3	23.1	10.9	11.7	77.1
Mamit	73.3	18.3	1.5	6.9	87.8
Saiha	80.5	9.1	1.1	9.4	87.8
Serchhip	88.9	3.9	0.0	7.2	91.8
State	62.7	17.8	5.8	13.7	79.0

Source: Calculations based on DISE, 2009.

schools in Lawngtlai and Mamit lack the availability of facilities.

(ii) Human Interface: It has been found that the teacher availability per school (TPS) is four in primary schools, and eight in upper primary schools (Table 7.6). This is lower than the national average. The teacher-pupil ratios (TPRs)—or number of teachers per 100 students—in the state is higher than the national averages of six primary schools and eight in upper primary schools. This may be reflective of the fact that the number of students per school in Mizoram is also lower than the national average. The Teacher Availability Index shows that among the districts, the situation is better in Saiha and Aizawl, and relatively poor in Mamit, Kolasib, and Lawngtlai. In Lunglei, the TPS is low but the TPR is high, probably because of the low enrolment of students.

Composite Educational Infrastructural Index

The Access Index, Facilities Index, and Teacher Index for the state as well as the districts have been developed on the basis of the availability and accessibility of institutions, and the availability of teachers and facilities in those institutions. From these, an Educational Infrastructure Index (EII) has also been computed (Table 7.7). This gives a single-point measure of the Institutional Support System in place for the development of the educational capabilities of the people of the state.

It has been observed that the average EII for the state is 0.47 (on a scale of 0 to 1). Since it is below the half-point mark, what it signifies is that the infrastructural support system needs a major improvement, which requires the immediate attention of the policy-makers. If one tries to focus on the spatial dimension, it is observed that in terms of EII, Lawngtlai, Mamit, and Lunglei are the lagging regions, while the situation is better in Saiha and Serchhip.

Costs of Education

Private Expenditure on Education

The cost of education is a major deterrent towards human capital formation in developing countries like India. While on one hand, it acts as a disincentive towards sending children to school, on the other hand, it also induces many families to withdraw their children from school, especially the girl child in a patriarchal society, and send them to work. Simultaneously, the expenditure incurred on education is also an indicator of the importance attached by the parents to the betterment of their children's future and their capacity for paying this expense.

It has been observed that on an average, more than Rs. 2000 are spent per child per month on education and allied items (Table 7.8). A majority of this consists of the boarding

Table 7.5: Facilities in Primary Schools—2009

Districts	Percentage of Schools with				Facility Index
	Pucca Building	Drinking Water	Toilet	Girls' Toilet	
Aizawl	20.9	98.5	90.5	32.3	52.6
Champhai	2.0	86.3	73.5	17.1	36.2
Kolasib	10.9	88.3	87.8	19.1	43.4
Lawngtlai	0.0	41.6	68.6	5.0	23.0
Lunglei	3.8	75.2	65.3	38.2	37.3
Mamit	0.0	74.5	73.8	12.9	32.2
Saiha	5.6	95.7	100.0	12.4	43.9
Serchhip	4.2	99.5	99.5	10.8	43.6
State	7.9	81.9	80.2	22.0	40.0

Source: Calculations based on DISE, 2009.

Table 7.6: Availability of Teachers in Schools—2009

Districts	Primary Schools		Upper Primary Schools		Teacher Availability Index
	Teacher-Pupil Ratio	Teacher per School	Teacher-Pupil Ratio	Teacher per School	
Aizawl	6.3	5.5	7.8	9.5	29.2
Champhai	5.6	4.0	8.1	6.6	24.3
Kolasib	4.0	4.8	6.5	6.1	21.4
Lawngtlai	5.0	3.7	7.5	6.2	22.4
Lunglei	7.2	4.1	12.2	7.5	31.0
Mamit	4.3	3.9	4.4	4.9	17.4
Saiha	12.5	5.1	14.7	8.4	40.7
Serchhip	7.1	4.5	10.3	7.0	28.8
State	6.0	4.4	8.2	7.6	26.2

Source: Calculations based on DISE, 2009.

Table 7.7: Educational Infrastructural Scores—2009

Districts	Access Index	Facility Index	Teacher Index	EII	Rank
Aizawl	73.1	52.6	29.2	0.50	4
Champhai	83.6	36.2	24.3	0.43	5
Kolasib	85.8	43.4	21.4	0.51	3
Lawngtlai	80.6	23.0	22.4	0.20	8
Lunglei	77.1	37.3	31.0	0.43	6
Mamit	87.8	32.2	17.4	0.37	7
Saiha	87.8	43.9	40.7	0.83	1
Serchhip	91.8	43.6	28.8	0.73	2
State	79.0	40.0	26.2	0.42	

Source: Calculations based on earlier tables.

and lodging expenses of students who live in hostels for pursuing their studies. The second most important item on which the expenditure is incurred is private coaching. The expenditure on education is the highest in Saiha, followed by Aizawl and Kolasib. On the other hand, the average spending is low in Mamit, Lawngtlai, and Lunglei, mainly because of the low boarding and lodging expenditures in those districts. This hints at the low spending capacity of the people in those two districts.

Government Support to Students

The government also provides various types of support to the students for facilitating their school going. However, only about 45 per cent of the students aged 6-25 years have obtained any type of support from the government (Table 7.9). Considering that the mid-day meal scheme is restricted to primary schools only, the proportion of elementary school students obtaining state support has been computed on the basis of this (Table 7.10). It is observed that close to half of the elementary school students do not obtain any form of government assistance.

Other than the Mid-day Meal Scheme, government assistance in the form of textbooks is obtained by 18 per cent of all students and about one-fourth of the elementary school students, while 2-3 per cent of the students obtained school uniforms, and about 12 per cent obtained scholarships. In Saiha and Aizawl, a few students were also given bicycles by the authorities to enable them to reach their schools.

Among all the students, the non-receipt of any form of government assistance is more frequent in Kolasib, Aizawl, and Lunglei, whereas among the elementary school students, in addition to these three districts, government assistance is more infrequent in Serchhip and Saiha too. Lawngtlai and Champhai are the two districts where a large proportion of the students have obtained some kind of government assistance, especially in terms of the distribution of books, and the functioning of the Mid-day Meal Scheme here is notably better than in the other districts.

Educational Achievement of the People

The current status of human development in the perspective of human capital formation can be indicated by the level of educational achievement among the people of the state. This can be measured by the commonly used indicators of Literacy and Net Enrolment Rates. However, there is also a need to assess the qualitative aspect, and make use of indicators like the Drop-out Rates, and indicators specifically designed for this report like Completion Rates, and Retention Rates.

Table 7.8: Average Monthly Educational Expenditure per Student—2009

Districts	Fees	Books and Uniform	Private Coaching	Transport	Boarding and Lodging	Others	Total
Aizawl	280	148	312	186	1,357	71	2354
Champhai	104	136	82	168	1,403	65	1957
Kolasib	65	99	0	112	1,732	11	2019
Lawngtlai	65	86	181	55	618	148	1151
Lunglei	170	166	132	134	863	202	1667
Mamit	88	74	125	101	617	0	1006
Saiha	129	213	180	284	2,502	755	4063
Serchhip	140	259	110	126	1,160	167	1961
State	189	149	202	163	1305	137	2145

Source: Calculations based on survey data, 2008.

Table 7.9: Proportion of Students (6-25 years) Receiving Government Support—2009

Districts	Books	Uniforms	Scholarships	Mid-day Meal	Cycle	Others	Any Support	No Support
Aizawl	6.4	0.8	12.1	18.4	0.1	0.9	38.2	61.8
Champhai	37.0	2.3	16.0	37.7	0.0	0.0	63.9	36.1
Kolasib	5.7	1.8	4.8	17.0	0.0	0.0	29.2	70.8
Lawngtlai	62.9	11.5	9.6	34.9	0.0	0.0	74.3	25.7
Lunglei	29.0	2.1	7.6	16.7	0.0	0.6	40.5	59.5
Mamit	13.7	3.6	8.6	25.4	0.0	0.5	51.5	48.5
Saiha	11.8	0.4	21.0	21.4	0.3	0.4	51.1	48.9
Serchhip	9.7	0.4	22.3	15.4	0.0	8.9	50.2	49.8
State	17.8	2.0	12.4	22.0	0.1	1.0	45.8	54.2

Source: Calculations based on survey data, 2008.

Table 7.10: Proportion of Elementary School Students Receiving Government Support—2009 (by District)

Districts	Books	Uniforms	Scholarships	Mid-day Meal	Others	Any Support	No Support
Aizawl	9.3	1.3	2.5	26.3	0.0	39.2	60.8
Champhai	53.4	3.8	4.6	55.1	0.0	74.7	25.3
Kolasib	8.1	2.9	2.3	25.7	0.0	39.0	61.0
Lawngtlai	76.1	12.0	2.4	42.1	0.0	82.3	17.7
Lunglei	46.9	3.6	2.5	25.5	0.1	53.2	46.8
Mamit	17.8	4.9	1.1	30.5	0.6	54.5	45.5
Saiha	17.6	0.4	3.2	30.2	0.7	45.3	54.7
Serchhip	13.0	0.3	7.3	23.6	10.3	44.6	55.4
State	26.3	2.9	3.0	31.7	0.7	50.7	49.3

Source: Calculations based on survey data, 2008.

Literacy Level

We first start with Literacy (Table 7.11). Over the last century, literacy in India increased from 5.3 per cent in 1901 to 65.4 per cent in 2001. However, the improvement was much more pronounced for males as compared to females, especially till 1981. As a result, the gender gap (GG or difference between the percentage figures for males compared to the females) in literacy soared from 9.2 points in 1901 to 26.8 points in 1981, but declined thereafter to 21.7 points in 2001. The latest census of 2011 pegs literacy in India at 74 per cent. Male literacy stood at 82 per cent while female literacy was 65 per cent, indicating that the GG has declined further to 17 percentage points. Although the declining gender gap is a welcome trend, the gap is, however, still quite substantial and indicates gender bias in basic human capacity building.

It is a heartening fact that Mizoram ranks third in the country in terms of both aggregate and male literacy rates, while in terms of female literacy rates, it is ranked second in the country. The gender gap in literacy in Mizoram, at just 4 percentage points, is also quite insignificant as against the national perspective. Thus, Mizoram is one of the most literate and gender-neutral states in terms of basic educational achievements.

Lawngtlai, Lunglei, and Mamit are the three districts which are relatively lagging behind in terms of literacy, especially female literacy, and the gender gap is comparatively higher in these areas, especially in Lawngtlai. As a result, the gender gap-adjusted Literacy Index is close to the unadjusted rate at the state level. Among the districts though, the literacy index is considerably lower in Lawngtlai and Mamit.

Table 7.11: Educational Achievements—Literacy—2011 (by Districts)

Districts	Male	Female	Total	Gender Gap	Literacy Index
Aizawl	99.0	98.0	98.5	1.0	98.5
Champhai	94.8	92.2	93.5	2.6	93.5
Kolasib	95.5	93.5	94.5	2.0	94.4
Lawngtlai	74.7	57.6	66.4	17.1	65.5
Lunglei	92.7	85.9	89.4	6.9	89.1
Mamit	90.2	81.4	86.0	8.8	85.7
Saiha	91.0	85.8	88.4	5.2	88.4
Serchhip	99.2	98.3	98.8	1.0	98.7
State	93.7	89.4	91.6	4.3	91.5

Source: Calculations based on survey data, 2008.

Enrolment in Schools

The step beyond literacy leads to the schools. We now examine the trends exhibited by school enrolment of children in the state (Table 7.12). The enrolment figure in formal primary schools was around 50,000 in 2008-09. During the same period, the figure for enrolments in the upper primary schools was about 66,000. Even such high numbers have not been enough to bring all the children to school. Scaling for population differences, the Net Enrolment Ratio (NER) is a commonly used measure that is relevant for capturing the collecting power of the educational system. The Net Enrolment Ratio (NER) for the primary stages of education for the nation as a whole was 95.9 per cent in 2007-08 (NUEPA, 2008). The corresponding figure for the upper primary level during the same period was 52.5 per cent.

The data from DISE for 2007-08 shows complete enrolment at both the primary and upper primary levels for all the districts of Mizoram except Saiha. However, the field data collected for this report questions the DISE data, as a substantial number of out-of-school children were enumerated during the survey. As per this field data, for Mizoram, the NER was approximately 94 per cent and 98 per cent for the primary and upper primary stages, respectively. Thus, the field data indicate that in terms of bringing children to school, the state is far ahead of the national situation, especially in upper primary enrolment. It is also commendable that girls and boys in the state have very similar NERs, indicating gender neutrality in school enrolment. The Combined Enrolment Index shows a figure of more than 96 per cent with a gender gap of only 0.2 percentage points.

Among the districts, Aizawl, Mamit, Champhai, and Lunglei lag behind others in terms of the primary NER while Lawngtlai and Mamit are laggards in terms of the upper primary NER. Kolasib, Serchhip, and Saiha are consistent front-runners in terms of both the primary and upper primary NERs.

Drop-out and Retention

It has been observed that close to 15,000 children drop out from schools before completing the school stage. This indicates that the retention of children in schools is not exhaustive and a sizeable fraction of the enrolled students do drop out for various reasons. In fact, the Drop-out Rates (DORs) are substantially high in India. The DORS at the primary, upper primary and secondary levels in 2000-01 were 40.3 per cent, 54.5 per cent and 68.3 per cent, respectively. This situation has subsequently improved substantially and in 2007-08, the DOR at the national level was 9.36 per cent for the primary stages, which was marginally higher for the girls as compared to the boys.

For Mizoram, the situation is better than the national average and only about 4.5 per cent of the enrolled children drop out before completing primary schooling. The DOR at this stage is higher for girls as compared to boys. However, if the elementary education stage is taken in aggregate, then the situation is not at all comfortable, and close to 20 per cent of the enrolled children do not complete their schooling for various reasons. The DOR is marginally higher for

Table 7.12: Net Enrolment Ratios in School-Stages—2009 (by Districts)

Districts	Enrolment in Primary Stages			Enrolment in Middle Stages			Enrolment Index		
	Boys	Girls	GG	Boys	Girls	GG	Boys	Girls	GG
Aizawl	92.5	91.6	0.8	99.5	99.2	0.3	96.0	95.4	0.6
Champhai	94.4	92.0	2.4	98.6	99.6	-1.0	96.5	95.8	0.7
Kolasib	100.0	99.5	0.5	100.0	100.0	0.0	100.0	99.8	0.2
Lawngtlai	99.3	98.7	0.5	88.2	90.4	-2.2	93.7	94.6	-0.9
Lunglei	93.0	97.1	-4.2	100.0	97.9	2.1	96.5	97.5	-1.0
Mamit	91.6	95.6	-4.0	98.4	92.1	6.3	95.0	93.8	1.2
Saiha	97.2	98.8	-1.6	99.0	98.9	0.1	98.1	98.9	-0.8
Serchhip	98.9	97.8	1.1	100.0	100.0	0.0	99.4	98.9	0.6
State	94.5	94.4	0.1	98.7	98.3	0.4	96.6	96.4	0.2

Source: Calculations based on survey data, 2008.

boys, indicating that one out of every five children who have enrolled for school leave before completing eight years of education (Table 7.13). The situation is much more alarming if the regional differences are taken into account. The DORs are disturbingly high—more than 25 per cent—in Lawngtlai, Champhai, and Mamit. The female DOR is also particularly high in these areas where, on an average, 10-15 per cent of the girl students are seen to be leaving school before completing even the primary stage. Retaining these students is a major challenge for the policy-makers.

The complementary of the DOR can be called the Retention Rate, obtained by subtracting the DOR from 100. It indicates the percentages of enrolled students who do complete the school stages. The Average Retention Rate for the state (after adjustment for gender differences) is about 80 per cent. Retention is alarmingly low in Lawngtlai and Mamit, while in Kolasib and Saiha, it is fairly high.

Table 7.13: Drop-out, Retention and Completion Rates in Elementary School Stage (by Districts)

Districts	Drop-out Rate			Retention Rate			Completion Rate		
	Boys	Girls	Gender Gap	Boys	Girls	GG-adjusted Aggregate	Boys	Girls	GG-adjusted Aggregate
Aizawl	21.9	14.0	-7.9	78.1	86.0	82.0	72.2	78.8	75.5
Champhai	27.2	27.7	0.5	72.8	72.3	72.6	68.8	66.5	67.6
Kolasib	6.7	4.9	-1.8	93.3	95.1	94.3	93.3	94.7	94.0
Lwangtlai	31.0	49.2	18.2	69.0	50.8	59.0	68.5	50.2	58.4
Lunglei	18.8	23.6	4.9	81.2	76.4	78.7	75.5	74.2	74.7
Mamit	21.6	38.4	16.8	78.4	61.6	69.2	71.8	58.9	64.5
Saiha	5.7	6.2	0.5	94.3	93.8	94.1	91.6	92.7	92.1
Serchhip	14.4	17.0	2.6	85.6	83.0	84.2	84.6	81.2	82.9
State	20.1	19.8	-0.3	79.9	80.2	80.1	75.5	75.8	75.7

Source: Survey data, 2008.

Completion Rates

The DOR, while being a very important indicator of educational attainment, has certain limitations. It only reflects the percentage of the enrolled students that leave before completing a certain stage of schooling. However, in order to determine the proportion of children of the relevant age group who are really completing a certain level of schooling, one should concentrate on the completion rate (CR), which is obtained by multiplying the NER with the Retention Rate (complementary of DOR). It was observed that at the national level in 2007-08, only 72 per cent of the relevant age group children were completing primary level education, and less than 60 per cent were completing elementary education, up to class VIII. As compared to the national average, the situation is better in Mizoram where about three-fourths of the children do complete eight years of formal education. The overall completion rate of the girls is marginally higher than that for the boys, which is also a commendable feat in terms of human development. However, the spatial disparity is quite high and the average figure hides more than it reveals. The CR is just more than half in Lawngtlai, indicating that almost half of the relevant age group children do not complete even eight years of formal schooling. The CR is less than the state average in Mamit, Champhai, and Lunglei also.

The reasons for such a substantial number of children dropping out of the formal system before completing elementary education merit exploration. It has been observed that for both boys and girls, the main reason behind the dropout of students is the failure to be promoted to the higher stages and a general lack of interest in studies (Table 7.14). The second most common reason cited by the respondents is that they had to leave formal school to work and supplement family earnings. Poor health is another important reason behind the dropout rates of students. Problems related to school facilities and distance and those associated with the poor attitude of teachers are also important reasons for drop-outs among boys. Among the girls, however, unaffordable costs hinder the continuation of studies in the case of about 10 per cent of the students.

There are substantial regional disparities also. The need to work to earn for the family is the most important factor responsible for the drop-outs of boys in Champhai and Serchhip and for the girls in Kolasib and Mamit. For the girls of Saiha, the most crucial reason for the drop-outs is the unaffordability of related costs. Similarly, in Lunglei, school-related difficulties are common among boys while health problems are common among girls.

Composite Educational Achievement Index

On the basis of the above discussions on the achievements of the state and districts in terms of education and capacity building, it is possible to prepare a composite score of the educational achievement dimension. This would provide a focused view of the lagging and the better performing sub-regions which would, in turn, facilitate the framing of well-directed policies. We have, therefore, prepared the Educational Achievement Index (EAI) from the Gender Gap-adjusted Literacy Index, Combined Enrolment Index, and the Retention Index (Table 7.15).

It has been observed that the average EAI for the state is 89.4, signifying that the achievement of the state in terms of various dimensions of educational capacity building has been satisfactory and somewhat better than the national average figures. While the literacy and enrolment situation is praiseworthy, retaining students in the formal schooling system and preventing drop-outs should be the focus area of the policy-makers.

The relative ranking of the districts shows that Kolasib, Serchhip, and Saiha are at the top while the situation is rather uncomfortable in Lawngtlai, Mamit, and Champhai. Separate RADARs for all the districts are provided at the end to formulate specific action plans for each of them individually. It is hoped that such a targeted approach would yield better results in terms of enhancing capacity building and improving the levels of human development in the district.

Table 7.14: Reasons for Dropping Out—2009

Districts	Work to Earn	School Problems	Teacher Problems	Cost Unaffordable	Failed / Uninterested	Marriage	Ill Health, etc.
Boys							
Aizawl	4.3	5.3	11.8	5.7	55.2	0.0	12.0
Champhai	40.2	0.0	0.0	11.9	36.6	3.6	7.6
Kolasib	31.0	0.0	0.0	0.0	69.7	0.0	0.0
Lawngtlai	15.8	3.5	9.8	8.5	45.6	0.0	16.8
Lunglei	3.8	28.5	9.1	0.0	49.5	0.0	9.2
Mamit	26.9	0.0	0.0	0.0	59.9	4.7	8.5
Saiha	11.2	0.0	0.0	0.0	84.3	0.0	4.1
Serchhip	40.6	6.5	0.0	0.0	45.4	2.7	5.1
1. State	16.1	6.8	7.1	5.4	50.8	1.1	10.5
Girls							
Aizawl	15.2	0.0	5.2	4.8	58.0	12.7	4.2
Champhai	26.8	2.7	0.0	12.2	51.7	1.7	5.0
Kolasib	76.2	0.0	0.0	0.0	23.8	0.0	0.0
Lawngtlai	20.9	0.0	5.7	16.0	41.1	2.6	13.6
Lunglei	14.9	7.2	0.0	0.0	43.7	0.0	34.3
Mamit	53.1	3.6	0.0	4.3	26.4	0.0	12.6
Saiha	23.7	0.0	0.0	39.3	36.5	0.0	0.0
Serchhip	0.0	0.0	7.6	6.3	72.8	0.0	13.4
2. State	22.9	2.1	2.7	8.1	48.0	4.3	11.8

Source: Survey data, 2008.

Gender Parity

Gender gaps in literacy, and other measures of educational attainment, have far-reaching consequences. It is generally accepted by researchers that social phenomena like Birth Rates (CBRs), Death Rates (CDRs), Infant Mortality Rates (IMRs), and Population Growth Rates (PGRs) decelerate with improvements in literacy levels. This phenomenon is observed to be operating in India also, as researchers have found a close negative association between the state-level literacy rates and their CBRs, CDRs, IMRs and PGRs. Apart from these social impacts, improvements in literacy levels also lead to an uplifting of living standards. While the work participation rates (WPRs), per capita income (measured by per capita net state domestic product—PCNSDP) and per capita consumption (monthly private consumption expenditure—MPCE) are observed to have a significantly positive association with the literacy rate of the state, the proportion of people below the poverty level has a significant negative association with literacy. Thus, an improvement in the 'inclusion rate' has not only an aggregate uplifting effect but also the desired distributional consequences. Moreover, in all these cases, the association is found to be stronger with female literacy than with male literacy, thereby underlying the importance of female education in India. This also identifies gender gap as an important issue for exploration.

In order to examine gender parity in educational achievement, we have calculated the EAI separately for the males and females, and have computed a Gender Parity Ratio as the ratio between the female EAI and Male EAI (Table 7.16). A GPI value of 1 would indicate complete gender parity, while values of less than 1 would indicate a gender bias against females in educational achievement. The opposite would be true if the GPI were greater than unity. It has been observed that the state average GPI is 0.98, indicating close gender equality in capacity building in the state. In Kolasib, the GPI is just 1, indicating absolutely equal EAI for males and females in the district. In Aizawl, women are in a better position as compared to men in terms of educational achievement. However, in Lawngtlai, and also in Mamit, women are lagging behind men considerably. The removal of such

Table 7.15: Gender-adjusted Educational Achievement Index (by Districts)

Districts	Literacy Index	Enrolment Index	Retention Index	Educational Achievement Index	Rank
Aizawl	98.5	95.7	82.0	92.1	4
Champhai	93.5	96.1	72.6	87.4	6
Kolasib	94.4	99.9	94.3	96.2	1
Lwangtlai	65.5	94.1	59.0	72.9	8
Lunglei	89.1	97.0	78.7	88.3	5
Mamit	85.7	94.4	69.2	83.1	7
Saiha	88.4	98.5	94.1	93.6	3
Serchhip	98.7	99.2	84.2	94.0	2
State	91.5	96.5	80.1	89.4	

Source: Calculations based on earlier tables.

Table 7.16: Gender-specific Educational Achievement Indices and Gender Parity Ratio (by Districts)

Districts	Educational Achievement Index			Gender Parity Ratio
	Males	Females	Gender-adjusted	
Aizawl	91.0	93.2	92.1	1.02
Champhai	88.0	86.8	87.4	0.99
Kolasib	96.2	96.2	96.2	1.00
Lwangtlai	79.2	67.7	72.9	0.85
Lunglei	90.2	86.6	88.3	0.96
Mamit	87.9	78.9	83.1	0.90
Saiha	94.5	92.8	93.6	0.98
Serchhip	94.7	93.4	94.0	0.99
State	90.1	88.7	89.4	0.98

Source: Calculations based on earlier tables.

gender bias in the specified districts poses another major challenge for the educational administrators.

Higher and Technical Education

The Department of Higher and Technical Education, which was established as a separate Department following the trifurcation of the then Department of Education on 1 April 1989 is one of the youngest Departments in Mizoram. It deals with university education, collegiate education, technical education, management education and distance education in the state. The Department oversees the functioning of 22 government colleges, including the College of Teacher Education and the Mizoram Hindi Training College, wherein degree courses in Teacher Education are being imparted for both pre-service and in-service, and the Grant-in-Aid Colleges, viz. Mizoram Law College and Kamalanagar College. The department also looks after two technical institutions, namely the Mizoram Polytechnic in Lunglei, which imparts three- year Diploma Courses in Civil, Mechanical, Electrical and Computer Science Engineering and is recognized by the AICTE for such courses, and the Women's Polytechnic, Aizawl, which

has been established with the approval of AITCE. This institute imparts courses in Electronics and Telecommunication, Modern Office Practices, Beauty Culture and Cosmetology, and Garment Technology. The Department also deals with Distance Education institutions, namely the Indira Gandhi Open University (international) and Madhurai Kamaraj University. The entrance examinations for various engineering, medical and allied courses for filling up of the state quota are being conducted every year by the technical cell under this department. The Department also supervises the award of post-matriculation merit scholarships to students wishing to pursue higher learning, and other incentive cash awards to successful candidates for various competitive examinations conducted by the Union Public Service Commission (UPSC) and Research Fellowships for research scholars.

In order to upgrade the standards of education and to facilitate the better functioning of higher education and technical education systems in Mizoram, the Department has taken up various schemes such as the upgradation of colleges as per the norms of the University Grants Commission (UGC) and the modernization of polytechnics as per the norms of the All India Council for Technical Education in staffing patterns, upgrading of private colleges by providing Deficit Grant-in-Aid status, and the provincialization of deficit colleges. In order to maintain uniformity of standards among the colleges, financial assistance is given to colleges and polytechnics in the form of recurring and non-recurring grants. It has also established and looks after collegiate hostels at various places in and outside the state.

For the strengthening and modernization of technical education, the Mizoram State Council for Technical Education was set up and started functioning in 1994 under the Directorate of Higher and Technical Education to conduct all examinations of the polytechnics, the Regional Institute of Paramedical and Nursing Science, DOEACC, etc., including issue of certificates and mark sheets to the students passing out from these institutions.

The World Bank Project under the third Technician Education Project was started with effect from January 2001, for the strengthening and modernization of technical education in the state. The project, which entails a total cost of Rs. 42.63 crores, covers the Mizoram Polytechnic, Lunglei; and the Women's Polytechnic, Aizawl; and the setting up of the Directorate of Technical Education in the state, which has, however, not been done so far. The project has three components, viz. quality enhancement, capacity expansion and efficiency improvement.

During the 1980s and early 1990s, there was a rapid growth of higher education institutions and many new colleges in the general lines were set up. Since then, no more new colleges in the general lines have been established. Besides, amongst the already opened colleges, as many as five colleges were closed down not long after their establishment due to financial problems and the shortage of students for enrolment.

Other training facilities available in the state are run by various government departments. The Integrated Training Centre (ITC) managed by the Agriculture Department provides basic agriculture training of two years duration, generally for in-service personnel; the Krishi Vigyan Kendra (KVK) under the same department provides training to farmers. The Indian Council of Agriculture Research (ICAR) has one sub-centre in Mizoram. A School of Animal Husbandry and Veterinary Science, which functions under the Animal Husbandry and Veterinary Department, offers training to Veterinary Field Assistants (VFAs). The Forest Education and Research Institute, under the Forest and Environment Department, also offers training to forest staff and forest guards employed by the state government. Under the SCERT, the English Language Teaching Institute (ELTI) and the Mizoram Institute of Spoken English (MISE), the State Institute of Educational Management and Training (SIEMAT) also offers in-service training to teachers.

In 2008, 7500 students, 48 per cent of whom were girls, were pursuing under-graduate studies in the Arts, Science and Commerce Colleges in Mizoram. A majority of the students in Mizoram colleges are in the arts stream. Approximately 10 per cent of the under-graduate students take admission

to the post-graduate courses in universities within Mizoram. However, the exodus of students to other states for higher education is an important aspect of the education scenario in Mizoram and needs to be carefully examined by the administrators.

The field survey data shows that only about 12 per cent of the youth are enrolled for higher education in the state, with the figure ranging from less than 5 per cent in Saiha and Lawngtlai to more than 15 per cent in Aizawl (Table 7.17). In addition, about 7000 young persons have obtained vocational and allied skill training. About 3000 of them have obtained some sort of certificate after acquiring skill training, which may help them as they enter the job market. The average duration of such skill training programmes is 16 months. The incidence of skill training is relatively higher in Serchhip and Saiha than in the other districts. Thus the low penetration of higher education and training facilities is a matter of concern and proper policies must be framed immediately to address this issue.

Shortcomings

Elementary education in Mizoram suffers from the problem of inadequate infrastructure, especially that related to school buildings, classrooms, and drinking water and toilet facilities. The inaccessibility of educational institutions for many prospective students because of the distance between the school and the home, and the difficult terrain is also a problem area. Also, though enrolment levels are high, students do drop out before completing the school stage, and hence capacity building remains incomplete, especially in the case of children from the poor families.

The Department of Higher and Technical Education is also confronted with certain problems. The existing college buildings are old and need repair; therefore, grants for new construction and repair of buildings are an extreme necessity. Besides this, quite a number of teaching posts remain vacant due to various reasons. The budget allocation

Table 7.17: Higher Education and Training among Youth—2009

Districts	Enrolled for HE (%)	Received Skill Training	Received Certificate	Average Duration
Aizawl	15.9	3295 (2.7)	1452	17
Champhai	8.5	170 (0.4)	84	13
Kolasib	6.6	114 (0.5)	114	11
Lawngtlai	4.9	1087 (3.9)	456	19
Lunglei	11.9	NA	NA	NA
Mamit	8.2	514 (3.5)	110	18
Saiha	4.6	933 (4.7)	382	10
Serchhip	6.5	1164 (7.1)	862	12
State	12.0	7277 (2.3)	3460	16

Source: Calculations based on survey data, 2008.
Note: Figures in parentheses are percentages to the total youth population.

Table 7.18: Policy Focus—Shortcomings at a Glance

Districts	Issues that Need Focus
Aizawl	Teachers, Facilities, Access
Champhai	Teachers, Facilities
Kolasib	Teachers, Facilities
Lawngtlai	Facilities, Teachers, Female Literacy, Girls' Retention
Lunglei	Teachers, Facilities
Mamit	Teachers, Facilities, Girls' Retention
Saiha	Facilities
Serchhip	Teachers
Indices	Districts that Need Focus
Access	Aizawl, Lawngtlai, Lunglei
Facilities	Lawngtlai, Lunglei, Mamit
Teachers	Mamit, Kolasib, Lawngtlai
Male Literacy	Lawngtlai
Female Literacy	Lawngtlai, Lunglei
Enrolment	Mamit, Lawngtlai
Boys' Retention	Lawngtlai, Mamit, Champhai
Girls' Retention	Lawngtlai, Mamit, Champhai

Source: Calculations based on earlier tables.

is too meagre and more than 90 per cent of it is utilized for salaries. This means that planned expenditure is low and new schemes cannot be introduced. Spatial and Index-specific shortcomings are provided in Table 7.18.

Special Programmes Initiated in the State/ Districts

Mid-day Meal Scheme

With a view to enhancing enrolment, retention and attendance, and simultaneously improving nutritional levels among children, the National Programme of Nutritional Support to Primary Education, popularly known as the Mid-day Meal Scheme, was launched as a Centrally-sponsored scheme on 15 August 1995, initially in 2408 blocks in the country. By the year 1997-98, the scheme was introduced in all blocks of the country. It was further extended in 2002 to cover not only children in Classes I-V of government, government-aided and local body schools, but also children studying in the Education Guarantee Scheme (EGS) and Alternative and Innovative Education (AIE) centres. In September 2004, the scheme was revised to provide cooked mid-day meals with 300 calories and 8-12 grams of protein to all children studying in classes I-V in the targeted schools and centres.

The objectives of the Mid-Day Meal Scheme are to improve the nutritional status

of children in classes I-V in government, local body and government-aided schools, and the EGS and AIE centres. It also encourages poor children, especially those belonging to the disadvantaged sections, to attend school more regularly and help them concentrate on classroom activities. In addition, it provides nutritional support to children studying at the primary levels in drought-affected areas during their summer vacations.

The revised scheme provides for Central Government assistance in the forms of supply of free foodgrains (wheat/rice @ 100 grams per child per school day from the nearest FCI godown); reimbursement of the actual cost incurred in the transportation of foodgrains from the godown to the primary school subject to the ceiling of Rs. 100 per quintal for eleven special category states, viz. Arunachal Pradesh, Assam, Meghalaya, Mizoram, Manipur, Nagaland, Tripura, Sikkim, J&K, Himachal Pradesh and Uttarakhand, and Rs. 5 per quintal for all the other states and Union Territories (UTs); provision of assistance for cooking cost at the rate of Rs. 1.80 per child per school day for the states in the north-eastern region provided the state government contributes a minimum of 20 paisa, and Rs. 1.50 per child per school day for other states provided the state government/UT administration contributes a minimum of 50 paisa.

Mizoram has covered 1489 primary level schools and 1007 upper primary schools under the scheme against the PAB approval of 1421 under primary and 991 under upper primary schools. More than 1.5 lakh children were covered under the Mid-day Meal Scheme during 2009-10 and were distributed cooked meal for 167 days during the year. The District Education Committees and Village Education Committees play a vital role in the Mid-day Meal Scheme and it has been implemented with the support of NGOs through Village Education Committees in Mizoram.

There are several difficulties in the smooth working of the scheme as the funds are not received in time, causing great hardships for the schools. However, with the dedicated efforts and enthusiasm of the teachers, parents and NGOs, these difficulties are being overcome by the schools that take the required commodities on loan from the local shops to be repaid as and when the conversion fund is received.

Sarva Shiksha Abhiyan

The Sarva Shiksha Abhiyan (SSA) was launched in India in 2001 to extend useful and quality elementary education to all children in the age group of 6-14 years before the end of 2010. The SSA primarily targeted the physical factors like school infrastructure, both physical and human. The modus operandi of the SSA was to start informal educational centres in the regions and hamlets not served by formal schools, run short-term camps for out-of-school children so that they can be brought back to formal schools, improve infrastructure in the existing formal schools to make it a better and attractive place for children, and fund the appointment of Shiksha Sahayikas (education aides) to supplement the number of teachers. During the ten years of its operation since 2000, a total amount of Rs. 5700 billion has been allocated to the SSA through Union Budgets from 1999-2000 to 2009-10. This enabled the SSA to finance the construction of 2,48,465 school buildings and 9,78,738 additional classrooms in the existing schools by March 2009. As part of the objective to equip more and more schools with the basic amenities, 1,89,729 schools were provided with drinking water facilities and 2,63,899 schools with toilet facilities. As many as 9,86,000 new teachers were also recruited during this period to solve the problem of under-staffed schools and a high student-teacher ratio.

The State Education Department of Mizoram started implementing the SSA from 2001 onwards by undertaking pre-project activities in the Saiha district, the district identified as the gender focus district because of its low female literacy rate. In 2001 itself, The Mizoram Sarva Shiksha Abhiyan Rajya Mission Rules, 2001, was passed by the State Assembly and the Mizoram Sarva Shiksha Abhiyan Mission was registered under the Societies Registration Act.

A significant role is being played by school infrastructure towards universalizing elementary education. In the context of Mizoram, this is much more significant than in the other established states because of vast infrastructural gaps found here under this core issue. In this context, it may be

Table 7.19: Progress of Civil Works under SSA in Mizoram

Items	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	TOTAL 2001-07	Target 2007-08
Block Resource Centre	3	5	6	7		1	22	8
Circle Resource Centre	11	12	21	43	24	25	136	19
New Primary School					62	105	167	55
New Upper Primary School		10	10	20	47	63	150	67
Primary School Building	16	5	20	45			86	5
Upper Primary School Building	4	9	17	79		14	123	15
Primary School Building Repair			33	122	25	138	318	140
Upper Primary School Building Repair			35	31	31	104	201	87
Additional Classroom		40	10	101	40	47	238	158
Toilet/Urinals	250	69		486	322		1127	0
Separate Girls Toilet								619
Drinking Water Facility	230	90		315	351		986	402
Boundary Wall				66	8		74	96
Separation Wall				50			50	184
Electrification				10		237	247	296
Kitchen Shed						300	300	0
Ramps						850	850	487

Source: Calculations based on data from SSA, Mizoram.

mentioned that due to the paucity of funds, the elementary schools in Mizoram earlier suffered from serious deficiencies in terms of basic infrastructure and amenities like classrooms, toilets, drinking water facilities, electrification, ramps, etc. However, since the implementation of the SSA, considerable progress has been made on this front as well (Table 7.19). During the period 2001-2007, more than 300 new schools, more than 200 new school buildings, about 250 additional classrooms, and about 1000 toilets, urinals and drinking water facilities, were constructed, and ramps were built in about 850 schools for children with special needs. About 500 school buildings were repaired, 250 schools were electrified, and kitchen sheds were constructed in 300 schools. All the 22 Block Resource Centres sanctioned were constructed and made functional. In addition, 136 Circle Resource Centres were constructed.

There was also a lot of development regarding the distribution of free textbooks during the year 2006-07. The SSA norm of Rs. 150 per child was found to be inadequate for covering the cost of textbooks. After a series of discussions with the Education Department officials and the MBSE, a

decision was taken to procure textbooks directly from the publishers and then distribute them to the students under the SSA. As a result, the prices of the textbooks were reduced and the SSA could procure more textbooks for the children, thereby benefiting about 2 lakh school children.

During 2007-08, the main emphasis was on the construction of separate girls' toilets, additional classrooms, extension of drinking water facilities to more schools, construction of ramps, and the electrification of schools. The district-wise fund allocation shows that the maximum amount of funds were allocated to Aizawl, followed by the relatively lagging districts of Lawngtlai and Lunglei (Table 7.20).

Incentive for Girl Students

The National Scheme of Incentive to Girls for Secondary Education was recently launched (2009) in Mizoram. Under this scheme, a girl student studying in class IX, who was below the age of 16 years by 1 March 1988, should open a 'zero balance account' in selected State Bank of India (SBI) branches. The government would then deposit Rs. 3000 in a fixed deposit in her account. The girl student would then be able to receive this sum along with the interest under condition that on completing 18 years of age, she should remain single, she should have passed class X or its equivalent by 18 years of age, and that she should continue her studies for at least two years after joining this scheme.

Madhyamik Shiksha Abhiyan

The Rashtriya Madhyamik Shiksha Abhiyan (RMSA) is a new central scheme for the universalization of access to and improvement of quality at the secondary stage. The desire is to make good quality education available, accessible and affordable to all young persons in the age group of 14-18 years. The scheme aims to achieve the following targets:

- Provide a secondary school within a reasonable distance of any habitation, that is, 5 km for secondary schools and 7-10 km for higher secondary schools;
- Ensure universal access of secondary education by 2017 (GER of 100 per cent);
- Ensure universal retention by 2020; and
- Provide access to secondary education with special references to the economically weaker sections of the

Table 7.20: Fund Allocation to Districts under SSA in Mizoram

Districts	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 up to Dec.	TOTAL 2001-07
Aizawl	9	224	359	940	758	474	2765
Champhai	2	118	181	500	338	191	1330
Kolasib	3	82	108	365	375	180	1113
Lawngtlai	0	130	156	770	546	316	1919
Lunglei	6	171	240	543	537	363	1860
Mamit	0	108	127	402	417	260	1314
Saiha	16	85	94	304	153	162	815
Serchhip	2	87	95	271	167	122	745
State Pr Off	1	42	5	19	80	67	214
State	39	1047	1365	4116	3361	2136	12,065

Source: Calculations based on data from SSA, Mizoram.

society, the educationally backward, the girls and the disabled children residing in rural areas and other marginalized categories like SCs, STs, Other Backward Castes (OBCs) and Educationally Backward Minorities (EBMs).

Since this scheme is presently in its initial stage, a survey and annual plan is at present being carried out to assess its success in Mizoram since 2008.

Education Reforms Commission

In order to propose an improvement in the education system in Mizoram, the Education Reform Commission was established in April 2009. The Commission began its work by examining the present status of the education system from the pre-school up to the stage of higher and technical education in Mizoram. The Commission plans to revise the State Education Act, and to investigate the functioning of the different Education Directorates including the MBSE and SCERT. The Commission also intends to examine the present syllabus and curriculum, and even make suggestions regarding the medium of instruction. The Commission has opened an office in the Directorate of School Education and invites all members of the public, who are deeply concerned with the improvement of the education system, to write papers/ memoranda/notes on any aspects of education and submit them to the Secretary, Education Reforms Commission in the office.

Conclusion and Recommendations

The task of promoting education and capacity building in Mizoram is quite commendable, more so if the national scenario is kept in perspective. However, in light of the Millennium Development Goal (MDG) of universalization of elementary education, it still has some ground to cover, especially in the area of retaining enrolled children in schools. The primary policy aim should be to improve the school infrastructure in the state by paying special attention to not only the physical infrastructure but also the human interface like teachers. In addition to the quantity factor, adequate care should also be taken to ensure the quality of education. Spatial disparities in the educational infrastructure and achievement are also areas that require a focused and targeted approach. The RADARs constructed at the district levels would serve as a pointer in this direction (see Figures 7.1 and 7.2).

A larger share of the state budget needs to be set aside for the Higher and Technical Education Department. There is also a growing aspiration to set up a separate Department of Technical Education in the state with the appropriate financial power and decision-making authority to efficiently and effectively utilize fund allocation. This may solve the problem of the exodus of a large number of young people to other states for pursuing higher education.

Access Index:

The actual data indicate the proportion of the population in each district that has educational institutions at a specified distance in an ordinal scale. This distribution in the ordinal scale is quantified by using a scheme of weights reflecting the magnitude of deprivation because of the non-availability of institutions. Being a measure of negativity, it is quite natural that the weights should decrease with the increase in distance. The following weightage scheme is followed:

Classification	Within 1 km	1–2 km	2–4 km	> 4 km
Proportion of population having educational institutions	0	-) 5	(-) 10	(-) 20

The negative scores thus collected for each district are summed up to yield a score that might be considered as an indicator of the non-availability of institutions. The maximum non-availability score of a district can be (-) 2000, when cent per cent of its population has educational institutions beyond 4 km. As a result, the individual district score is obtained as Access Index = [{(Maximum non-availability score – District non-availability score)/(Maximum non-availability score)]*100 resulting in indicative score lying between '0' and '100'. It may be noted that a score close to '0' indicates non-availability to a greater extent, indicating deprivation than scores close to '100' indicating better accessibility.

Facilities Index:

The average of the four Facilities Scores is computed to give the Facilities Index, with a ***Pucca*** Building assigned double the weightage of others.

Teachers Index:

The averages of the Teachers-Student Ratio and Teachers per School are computed to give the Teacher Index.

Educational Infrastructure Index:

EII is computed as a simple average of the Access Index, Facilities Index, and Teachers Index, after converting each of the three indices to a scale of 0 to 1 by using the UNDP Goalpost Method. The EII therefore ranges from 0 to 1.

Gender Gap Adjusted Rates:

The Gender Gap-adjusted Rates (Literacy, Enrolment, Retention, and Completion) are computed as the Harmonic Mean of Male and Female Rates, weighted by their respective population shares.

Literacy Index:

The Literacy Score is the Gender Gap-adjusted Literacy Percentage.

Enrolment Index:

Enrolment Scores are obtained as the combined Primary and Middle School Enrolment Ratios, adjusted for Gender Gaps.

Retention Rates:

The Retention Rates are the reciprocals of the Drop-out Rates and obtained as 100 – DOR.

Completion Rates:

The Completion Rates demonstrate what percentages of the age-group children are completing specific school stages, after taking into account both non-enrolment and drop-outs. So, Completion Rate = (Enrolment Rate) X (Retention Rate).

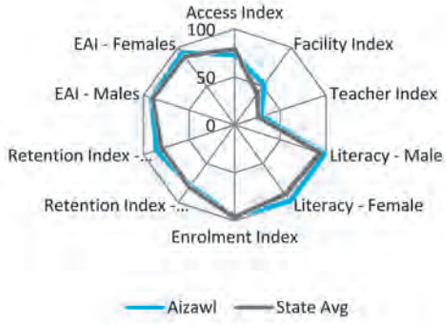
Retention Index:

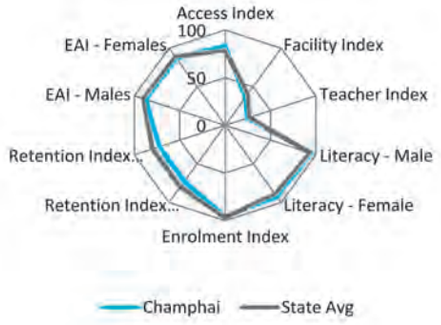
The Retention Index is obtained by using the Gender-adjusted Retention Scores.

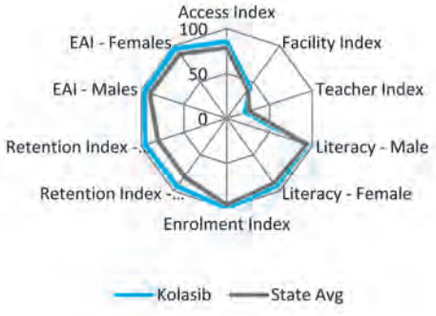
Educational Achievement Index:

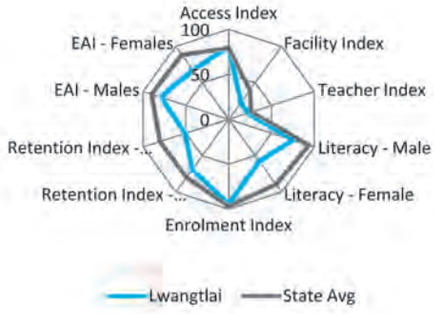
The EAI is computed as a simple average of the Gender-adjusted Literacy Index, Enrolment Index, and Retention Index (see Figure 7.3).

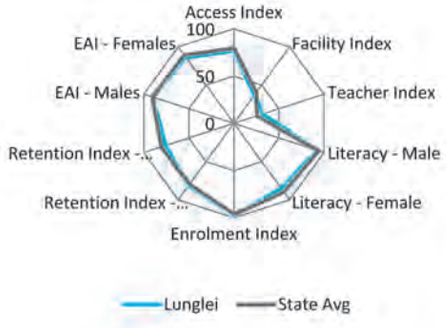
Figure 7.1: District RADARS—Strengths and Weaknesses

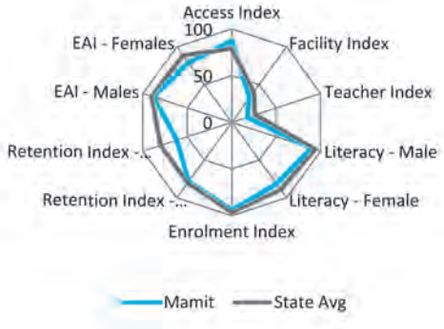


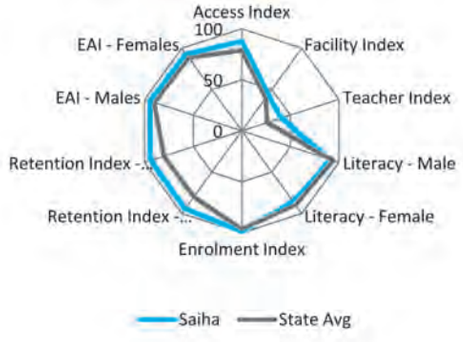


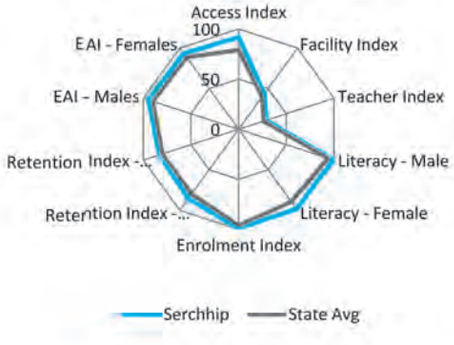






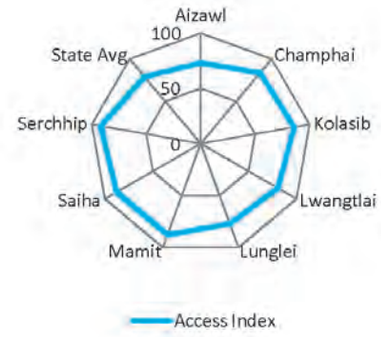


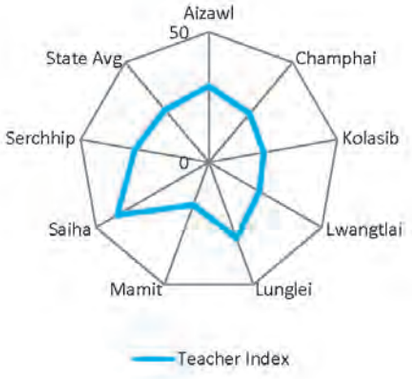


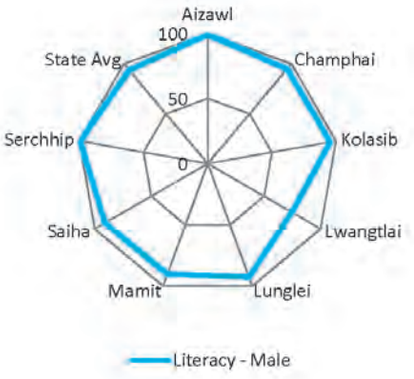


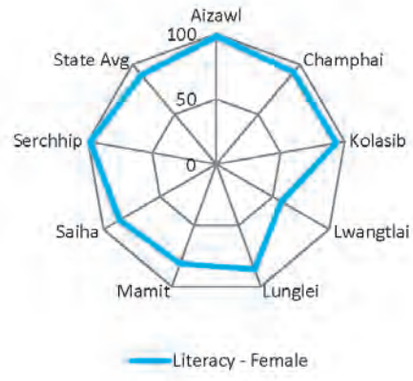
Source: Author's calculations based on various tables given in the chapter.

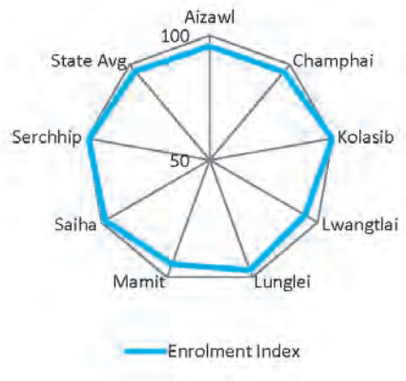
Figure 7.2: RADARS of Indices—Spatial Focus

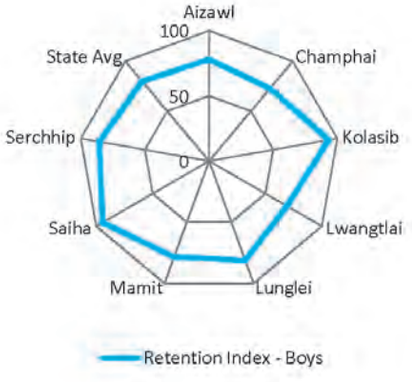


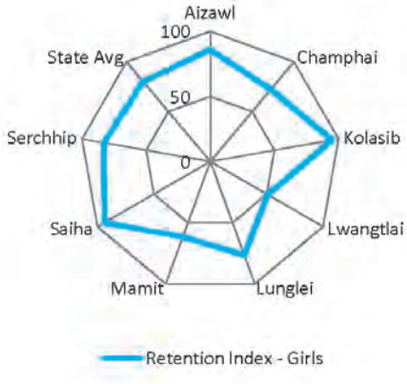






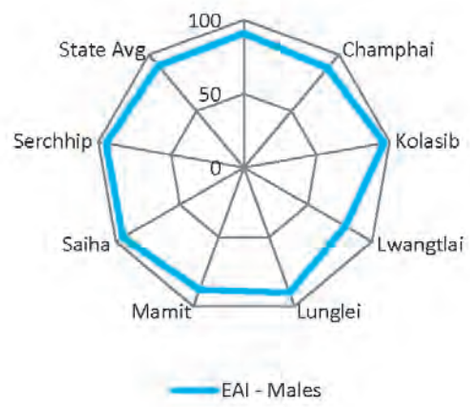


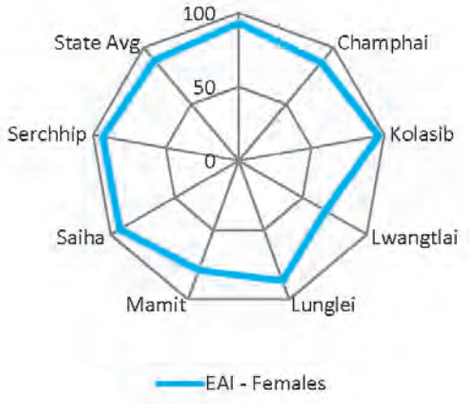


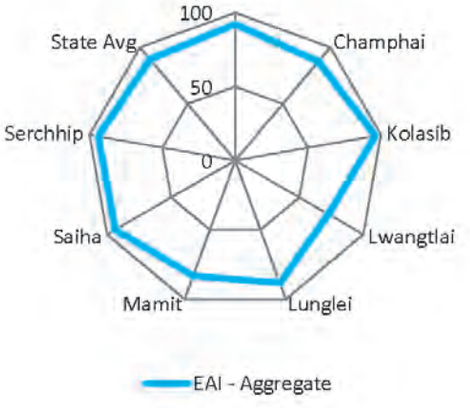


Source: Author's calculations based on various tables given in the chapter.

Figure 7.3: Educational Achievement Index—Districts







Source: Author's calculations based on various tables given in the chapter.

8

Governance and Human Development

The evolution of governance systems in Mizoram is a post-Independence phenomenon. Currently, a combination of the Village Council and other community organisations form the governance structure in the state. Before that, the state was functioning under a system of tribal chieftainship until the advent of British rule, and the first democratic institution, the Mizo District Council, was inaugurated in 1952. The Village Council has been assigned numerous functions—administrative, executive and judicial. However, the requisite powers and authority of the Council to discharge these functions are not well-defined. The chapter provides some key suggestions in this regard.

This chapter discusses the significant aspects of governance in human development in Mizoram. The inter-relationship between governance and human development has acquired significance in the state in recent times due to increased public awareness and government initiatives in ensuring the accountability and credibility of flagship programmes. That human development and governance are inextricably linked is evident from the fact that states which have good governance systems have better human development. For instance, Kerala has demonstrated that a decentralized form of governance ensures local level development and enhances community participation in development. Governance has also been recognized as an important input in the administration and management of development programmes. Mizoram presents a curious mix of traditional forms of governance coexisting with democratic institutions. Religion, especially the Church, also plays an important role in governance. In Mizoram, social control through the institutions of chieftainship, Zawlbuk and later on the Church took on the role of informal administration and governance. Even today, the Church wields enormous influence in maintaining law and order, and overall governance.

Governance, in modern parlance, is defined as the processes through which individuals and state officials interact to express their interests, exercise their rights and obligations, work out their differences, and cooperate to produce public goods and services. According to the Concise Oxford Dictionary, governance means 'the action or manner of governing'. In other words, 'governance' implies the process of decision-making and implementation of the decisions. In Mizoram, several actors are involved in governance including influential landlords, associations of peasant farmers, cooperatives, Panchayati Raj institutions (PRIs), non-governmental organizations (NGOs), religious leaders, and political parties. The situation in the urban areas of the state is much more complex with interconnections between various actors including the government, municipal bodies, corporate bodies, political parties, student and youth associations, and NGOs, all of which are involved in urban governance. In addition to these actors, at the national level, media, lobbyists, international donors and multinational corporations also play a significant role in decision-making or in influencing the decision-making process.

Governance, therefore, plays a very important role in ensuring sustainable development. The following sections present the issues relating to governance in Mizoram including the operational aspects. First, the chieftainship in Mizoram that was the prevalent mode of social control and governance in pre-British era is discussed. This is also significant for present-day Mizoram due to the influence and control exercised by certain tribes and clans.

Evolution of the Polity in Mizoram

Tribal Chieftainship

The evolution of governance systems in Mizoram is a post-Independence phenomenon. Mizoram had a system of tribal chieftainship until the time of British rule. The British, however, decided to leave the authority of the villages to the chiefs as long as it did not impinge on their establishment and business interests in Cooch Behar and also to avoid uprisings among the tribal people in the state. Moreover, Christian missionaries began working in the area by promoting education and the British authorities, therefore, did not interfere in the matters of the region. Due to differences in traditional customs and habits between the tribal chiefs and the Christian missionaries, they had animosity towards each other and failed to work together. In other words, the excessive reliance of the British on the Church led to a type of governance dominated partly by village chiefs and partly by the Church.

An important outcome of this process was that a large population acquired education and along with it, gained political consciousness and a broad outlook. At the time when India attained Independence, several options were mooted for what is

today Mizoram, such as a separate state, an autonomous district within Assam, and also the creation of a new territory with the adjoining areas of Burma. But there was no consensus among the officials and the Mizo chiefs, and the matter was referred to the Indian Government.

Democratic Institutions in Mizoram

The Mizo District Council was inaugurated on 25 April 1952, by the Chief Minister of Assam, Bishnuram Medhi at Aizawl (Vanlawma, 1972, p. 165). Under the Sixth Schedule to the Constitution of India, the Pawi-Lakher Regional Council (PLRC) was formed by Ch. Saprawnga, in 1953 at Lunglei (Doungel, 2003, p. 6).

Following the implementation of the Sixth Schedule, the first election to the District Council of Mizoram was held on 4 April 1952 (Chaltuahkhuma, 1981, p. 77). The council was elected by adult franchise to administer the functions and exercise the powers entrusted to them. Thus began the evolution of a democratic governance system in Mizoram. In 1957, general elections to the District Council of the Mizo Hills were held for the second time (Vanlawma, 1972, p. 182). Around the same time, both a famine and an armed revolt took place and it became a major challenge for the government to address these issues.

The Mizo District Council had been authorized by the state government of Assam to collect revenues in the form of land revenue, house tax, professional tax, trade tax, taxes on animals, taxes on vehicles and boats, tolls on ferries, fees on land transfer, royalties on unclassified state forests, fees on establishment of markets, and rent on fisheries (Government of Assam, 1960, pp. 2-3). Despite these new sources of revenue, the District Council could not provide enough financial support to the famine-stricken people. During this phase, the state witnessed the emergence of new political outfits such as the Mizo National Front (MNF) that enhanced debate and participation of the community in the political process.

Role of Decentralized Institutions

Presently, there are two decentralized institutions operating in Mizoram, namely the District Councils and the Village Councils.

District Councils

The Pawi-Lakher Regional Council was converted into an Autonomous District Council and was called the 'Chhimtuipui District Council'. Accordingly, the Chhimtuipui district, with its headquarters at Saiha, was created, comprising areas of the erstwhile Pawi-Lakher Regional Council (PLRC) (Government of Mizoram, 1972b). While the Government of India was taking positive steps for the elevation of the hitherto Autonomous District Council of the Mizo Hills into Union Territory status, there was a move for the abolition of a democratic decentralized institution called the 'Mizo District Council.' The division of Chhimtuipui district into three Regional Councils took place on 2 April 1972. These councils were subsequently upgraded to the status of full-fledged Autonomous District Councils on 29 April 1972 (Hnialum, 1988, p. 50).

The Union Territory was classified into administrative districts to 'facilitate the implementation of development programmes' (Ray, 1982, p. 144). Aizawl district was created comprising the hitherto Aijal sub-division of the Mizo district (Government of Mizoram, 1972c). Similarly, the new administrative district of Lunglei was created with the area of the erstwhile Lungleh sub-division of the Mizo district (Government of Mizoram, 1972a). The headquarters of these two new districts were located at Aizawl and Lunglei, respectively. The administrative districts in Mizoram as per the 2001 Census are given in Table 8.1.

It is pertinent to note that along with the transformation of the Pawi-Lakher Regional Council into the Chhimtuipui Autonomous District, Aizawl and Lunglei were losing their earlier Autonomous district status. Under the circumstances, both Aizawl and Lunglei districts had changed from decentralized governance status to become

Table 8.1: The Administrative Districts in Mizoram

Name of the Administrative District	Headquarters	Population
Mamit	Mamit	62,785
Kolasib	Kolasib	65,960
Aizawl	Aizawl	3,25,676
Champhai	Champhai	1,08,392
Serchhip	Serchhip	53,861
Lunglei	Lunglei	1,37,223

Source: Government of Mizoram, 2004, p. 1.

mere administrative districts, while the new Autonomous District Councils in the southern part of the state were prepared to inherit all the powers and functions previously enjoyed by the Autonomous District Council of the Mizo Hills.

In January 1975, for facilitating the delegation of administrative powers and the effective implementation of development programmes, four new administrative sub-divisions were created in the Aizawl district, namely: (1) Aizawl (Sadar) sub-division with headquarters at Aizawl, (2) Mamit sub-division with headquarters at Mamit, (3) Champhai sub-division with headquarters at Champhai, and (4) Kolasib sub-division with headquarters at Kolasib (Government of Mizoram, 1975a). In Lunglei district, two sub-divisions were also created as follows: (1) Lunglei (Sadar) sub-division with headquarters at Lunglei, and (2) Tlabung sub-division with headquarters at Tlabung. However, no sub-division was created in Chhimtuipui district (Government of Mizoram, 1975b).

The conferment of statehood on Mizoram was followed by the modification of names for the two Autonomous District Councils (Doungel, p. 50), the Pawi Autonomous District Council as the Lai Autonomous District Council (LADC), and the Lakher Autonomous District Council as the Mara Autonomous District Council (MADC). However, the Chakma Autonomous District Council (CADC) retains its original name.

Village Councils

In Mizoram, the political situation underwent rapid changes at the grassroots level following the capture of the first District Council by the Mizo Union, whose policy was to bring about a diminution of the powers and privileges of the traditional Chiefs for the improvement of the socio-economic and political conditions of the common people. Immediately after the installation of an Autonomous District Council, the Mizo Union reiterated its original demand for the introduction of the village councils all over the district in the wake of the elections, in place of the existing autocratic regime of the Chiefs.[1] The Mizo Union leaders were of the strong opinion that the Chiefs were not there due to the will of the people and as such, they could bear no responsibility. Although the Chiefs decided to adopt an attitude of non-cooperation with the District Council, the state government made no secret of its dissatisfaction with the Chiefs and interpreted their attitude of non-cooperation "as an act of defiance of lawful authority."[2] As the Mizo Union was pleased with the government's attitude towards the Chiefs, its President, in his correspondence with the Chief Minister of Assam, stated: "Mizo Union is happy in the knowledge that you acknowledge the welfare of the Hill Tribals of Assam as your sacred duty and it feels secure in the confidence that you, the father of our State, are ever ready to nurture this district at this critical juncture of its infantile stage of development in this great venture of democratic autonomy."[3]

In keeping with the political ideology of the Mizo Union to establish grassroots democracy within the jurisdiction of the Mizo District Council, the Government of Assam had enacted the Assam–Lushai Hill District (Acquisition of Chiefs' Rights)

Act of 1954, which became operative within the entire jurisdiction of the Mizo District Council from 1 April 1954. Giving way to the process of implementation of democratic decentralization at the grassroot level, the rights and interests of 259 Mizo (Lusei) Chiefs and 50 Pawi-Lakher Chiefs were abolished in favour of the Government (Poonte, 1965, pp. 4-5).

Along with the abolition of the traditional institution of chieftainship, democratic elections to the Village Councils were conducted in different villages in accordance with the famous Act passed by the District Council known as "the Lushai Hills District (Village Council) Act, 1953" (Hriattirna, 1953, p. 15). Thus, the first batch of Village Councillors for each village was elected by the people on the basis of adult franchise. As anticipated, the Mizo Union won all the Village Council elections, which proved that they had complete sway all over the district. In this way, Village Councils, hitherto unknown in the Mizo society, were set up by the District Council as democratic institutions in different villages to supplant the traditional system of administration at the grassroot level. In pursuance of the order issued by the district authority, the first sitting of all the Village Councils in Mizoram was held on 16 August 1954.[4]

According to the provisions of the Village Council Act of 1953 (as amended from time to time), the Village Councils, except those inside the three Autonomous Districts in Mizoram, would have members according to the number of houses they contain.[5] Every Village Council would normally continue for three years from the date of its first sitting unless dissolved under the provision of Section 25 of the said Act.[6] According to the same Act, only the legitimate members of the Scheduled Tribes (STs) permanently residing in Mizoram can participate in the election of Village Council members. Similarly, only bona fide residents of Mizoram can contest Village Council elections.[7]

Functions of the Village Council

The Village Council is entrusted with numerous functions but without the requisite powers and authority. However, its functions can broadly be divided into three groups— administrative, executive and judicial.

Executive and Administrative Functions

According to the Village Council Act of 1953, as amended from time to time, no distinction is specifically drawn between the executive and the administrative functions of the Village Council. Meanwhile, the same Act provides that the executive functions of the Council are vested exclusively in the office-bearers, namely the President, Vice President and Secretary. The executive functions of the Village Councils include land allotments, implementation of community works, and all government schemes.

Legislative Functions

Although the Village Council serves as the democratic machinery of governance for the people at the grassroot level, Section 23(2) of the Lushai Hills District (Village Council) Act of 1953, in clear terms, sanctions certain rule-making powers to the Village Councils pertaining to the following subjects:[8]

(a) Control, preservation and use of timbers and other forest products, except of the reserved forests, ordinarily utilized for building purposes such as canes, sungrass, siallu, *thilthek*, *laisawral*, etc.;[9] and

(b) Maintenance, preservation and improvement of good water supply, sanitation facilities and cleanliness in the village.

Judicial Functions

The Lushai Hills Autonomous District (Administration of Justice) Rules, 1953, provide judicial functions to the Village Councils. Section 6 of this Act clearly authorizes the Village Council to constitute within it the 'Village Council Court' to try petty cases—both civil and criminal. However, it is important to note that the Village Council court is competent to try 'civil cases' arising between or among the tribals and other petty cases.

Role of Community Organizations

There are various community organizations operating in Mizoram. However, this chapter will list only those organizations that are providing significant inputs for the governance of the state.

Church Organizations

Church organizations have made many laudable contributions towards governance and development in Mizoram. Firstly, these organizations have got themselves deeply involved in the field of education. Secondly, soon after the outbreak of insurgency in Mizoram, church organizations persuaded the Mizo National Front leaders to refrain from violence that tended to aggravate the existing tensions in Mizoram.

The Presbyterian Church, the largest Church denomination in Mizoram, convened an emergency meeting of its Standing Committee on 12 March 1966, and unanimously resolved to publish a pamphlet, which, *inter alia*, would include an appeal to everybody in the Mizo district to work for the restoration of peace and prevention of the escalation of the existing situation (Lalrinsanga, 1999, p. 20). They also fervently appealed to the MNF leaders to avoid violent activities which could disturb the peaceful life of innocent people (Lalsangliana, 1991, p. 1). Although the church leaders were not successful in their mission in the beginning, they were determined to accelerate the peace process by minimizing the untold sufferings of the innocent people. Of all the churches in Mizoram, the Mizoram Presbyterian Church has been playing one of the most significant roles for the improvement of the quality of governance and development.

In this regard, the Church, among many other activities, has taken up the following programmes:

(i) *Quality Education:* It has been the aim of the Social Front to educate the people on the values of education. The Synod meeting held in 1992 voiced its concern over the decline of quality education in Mizoram. They have made appeals to the local Churches to organize their own education development programmes at the grassroots level.

(ii) *Political Education:* Right from the time of its inception, the Programme of Political Education has been followed up zealously and effectively. The Church has been making serious attempts to reverse the downward trend in state politics. An intensive campaign is going on to educate the masses on the ethical and basic meaning of the term 'politics,' including their political rights as the citizens of the country. Emphasis has been laid on the need to elect candidates on the basis of personality rather than party affiliations. The political campaigns have been found to be effective in changing the political attitude of the people of Mizoram, in general, and the minds of politicians, in particular.

The church institutions have assisted in bringing about a complete democratization of the society. The messages that peaceful coexistence and governance are essential have been supported by the Church and large-scale awareness programmes have been carried out for the same. This has led to the agitationists abandoning the violent means and aggression they were resorting to for retaining power.

(iii) *Economic Self-sufficiency:* In the year 1992, the Mizoram Presbyterian Church Synod announced the next ten years as the 'Decade for Self-Sufficiency'. In this matter, the Committee has collaborated with the government of Mizoram in several agricultural research projects. As a result of the self-sufficiency drive, there has been a phenomenal increase in the production of agricultural goods in the land.

In order to identify market avenues for agricultural products, the Committee has approached leading companies and government agencies outside Mizoram which, in return, conveyed their willingness to help and aid the Social Front in every possible way to further the economic development process in Mizoram.

(iv) *Land Ceiling and Land Reform Cell:* The Synod Social Front has been making an effort to persuade the government to facilitate the even distribution of

land throughout the state and to rectify the policy of acquisition of fertile land by the Forest Department since it has been found to be an obstacle against the economic activities and upliftment of lives of many people, who are agriculturists and depend on the land for their livelihood. The Synod Social Front is ensuring that the steps suggested by the Committee are implemented by the Land Ceiling and Land Reform Cell. In addition, the organization is engaged in multiple advocacy activities on land ceiling and reform.

Young Mizo Association (YMA)

The Young Mizo Association (YMA) was established on 15 June 1935 at Aizawl. It is a non-political, voluntary organization registered under the Societies Registration Act (Act XXI of 1960). It is an all-India organization having as many as 702 branches across the states of Mizoram, Assam, Manipur, Meghalaya, Nagaland and Tripura. These branches are organized into 50 groups, each of which is popularly known as 'Group YMA.' The YMA has its headquarters at Aizawl while Lunglei serves as its sub-headquarters.

According to the record maintained at its headquarters' office, YMA has more than 2.5 lakh members and 750 branches. The coordination of work with the sub-headquarters, Group YMAs and the Branch YMA is done by an apex body called the 'Central YMA' with its headquarters at Aizawl, the capital of Mizoram.

Students' Organizations

The first Mizo Students' Organization on record is the Mizo Zirlai Pawl (MZP), which was established in 1935. It has since gained pre-eminence as a forum of the youth. It was originally concerned with the interests and welfare of the Mizo students, especially in an endeavour to create understanding and unity among them. In addition, it has transformed itself into a non-partisan political pressure group on various issues affecting not only the student community but also the state as a whole. Its leaders have also increasingly used it as a staging ground for entry into full-time participation in politics.

Mizo Hmeichhe Insuihkhawm Pawl (MHIP)

The United Mizo Women's Association, called the Mizo Hmeichhe Insuihkhawm Pawl (MHIP), was formed on 6 July 1974. It is a voluntary organization at Aizawl devoted solely to the upliftment of the weaker sections of the society, particularly women and children.

It also has sub-headquarters corresponding to seven district headquarters of the state. These sub-headquarters are further divided into 16 blocks and 716 branches with a total strength of 1,42,800 members. The MHIP is concerned with the protection of human rights of all women, including the destitute and downtrodden women.

Human Rights and Law Network (HR & LN)

The Human Rights and Law Network (HR & LN) was founded in September 2003. It is the first NGO in Mizoram that is dedicated solely towards the protection and promotion of human rights. The HR & LN is a purely voluntary, non-profit and non-political organization in which a small team of like-minded workers devote their valuable time in making sincere efforts to ensure the prevalence of law and the enjoyment of basic rights of every human being, regardless of status. The protection of the rights of women, children, destitutes and prisoners are the thrust areas of this organization.

People's Right to Information and Development Implementing Society of Mizoram (PRISM)

The People's Right to Information and Development Implementing Society of Mizoram (PRISM) was formed on 1 August 2006, in the wake of the implementation of the 'Right to Information Act' in Mizoram. It was registered under the Mizoram Societies Registration Act on 19 November 2007. The main objective of PRISM is to facilitate the optimal utilization of the RTI Act by digging out hidden facts about the corruption and malpractices of the government for the purpose of creating a healthy atmosphere and for guaranteeing good governance in Mizoram.

Political Participation of Women

Political participation of women, in the present context, means the involvement of women as citizens in the process by which leaders are chosen and/or government policies are shaped and implemented.' Broadly, political participation can be seen either as direct participation in the political life of the community or civil society to prevail upon political life. Political participation, *inter alia*, may take the following forms:

(1) Voting in local or national elections;

(2) Canvassing or otherwise campaigning in elections;

(3) Being an active member of a political party; or

(4) Being an active member of a pressure group.

The first instance of women's participation in Mizoram politics was seen when the Bordoloi Sub-Committee arrived at Aizawl, on 17 April 1947, to assess public opinion for the future political status of the Mizo Hills. On 18 April 1947, Mrs. Lalziki Sailo appeared, along with other community representatives, before the Bordoloi Sub-Committee and gave evidence on what the future political status of the Mizo Hills should be in the event of India attaining independence.

When India attained independence and a democratic governance structure was put in place in the Mizo Hills, the ruling Mizo Union chose Mrs. Lalziki Sailo to be the first nominated woman member in the first District Council (1952-56). This was the first time that a Mizo woman took part in the decision-making process of the government. During the second term of the District Council (1956-60), Mrs. Maria Hmingliani was nominated to be the second lady member in the District Council.

When Mizoram became a Union Territory in 1972, there were four women contestants. When the process of formation of the government was finalized by the Mizo Union, Miss Saptawni was nominated as member of the first Legislative Assembly (1972-77). This was the third time in Mizo history that a woman was nominated as a member to participate in the decision-making process.

The first woman democratically elected by the people as their representative in the Union Territory Assembly was Ms. Thanmawii of the People's Conference in 1978. In 1979, Ms. Thanmawii, a woman candidate from the People's Conference was again elected in a legislative election of the Union Territory of Mizoram. In the 1984 Legislative Assembly election, Ms. K. Thansiami, a woman candidate of the People's Conference, was elected from the Aizawl West Constituency.

Since the elevation of the Union Territory of Mizoram to a full-fledged state in 1986, there has been only one woman legislator in the state assembly. Ms. Lalhlimpuii was elected from Aizawl North Assembly Constituency in 1987 and was given the berth of Minister of State in Laldenga's Ministry.

Role of Right to Information (RTI) Act

The Right to Information (RTI) Act, *per se*, is not intended to improve governance either at the national or state level. It would be useful only when used extensively by the people for their empowerment in the governance system. There is no denying the fact that though RTI has given the citizens the right to know what they want to know from the government, only a handful of civil societies have come forward to make use of RTI as an effective instrument for improving the quality of governance in Mizoram. Of these civil societies in Mizoram, the People's Right to Information and Development Implementing Society of Mizoram (PRISM) has made extensive and effective use of RTI for digging out hidden information about the corrupt practices within the governance system. In spite of this unsatisfactory use of the RTI Act by the citizens, it has already become an indispensable instrument for ensuring transparency and accountability in the state administration.

The Mizoram political accord was signed on 25 June 1986 between Laldenga and

Arjun Singh, leading to the formation of a coalition interim government between the MNF and the Congress. This was finally followed by the signing of the Mizoram Peace Accord on 30 June 1986 between the Union Home Secretary, R.D. Pradhan, Laldenga and Lalkhama, the Chief Secretary of Mizoram. The Mizoram Peace Accord provided full statehood for Mizoram with a 40-member Legislative Assembly. Finally, Mizoram state was inaugurated at Aizawl by the then Prime Minister, Rajiv Gandhi, on 20 February 1987, making it the twenty-third State of the Indian Union.

Interface between the Institutions and Governance

Since traditional institutions like Chieftainship, Bawi (slavery) and Zawlbuk are no longer operative, it is the Church institution that plays a very significant role in governance in Mizoram. A number of denominations profess that they are Christians but differ from their counterparts in certain aspects/areas. The Presbyterian Church enjoys a majority in terms of membership among all the Christian Churches. The Church leaders of various denominations have also come together to constitute a Forum for discussing common issues and, if necessary, pressing the state government to look into the matters concerned. It was the Church that influenced the state government to enforce the total prohibition of liquor in Mizoram. Similarly the Church has also been raising social issues pertaining to corruption, education, energy, food security, and other significant issues. Other NGOs like YMA, MHIP and Mizo Zirlai Pawl (MZP) too influence the state government on certain issues.

Lessons for Better Governance in Mizoram

Decentralization and Delegation of Duties

It has been observed that several departments are being overseen by only a few staff members. There is thus a need for dedicated staff to supervise the work of different departments to ensure that the work is appropriately delegated for ensuring speedy policy decision-making. In addition, the needs of different departments and timelines vary, which makes it difficult for the existing staff to meet the needs of all the programmes.

Programme Management

One of the areas that needs strengthening is programme management. The staff members need to be trained in programme management and implementation. A number of significant initiatives have been undertaken by the state and Central governments, but their implementation leaves a lot to be desired because of the inadequate staff strength and lack of people with leadership and other requisite skills.

Engagement of Non-State Actors

Communities, the Church, NGOs, media and corporate partners should all be involved in policy-making. These actors have been involved in governance at different levels at different points of time. It is thus useful to engage them in the task of governance from the beginning so that all the perspectives can be taken into account for carrying out the various government programmes and initiatives.

Notes

1. Demi-Official Letter sent by Thanhlira to Subramanian, 18 September 1951.
2. Confidential Note by Subramanian, 30 April 1952.
3. Demi-Official Letter sent by Ch. Chhunga, President, Mizo Union to B.R. Medhi, Chief Minister of Assam, 27 November 1952.
4. As recorded by the Local Administration Department, Government of Mizoram.
5. Government of Mizoram, The Lushai Hills District (Village Council) Act, 1953 (Amended from time to time).
6. Government of Mizoram, The Lushai Hills District (Village Council) Act, 1953, (Amended), Chapter II, p. 5.
7. Government of Mizoram, The Lushai Hills District (Village Council) Act, 1953, (Amended), Chapter II, Section 3(2).
8. Village Council Act, 1953, Chapter III, Section 23(2).
9. *Siallu*, *thilthek*, and *laisawral* are big leaves in the jungle used for making roofs for typical Mizo houses.

9

Human Development—The Gender Parity Perspective

The sex ratio of Mizoram is 975 as compared to the national average of 940 females per 1000 males (Census, 2011). The morbidity for females is lower than that of males in the rural areas but it is higher in the urban areas. The employment rate among women in Mizoram is substantially lower than that among males, while there is also a substantial spatial and tribe-wise gender wage gap in the state. The Combined Decision Index shows that women actively participate in decision-making though their participation in the political field is negligible and they hold virtually no leadership and membership positions. Mizo women also traditionally do not enjoy inheritance rights. Both the Gender Development Index (GDI) and the Gender Parity Index (GPI) indicate that women enjoy considerably lower levels of human development as compared to their male counterparts in the state.

Introduction

The development discourse of a region, especially that related to human development, must take into account the fact that the development may not be spread evenly across all sections of the society. It is frequently observed that women, the aged, and ethnic minorities lag behind other sections of the society in many aspects. This creates a chink in the armour where regional progress is concerned. In particular, since women constitute half of the population, development is incomplete if the women lack proper education, healthcare and economic independence, and are also socially less empowered than men. Against this background, the Human Development Report must consider the disparity in development between men and women.

The traditional Mizo society, as in most other parts of the country, is based strictly on what are known as patriarchal norms. Women lack the power of decision-making, whether at home or outside. They are expected to contribute to the process of procreation and child-rearing in addition to the daily household chores. Often, they are also expected to add to the household income. However, they are not expected to have any independent religious loyalty, but are required to follow the religion of their husbands. Discrimination against women is still prevalent even in the Church and other social organizations. Women are not eligible to become church elders or pastors of the church. It is a common belief that women face a glass ceiling and do not get to occupy the top position in social institutions or NGOs.

One of the most important examples of discrimination against women in traditional Mizo society pertains to the right of inheritance. According to the customary law, women are not entitled to inherit family or ancestral property. If there is no son in the family, the family property including the ancestral home should go to the nephew of the father, as the daughters or wife cannot keep the family property after the death of the father or husband. This is just one example of the many deprivations that women face, making the study of gender aspects of human development important and relevant.

Methodology

Faced with such realities across the globe, the UNDP deems it necessary to examine the impact of such social constraints on the material and non-material conditions of women and their position vis-à-vis men. The Millennium Development Goal (MDG) ratified by the UN envisages the elimination of gender inequality at all levels by the year 2015 in order to achieve the goal of empowerment of women, in particular, and human development, in general. The Gender Development Index (GDI) or the HDI adjusted for gender inequality has been used for this purpose for quite some time. The GDI uses the same three indicators, namely Life Expectancy at Birth, Adult Literacy Rate and Gross Enrolment Rate, and the real GDP per capita in terms of the purchasing power used in the construction of HDI but focuses on the inequality between the sexes. Gender-specific HDI is calculated by using the Male and Female LEB, Education, and Income indices separately. The GDI is then calculated as the Weighted Harmonic mean of the two gender-specific HDIs, by using the gender share in the population as weights. However, at the regional level, it is often difficult to obtain gender-specific income data, and in countries like India, it is all the more difficult because of the fact that a large number of women are engaged solely in domestic activities, thereby under-reporting their income share in the GDP. In addition, the purpose of GDI was to compare between regions after accounting for gender differences and NOT to reveal the disparities within genders in a particular region. The GDI has to be compared with the HDI in order to understand the disparities between genders, without however identifying which gender is at the receiving end. For that purpose, we can develop a Gender Parity Index (GPI), which compares the difference in development between men and women in a region, while encompassing various aspects of human development. A higher score of such a GPI

Table 9.1: Sex Ratio in Mizoram—Districts

Districts	Sex Ratio	Child Sex Ratio
Aizawl	952	973
Champhai	944	972
Kolasib	908	973
Lawngtlai	899	938
Lunglei	922	962
Mamit	896	937
Saiha	954	961
Serchhip	967	978
State	935	964

Source: DISE, (NUEPA).

would imply that development is relatively more evenly spread across men and women in the region. The GPI, as constructed here, has four components—social, economic, educational and healthcare (Figure 9.1). The social component tries to capture the difference in social status between men and women; the economic component tries to capture the difference in their economic conditions; the educational component captures the difference in the education level; while the health component captures the gap between the desired and the actual level of healthcare available to women.

Health

Conceptual Setting

The right to lead a long, healthy and productive life is fundamental to the idea of human development. Gender differences in health and survival are said to reflect social structures in society. In communities where there is gender justice, there appears to be better allocation of food among men and women, and better access to and utilization of health services and resources for healthy living and survival. Issues related to the health dimension of the HDI conventionally deal with Life Expectancy at Birth. However, in order to provide a comprehensive understanding of healthy life in a regional setting and through the looking glass of gender parity, one has to incorporate various other dimensions as well. In this section, issues like reproductive and preventive health, morbidity, and medical expenses have been included to facilitate an understanding of the gender dimension of health. Indicators like ante-natal and post-natal care of mothers, immunization of boy and girl children, duration of sickness among men and women, and out-of-pocket medical expenses have been used. At the methodological and conceptual levels, gender parity in terms of healthcare should not compare the male indicators with the female ones, as health, being of critical importance, should be seen in an absolute framework, without reference to any other group. For example, morbidity among women is bad, irrespective of the morbidity of men being higher or lower than women. Similarly, immunization or ante- and post-natal care is essential in its own right and the comparison should be with the target of universal coverage. Let us now discuss these issues as evident from the field survey data in Mizoram, beginning with the gender ratio in Mizoram.

Sex Ratio

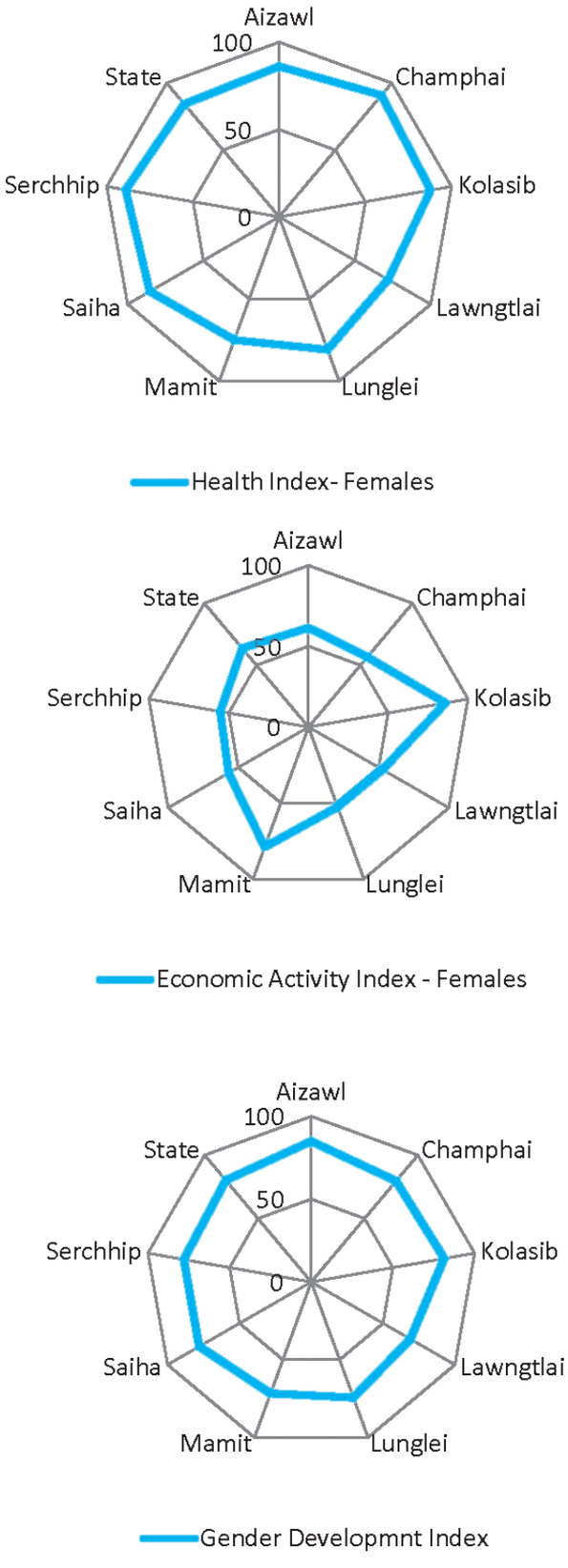
The sex ratio helps one get an overall idea of certain factors like male–female mortality differentials and also sex-specific migration. It captures gender parity in the context of reports of female foeticide and infanticide. It is generally expressed as the total number of females per 1,000 males in a particular locality. As compared to the national average of 933, Mizoram records a marginally higher level of 935 as per the Census of 2001. The rural–urban variation in the sex ratio is 923 (rural) and 948 (urban).

The district-wise profile indicates a fair degree of variation with a high of 955 in Champhai, and the lowest being 901 in Lawngtlai (Table 9.1). Interestingly, the profile does not follow the urbanization pattern of the state, suggesting that other factors play a more important role.

Sex Ratio among Children

Interestingly, the sex ratio of children in the age group of 0-6 years is higher at 964 for the entire State, and stands at 965 and 963 in rural and urban areas of the state, respectively (Census, 2001). A district-wise comparison of the sex ratio of children indicates that the highest ratio of 991 is seen in the Serchhip district, with the lowest of 953 being in the Mamit district. This high

Figure 9.1: RADARS – Components of GDI across Districts



Source: Author's calculations based on various tables given in the chapter.

Table 9.2: Reproductive History

Districts	Age at Marriage	Age at First Pregnancy	Number of Live Births
Aizawl	22	23	3.52
Champhai	21	22	3.59
Kolasib	22	22	2.98
Lawngtlai	20	21	3.06
Lunglei	21	21	3.18
Mamit	21	22	3.15
Saiha	21	22	3.31
Serchhip	21	22	3.25
State	21	22	3.35

Source: Survey data, 2008.

Table 9.3: Ante-natal and Post-natal Care—Districts

	Percentage of Pregnant Women Who Received				Child Delivery Status	
	ANC		Post-natal Care	ANC and PNC	Institutional Delivery	Delivery by TP
Districts	IF Tablet	Tetanus Injection				
Aizawl	69	82	82	67	88.0	94.0
Champhai	84	95	76	74	90.0	96.0
Kolasib	79	97	94	77	81.0	93.0
Lawngtlai	65	74	78	63	47.0	60.0
Lunglei	74	88	87	72	65.0	75.0
Mamit	52	81	96	50	73.0	74.0
Saiha	61	97	77	59	86.0	93.0
Serchhip	61	96	79	59	95.0	99.0
State	70	87	83	68	80.0	87.0

Source: Survey data, 2008.

incidence could either be the result of a differential incidence of mortality by age or more importantly, because of the better survival of all children including female children. If the latter is the main contributing factor, it reflects well on the health status of the people in the state.

Reproductive and Preventive Health

Marriage and child birth take place relatively early in Mizoram with the mean age at marriage being 21 years and mean age at the first pregnancy being 22 years (Table 9.2). The average number of live births also exceeds three in most districts. It has been observed that more than 30 per cent of the pregnant women in the state do not obtain ante-natal care like IF tablets while more than 10 per cent of the pregnant women are not administered the tetanus injection. More than 17 per cent of the women also do not receive any kind of post-natal care (Table 9.3).

Only about 68 per cent of the pregnant women received both ante-natal and post-natal care during the last child birth. Thus, the coverage of health facilities of women is far from desired. The situation is the worst

in Mamit where just half of the pregnant women receive both ante- and post-natal care. The situation is relatively better in Kolasib.

Another aspect of reproductive healthcare concerns the institutional delivery of babies in the presence of trained personnel. It has been observed that more than 20 per cent of all childbirths are non-institutional while in about 13 per cent of the cases, no trained personnel assisted in the delivery. The situation is the worst in Lawngtlai where more than half of all childbirths were seen to take place outside institutions and more than 40 per cent were unassisted by trained personnel. The situation is relatively better in the Serchhip and Champhai districts in this regard.

The immunization of children and the gender dimension of immunization also merit inquiry. It is observed that on an average, about 92 per cent of the children are immunized in the state (Table 9.4). The rate of immunization of boys is marginally better than that of girls, except in Aizawl where the rate of immunization of girls lags substantially behind that of the boys. In Mamit too, more than 20 per cent of the girls are not immunized, and one can derive little solace in the fact that even among boys, only 77 per cent are immunized here. The quality of ante- and post-natal care and the working condition of the mother are also two significant factors, which play a crucial role in determining the maternal mortality rate. Interestingly, the maternal mortality rate in Mizoram is distinctly lower than the corresponding national average.

Morbidity and Health Expenses

The morbidity rate implies the number of persons (per 1000 population) reporting some kind of ailment during the 15 days preceding the date of survey. This information is relevant both for the assessment of the health situation of the people and for the formulation of appropriate health policies and programmes. It helps in identifying the vulnerable groups that face a high risk of morbidity and are in need of health services.

In Mizoram, the morbidity rate is quite low as compared to that in the other Indian states. The morbidity rate for 2004 in the rural areas for males and females was 23 per cent and 18 per cent, respectively, whereas in the urban areas it was 17 per cent and 18 per cent, respectively. Data from the NSSO 60th Round reveal that the national average of the morbidity rates for males and females in the rural areas are 83 and 93, respectively, whereas they are 91 and 108, respectively, in the urban areas. The substantially low levels of morbidity suggest a significantly healthier population in Mizoram as compared to the national average. Also significant in terms of gender issues is the fact that morbidity is lower for females compared to males in rural areas but higher in urban areas.

Field survey data of 2008, though not comparable with the NSSO 2004 data reported above, indicates that the morbidity rates among men and women are 2.9 per cent and 4.7 per cent, respectively (Table 9.5). The female morbidity rate is higher than the male morbidity rate in almost all the districts except Champhai, Mamit, and Saiha. However, contrary to the morbidity levels, the incidence of hospitalization among the sick is higher among the males as compared to the females and the average out-of-pocket health expense is also substantially higher for males. This is perhaps an indicator of an inherent bias in the society's perception of women's health wherein the sickness of males is given more importance and substantially more money is spent on the treatment of the men as compared to that of the women.

As regards the health issues of women alone, it has been seen that the morbidity is relatively higher in the Serchhip, Saiha, Lawngtlai, and Aizawl districts. The incidence of hospitalization is higher in Serchhip, Saiha, and Lunglei, where medical expenses are also quite high.

Health Development Index

A Health Development Index can be prepared on the basis of the indicators of reproductive care, institutional and assisted delivery, immunization, and 'not reported sick, (complementary of the morbidity rate). The score comes out to be 84.3 for the state, with the lowest being reached in Lawngtlai and the highest in Champhai (Table 9.6). It should be noted that this score should ideally be 100, indicating universal coverage and zero sickness.

Table 9.4: Immunization Coverage— Districts

Districts	% of Boys Immunized (A)	% of Girls Immunized (B)	Ratio of B over A
Aizawl	90.8	86.6	0.954
Champhai	98.0	97.6	0.996
Kolasib	91.9	91.1	0.991
Lawngtlai	95.1	95.1	1.000
Lunglei	91.5	96.1	1.050
Mamit	77.2	80.3	1.040
Saiha	92.2	95.1	1.031
Serchhip	100.0	98.7	0.987
State	92.3	91.2	0.988

Source: Survey data, 2008.

Table 9.5: Morbidity and Health Expenditure—Districts

	Percentage of Persons				Average Health Expense (Rs. per year)	
	Reporting Sick		Hospitalized among Sick			
Districts	Male	Female	Male	Female	Male	Female
Aizawl	2.7	5.2	36.5	28.3	4205	2394
Champhai	3.8	3.1	41.2	14.4	3823	2475
Kolasib	1.3	2.7	21.9	10.1	1897	1066
Lawngtlai	3.9	5.7	19.3	28.8	801	1427
Lunglei	2.5	3.8	36.7	37.8	4031	4083
Mamit	7.0	2.5	3.9	13.6	1480	1348
Saiha	10.1	6.0	48.1	33.8	2033	1371
Serchhip	2.8	6.7	25.2	50.3	8779	2927
State	2.9	4.7	33.8	28.5	3680	2458

Source: Survey data, 2008.

Table 9.6: Health Expenditure and Health Development Index

Districts	Percentage of Women/Girls Covered				Not Reported Ill	Health Development Index
	Reproductive Care	Institutional Delivery	Tr. Per.	Immunization		
Aizawl	67.0	88.0	94.0	86.6	94.8	86.1
Champhai	74.0	90.0	96.0	97.6	96.9	90.9
Kolasib	77.0	81.0	93.0	91.1	97.3	87.9
Lawngtlai	63.0	47.0	60.0	95.1	94.3	71.9
Lunglei	72.0	65.0	75.0	96.1	96.2	80.9
Mamit	50.0	73.0	74.0	80.3	97.5	75.0
Saiha	59.0	86.0	93.0	95.1	94.0	85.4
Serchhip	59.0	95.0	99.0	98.7	93.3	89.0
State	68.0	80.0	87.0	91.2	95.3	84.3

Source: Survey data, 2008.

Education

Mizoram is one of the most advanced states in India in terms of literacy, as almost 90 per cent of the people here are literate. However, the women here, as elsewhere, have a lower literacy rate as compared to the men, with the gap being the highest in Lawngtlai and the lowest in the capital Aizawl and Serchhip (Table 9.7).

Beyond literacy, one should look at the enrolment rate in schools. The Net Enrolment Ratio (NER) figures show that during the primary stages, the enrolment status of girls is close to that of the boys in almost all the districts except in Champhai (Table 9.8). In Lunglei, Mamit, and Saiha, girls have a better NER than boys. On the other hand, at the middle level, enrolment is higher among boys than girls except in Lawngtlai and Champhai.

A closer look at the drop-out rates across districts reveals that close to one-fifth of the boys and girls drop out before completing middle school stage, with the retention being marginally better among girls than boys, quite contrary to the national trends (Table 9.9). However, the female drop-out rate is substantially higher than the male ones in Lawngtlai and Mamit, whereas in Aizawl, girls have a lower drop-out rate than boys.

The Combined Educational Development Index was constructed separately for men and women by using the literacy rates, enrolment rates and retention rates (complementary of Drop-out Rates) (Tables 9.10 and 9.11). It is also observed that the indices for women have lower values than those for men for all the districts except Lunglei. As a result, the Gender-adjusted Educational Development Index

Table 9.7: Literacy and Gender Gap (Districts)

Districts	Male Literacy	Female Literacy	Total Literacy	Gender Gap in Literacy
Aizawl	99.0	98.0	98.5	1.0
Champhai	94.8	92.2	93.5	2.6
Kolasib	95.5	93.5	94.5	2.0
Lawngtlai	74.7	57.6	66.4	17.1
Lunglei	92.7	85.9	89.4	6.9
Mamit	90.2	81.4	86.0	8.8
Saiha	91.0	85.8	88.4	5.2
Serchhip	99.2	98.3	98.8	1.0
State	93.7	89.4	91.6	4.3

Source: Census of India, 2011.

Table 9.8: Net Enrolment Ratios in School Stages—2009 (Districts)

Districts	Enrolment in Primary Stages			Enrolment in Middle Stages		
	Boys	Girls	GG	Boys	Girls	GG
Aizawl	92.5	91.6	0.8	99.5	99.2	0.3
Champhai	94.4	92.0	2.4	98.6	99.6	-1.0
Kolasib	100.0	99.5	0.5	100.0	100.0	0.0
Lawngtlai	99.3	98.7	0.5	88.2	90.4	-2.2
Lunglei	93.0	97.1	-4.2	100.0	97.9	2.1
Mamit	91.6	95.6	-4.0	98.4	92.1	6.3
Saiha	97.2	98.8	-1.6	99.0	98.9	0.1
Serchhip	98.9	97.8	1.1	100.0	100.0	0.0
State	94.5	94.4	0.1	98.7	98.3	0.4

Source: Survey data, 2008.

Table 9.9: Drop-out and Retention Ratios in Elementary School Stage (Districts)

Districts	Drop-out Rate			Retention Rate		
	Boys	Girls	GG	Boys	Girls	GG
Aizawl	21.9	14.0	-7.9	78.1	86.0	82.0
Champhai	27.2	27.7	0.5	72.8	72.3	72.6
Kolasib	6.7	4.9	-1.8	93.3	95.1	94.3
Lawngtlai	31.0	49.2	18.2	69.0	50.8	59.0
Lunglei	18.8	23.6	4.9	81.2	76.4	78.7
Mamit	21.6	38.4	16.8	78.4	61.6	69.2
Saiha	5.7	6.2	0.5	94.3	93.8	94.1
Serchhip	14.4	17.0	2.6	85.6	83.0	84.2
State	20.1	19.8	-0.3	79.9	80.2	80.1

Source: Survey data, 2008.

Table 9.10: Educational Indicators and Educational Development Index for Females (Districts)

Districts	Percentage of Women / Girls				Educational Development Index
	Literate	Primary Enrolled	Middle Enrolled	Continuing School	
Aizawl	96.2	52.1	27.7	53.2	63.1
Champhai	89.1	66.6	44.3	66.5	70.4
Kolasib	90.2	83.0	28.4	34.2	60.0
Lawngtlai	57.8	49.0	28.4	58.0	51.5
Lunglei	80.5	66.6	39.2	58.9	64.1
Mamit	74.8	61.2	23.4	38.2	51.8
Saiha	78.1	74.6	22.6	30.3	52.3
Serchhip	94.1	72.2	46.7	64.7	72.7
State	86.7	60.8	32.3	53.1	62.1

Source:

Table 9.11: Educational Development Indices and Gender Parity Ratio (Districts)

Districts	Educational Development Index				Parity Ratio
	Females	Males	Aggregate	Gender-adjusted	
Aizawl	93.1	91.0	92.1	92.1	1.02
Champhai	86.8	88.0	87.4	87.4	0.99
Kolasib	96.1	96.3	96.2	96.2	1.00
Lawngtlai	67.7	79.2	73.4	73.2	0.85
Lunglei	86.6	90.1	88.4	88.3	0.96
Mamit	79.0	87.9	83.4	83.3	0.90
Saiha	92.8	94.5	93.6	93.7	0.98
Serchhip	93.4	94.8	94.1	94.1	0.99
State	88.7	90.1	89.4	89.3	0.98

Source: Calculations based on survey data, 2008.

(population share weighted harmonic mean of gender-specific indices) has lower values than the Aggregate (Unweighted) Educational Development Index, and the Gender Parity Ratio has values less than 1, indicating lower educational status for women relative to men. The Gender Parity Ratio is the lowest for Lawngtlai and the highest for Kolasib (leaving Aizawl where it is, at greater than 1).

Economic Activities

While ideally the income earned by women and its magnitude relative to that earned by men should be assessed, the lack of adequate data prevents this at the sub-state level. Therefore, the gender dimension of economic activities is explored in this chapter by using indicators like women's Work Participation Rate (WPR), Employment Rate (ER), nature and sector of employment, and the average wages earned per day.

Work Participation of Women

Women's participation in economic activity has increased over the years at the national level. This has far-reaching implications, not only in terms of the human resources available and the size of the working population, but also in terms of the economic empowerment of women. Expanding educational achievements, the felt need for economic independence, and changing social perceptions are perhaps the major contributing factors for an increase in the women's WPR. The work participation rate of women in Mizoram is about 26 per cent, which is marginally higher than the national average, indicating the greater participation of women in the labour force in the state than elsewhere in the country (Table 9.12). However, in order to examine the effective labour force participation among the working age group population (15–60 years of age), we have also calculated the effective WPR, that is, the labour force as a proportion of the working age population. It has been observed that the effective WPR in Mizoram is 44 per cent for females, as compared to 68 per cent for males. Thus, participation in economic activities outside the home is still lower among females as compared to males in the state. At the spatial level, the female WPR is higher in the Champhai, Lawngtlai, Serchhip, Aizawl, and Mamit districts than the state average.

Employment and Unemployment

Even with a low WPR, the employment rate among women is substantially lower than that of males in the state. Close to one-third of the women in the labour market are unemployed, while the comparative figure for males is just 12 per cent. The unemployment rate among women is the highest in Lawngtlai, followed by those among women in the Lunglei, Aizawl, Serchhip, and Saiha districts. Relatively lower degrees of unemployment are observed in the Mamit and Kolasib districts.

However, high WPRs or employment rates are not always an indication of a better economic condition, for it is the poor who can ill-afford to remain outside the labour market, and very often women from the poor families have to venture out to work to supplement the family income. Therefore, it is necessary to explore the nature of jobs and earnings thereof, as is examined next.

Nature of Employment

Much of women's work is done at home or outside the formal economy in Mizoram, and female workers tend to concentrate on the agricultural and allied activities. Traditional handicrafts like weaving and bamboo works occupy a prominent place next to agriculture. Due to various constraints and the risks of financial investments, women in female-headed households are forced to remain engaged in traditional modes of economic activity. Since they are generally restricted to low-productivity informal sector employment and have to bear higher dependency burdens, they invariably remain poor and malnourished and rarely get opportunities to acquire formal education, healthcare, or sanitation. Many women run small family businesses, called micro-enterprises, which require very little initial capital and often involve the marketing of food articles and handicrafts produced under the domestic system. The proportion of female employment in the organized sector, both in

Table 9.12: Work Participation Rates and Employment Rates by District

Districts	Male				Female			
	WPR	WPR (Effective)	Employ-ment Rate	Unemploy-ment Rate	WPR	WPR (Effective)	Employ-ment Rate	Unemployment Rate
Aizawl	42.9	60.0	80.8	19.2	24.0	45.7	59.9	40.1
Champhai	50.4	64.4	90.0	10.0	32.6	51.9	72.5	27.5
Kolasib	58.3	68.8	92.4	7.6	28.7	33.1	88.1	11.9
Lawngtlai	53.4	71.1	85.6	14.4	23.9	47.6	56.4	43.6
Lunglei	51.3	65.9	86.3	13.7	23.8	39.3	58.4	41.6
Mamit	51.8	63.6	92.3	7.7	35.7	44.4	89.6	10.4
Saiha	47.1	60.2	88.4	11.6	25.8	40.0	68.2	31.8
Serchhip	43.3	62.8	87.8	12.2	26.9	46.8	65.6	34.4
State	47.8	64.3	87.5	12.5	26.3	43.8	68.1	31.9

Source: Survey data, 2008.
Note: WPR (effective) = Total No. of Workers/Population Aged 15-60 Years; Unemployment Rate = Total Unemployed/Total Labour Force; Labour Force = Workers + Unemployed; Employment Rate = 1 – Unemployment Rate.

India as a whole, as well as in Mizoram, is far below that of male employment, which signifies that in spite of their growing literacy levels, employment among women in the organized sector is still negligible. Poor representation of females in the organized sector often leads to the exploitation of women. The answers are hidden behind a complex matrix of social and cultural factors. First, in the absence of sufficient development and expansion of the public sector, which assures stable employment, the overall employment opportunities for both males and females in this sector, have become restricted. Second, the prevalent patriarchy reinforces the belief that women are basically supplementary earners and, therefore, in a job-scarce economy, societal attitudes justify elbowing women out of the job queues. Third, gender bias and tradition have kept many large sectors out of bounds for women in areas such as electricity generation and transmission, petroleum, gas and construction. On the other hand, women are mostly considered as assets in the private sector, where prescribed norms do not govern the labour market, and hence the work done by women workers and remunerations paid to them could be made to fluctuate according to the whims and fancies of their employers. A substantial proportion of the women workers in Mizoram are self-employed. The problem lies in the fact that a majority of these workers are unpaid workers with no authority to exercise their decisions in the family enterprises and these workers constitute nearly half the women engaged in traditional, family-based occupations. The concentration of a large number of females in agriculture and allied activities in Mizoram is reflective of the growing poverty among women, which increasingly pushes them into the agricultural sector. Despite their increasing prominence in the agricultural labour force, rural women are not absorbed in the large number of jobs outside agriculture that are being generated due to increasing development in the rural areas. It is also evident from the field survey that women lag behind men in terms of the nature and permanency of employment (Table 9.13).

While more than 30 per cent of the male workers are engaged in regular salaried jobs, the comparative figure for females is less than 20 per cent. Close to one-fourth of the female workers are casual workers without any regularity of jobs. Employment in regular jobs is high in Aizawl, at more than 40 per cent, which is expected because of the predominantly urban setting and prevalence of government jobs in the capital city.

There are not many differences between the two genders in terms of the industrial distribution of the workforce (Table 9.14). Agriculture is the predominant sector for both the groups. For the males, the second most common form of employment is in the government sector, while for the females, unclassified jobs constitute the second most important sector. About 12 per cent

Table 9.13: Nature of Jobs (Districts)

	Self-employ-ment	Family Labour	Regular	Casual	Self-employ-ment	Family Labour	Regular	Casual
Aizawl	27.5	7.2	50.1	15.2	17.8	20.1	44.1	18.0
Champhai	41.2	11.4	26.0	21.4	20.8	33.8	12.0	33.3
Kolasib	30.7	12.3	33.7	23.4	19.8	38.1	11.7	30.4
Lawngtlai	40.3	29.1	18.0	12.7	24.8	52.5	8.8	13.9
Lunglei	32.0	22.3	33.2	12.5	20.9	17.9	28.0	33.2
Mamit	46.6	15.5	22.0	16.0	22.2	50.2	12.9	14.7
Saiha	29.5	14.5	34.0	22.0	23.1	24.2	13.1	39.7
Serchhip	50.5	19.6	24.0	6.0	32.0	40.7	14.6	12.7
State	36.6	16.2	31.0	16.2	22.4	33.5	19.5	24.6

Source: Survey data, 2008.

Table 9.14: Gender and Age-wise Industrial Distribution of Workers

Educational Groups	Industrial Groups							
	A	B	C	D	E	F	G	H
Males								
15-24 Years	57.6	0.1	1.7	8.9	2.6	3.2	7.5	18.4
25-40 Years	40.3	0.3	3.6	7.1	4.1	3.6	19.6	21.4
41-60 Years	44.3	0.2	1.7	3.5	4.7	1.1	32.6	11.9
Above 60 Years	48.9	0.6	2.8	8.0	5.7	0.0	15.3	18.8
All Age Groups	44.8	0.3	2.7	6.2	4.1	2.6	21.7	17.7
Females								
15-24 Years	55.7	0.3	1.0	12.2	7.4	0.0	4.3	19.1
25-40 Years	43.7	0.0	2.2	12.9	5.4	0.8	14.1	20.8
41-60 Years	44.9	0.0	1.0	9.1	8.8	0.9	16.9	18.4
Above 60 Years	37.7	0.0	2.6	15.6	7.8	0.0	14.3	22.1
All Age Groups	45.7	0.1	1.7	11.7	6.9	0.7	13.6	19.8

Source: Calculations based on field survey in 2009.
Notes: Industrial Groups are as follows: A—Agriculture and Livestock; B—Mining, etc.; C—Manufacturing; D—Construction; E—Trade; F—Transport, etc.; G—Government Service; H—Others.

of the women workers are engaged in the construction sector, as compared to about 6 per cent for men.

Irregularity of work for the women outside the home is also evident from the figures pertaining to the average number of days of employment (Table 9.15). On an average, women find employment for 242 days in a year, as compared to 267 days for the men. The average number of employment days for women is significantly low in the Kolasib and Mamit districts where as a result, the gap with their male counterparts is also high. This gap is also high in Saiha. The average number of employment days for women is the highest in Aizawl, where the gap with the male figures is almost negligible, possibly due to the nature of jobs in the capital district, as mentioned earlier. This is also evident if the frequency distribution of employment days is considered wherein it can be seen that the number of women is proportionately higher in the lower stages of the employment days than in the higher ones.

Remuneration from Work

The expansion of the female labour force participation has not led to a simultaneous increase in the number of women achieving

Table 9.15: Regularity of Employment in Mizoram—Districts

Duration of Work	Aizawl	Champhai	Kolasib	Lawngtlai	Lunglei	Mamit	Saiha	Serchhip	State
Percentage of MALE Workers Having Worked in Last Year for									
Less than 100 days	4.1	1.2	2.6	0.7	3.8	5.2	3.7	4.5	3.3
100 to 199 days	5.2	8.4	21.1	21.4	11.9	25.7	4.3	1.4	10.3
200 – 299 days	26.8	54.4	54.9	53.0	44.2	54.3	27.1	26.2	39.3
More than 300 days	63.9	36.0	21.4	24.9	40.0	14.8	65.0	67.9	47.1
Average per year	294	257	241	231	251	225	277	280	267
Percentage of FEMALE Workers Having Worked in Last Year for									
Less than 100 days	9.6	14.3	2.3	4.2	8.8	17.7	14.9	9.6	7.0
100 to 199 days	17.3	31.9	26.8	30.3	42.0	12.0	1.7	17.3	15.6
200 – 299 days	46.2	46.7	54.4	26.3	40.3	21.0	27.1	46.2	38.2
More than 300 days	26.9	7.1	16.5	39.2	8.9	49.2	56.3	26.9	39.1
Average per year	290	220	179	215	223	190	221	252	242

Source: Survey data, 2008.

equal status or bargaining power in the labour market. The high concentration of women in sectors involving daily household chores, family farm units and strenuous routine work has contributed to an overall weakening of their wage bargaining power. National reports have shown that women's earnings are lower than men in most of the reporting countries (Commission on the Status of Women, 1995). Thus, the economic status of women in the labour market also needs to be studied in the context of the wages received by women and its level vis-à-vis that of men.

At the state level, there exists a small gap between the wages per day earned by men and those earned by women in Mizoram, with the males earning Rs. 169 on an average as compared to Rs. 153 for females (Table 9.16). Surprisingly, this generalization does not hold in all the districts and in Kolasib and Serchhip, the average wage per day earned by women is higher than that earned by men, while in Mamit, the wages for both of them are at the same level. It is in Champhai, however, that the gap between the wages earned by men and women is the largest, with the women in this district earning the lowest wages relative to those earned by their male counterparts.

Double Burden of Work for Women

Although most women are engaged in work, their work tends to be invisible and unrecorded. In spite of their valuable contribution to the household income, in both the agriculture and non-farm sectors, women have little or no control over decisions relating to their income. They have to bear the double burden of domestic chores in addition to their work outside the home. Therefore, any strategy to improve the access of women to paid work must also consider ways of reducing their domestic burden. The usual fallout of this double burden is that children, especially the girl child, are often made to share these chores. In the process, children's education suffers and this becomes the cause of continued poverty and large families.

Ownership of Assets

As mentioned in the introduction to this chapter, the Mizo women do not have any say in matters relating to property rights. All land and assets belong to the family head, usually the father. Strictly according to the Mizo customary law, after the death

Table 9.16: Average Wages per Day

Districts	Males	Females
Aizawl	161	130
Champhai	192	144
Kolasib	227	259
Lawngtlai	144	133
Lunglei	138	127
Mamit	222	222
Saiha	153	120
Serchhip	119	123
State	169	153

Source: Survey data, 2008.

Table 9.17: Economic Activity Indicators and Economic Activity Index—Districts

Districts	% of Women Workers			Average Wage	Economic Activity Index
	Employed	In Regular Jobs	>200 days		
Aizawl	59.9	44.1	73.1	130	61.4
Champhai	72.5	12.0	53.8	144	56.5
Kolasib	88.1	11.7	70.9	259	85.9
Lawngtlai	56.4	8.8	65.5	133	52.7
Lunglei	58.4	28.0	49.2	127	52.5
Mamit	89.6	12.9	70.2	222	78.9
Saiha	68.2	13.1	83.4	120	56.9
Serchhip	65.6	14.6	73.1	123	55.3
State	68.1	19.5	77.3	153	63.6

Source: Survey data, 2008.

of the family head, all the property goes to the youngest son. The female members do not have any inheritance rights. Also, in the case of a divorce or separation, even if the wife is the breadwinner of the family, all the family assets go to the husband. Women usually inherit property depending upon the will of the family head. If the family head is willing to distribute his property equally to both his male and female children, he may do so. Otherwise, it is a patriarchal society, which transfers all assets to the male children, depriving the girl child completely of any inheritance.

Economic Activity Index

A combined Economic Activity Index has been prepared by using the indicators of Employment Rate, proportion of workers in regular salaried jobs, proportion of workers with more than 2000 days of work during the preceding year, and the average wage received per day (Table 9.17). It can be observed that the value of this index is 63.6, on an average, ranging from as low as 52 in Lunglei and Lawngtlai to 86 in Kolasib.

Participation in Decision-making

It is imperative to empower women to participate in different social organizations, and in administration at the village/town/municipal levels and politics, and to ensure that they have adequate decision-making powers in their fields of work. Thus, women need to be viewed and empowered on an equal footing with men in all spheres of life. The situation in Mizoram can be analysed from this angle as has been done below.

Participation in Household Decision-making

It seems that in the sphere of household decision-making and household income/ consumption-related activities, the Mizo women, in general, are far more active than their male counterparts. Most of the sale of products from the household enterprise is done either by the female or by both the male and the female jointly, with only 6 per cent of the households reporting that such activities are undertaken solely by the male members of the family (Table 9.18).

Similarly, the purchase of consumer goods is mostly done by the females or by both males and females. In only 9 per cent of the households such purchases are done by the head of the household, and in 7 per cent of the cases, they are done by the male members (Table 9.19).

A similar pattern is observed in the case of the retention of income from the sale of products—the chief measure of economic decision-making in the household (Table 9.20). However, in this case, the head of the household wields a greater role with about one-fifth of the households reporting that the income is kept by the household head. The Combined Decision Index shows that the situation is close to optimum (50 per cent representing equal decision making-power of males and females) (Table 9.21). However, the situation is strongly biased against females in the Kolasib, Mamit, and Serchhip districts.

Participation in Political Activities

In Mizoram, the villages and towns are governed by the Village Councils. Seldom is a woman given membership in either the governing authority or in the council level administration. Though literate, women need to be empowered to take part in the village and town administration. In the election of 2006, out of 556 village council seats, 36 women were elected, out of which three were elected as presidents. In the village council election of February 2009, out of a total number of 5258 candidates, there were 82 women candidates and 31 of them won the election. The compulsory reservation of 33 per cent seats in local bodies for women in the 73rd and 74th Constitutional Amendment Acts has opened up new opportunities for women. Women have begun to occupy important positions in local bodies but they are still not able to fully exercise their power for various reasons. In many cases, they are often proxy representatives while the male members of their families wield the real power. Yet, there are also examples of determined elected women leaders who are doing exemplary work.

Even when there are women candidates, people support male candidates as their leaders as it is felt that women are not capable leaders. Mizoram has witnessed the elevation of only one Mizo woman to the post of minister since 1987. During the election to the 40-member Legislative Assembly in November 2008, out of the total number of 206 candidates, only 9 female candidates contested the election and none of them was elected. Mizoram has only two Members of Parliament (MPs) and both of them are males. This implies that fewer women participate in politics in the state and that the society is yet to accept women as leaders and decision-makers. It is thus imperative to ensure empowerment among women and to provide them strong support in different social organizations.

Similarly, villages are governed by the Village Council, but women are not given membership in the village council level administration. Women need to be empowered to be able to take part in the level of village/town administration. In the village council election of 2002, out of 532 village councils, there were 48 women as members and only 2 out of these became the village council presidents. In the election of February 2006, out of 556 village councils, there were 36 women members in which 3 were elected as presidents. Therefore, it is urgent to find ways and means to include women in decision-making as a source of empowerment.

In the political field, women do not participate at all and participation is nil in terms of both leadership as well as membership. The only way in which women participate actively in politics is by supporting their husbands or relatives at the time of their election campaign. The state of Mizoram has so far witnessed the

elevation of only one Mizo woman to the post of Minister of State in the Mizoram Legislative Assembly.

Decision-making Powers in the Society

It is generally felt that social interaction among men and women is very high in Mizoram and that, therefore, there is gender equality. However, on the contrary, Mizo women are regarded as being subordinate to men and suffer high degrees of discrimination in various spheres of life. Many examples may be cited here of women whose earnings are controlled by their husbands and who are ill-treated by the latter in spite of earning for the family as well as doing the household work, with many such women being subsequently divorced by their husbands.

Women are excluded in all decision-making bodies in both social organizations and church life. The Church plays a dominant role in Mizo society. There is no improvement as far as the status and placement of women in the Church is concerned. Women have played an important role in the establishment of the Church, especially evangelization work, and in various aspects of life in Mizoram, yet they continue to play only subordinate roles and many of the trained women do not get the right jobs and responsibilities in the Church. They are also excluded from various decision-making bodies, ordination and other responsible positions.

In urban Mizoram, women enjoy greater autonomy in decision-making than women in the rural areas, though greater freedom is envisaged in matters of household consumption than spending money. Women in the urban areas of Aizawl district enjoy greater autonomy in matters pertaining to consumption. In almost all the districts of Mizoram, more than 95 per cent of the decisions regarding the education of the children and family-related decisions are taken by the women. Qualitative data from both rural and urban areas has revealed that at the community level, very few women enjoy decision-making powers. It has been observed that only women with a stable economic background and education can help empower other women and enable them to participate in decision-making. The exclusion of women from the process of decision-making at the community level thus reveals a strong male bias in Mizoram.

Table 9.18: Women's Control over Product Sale Decision

Districts	Product Sale Done by (%)		
	Only Male	Only Female	Both
Aizawl	7.11	62.40	30.48
Champhai	5.03	35.85	59.11
Kolasib	4.09	11.28	84.63
Lawngtlai	3.67	60.03	36.30
Lunglei	10.99	48.19	40.82
Mamit	6.38	27.00	66.62
Saiha	2.38	42.15	55.47
Serchhip	2.04	40.68	57.28
State	6.01	46.82	47.18

Source: Survey data, 2008.

Table 9.19: Women's Control over Consumption Decisions—Districts

Districts	Consumer Goods Purchased by			
	Head of the HH	Only Male	Only Female	Both
Aizawl	7.67	8.57	54.48	29.28
Champhai	9.10	2.84	55.31	32.75
Kolasib	6.07	8.55	11.40	73.98
Lawngtlai	15.53	3.33	38.57	42.57
Lunglei	13.54	4.69	35.26	46.51
Mamit	6.91	13.98	12.51	66.60
Saiha	2.97	2.93	40.81	53.29
Serchhip	3.39	5.78	39.63	51.20
State	8.72	6.57	42.72	41.99

Source: Survey data, 2008.

Table 9.20: Women's Control over Income—Districts

Districts	Income Kept By			
	Head of the HH	Only Male	Only Female	Both
Aizawl	17.37	8.67	53.01	20.95
Champhai	26.75	2.07	41.06	30.12
Kolasib	4.99	5.03	22.14	67.84
Lawngtlai	14.49	4.33	49.23	31.94
Lunglei	32.74	3.53	38.21	25.52
Mamit	22.51	15.15	15.05	47.29
Saiha	13.00	5.03	30.53	51.44
Serchhip	11.69	2.32	25.94	60.05
State	18.86	6.37	41.97	32.80

Source: Survey data, 2008.

Table 9.21: Women's Decision Index—Districts

Districts	% of Households with Female Decision over			Decision Index
	Sale	Income	Consumption	
Aizawl	62.4	53.0	54.5	56.6
Champhai	35.9	41.1	55.3	44.1
Kolasib	11.3	22.1	11.4	14.9
Lawngtlai	60.0	49.2	38.6	49.3
Lunglei	48.2	38.2	35.3	40.6
Mamit	27.0	15.1	12.5	18.2
Saiha	42.2	30.5	40.8	37.8
Serchhip	40.7	25.9	39.6	35.4
State	46.8	42.0	42.7	43.8

Source: Survey data, 2008.

Violence against Women

It is a matter of great concern that new forms of violence against women are increasing day by day. In the year 2008, 18 cases of minor rape (of girls below the age of 12 years) were registered and 9 cases of rape of girls aged 13 years and above were registered. Out of the total number of registered rape cases, almost 70 constitute minor rapes. The prevalence of drug abuse among the male, migrant population is one of the reasons for this state of affairs. Domestic violence is as much a matter of concern in Mizoram as in the rest of the country. In Mizoram, many NGOs are working for the protection of women. There are service providers in every district, except in Saiha. These service providers counsel the victims and create awareness about their rights. However, in order to bring about an improvement in the situation, there is a tremendous need for fostering attitudinal changes towards the women. Fundamental changes are also required in the social system to ensure changes in the overall scenario. There is a need to raise awareness levels and create public opinion for facilitating these changes in Mizo society. It is also important to educate the masses to foster a proper understanding and appreciation of the issues concerning gender justice. Thus, the whole society, in general, and men folk, in particular, need to become active participants in checking the violence against women and creating a harmonious domestic environment.

Indexing Gender Development

The discussions and observations presented in this chapter can be summarized in the form of gender-related development indices. As mentioned in the section on methodology, two such indices have been constructed—one relating to the general indicators of development for the women, and the other regarding their position vis-à-vis that of men. The first is denoted as the Gender Development Index (GDI) whereas the second is named the Gender Parity Index (GPI). The GDI is prepared by using the Educational Development Indicator, Health Development Indicator, Employment and Livelihood Index, and the Decision Power Indicator.

It has been observed that the GDI score for the state is 80.1, with the ideal value being 100. The GDI is comparatively low in Lawngtlai, Mamit and Lunglei, and relatively high in Aizawl and Kolasib (Table 9.22).

The GPI is a comparative measure, and indicates the situation of women vis-à-vis men as regards the three chosen areas of education, economic activities, and decision-making and vis-à-vis the optimum score of 100 for the Health Index. The GPI is less than 1 in all the districts, indicating that women have access to much lower human development levels as compared to the males in the state. Among the districts, gender disparity is highest in Mamit and Lawngtlai, and lowest in Aizawl, Champhai, and Serchhip (Figure 9.2).

Recent Steps for Gender Empowerment

The NGOs have played a major role in uplifting and empowering the Mizo women. The Mizo Hmeichhia Insuihkhawm Pawl (MHIP/Women's Forum), which came into existence in 1974, is deeply involved in protecting and uplifting the status of the Mizo women. They have the advantage of having a strong field presence and are aware of the issues on the ground and the relevance of various interventions.

The State Women Commission is also actively involved in the process of bringing about gender empowerment. The Commission should be strengthened, as it plays an important coordinating role in women's development. It should have appropriate linkages with the Departments of Health and Family Welfare, Rural Development, and other departments for ensuring the adoption of an integrated approach to women's development.

The Mizo Customary Law plays a significant role in determining the status of women with respect to their rights. The Mizo Divorce Ordinance came into existence in November 2008. Despite the efforts of MHIP and the State Women Commission, it could not be legislated during its period of ordinance (which lasts for six months). This Divorce Ordinance was much debated over in the State Assembly but it could not be legislated. If this ordinance were to be legislated, it would play a highly significant role in uplifting and empowering the Mizo women.

Conclusions and Recommendations

The GDI and GPI scores indicate that women are worse off in the areas of health and economic activities, but close to the males in terms of education and decision-making power. State policies should, therefore, focus on improving the reproductive and preventive healthcare outreach and delivery system, and also try to expand the economic horizon to increase the participation of women in productive and remunerative activities.

Spatial exploration indicates the existence of differences among districts in terms of gender development and gender parity. The radars at the end of the chapter show the areas where focused attention is needed to improve the condition of the women in the state. For issues related to social status and violence against women, as also to the need to change the traditional inheritance norms, the State Commission for Women should be strengthened, as it plays an important coordinating role in women's development. The Commission, however, has very limited powers, and there is a need to expand its rights and powers in such a way that it has the power to offer legal

Table 9.22: Gender Development Index and Gender Parity Index—Districts

Districts	Indicator Values—Female				Indicator Values—Optimum/Male				GDI	GPI
	Health	Education	Economic Situation	Decision-making	Health	Education	Economic Situation	Decision-making		
Aizawl	86.1	93.1	61.4	56.6	100.0	76.5	76.5	50.0	84.9	0.94
Champhai	90.9	86.8	56.5	44.1	100.0	79.7	79.7	50.0	79.5	0.88
Kolasib	87.9	96.1	85.9	14.9	100.0	85.9	85.9	50.0	81.4	0.86
Lawngtlai	71.9	67.7	52.7	49.3	100.0	65.1	65.1	50.0	69.0	0.82
Lunglei	80.9	86.6	52.5	40.6	100.0	68.3	68.3	50.0	74.4	0.84
Mamit	75.0	79.0	78.9	18.2	100.0	81.1	81.1	50.0	71.7	0.79
Saiha	85.4	92.8	56.9	37.8	100.0	73.5	73.5	50.0	78.0	0.86
Serchhip	89.0	93.4	55.3	35.4	100.0	65.0	65.0	50.0	78.0	0.88
State	84.3	88.7	63.6	43.8	100.0	74.8	74.8	50.0	80.1	0.89

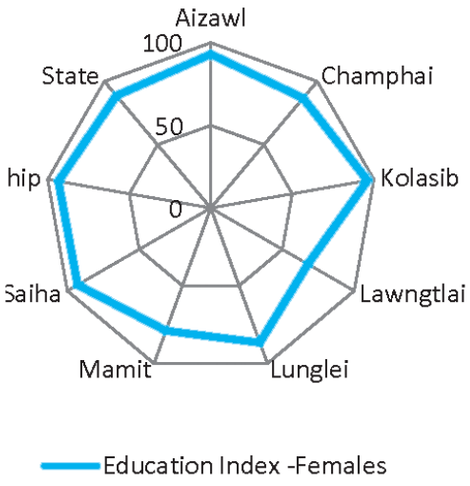
Source: Calculations based on earlier tables.

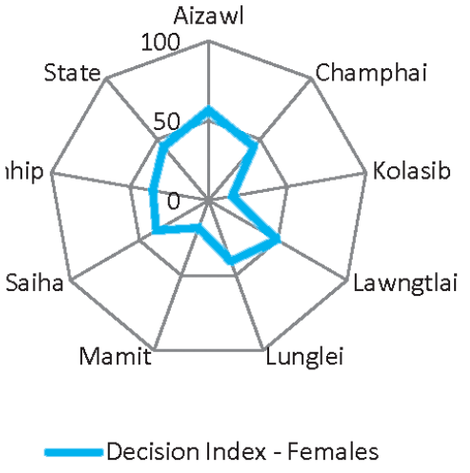
arguments in favour of women in a court of law. One out of the two seats in the Lok Sabha and Rajya Sabha in Mizoram may be reserved for women in the state. Moreover, at least 33 per cent of the seats in the State Legislative Assembly should be reserved for women. The state government should have a separate budget for women's development similar to the gender budgeting done in the Union Budget. The government should also evolve a proper system of monitoring the implementation of existing rules. Free legal aid should be provided to the women to enable them to fight for their rights. Simultaneously, NGOs can also be involved in the process of gender empowerment as partners, in planning for specific projects. A Women Empowerment Policy (WEP) should be formulated to effectively integrate women's participation in the process of development. Different state governments have formulated the WEP. Self-help Groups (SHGs) must be motivated so that they can become role models of successful group entrepreneurship for economic development. Marketing infrastructure, transport and communication, skill training and awareness on the government schemes should be provided to them. There should be enabling policies and action programmes to empower more SHGs and to create more income-generating opportunities through the collective action of poor women.

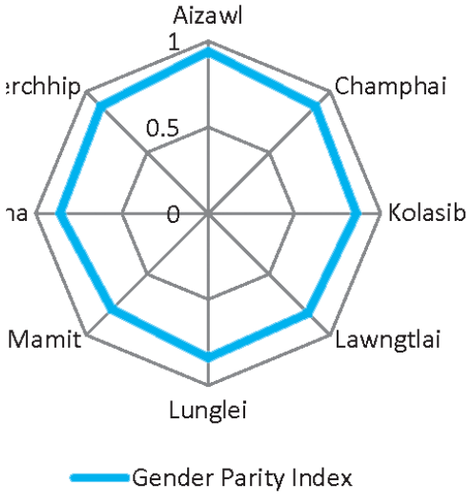
The present pattern of education deserves close scrutiny. Even with an increase in literacy, there are deficiencies in the number of males and females studying or employed in scientific and technological institutions. The mere introduction of technical training as an option in the educational system may not necessarily mean that more girls could be inducted into technical areas. This can only be done by offering girls special encouragement and counselling. Improving the economic status of women is also important not only for ensuring equity or social justice, but also for promoting faster economic growth. The low status of women is likely to lead to a slow rate of growth of the economy in the long run. The educational attainment and financial status of children reflect those of the mothers than those of the fathers. Thus, only by successfully integrating women into the growth process is it possible to pass on the benefits of current investment in human capital to the women.

Awareness should also be spread among women to make them realize that now they can not only enjoy relief under Section 498-A of the Indian Penal Code, but that they also have a remedy under civil law, in the form of the Domestic Violence Act. For empowering women for sustainable development, there is need to bring about a radical change in social attitudes and values relating to women's roles and rights. Interventions at all levels—social, cultural, political, and economic—are required for enhancing women's status in Mizoram, and this is possible only if radical changes take place in the existing social systems and structures.

Figure 9.2: RADARS – GDI and GPI across Districts







Source: Author's calculations based on various tables given in the chapter.

10

Financing Human Development

As regards some indicators of human development, Mizoram's performance is appreciable as compared to that of the other north-eastern states, though it still needs to cover a lot of ground in terms of ensuring the efficient implementation of its welfare programmes. Government spending on social services is a critical input for helping the poor and the marginalized population meet their basic human needs in view of their insufficient primary incomes. Although Mizoram has both a high Human Expenditure Ratio (HER) and high per capita human development expenditure on education, healthcare, water supply and sanitation, there is need to improve efficiency with regard to the expenditure in these areas. The state also largely draws from transfers in the form of grants-in-aid from the Centre to meet its financial commitments. It, therefore, needs to explore options for generating additional resources through other means.

Introduction

It is now widely accepted that the conventional measures of well-being such as income, per capita Gross Domestic Product (GDP), consumption expenditure, and poverty ratios do not capture the broader aspects of human capability. Although achieving high economic growth is important, it does not necessarily translate into betterment of the lives of all people, especially if its benefits do not percolate down to large sections of the population. The experience of many countries in the world shows that despite significant achievements in economic development, the benefits of such growth did not reach the poor and vulnerable sections of the society, thereby resulting in an increase in their proportion.

In recognition of the importance of human development, efforts should be made to meet basic human requirements such as food, safe water, education, health facilities, adequate shelter, etc. The problem is more acute in the case of less developed and developing countries where due to low personal incomes, people do not have the means to meet their basic needs and the government is also unable to provide basic support in the form of the provision of basic healthcare facilities, education or other services. A cross-country comparison of some of the human development indicators shows that the developing and less developed countries are ranked at the bottom of the table, indicating a neglect of basic needs in these countries, and India is no exception. In 2007, India was ranked 134th in terms of the HDI among 182 countries; its Gender Development Index (GDI) was also low, with its rank being 114. In terms of other indicators of human development like the Gross Enrolment Ratio (GER), Education Index, and Life Expectancy at Birth, India's performance is equally unsatisfactory in comparison with that of other countries in the world.

The fact that people in developing and less developed countries do not spend their primary income on basic healthcare, sanitation, drinking water or education (that is, on human development-related activities) either because their incomes are low or because such activities are not accorded priority, results in divergence between the desirable level of human development and the level attained in reality. The present chapter focuses on financing human development in the state of Mizoram.

Table 10.1 provides, for a different indicator of human development, a comparative picture of Mizoram vis-à-vis India as a whole and other north-eastern states including Sikkim. Table 10.1 shows that the performance of Mizoram is not only better than India as a whole, but it is also better than many of the north-eastern states for indicators like the death rate, birth rate, percentage of people below the poverty line and the GER. As regards literacy, Mizoram has one of the highest literacy rates in the country. However, for indicators like dropout rates at both the primary and secondary levels and households having access to safe drinking water, the state performs poorly. Mizoram had a human development index (HDI) of 0.57 in 2001, which is slightly higher than the all-India HDI of 0.56. Among the north-eastern states, Mizoram's HDI was lower than those of Meghalaya, Nagaland and Sikkim. Although the state has made considerable progress in achieving the desired level of human development since then, it still has a long way to go before the gap between the actual and desired levels of human development is eliminated. Mizoram will have to ensure the provision of optimal outlays on human development and ensure efficiency in spending in order to achieve the Millennium Development Goals (MDGs) as well as the targets set for the Eleventh Five Year Plan.[1]

Expenditure on Human Development

Financing of human development is critical for ensuring that public policies are appropriately designed to support the poor and other vulnerable sections of the society, and thereby to empower them so that they become capable of realizing their inherent potential in a participatory and democratic context. In order to bridge the gap between

Table 10.1: Human Development Indicators for Mizoram and North-eastern States

	Birth Rate 2008	Death Rate 2008	IMR 2008	People Below Poverty Line (%) 2004-05	Literacy Rate 2001	Gross Enrolment Ratio Class I-V 2006-07	Drop-out Rates 2006-07		Percent of HHs Having Safe Drinking Water		EDI 2007-08	HDI 2001
							Class I-V	Class I-X	1991	2001		
All India	22.8	7.4	53	27.5	64.8	111.2	25.4	59.9	62.30	77.90	--	0.56
Arunachal Pradesh	21.8	8.6	64	17.6	54.3	136.6	30.4	66.9	70.02	77.50	0.485	0.49
Assam	23.9	5.2	32	19.7	63.3	98.4	44.3	77.7	45.86	58.80	0.515	0.50
Manipur	15.8	5.0	14	17.3	70.5	163.6	45.7	43.8	38.72	37.00	0.611	0.52
Meghalaya	25.2	7.9	58	18.5	62.6	181.8	44.1	75.9	36.16	39.00	0.556	0.67
Mizoram	17.8	5.1	37	12.6	88.8	159.9	49.6	73.2	16.21	36.00	0.705	0.57
Nagaland	17.5	4.6	26	19.0	66.6	90.2	20.2	67.4	53.37	46.50	0.653	0.60
Sikkim	18.4	5.2	33	20.1	68.8	144.1	24.3	85.0	73.19	70.70	0.656	0.59
Tripura	15.4	5.9	34	18.9	73.2	142.9	18.2	74.6	37.18	52.50	0.609	0.56

Sources: 1) HDI from Tripura Human Development Report 2006-07.
2) Planning Commission for poverty numbers.
3) SRS Bulletin, October 2009, for birth rate, death rate, IMR.
4) Census 2001 for literacy rate, and percentage of households with access to safe drinking water.
5) MHRD Annual Report, 2008-09, for educational development index.
6) Statistics of School Education, 2006-07, for drop-out rates and Gross Enrolment Ratio.

the desirable and actual levels of human development, one of the strategies is to increase the primary income of individuals. This can be done through the generation of additional incomes and ensuring their equitable distribution. Sustained and equitable growth results in an increase in incomes for all in the society, thereby increasing the capacity of the people to meet their basic needs. As noted by the Human Development Report (1991), "the best strategy for human development is to ensure, through strong policies, generation and better distribution of primary incomes".

In addition to this, the provision of basic services by the government can supplement insufficient or low incomes of the poor to meet their needs. Government intervention in social infrastructure such as providing schools, health clinics, nutrition and food subsidies as well as physical infrastructure such as building roads, provision of electricity and housing facilities can help the underprivileged groups bridge the gap between their basic needs and their insufficient or low primary incomes. Government spending on social services like education, healthcare, nutrition, drinking water, sanitation, housing and poverty reduction is a critical input to help the poor and marginalized populations to overcome the insufficiency of their primary incomes for meeting their basic human needs.

The resources available to the government are limited and there are many competing demands on these resources. It should strive to achieve a fine balance between growth and equity, between economic development and social justice. It is, therefore, essential to invest in sectors that result in rapid economic growth while at the same time ensuring that such policies are not implemented at the cost of social investment targeting human development.

The role of the governments, both state and Central, is important in the provisioning of services like elementary and primary education, primary healthcare, social welfare, etc. which are not examples of classic public goods but have substantial positive externalities. Private providers of such services are unlikely to take into account such externalities into their calculation. Besides, between the alternative paradigms of human development, the

adoption of 'human rights paradigm' in which basic human development services are considered a citizen's right implies that the State has the responsibility of ensuring the availability of such services. In India, given that social services are primarily the responsibility of the state governments (with more than 80 per cent of the combined government expenditure in these areas being incurred by the states), the necessary public interventions would primarily be at the state level.

In recent years, the Central Government has, through various Centrally-Sponsored Schemes (CSSs), spent large sums of money towards improving the human development indicators in the country. Some of the important CSSs are the Sarva Shiksha Abhiyan (SSA) for elementary education, the National Rural Employment Guarantee Scheme (NREGS) for rural employment generation and asset creation in rural areas, and the National Rural Health Mission (NRHM) for the health sector, among others. As the funds routed by the Centre under these CSSs bypass the state government budgets and go directly to the various para-statal bodies, it is not possible to procure state-wise details of the funds spent for many of these CSSs. These Central funds to Mizoram are not considered in the present analysis. We focus only on the funds spent by the Mizoram government.

Trends in Investment in Human Development

In order to analyse how public spending on human development could be designed and monitored, the Human Development Report (1991) suggested the following four ratios: (a) Public Expenditure Ratio (PER); (b) Social Allocation Ratio (SAR); (c) Social Priority Ratio (SPR); and (d) Human Expenditure Ratio (HER). The analysis of spending by the Mizoram government is done in terms of the above-mentioned ratios.

The PER of a state is the government's total budgetary expenditure as a proportion of its GSDP while the SAR refers to the share of budgetary expenditures on the social sector in its total budgetary expenditures. Social service consists of the following sectors: (i) Education, Sports, Art and Culture; (ii) Medical and Public Health; (iii) Family Welfare; (iv) Water Supply and Sanitation; (v) Housing; (vi) Urban Development; (vii) Welfare of SCs, STs and OBCs; (viii) Labour and Labour Welfare; (viii) Social Security and Welfare; (ix) Nutrition; (x) Relief on Account of Natural Calamities; (xi) Other Social Services; and (xii) Rural Development. Strictly speaking, not all items of expenditure under some of the above-mentioned categories such as under rural development and urban development can be treated as social services. However, as disaggregated data is not readily available, the appropriate SAR could not be worked out.

The SPR refers to budgetary expenditures on human priority areas as a percentage of the expenditure incurred by state governments on the social sector. The human priority areas include elementary education, health and family welfare, nutrition, water supply and sanitation, and rural development. The HER measures the expenditure incurred by the state government in human priority areas as a proportion of its GSDP and is the product of the PER, SAR, and SPR. It is a powerful tool in the hands of the policy-makers, which enables them to modify their budgets in accordance with the existing imbalances and available options.

For each of the indicators, expenditure has been calculated as the sum of the revenue expenditures, capital expenditures, and loans and advances (net of repayments). These different indicators of expenditure on human development are estimated by using the basic data from the Finance Accounts of Mizoram. The GSDP data for Mizoram at current prices (1999-2000 series) is provided by the Central Statistical Organization (CSO).

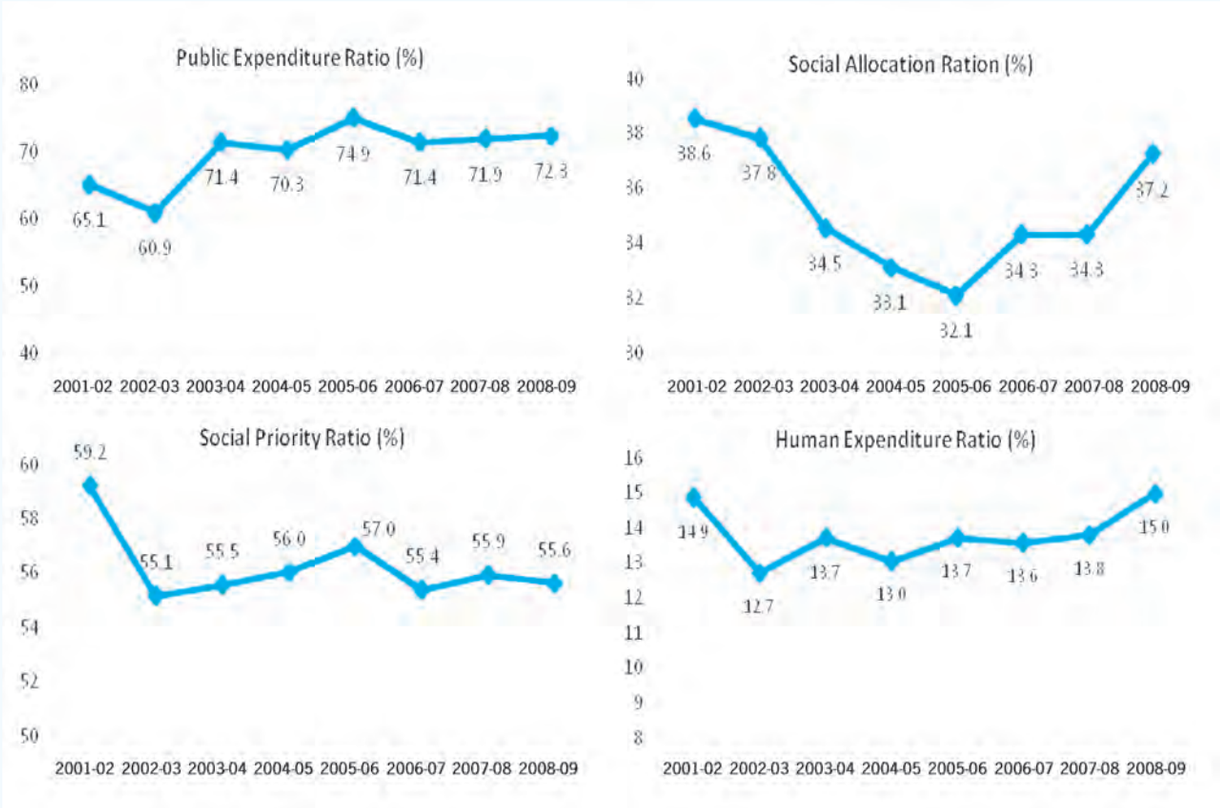
The indicators of expenditure on the human development-related sectors for Mizoram for the period 2001-02 to 2008-09 are shown in Table 10.2 and Figure 10.1. The trend in the PER denotes the level of spending on various public services by the Mizoram government. The PER of Mizoram, which was 65.06 per cent in 2001-02 declined to 60.89 per cent in 2002-03, and then shot up to 71.37 per cent in 2003-04. The main reason for the fall in PER was a decline in non-Plan expenditure in the areas of education,

Table 10.2: Indicators of Social Sector Expenditure in Mizoram (Percentage)

Years	Public Expenditure Ratio	Social Allocation Ratio	Social Priority Ratio	Human Expenditure Ratio
2001-02	65.06	38.55	59.21	14.85
2002-03	60.89	37.83	55.15	12.70
2003-04	71.37	34.55	55.55	13.70
2004-05	70.27	33.13	56.04	13.04
2005-06	74.95	32.10	56.99	13.71
2006-07	71.39	34.30	55.38	13.56
2007-08	71.88	34.31	55.92	13.79
2008-09	72.32	37.25	55.62	14.98

Source: Estimated from Finance Accounts of Mizoram, Accountant General, GoI..

Figure 10.1: Trends in Human Development Expenditure—Mizoram



Source: Estimated from Finance Accounts of Mizoram, Accountant General, GoI.

sports, art and culture; a decline in Plan funds under special area programmes; and a decline in interest payments, especially on internal debt. The increase in PER in 2003-04 over 2002-03 can be attributed to a higher growth of public expenditure than the GSDP which, in nominal terms, increased by 7.34 per cent in 2003-04. The increase in PER can also be attributed to an increase in Plan expenditure under medical and public health, and an increase in government expenditure on power. The PER gradually increased to 74.95 per cent in 2005-06 and was 72.32 per cent in 2008-09.

The share of social sector allocation or the SAR for Mizoram declined by more than 6 percentage points from 38.55 per cent in 2001-02 to 32.10 per cent in 2005-06 (see Table 10.2). As a ratio of the GSDP, the social sector expenditure declined from 25.08 per cent to 24.06 per cent during this period. However, during this period, the PER increased from 65 per cent to 75 per cent after registering a fall in 2002-03. This implies that despite an increase in public expenditure, the allocation to the social sector declined during this period, indicating a diversion of resources away from the social sectors to the other sectors of the economy. After 2005-06, however, the SAR registered an increase and was 37.25 per cent in 2008-09.

Social priority sector spending is a sub-set of expenditure in the social sector. The trends in the SPR for Mizoram show that the ratio varied between 55 and 57 per cent during this period with the exception of 2001-02, when the ratio was at a high of 59.21 per cent (see Table 10.2). The trends in the HER, which is the product of the PER, SAR and SPR, indicates that after an initial dip from 14.85 per cent in 2001-02 to 12.70 in 2002-03, it has been gradually increasing and was 14.98 per cent in 2008-09 (see Table 10.2). The HER is an important tool in the hands of policy-makers and is a principal guide to public spending policy.

Table 10.3 shows the trends in real per capita public expenditure, per capita public expenditure on the social sector and social priority of human priority areas during the period 2001-02 and 2008-09 for Mizoram. From Table 10.3, it can be seen that the per capita public expenditure on the social sector, which was Rs. 4820.60 in 2001-02, increased to Rs. 7143.49 in 2008-09 at an average annual increase of 5.9 per cent. The per capita human priority expenditure also registered an average annual increase of 5.04 per cent during this period. The expenditure on the human priority sector increased from Rs. 2854.35 per capita in 2001-02 to Rs. 3973.20 per capita in 2008-09.

Table 10.3: Per Capita Real Expenditure on Human Development in Mizoram (Percentage)

Years	Per Capita Public Expenditure	Per Capita Social Sector Expenditure	Per Capita Human Priority Expenditure
2001-02	12504.18	4820.60	2854.35
2002-03	12594.51	4764.47	2627.47
2003-04	14852.72	5130.93	2850.07
2004-05	15534.26	5146.37	2883.84
2005-06	16748.29	5375.59	3063.31
2006-07	17123.93	5874.27	3253.26
2007-08	18036.95	6188.91	3460.98
2008-09	19179.17	7143.49	3973.20

Source: Estimated from Finance Accounts of Mizoram, Accountant General, GoI.

Trends in Human Development Expenditure: Comparison of Mizoram with North-eastern States

Trends in the PER for the north-eastern states for the period 2001-02 to 2007-08 are shown in Table 10.4. The table indicates that the PER for the north-eastern states taken together varies between 28.62 and 33.68 per cent, and is much higher than the PER for all the states, which varies between 17.94 and 18.60 per cent. The PER is the highest for Sikkim, followed by Arunachal Pradesh and Mizoram. The high PERs in these states have, in fact, led to these states also having high HERs, as discussed above. The high PER for the north-eastern states vis-à-vis the other states is mainly because of the fact that for most of the north-eastern states, the GSDP is quite low and a considerable portion of their expenditure is driven by transfers in the form of grants-in-aid from the Centre. Hence, if during any particular year, the Central transfers are high, the public expenditure for these states will shoot up and vice versa. Among the north-eastern states, Assam has the lowest PER.

The 1991 Human Development Report (HDR, 1991) of the UN states that a high PER is neither a virtue nor a necessity, and that public policy and public spending must facilitate, encourage and complement private spending in order to ensure that human development needs are met. It suggests that a PER of 20 to 25 per cent is desirable. For the north-eastern states, this ratio was well above the level suggested by HDR 1991.

Table 10.5 provides a comparison of the trends in the SAR for Mizoram with the other north-eastern states for the period 2001-02 to 2007-08. The states of Assam, Meghalaya and Tripura had a higher SAR than Mizoram, implying that these states devote a larger proportion of their public expenditure to the social sectors. Among the north-eastern states, Sikkim had the least SAR, which over the years showed an upward trend. The HDR, 1991 suggests that the SAR should be 40 per cent and among the north-eastern states, only Assam and Meghalaya had SARs of around 40 per cent. For the other states, their respective SARs were much lower than the level suggested by HDR 1991.

Although a high SAR is important, by itself, it does not guarantee a good human development performance. What matters most is how and where the social sector allocation is spent. The crux of the issue is whether it is spent on sectors which the country deems as priority sectors or not. What is important is then the SPR, that is, the percentage of social sector expenditure directed at the social priority areas. In a developing country like India, the basic priority areas include elementary education, health and family welfare, nutrition, water supply and sanitation.

Table 10.6 shows the trends in the SPR for the different north-eastern states. All the states in the North-east except Tripura had an SPR which was higher than that of Mizoram, implying that these states devote a larger percentage of their social sector expenditure to the priority sector. Mizoram's achievements in terms of human development are better than those of many of the north-eastern states and hence, it is possible that it prefers to spend on other social sectors, which may not be priority sectors.

Table 10.7 shows the trends in the HER for Mizoram and the other north-eastern states for the period 2001-02 to 2007-08. The table shows that the average HER for all states varied between 3.2 and 3.5 per cent during this period and was much lower than the average for the north-eastern states, which varied between 6.1 and 7.2 per cent. Mizoram, however, had a much higher HER. Sikkim and Arunachal Pradesh had HERs which were higher than that of Mizoram. Assam has the lowest HER among the north-eastern states.

As regards the human priority expenditure in per capita terms (see Table 10.8), it can be seen that Sikkim, which had the highest HER, also spends the most in per capita terms, followed by Arunachal Pradesh and Mizoram, a trend which is similar to that of the HER. Assam spends the least in per capita terms on the human priority sector amongst the north-eastern states but its spending is still higher than the average spending by all the states. Figure 10.2 shows

Table 10.4: Public Expenditure Ratio (PER) = Total Expenditure/GSDP

States	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Arunachal Pradesh	63.26	63.81	77.08	66.06	72.15	72.75	77.49
Assam	19.21	17.55	19.18	23.62	20.10	20.04	20.15
Manipur	44.92	44.95	42.82	47.56	51.72	60.74	58.15
Meghalaya	29.41	29.20	29.34	31.73	30.00	30.39	31.22
Mizoram	65.06	60.89	71.37	70.27	74.95	71.39	71.88
Nagaland	41.94	41.35	45.80	40.16	46.97	49.06	
Sikkim	165.05	163.92	97.37	129.65	115.48	108.58	120.28
Tripura	37.67	35.82	33.20	33.98	33.40	31.05	34.35
NE States	30.36	28.62	29.20	32.42	30.70	30.83	33.68
All States	18.26	18.09	18.60	18.17	17.94	18.02	18.08

Source: Finance Accounts (various years) of state governments.

that both the HER and the per capita human expenditure averaged over three years 2005-06 to 2007-08. The states are ranked in descending order of their PCGSDP with Sikkim at the top, and Assam at the bottom. Mizoram not only has a high HER but its per capita human development expenditure is also high. Although for most of the north-eastern states, the PCGSDP is lower than the average of all states, they not only have HERs that are higher than those of all states but also spend much more in per capita on human development than the average of all states.

As per the HDR 1991, for a country to do well in human development, its human expenditure ratio should be around 5 per cent. However, it is critically dependent on how efficiently and judiciously this amount is spent. According to the report, the preferred option should be to keep the public expenditure ratio at around 25 per cent and allocate a large part of it to social sectors (around 40 per cent) and spend a considerable portion of social sector expenditures in the priority sectors (more than 50 per cent). In fact, the HER should increasingly become an important guide to public spending policy. In resource-constrained economies where it is not possible to have high public expenditures, the best strategy would be to allocate a higher proportion of the public expenditure on the priority social sectors like elementary and primary education, primary health, etc. In such countries, greater attention should be paid to according priorities and efficiency in spending. Thus, the best argument for mobilizing more resources is spending the existing resources judiciously.

Table 10.5: Social Allocation Ratio (SAR) = SSE/TE

States	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Arunachal Pradesh	31.16	29.23	28.49	31.50	33.78	32.17	29.37
Assam	40.66	41.00	40.21	38.08	37.75	40.06	41.41
Manipur	35.82	35.11	34.76	38.65	33.10	29.80	34.26
Meghalaya	41.75	39.55	39.89	39.59	39.39	38.83	38.96
Mizoram	38.55	37.83	34.55	33.13	32.10	34.30	34.31
Nagaland	28.54	29.50	27.75	29.55	30.26	30.12	29.98
Sikkim	16.39	16.04	28.21	22.22	22.77	23.97	23.23
Tripura	39.37	39.27	37.47	38.70	34.83	36.64	36.69
NE States	35.86	35.45	36.03	35.65	34.59	35.47	36.08
All States	35.44	34.87	32.95	34.04	35.30	35.37	35.98

Source: Finance Accounts (various years) of State Governments.

Table 10.6: Social Priority Ratio (SPR) = SPSE/SSE

States	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Arunachal Pradesh	64.89	66.52	59.82	71.94	62.07	66.73	68.00
Assam	63.76	61.74	61.63	56.41	59.41	59.11	59.42
Manipur	58.90	55.48	54.26	53.02	48.19	55.17	59.59
Meghalaya	66.19	69.93	65.95	63.31	66.53	67.96	68.51
Mizoram	59.21	55.15	55.55	56.04	56.99	55.38	55.92
Nagaland	66.02	62.89	60.79	65.56	64.42	60.79	56.93
Sikkim	63.20	59.06	57.91	58.49	58.47	59.14	55.53
Tripura	54.13	52.88	55.42	58.59	53.68	52.58	50.51
NE States	62.09	60.43	59.86	58.50	58.71	59.19	59.19
All States	54.62	53.58	52.63	53.18	53.61	52.88	53.20

Source: Finance Accounts (various years) of State Governments.

Table 10.7: Human Expenditure Ratio (HER) = PER*SAR*SPR

States	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Arunachal Pradesh	12.79	12.41	13.14	14.97	15.13	15.61	15.48
Assam	4.98	4.44	4.75	5.07	4.51	4.75	4.96
Manipur	9.48	8.75	8.08	9.74	8.25	9.99	11.87
Meghalaya	8.13	8.07	7.72	7.95	7.86	8.02	8.33
Mizoram	14.85	12.70	13.70	13.04	13.71	13.56	13.79
Nagaland	7.90	7.67	7.73	7.78	9.15	8.98	--
Sikkim	17.10	15.53	15.91	16.85	15.38	15.39	15.52
Tripura	8.03	7.44	6.89	7.70	6.25	5.98	6.37
NE States	6.76	6.13	6.30	6.76	6.23	6.47	7.19
All States	3.53	3.38	3.23	3.29	3.40	3.37	3.46

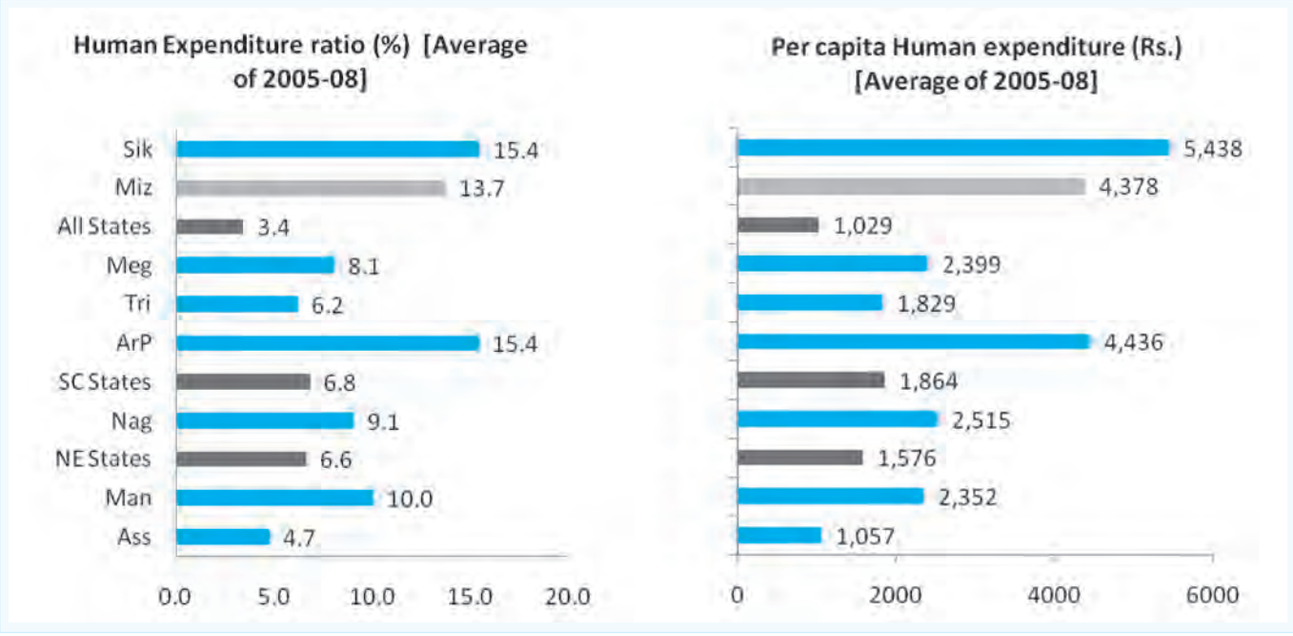
Source: Finance Accounts (various years) of State Governments.

Table 10.8: Per Capita Human Priority Expenditure (Rs.)

States	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Arunachal Pradesh	2425.00	2292.39	2741.07	3716.47	3795.74	4523.84	4989.72
Assam	710.09	705.94	810.94	948.30	914.22	1058.01	1197.35
Manipur	1373.98	1294.41	1327.89	1962.70	1820.63	2320.57	2915.35
Meghalaya	1546.48	1624.71	1700.18	1901.98	2062.47	2363.18	2771.15
Mizoram	3206.82	2974.96	3356.85	3443.50	3959.75	4353.33	4821.91
Nagaland	1536.01	1596.00	1647.34	1919.73	2383.12	2514.76	2648.58
Sikkim	3518.99	3569.37	4040.32	4769.43	4910.82	5410.86	5992.92
Tripura	1595.42	1534.11	1574.20	1908.74	1729.74	1798.90	1959.67
NE States	1059.21	1046.64	1159.88	1376.79	1379.39	1572.06	1775.94
All States	640.22	649.90	690.92	778.71	894.97	1017.81	1174.65

Source: Finance Accounts (various years) of State Governments.

Figure 10.2: Analysis of Human Expenditure (Average of Three Years 2005-08)



Source: Finance Accounts (various years) of State Governments.

Composition of Expenditure in the Social Sector

Between 2000-2001 and 2004-05, social sector spending by the government of Mizoram as a percentage of the GSDP declined from 26.12 per cent to 23.28 per cent (see Table 10.9). This decline in social sector expenditure is attributable to a decrease in spending in sectors like general education, especially elementary education, medical and public health, water supply and sanitation. However, since then, the spending in the social sector has registered an increase and in 2008-09, it increased to 26.94 per cent of the GSDP, which is attributable mainly to increased spending on medical and public health.

Figure 10.3 shows the composition of social sector expenditure, both Plan and non-Plan, in Mizoram. General education accounts for the largest share of social sector spending in the state followed by water supply and sanitation, and medical and public health. Together, these sectors account for close to two-thirds of the total expenditure in the social sector in the state. In 2008-09, as compared to 2000-01, the share of general education and water supply and sanitation in the social sector declined marginally while that of medical and public health registered an increase.

The sectoral composition of social expenditure for Mizoram, as proposed in the Eleventh Plan, is shown in Figure 10.4. General education, medical and public health, water and sanitation, and rural development account for about 62 per cent of the expenditure in social sector expenditure in the Eleventh Plan, which is higher than that projected in the Tenth Plan by more than 7 per cent.

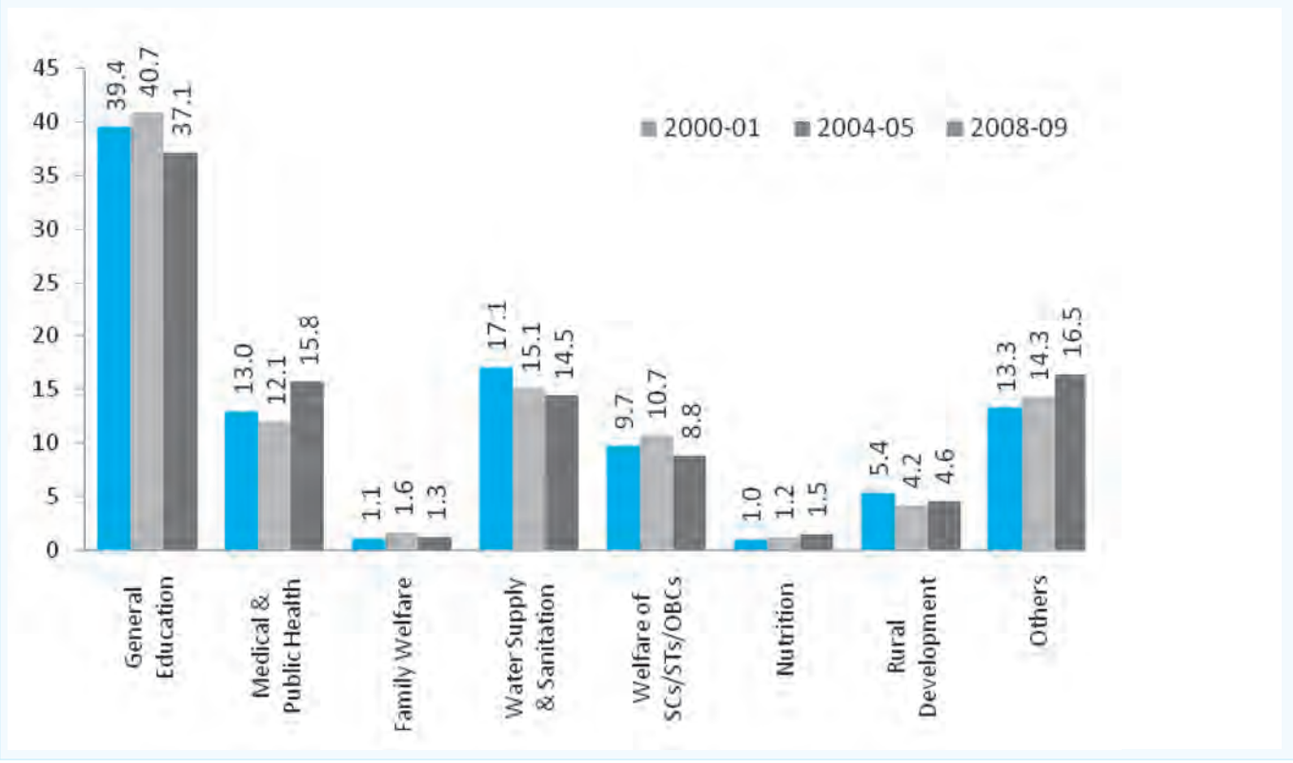
Figure 10.5 provides a comparative picture of compostion of social sector expenditure averaged over the period 2005-06 to 2007-08 for Mizoram and the other north-eastern states. As is evident from the figure, the share of general education, rural development, and medical and public health in social sector expenditure is lower for Mizoram vis-à-vis the other north-eastern states, but a larger percentage of the social sector expenditure incurred by the state is spent on water supply and sanitation, and for the welfare of SCs/STs/OBCs. However, if the social sector expenditure is considered as a percentage of the GSDP, the social sector expenditure in Mizoram that averaged over the period 2005-06 and 2007-08 accounts for 24.40 per cent of the GSDP as compared to 10.82 per cent for the other north-eastern (NE) states (see Table 10.10). Thus, the

Table 10.9: Composition of Social Sector Expenditure in Mizoram (as % of GSDP)

	2000-01	2004-05	2008-09
Social Sector Expenditure of which	26.12	23.28	26.94
General Education	10.30	9.48	9.99
Elementary Education	5.63	4.72	4.74
Secondary Education	2.63	2.14	2.66
Medical and Public Health	3.40	2.81	4.24
Urban Health Services	0.93	1.07	1.36
Rural Health Services	1.33	1.04	1.07
Family Welfare	0.29	0.37	0.35
Water Supply and Sanitation	4.47	3.52	3.91
Welfare of SCs/STs/OBCs	2.53	2.50	2.38
Nutrition	0.25	0.29	0.40
Rural Development	1.41	0.97	1.23

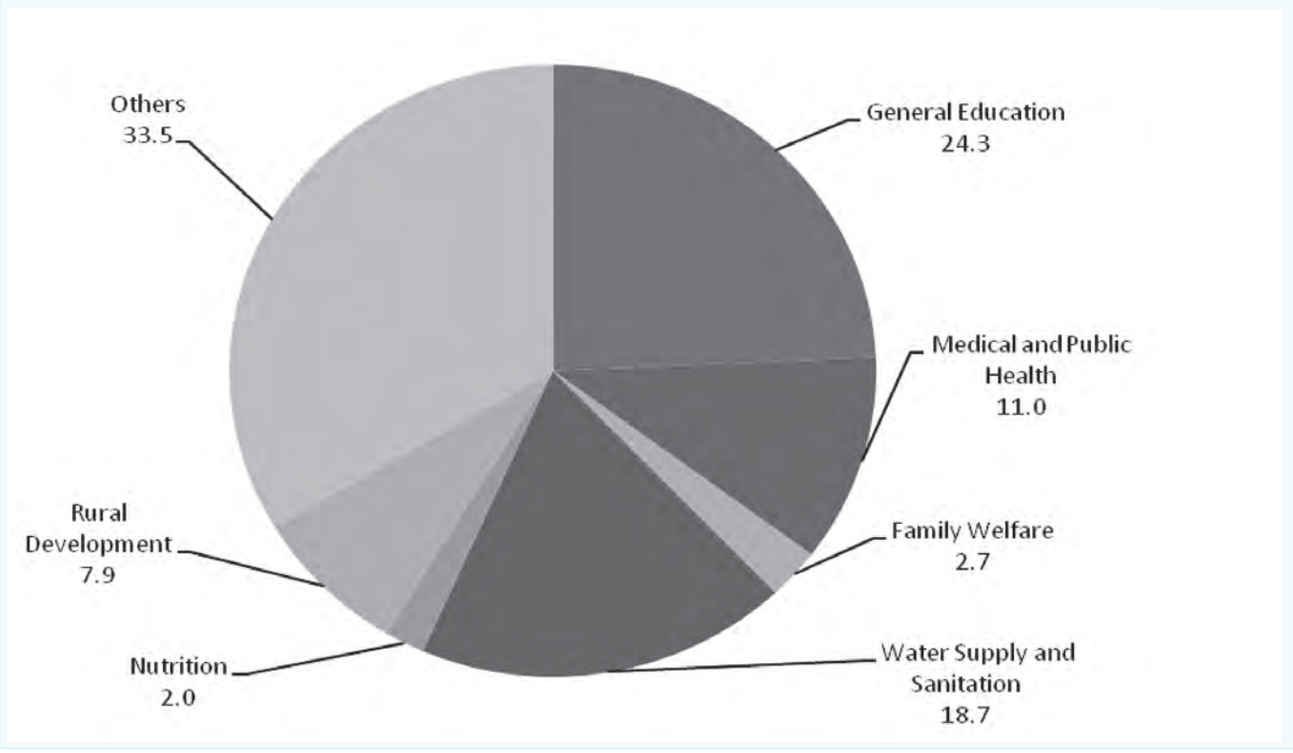
Source: Estimated from Finance Accounts of Mizoram, Accountant General, GoI.

Figure 10.3: Composition of Expenditure in the Social Sector (%): 2000-01, 2004-05 and 2008-09



Source: Estimated from Finance Accounts of Mizoram, Accountant General, GoI.

Figure 10.4: Composition of Proposed Social Sector Expenditure in the Eleventh Plan (2007-12) (%)



Source: http://mizoram.nic.in/aplan/annual.htm, Government of Mizoram.

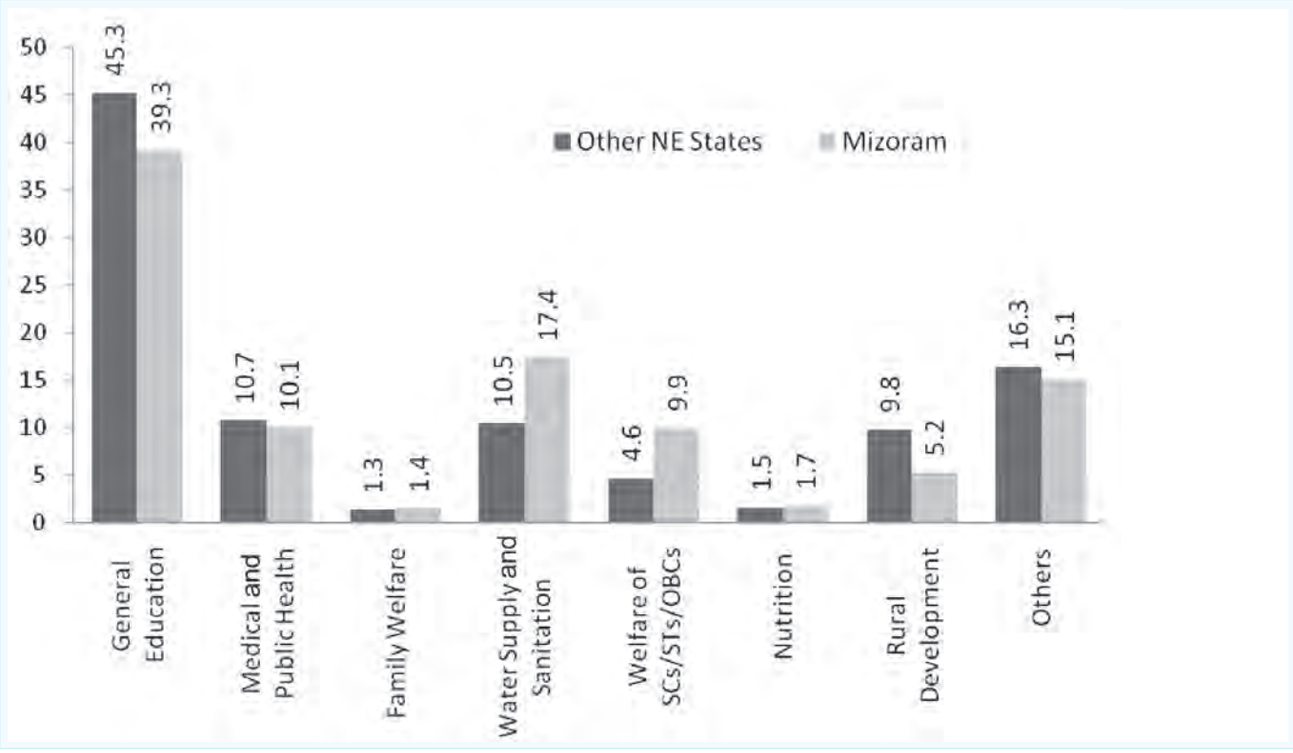
state spends a larger percentage of its GSDP on the social sector as compared to the other north-eastern states taken as a whole.

Raising Resources for Meeting the Gap

From the above discussions, it can be seen that for some indicators of human development, Mizoram's performance has been good as compared to those of the other north-eastern states but the state has to cover a lot of ground with respect to the other indicators. Moreover, if it were to meet the targets envisaged in the Eleventh Plan or the MDG targets, additional resources would be required. The awareness of the importance of human development has resulted in conceding the need to provide accessibility to human development services on a rights basis, as in the case of the right of children to free and compulsory education, right to food, right to employment, etc. All these would require additional resources. How these additional resources can be mobilized, or what the alternative sources of financing human development are, are some of the questions that call for consideration. For a state like Mizoram, which is heavily dependent on Central transfers, the options for generating additional resources to meet these requirements, is very limited. Central transfers, comprising both Plan and non-Plan grants and share in tax devolution, account for around 90 per cent of the total revenue receipts of the state (see Figure 10.6). The share of the state's own revenues in its total revenue receipts is very low at 10 per cent.

The Thirteenth Finance Commission (FC-XIII) had recommended a total transfer including share in Central taxes of Rs. 8805.3 crores for Mizoram during its award period of 2010-11 to 2014-15, which is almost twice the amount recommended by FC-XII. FC-XIII has provided Rs. 5 crores to Mizoram as grant for elementary education and Rs. 310.7 crores as local body grants. It has also provided Rs. 50 crores for Sainik School and Rs. 30 crores for construction of 15 primary health centres and 150 health sub-centres in the state under state-specific grants. These grants are much higher than those provided by earlier Finance Commissions. If these funds are spent judiciously by the state, it

Figure 10.5: Composition of Social Sector Expenditure: 2005-08 (%)



Source: http://mizoram.nic.in/aplan/annual.htm, Government of Mizoram.

Table 10.10: Comparison of Social Sector Expenditure (as % of GSDP) – (Average of 2005-08)

	Mizoram	Other NE States
Social Sector Expenditure of which	24.40	10.82
General Education	9.62	4.91
Elementary Education	4.73	2.63
Secondary Education	2.31	1.39
Medical and Public Health	2.47	1.15
Urban Health Services	1.06	0.29
Rural Health Services	0.93	0.34
Family Welfare	0.34	0.14
Water Supply and Sanitation	4.23	1.14
Welfare of SCs/STs/OBCs	2.42	0.50
Nutrition	0.41	0.16
Rural Development	1.24	1.05

Source: Estimated from Finance Accounts of Mizoram, Accountant General, GoI.

would go a long way in improving the human development indicators in Mizoram.

However, the state must also find ways to generate additional resources to meet its human development requirements. There are a number of ways in which the Mizoram government can mobilize additional resources. Some of these are detailed below.

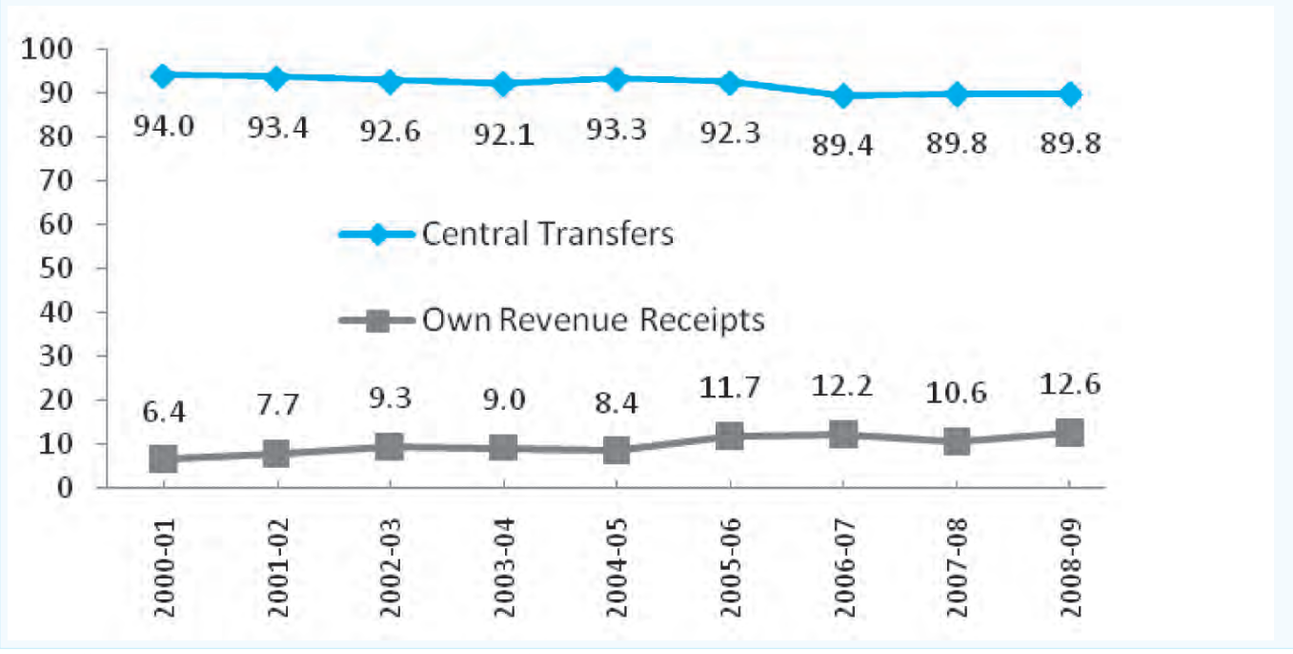
A. On the revenue side the options which the state can explore are:

a) Raising tax-GSDP/GDP ratio: Mizoram has the lowest tax-GSDP ratio in the country. Its tax-GSDP ratio was 0.83 per cent in 2000-01, which has, over the years, increased to 2.49 per cent (see Figure 10.7), which is still the lowest in the country. Despite being dependent on Central transfers, the Mizoram government has to make efforts to raise tax revenues if it were to raise resources to finance its human development expenditures. It is well known that the possibilities for raising tax revenue depend, among other things, on the structure of the economy, on the stage of economic development and on the country's/state's institutional capacity. However, Mizoram, largely being an agricultural economy, has very limited options for raising resources through the tax route.

The government can raise additional tax revenues by either introducing new taxes or revising the old tax rates. The tax revenues of states consist of sales tax, state excise, taxes on vehicles, and stamp and registration fees. Of these, sales tax is the single most important source. In recent years in Mizoram, the share of sales tax has increased substantially. Figure 10.7 shows that there was a jump in the own tax revenues of Mizoram from 2005-06 onwards, which was mainly because of increased revenues due to the implementation of VAT by Mizoram on 1 April 2005. The revenues from excise in the state are low, as there is prohibition on importing, transporting, manufacturing, possessing, selling and consuming liquor in the state except in the areas of the three Autonomous District Councils of Chakma, Lai and Mara. The Mizoram Liquor Total Prohibition Act 1995 (MLTP Act), which came into force with effect from 20 February 1997, continues to exist in the state.

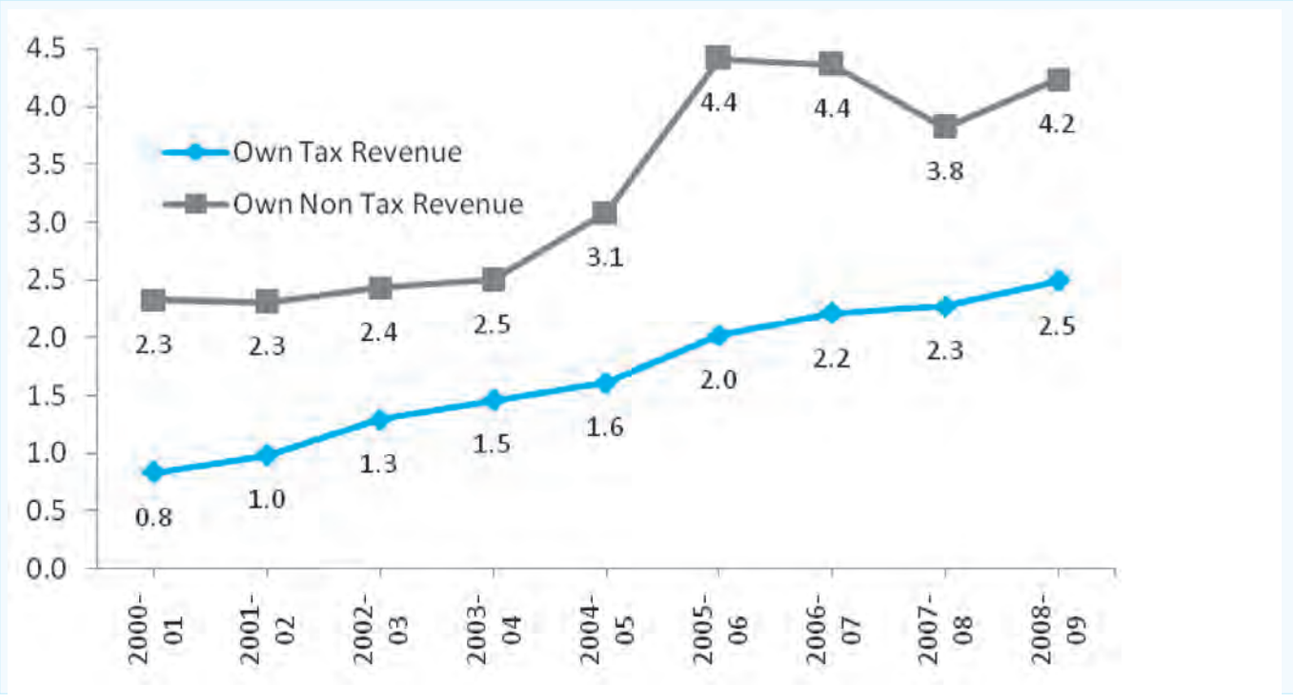
Mizoram had a buoyancy of 1.63 for own taxes during the period 2005-06 to 2008-09. This implies that for every Re.1 increase in the state's GSDP, its tax revenue would increase by Rs. 1.63. One of the ways in which additional tax revenues can be mobilized is for the state to ensure and sustain a high growth of GSDP over a long

Figure 10.6: Composition of Revenue Receipts (%)



Source: http://mizoram.nic.in/aplan/annual.htm, Government of Mizoram.

Figure 10.7: Own Revenues as a Percentage of the GSDP



Source: http://mizoram.nic.in/aplan/annual.htm, Government of Mizoram.

period.

Although for a state like Mizoram, the options of raising resources through the taxation route, either by introducing new taxes or by widening the base of the existing taxes, is limited, it can still do so by levying some innovative taxes like environmental taxes, the proceeds of which can be spent on some particular sector. It should, however, be ensured that such taxes are not regressive and that the vulnerable sections of the society are not adversely affected by the introduction of such taxes.

b) Raising non-tax revenues: Resources can also be mobilized by raising non-tax revenues by way of recovering the cost of providing services. The own non-tax revenue as a percentage of the GSDP was 2.3 per cent in 2000-01 and gradually increased to 4.2 per cent in 2008-09 (see Figure 10.7). The receipts for the power sector constitute a major source of the non-tax revenues for the state.

Many of the services like basic healthcare and sanitation facilities, drinking water, primary education, etc. are provided by the governments in most states either free of cost or at a very nominal charge. Given the constraints in raising tax revenues, the Mizoram government can consider or explore possibilities of not only imposing user charges/fees for services, which are provided free, but also increase user charges/ fees for services for which it is currently levying nominal charges so as to recover the cost of provision of such services.

c) Raising resources through public private partnership (PPP) mode: A state like Mizoram, which is heavily dependent on Central transfers, should also find alternative means for generating resources to finance human development activities. One such mode is to explore the possibilities of partnership with the private sector. The Public–Private Partnership (PPP) mode is a viable option for mobilizing additional resources.

B. On the expenditure side, some of the options which the state can avail of are:

a) Restructuring State Public Sector Undertakings: In developing countries like India, Public Sector Undertakings (PSUs) occupy a large space. Post-Independence, development of core sectors through Public Sector Enterprises (PSEs) was envisaged. It was thought that the public sector would correct the regional imbalances and create employment. Emphasis was laid on the expansion of industrial production, particularly of capital equipment and goods satisfying the basic needs of the people as also of commodities for the purpose of exports to earn foreign exchange. Over

the years, these PSEs became loss-making entities, as they were unable to recover their costs because of being saddled with problems like over-staffing, lack of accountability, inefficient and outdated modes of production, administered pricing policy of the government, etc. These loss-making PSEs are a huge drain on any government's budgetary resources.

In Mizoram, as on 31 March 2009, there were five state PSUs, which were all loss-making units. However, the scope of releasing additional resources by restructuring them is limited, as these PSUs occupy a very insignificant position in the state's economy. Their turnover for the year 2008-09 was RS. 2.41 crores, which was just 0.07 per cent of the state's GSDP. Their losses for the year 2008-09 were worth Rs. 4.56 crores, and they employed 263 people. As on 31 March 2009, the total investment in the state level public enterprises was Rs. 94.98 cores. The total investment consisted of 64.57 per cent towards capital and 35.43 per cent in long-term loans. All PSUs were incurring losses continuously over the last six years and their accumulated losses in 2008-09 were Rs. 40.23 crores. The liability of the government is also on account of the guarantees provided on the borrowings of these enterprises. The budgetary outgo towards equity, loans, and grants/subsidies was Rs. 16.79 crores in 2008-09.

Efforts should thus be made by the government to restructure these loss-making enterprises by way of privatizing them through disinvestment or closing down the loss-making enterprises. This would save funds currently spent on running the loss-making PSEs as also enable the government to mobilize resources through disinvestment. These additional resources can be used for funding both human development and growth-promoting activities.

In addition to the five state level PSUs, there are two departmental undertakings, power and electricity, and transport, both of which provide, respectively, power and public transport facilities in the state. Both these departmental undertakings are running in losses. The losses of the power department during the years 2006-07, 2007-08 and 2008-09 amounted to Rs. 63.90 crores, Rs. 32.83 crores and Rs. 52.40 crores, respectively, while the transport department had losses amounting to Rs. 12.34 crores, Rs. 12.61 crores, and 14.55 crores, respectively, during these three years. The share of the Mizoram State Transport (MST) in the total passenger traffic has been declining over the years and in 2008-09, it was merely 5 per cent while private operators accounted for the remaining 95 per cent. The turnover of MST in 2008-09 was Rs. 2.07 crores, which was just 0.06 per cent of the state's GSDP. As on 31 March 2009, it still employed 582 employees. As per the CAG's report, the state has no transport policy and MST was not able to maintain its share in transport and incurred losses because of operational inefficiencies. Unless these inefficiencies are addressed, MST will continue to be a burden on the state exchequer and precious resources would continue to be wasted at the cost of social sector development.

b) Rationalizing subsidies: Subsidies constitute an important component of government expenditure. In India, both Central and state governments provide subsidies on a number of items. The predominant ones, in terms of their magnitude are food subsidies, fertilizer subsidies, and subsidies on petroleum products like kerosene and LPG. These subsidies, if not targeted properly, can be a huge drain on the government exchequer. Hence, it is essential to target these subsidies in a proper manner. Subsidies on power and water, apart from being a heavy drain on the state government resources, are encouraging the inefficient use of scarce resources. If such subsidies could be minimized, a huge resource would be available for allocation on human development while encouraging the efficient use of scarce resources like power and water.

The broad point is that by rationalizing subsidies, by way of withdrawing unwanted subsidies through proper targeting, a large sum of money could be saved. The money thus released could be used for financing human development activities.

c) Reducing interest liabilities by curtailing debt: Governments often borrow to finance their increasing expenditures. This measure also acts as a guarantor of loans taken by the various public sector undertakings. With the dismal performance of most PSUs, the cost of servicing such debt also falls on the government. Interest payments or servicing of debt accounts for a large proportion of the government's revenue expenditure. Additional resources can be released if the government undertakes various policy measures to curtail its debt, thereby reducing the cost of servicing. These resources can then be used to finance human development-related activities.

Mizoram ranks the highest amongst all states in terms of the debt-GSDP ratio. As per the RBI State Finances, 2008, the average debt-GSDP ratio for 2004-07 was

115.6 per cent and the debt-GSDP ratio for 2007-08 (RE) was 104.8 per cent, respectively. Internal debt constitutes the largest share of outstanding liabilities of the state, accounting for about 43.48 per cent of the total debt in 2007-08, followed by small savings and provident fund at 30.64 per cent. In 2008-09, the outstanding debt was 103.53 per cent of the GSDP.

High debt would mean higher cost of servicing. The interest payments, which accounted for 15.33 per cent of the revenue receipts of the state in 2002-03, gradually declined to 10.56 per cent in 2007-08 and increased to 11.24 per cent in 2008-09.

In order to achieve the targets set for the Eleventh Plan and to reach the MDGs, the state government must make higher investments and enhance their productivity by improving delivery systems. On the expenditure side, reorientation of budgets away from subsidies, administrative costs, and debt servicing would release some resources, which can be used for financing human development-related activities. As mentioned earlier, Mizoram has the lowest tax-GSDP ratio in the country. The state can generate additional resources by raising its own tax and non-tax revenues. It should also identify innovative taxes through which resources like environmental taxes can be raised. Resources can also be generated by exploring options under the PPP mode.

Conclusion

It is a well-established fact that economic growth alone cannot be relied upon to attain increasing levels of human development. While recognizing the importance of human development, efforts should be made to meet basic services like the provision of safe drinking water, health facilities, adequate shelter, etc. The problem is acute in developing countries where due to low primary incomes, the provision of such services gets neglected, thereby resulting in a huge gap between the desired and actual level of human development. In order to bridge this gap, government intervention in the form of provisioning of such services becomes essential. The above discussions show that for some indicators of human development, Mizoram's performance has been good as compared to that of the other north-eastern states but the state still has to cover lot of ground with respect to the other indicators. Moreover, if it were to meet the targets envisaged in the Eleventh Plan or the MDG targets, additional resources would be required.

In view of the importance of the government's role in promoting human development, the Mizoram government can mobilize additional resources for financing human development in a number of ways. Despite being dependent on Central transfers, the state government needs to make efforts to raise tax revenues for financing its human development expenditures. Being largely an agricultural economy, Mizoram has very limited options for raising resources through the tax route. The widening and deepening of the tax base will not yield the desired results. Given the constraints in raising tax revenues, the government can consider or explore the possibilities of not only imposing user charges/fees for services, which are provided free, but also increase user charges/fees for services for which it is currently levying nominal charges so as to recover the cost of provision of such services.

Resources can also be released through reorientation of the government budgets away from administrative costs like internal security, reduction in wasteful expenditure like subsidies, restructuring of the state PSUs and debt servicing. In other words, changing the composition of government spending can help release resources for promoting human development.

The gains from the efforts to raise resources for financing human development will accrue only when there is an efficient and effective utilization of these resources. Thus, raising the level and enhancing efficiency in the allocation of public expenditure is an important dimension/ instrument of realizing human development outcomes. Finance is the means to provide human development services, but the extent to which these services are available would depend upon an efficient and effective delivery mechanism.

Notes

1. Following the inclusive growth strategy, the Eleventh Plan had 27 monitorable targets at the national level of which 13 can be disaggregated at the level of individual states. These are: (i) GDP growth rate, (ii) agricultural growth rate, (iii) new work opportunities, (iv) poverty ratio, (v) drop-out rate in elementary schools, (vi) literacy rate, (vii) gender gap in literacy, (viii) infant mortality rate (IMR), (ix) maternal mortality rate (MMR), (x) total fertility rate, (xi) child malnutrition, (xii) anaemia among women and girls, and (xiii) sex ratio.

11

THE WAY FORWARD

The state of Mizoram, a land of hills, rivers and lakes is situated in the north-eastern part of India. It is the twenty-third state of the Indian union. The people in the Mizo society co-exist in harmony without any class distinction. As an economy, it has progressed pretty well during the last two decades. However, the period before 1986 was not a very progressive period for the state of Mizoram. From the mid-1960s to the mid-1980s, the state underwent an extended period of turmoil.

Before gaining independence, Mizoram was a district in Assam. In the 1960s, the Mizo National Front (MNF) headed by Laldenga, its founder, grew strong. Due to tensions with the Assam government, the MNF declared independence as its goal. In 1966, the MNF volunteers commenced an armed struggle for independence. The revolution that brought insurgency and violence restrained all development activities in Mizoram. With peaks and lulls in the state of violence, the whole process of insurgency lasted for 20 years. Finally on 30 June 1986, a peace accord was signed between the Government of India and the MNF and in 1987, Mizoram became an independent state. Henceforth began a period of peace and progress for Mizoram, and the state embarked on a path of economic and human development. The people of Mizoram have made extraordinary efforts towards establishing a peaceful society, especially after seeing two decades of extreme violence in the state.

Immediately after it became a state in 1987, development initiatives were taken in Mizoram on various fronts—education, employment, health and agricultural development. Within a period of two decades, the state has achieved one of the highest levels of human development in the north-eastern region and performs better than the national average for each of the three indices of human development. The transformation of destructive forces into constructive democracy is indeed impressive.

Mizoram began its development process in 1987, precisely 40 years after the period when India embarked on the path of economic development after Independence. Thus, Mizoram is a late starter as compared to the other major Indian states and India as a whole. Nevertheless, the scale of progress and achievements in human development that Mizoram has shown are definitely inspiring.

No doubt, Mizoram's achievements in human development are one of the highest in the country, especially when compared with other north-eastern states. But the level of poverty as estimated in the study is very high in the state. This looks like a contradiction. But the attainment of human development is a function of primary income of the household; if that is not sufficient to provide for basic services, the government steps in to supplement it by way creating human development infrastructure as well as services. In Mizoram, government expenditure on social services such as health care and education is quite high, which is what has resulted in a higher level of human development.

The state has shown a very smooth and quick rate of political, social and economic change. The institutional and societal transformation in the state is largely responsible for its high level of human development.

Institutional transformation: An important feature of Mizo society that influences the overall performance of the state is the ability of its people to mould the traditional institutions into modern ones. This transition has been a smooth and a quick process. Chieftainship used to be a traditional administrative system in Mizoram. The chief used to take care of the economic and social needs of its people. However, slowly after the advent of Christianity, the traditional institutions were replaced by the Village Councils. As opposed to chieftainship, which was a system of hierarchy based on the authoritative rule of the chief, the Village Councils are democratic representative institutions. The Village Council ensures smooth functioning of economic and social machinery in the state under the supervision of the District Council.

Societal transformation: From being a primitive tribal society, Mizo society has been transformed into a modern and advanced society. The advent and spread of Christianity in Mizoram has been instrumental in this transition to modernity. It has just been a century since Christianity was introduced to this society and now more than 80 per cent of the population is Christian. Christianity has acted as an agent of modernization by spreading education and awareness campaigns, and providing healthcare facilities. The mass movement of spreading education by Christian missionaries is one of the main reasons for the widespread literacy in the state.[1] The social capital of Mizo society, that is, its people and traditional culture and norms that bind the society together, also represent a major factor that is responsible for the transformation of the state into a peaceful and modern state.

The transformation that has occurred in the state is truly awe-inspiring and has resulted in a peaceful society with high levels of human development. The state and the active civil society in Mizoram have paid keen attention to the three components of human development—education, health and income. In order to maintain a high level of human development, it is essential to ensure that these three components are well provided. The two factors that ensure a good provision and utilization of the three components of human development are as follows:

The primary income or private income of the household: If the primary income is insufficient for availing of the basic social services, then the government steps in to fill the gap. In Mizoram, both the government as well as the dynamic civil society organizations have participated to generate the mechanisms for income-earning opportunities so as to raise the primary income of the people.

Access to social services: Besides the income, the availability of and access to the basic social services like healthcare and education ensure a high level of human development. It is the task of the government to provide for these services at a low cost and make them accessible to all. In Mizoram, the civil society also plays an important role in providing services like schools and hospitals.

Thus, the state, civil society organizations and the people together have been able to attain an appreciable level of human development. The Human Development Index (HDI) for Mizoram was 0.65 in 2008,[2] which is much higher than the national average. However, it still falls in the category of medium human development.[3] The state has attained this level after starting from scratch and witnessing two decades of violence and destruction. Now, the challenge before it is to move up to a level of high human development. In view of the past accomplishments and potential of the state, it seems possible for Mizoram to attain this level too. However, there are some initial conditions that could prove to be both the strengths and weaknesses of the state. The manner in which these initial conditions impact the development process depends on how they are put to use by the government and the people.

The physical and geographical characteristics of the state are inherent to the state and are unchangeable. It is only against this kind of background that the state has achieved a high human development level. In the future too, the state can maximize its growth and human development by building upon its strengths, efficiently utilizing its potential and minimizing the threats it faces.

The initial conditions are:

- **Area and Location:** The state of Mizoram is very small in terms of its area and covers around 21,087 sq. km, which is less than 1 per cent of the area of India as a whole. However, being small in area does not necessarily become a weakness or strength in itself. The area in comparison to the population or its natural endowments is a useful indicator of an advantage or disadvantage. The state has quite a low population as compared to the total area; the population density is only 52 persons per sq. km while the population density for India as a whole is 382 persons per sq. km. This low population density is a positive attribute as it precludes overcrowding and puts less pressure on land. However, it also leads

to scattered habitation. From the market point of view, scattered habitation in hilly areas hampers the development of marketplaces. The density of the population between districts in Mizoram varies widely. Aizawl has the highest population density of around 113 persons per sq. km and the district of Mamit, with the lowest density of population, has only 28 persons per sq. km. Aizawl is a highly urbanized district and offers better paying employment opportunities in the service sector. To some extent, this explains the high rate of migration to Aizawl and the resulting high population density in the city. Therefore, in order to prevent cluttering in one or two more advanced and urbanized districts, it is important to develop other under-developed areas in the state too. For example, Lwangtlai is a completely rural district; steps to urbanize the area and uplift the population in this district would prevent out-migration and ensure the balanced development of the state. The state of Mizoram is located in the north-eastern part of India along with its seven sister states in North-east India. It is a landlocked state with its southern part sandwiched between Bangladesh and Myanmar. In India, it is bounded by Assam, Tripura and Manipur. Being landlocked means that it has no direct access to the sea. Thus, the lack of maritime access, which facilitates a maritime trading system, becomes a disadvantage of being a landlocked state. Further, the remoteness of the state from the Indian market and the Western developed nations hampers the trading network and potential of the state. However, the geography and location of the state becomes crucial if seen from the point of view of its proximity to South-east Asian nations.

- **Terrain:** The state has a very hilly terrain, which is very steep in many areas. The difficult and hilly terrain of the state is one of the important weaknesses of the state. It hampers the development of the state by constraining the infrastructure development, transport system and communication infrastructure, internal market system and agricultural cultivation, irrigation facilities, and water harvesting. There are only three small plains in the whole state, viz. the Champai Plains, Vanlaiphai Plains and Thenzawl Plains. The plains are mainly used for paddy cultivation and wet rice cultivation. However, irrespective of the geography and topography of a place, the best way to use it for human development is to make its usage people-centric. If Mizoram has more terrains than plains, terrace farming can generate the surplus needed to feed the population and the potential for exports to generate foreign currency. Besides crop cultivation on terraces, horticulture, floriculture and animal rearing can be practised in the hilly terrains. The state, therefore, has a comparative advantage in terms of the production of various horticultural and floricultural crops.

- **Climatic Conditions:** The geography of the state offers favourable agro-climatic conditions. The state has a sub-tropical climate and receives plenty of rainfall. The state gets an average annual rainfall of more than 2455 mm, which is concentrated mainly for a period of six months.[4] The rainfall is evenly distributed throughout the state.[5] The agro-climatic conditions of the state are conducive to the production of various horticultural and floricultural crops.

- **Soil Condition:** The overall fertility of soil in Mizoram is not very conducive for growing agricultural crops. The soils, in general, have low inherent fertility, viz. bases and mineral reserves. The soil in the hills is acidic.[6] Further, soil erosion caused due to the hilly terrain and heavy rainfall damages the quality of the soil. Less fertile soils mean less productivity and lower yields. However, the farmers can substitute the less fertile soil with fertilizers and organic manures to increase its fertility.

- **The Practice of Jhum Cultivation:** Besides the fertility of soil, the yield also depends a lot on the cultivation practices adopted by the local population. In Mizoram, the practice of shifting cultivation has caused a lot of degradation of soil. The traditional practice of Jhum cultivation has become

less sustainable owing to the increasing population pressures causing reduction in the Jhum cycle from 8-10 years to 2-3 years. This cultivation practice produces the lowest yields. A comparison of the yields of paddy from Jhum cultivation to those from wet rice cultivation show that the yields from the latter are double the yields from Jhum cultivation. Due to low yields, the income of the Jhumia families is also very low. Furthermore, the Jhum practice involves burning and clearing of a forest for cultivation. Hence, the practice of Jhum also causes deforestation. The burning of trees, weeds and bamboo from forests causes a lot of pollution, which disturbs the eco-system. The fires also lead to accidents causing deaths of people and animals. The practice of Jhum cultivation thus poses a major threat to the economy of Mizoram and is one of the reasons for the poverty prevalent among many Jhumia families. Providing an alternative means of employment to the Jhumia families seems the best option for reducing this practice and the New Land Use Policy (NLUP) introduced by the government of Mizoram has some brilliant measures to provide alternatives to reduce Jhum cultivation.

- **Horticulture:** Due to the topography of the state, setting up big manufacturing industries is a difficult task. However, this does not necessarily imply that the state cannot progress without a well-developed secondary sector. The state of Mizoram has its comparative advantage in the growth of the primary sector including agriculture, horticulture, fisheries and animal husbandry, as well as the services sector. It is only when the state diversifies to incorporate all these activities as the main economic activities of the state at a commercial level that it would be able to rise above its threshold. Various tropical and sub-tropical fruits and vegetables grow well in Mizoram. The main fruits grown in Mizoram are passion fruit, grapes, oranges and bananas, out of which passion fruit has great potential because of various factors. The hilly topography of the state is highly suitable for the production of both the purple and golden varieties of passion fruit. The method of cultivation of the fruit is simple; it is less vulnerable to attacks from insects and pests. It is valued a lot due to its exotic taste and has a huge demand in the international market. The productivity and monetary returns from the cultivation of passion fruit are also very high. Other fruits like oranges, pineapples, and grapes too have a good yield and grow very well in Mizoram. Besides fruits, vegetables like cabbage, tomato, beans and squash grow well in the state and have a good demand. Among the floriculture crops, anthurium, rose, orchids and bird of paradise grow extensively in Mizoram and have a huge international demand. Amongst other horticultural crops, spices like turmeric and ginger have a very good productivity in the state and are highly demanded within and outside the state. Their characteristic of being non-perishable increases their prospect as an item for trade with far-flung regions. The horticultural and floricultural crops in Mizoram have a great potential for increasing the incomes of farmers and reducing the traditional and unproductive practice of shifting cultivation. The government of Mizoram as well as the National Horticultural Mission for the North-east is exploring this potential and opening new avenues for the state. Secondly, it is very important for the state to recognize and harness its horticultural potential to the optimal extent. For this purpose, the state needs to implement the following measures:

  1. Build large food processing units close to the areas of horticultural production; and

  2. Encourage farmers to produce large quantities of horticultural crops like passion fruit and orange by offering them options like buy-back.

- **Forests:** The state of Mizoram, placed on high hills, is blessed with vast tracts of forest cover. More than 75 per cent of the state is covered by forests, which constitute a rich source of bamboo, firewood, and medicinal plants, among other things. Various kinds of natural orchids are distributed in the forests of Mizoram. More than 400 medicinal

plants are also reported to grow in the forests of Mizoram.[7] One of the most important resources from forests is bamboo. Several varieties of bamboo grow in Mizoram, among which the variety called 'Melocanna baccifera' is the dominant one. Bamboo is a very precious resource due to its usefulness in various applications such as building of houses and bridges, and making of handicrafts, fences, and baskets, among other things. The demand for bamboo has been growing at an incredible rate and it serves as a good substitute for timber. Since Mizoram has vast bamboo-producing areas, this product, which already serves as a source of revenue to the state, holds tremendous economic potential for Mizoram.

- **Fisheries:** This area represents a potential that is yet to be explored in the state. Mizoram has perennial clear water streams with high oxygen content and the temperate climate with moderate rainfall offers highly suitable conditions for carrying out commercial fishing activities. Of the total potential, only a little more than 10 per cent is utilized, leaving a vast area unexploited. The practice of pisciculture can serve as an alternate means of livelihood for Jhumia families and help the state become self-sufficient in its demand for fish.

- **Hydel Power Generation:** The state has a large potential for electricity generation. Of the total potential, only 2 per cent is utilized for hydel power generation. Many villages in the state have still not been electrified and the state is not self-sufficient in its demand for power. About 97 per cent of its power demands are met through import from the central grid or neighbouring states. Thus, the maximum utilization of the available power resources is essential for infrastructural development of the state. Moreover, micro hydel power projects have the potential to meet the electricity demands of agro-processing units in the state. The development of micro/major hydel projects has the potential to spur the growth of the agriculture and allied sector in Mizoram.

- **Tribal Population:** Mizoram is mainly inhabited by a tribal population. The tribes in Mizoram, especially the Lusei tribe, have a history that can be traced back thousands of years ago. The cultural identity of the indigenous people in Mizoram is unique to the state. They have lived here for many years and have learnt how to sustain themselves physically and financially in that region. They constitute a rich source of indigenous knowledge about the resources of the natural environment, and their inter-relationships and lifestyles offer solutions for conserving the ecology of the region. The indigenous people have not only sustained themselves for generations but have also been successful in becoming self-sufficient in their consumption. The tribes in Mizoram, which are still native to the forests and grasslands in the state, are a good source of information for protecting the biodiversity in the state. A possible community-based system involving the participation of the indigenous people of Mizoram in policy-making can serve as a means of restoring and rebuilding Mizo society and helping it attain self-sufficiency.

- **The Demographic Structure:** Its demographic structure can be seen as a major strength of Mizoram. The gender distribution is quite fair in the state as compared to the all-India average. The sex ratio in Mizoram in 2011 is 975 females per 1000 males, which is a good jump from the Census 2001 sex ratio of 935 females per 1000 males. The sex ratio for India is 940 females per 1000 males, which is considerably lower than that of Mizoram. Within the districts, Aizawl has the highest sex ratio of 1009 females per 1000 males, while Mamit has the lowest sex ratio of 924 females per 1000 males. If the sex ratio is seen as an indicator of gender inequality, the high sex ration in the state would seem to indicate that women enjoy a better status in Mizoram as compared to their counterparts in the rest of the nation. However, there still are significant differences within the state that need to be addressed. Sex ratio is one of the indicators of gender inequality but

does not comprehensively portray the position of women.

- **High Literacy Rate:** This is an important demographic feature of Mizoram. It also constitutes the social capital of the state. The literacy rate in Mizoram jumped from 88.8 per cent in 2001 to 91.6 per cent in 2011. The male literacy rate is 93.72 per cent while the female literacy rate is 89.4 per cent. The literacy levels in Mizoram are significantly higher than the all-India average (74.04 per cent) and are the second highest in the country.

- **Civil Society:** Only a democratic state can create a democratic civil society; and only a democratic civil society can sustain a democratic state (Michael Walzer).[8] The civil society in Mizoram has recognized and respected the important linkages between government and civil society. By playing an active role in society to protect the life, property and sovereignty of the citizens, the civil society organizations in Mizoram have ensured accountability and transparency in the operation of the government machinery of the state. The Young Mizo Association (YMA) has also played an important role in maintaining public health and sanitation, and in spreading education in the state. Recently, the YMA has also been involved in forest conservation and in 1974, it introduced the idea of the Green Mizoram Project.[9] The YMA is just one of the many active civil society organizations monitoring the functions of the government.

The prevalent conditions and the situation in the state determine the initial conditions for Mizoram to walk the path of high human development. At this juncture, in the short run, Mizoram has an option to optimally and efficiently utilize its existing potentials. For this purpose, the state can diversify its activities for maximizing the benefit to the people. However, there is a limit to how much a state can maximize its growth on the basis of the existing potential. The challenge to rise above the lower levels of economic and human development to a medium level is an easier process as compared to the process of rising above the medium level of development to a higher level. The threshold level for Mizoram is pretty high and the real challenge for the state is to rise above this level and diversify. In order to move to the level of high human development, the state needs to shift to a higher level of primary income generation. In the long run, this is possible through an enhancement of the production processes. Mizoram can also become the gateway to South-east Asia by being linked with Myanmar.

The geography of the state offers advantageous trading opportunities with the South-east Asian countries. The state of Mizoram borders Myanmar on the east and the south and Bangladesh on the west. The river Kolodyne flows southwards and leads to the port of Akyab in Myanmar, while the river Karnaphuli leads to the port of Chittagong in Bangladesh. Both rivers are large and navigable. Thus, the state has a potential marine route to trade with other countries. The state's proximity to South Asia and South-east Asia can facilitate trade with these nations. Further, the Bay of Bengal initiative for Multi-sectoral Technical and Economic Cooperation (BIMSTEC) and Free Trade Area agreement and cooperation of BCIM (Bangladesh, China, India and Myanmar) will facilitate trade with the neighbouring regions of Bangladesh, Myanmar, Bhutan, Nepal, Thailand and China. These areas are closer to Mizoram than the interior regions of the rest of India or the western developed nations. By harnessing the potential trading opportunities, the state of Mizoram can develop a niche trade in horticultural crops. This linkage has the potential to not only significantly augment its production and marketing processes but also generate large-scale trade-related employment. Hence, exploring this possibility would have an impact on human development.

Apart from harnessing the potential of the state and exploring new possibilities to improve the human development of the people of Mizoram, the state also needs to address the following pressing challenges urgently:

- **Incidence of HIV:** The presence of Christian missionaries has ensured a very strong and admirable system of education and healthcare in the state. However, there is need to create

awareness about HIV/AIDS among large sections of the population. The increasing rate of HIV infection in Mizoram poses a major threat to the development of the state. About two-thirds of all HIV-positive cases in the state have been found among the young population aged 35 years and less.[10] The people of Mizoram are the state's strength. Thus, the increasing rate of HIV in the state needs to be checked to ensure the safety of human capital of the state.

- **Transport System:** An important challenge is to neutralize the impact of the remote location of the state. A poor transport network impedes the development of a market-based system of production. In the absence of adequate transport facilities, the farmers have no incentive to produce anything beyond what is required for their self-sufficiency. Establishing a strong and efficient transport network is the key. This will also help in the development of a good trade network to transport goods and people within the state as well as between states in India. Special transport with cooling facilities is required for the transportation of perishable goods like horticultural crops and flowers. Moreover, good storage facilities including cold storage are also essential for facilitating trade in these goods.

Being a state blessed with nature's bounty in the form of beautiful vast forests, Mizoram would always face a conflict between development and natural conservation. The older generations of Mizos have preserved this state and its bounty for many years. However, now the times have changed. The habits and practices of the tribal people, which symbolize ways of living close to nature, have now become unfriendly to the environment. For example, the practice of shifting cultivation is not sustainable anymore, as it causes pollution and other kinds of environmental degradation. Due to the traditional institutions of the tribal people, a major part of their requirements comes locally from the forests. For their shelter, they depend on bamboo from forests, for food they depend on the meat of wild animals and local vegetables, and for fuel, they use grass and other small wood pieces from the forests. But now this practice too is becoming unsustainable. It is thus time that without losing the positive aspects of these traditions, the local population is encouraged to incorporate more sustainable modern practices, such as a shift from Jhum practices to the more productive wet rice cultivation or horticultural production. Instead of killing wild animals, which represent the precious fauna of the state, the people should be urged to move towards the more efficient and sustainable practice of animal husbandry.

Mizoram is one of the most highly urbanized states in the country. However, the price of urbanization symbolized in modern ways of living and higher living standards is very high in terms of environmental degradation. For a state like Mizoram, its bio-diversity including forests and its products, flora and fauna is very important. Therefore, the process of economic development and modernization should be such that it causes only minimal degradation of the environment. The state needs to optimize between human development and conservation of the environment by weighing the benefits of modernization vis-à-vis the cost of environmental destruction. For example, the state has a vast forest cover, a majority of which is in the form of open forests. The answer lies in afforestation and the creation of dense forests which would prove to be more resource-rich and useful than open forests. A moderate coverage of dense forests is better than a vast coverage of open forests, as. it would leave a larger area for the pursuance of development activities like land development for cultivation, for growing horticultural crops, and for building a better transport network.

The state has a young population with about 15 per cent[11] of the population being in the age group of 0-6 years. A high proportion of the young population implies a rich human capital for the state. However, in order to optimally utilize the potential of the human capital, it is essential for the state to concentrate on providing better access to education for its population. This is a big challenge for the state. The literacy rates in the state are already very high, and raising them even more necessitates the implementation of a carefully thought out education plan. Three important measures that can be taken in this regard are:

1. Increasing the number of schools so as to accommodate the growing young population;
2. Introducing new initiatives and continuing existing ones like the Mid-day Meal Scheme, and offering scholarship programmes to reduce the high drop-out rates among the schoolgoing children in the state; and
3. Promoting a higher education system, which could work in tandem with the high literacy rates to optimize the growth and development of the people of the state. This would help in addressing the major drawback in the education system of the state, which is that despite being the second most literate state in India, only a small proportion of the students in Mizoram opt for higher education. With the tertiary sector gaining high prominence in the GSDP of the state, it is essential to improve the higher education system of the state so as to be able to provide the manpower for technical and higher level jobs within the state.

The state of Mizoram definitely has a lot of potential, in the form of both natural and human resources that are still largely unutilized. By building upon its strengths and minimizing its weaknesses, the state can unlock its vast potential and emerge as a leader in human development.

Notes

1. Encyclopaedia of the North-east.
2. Author's calculations based on the survey data.
3. As per the UNDP categorization of HDI.
4. New Land Use Policy Document.
5. Lal Pudaite, Mizoram.
6. New Land Use Policy Document.
7. www.envformizo.in
8. http://dalitandtribe.wordpress.com/2010/02/16/civil-society-state-and-the-tribal-society-a-case-study-on-young-mizo-association-mizoram/
9. http://dalitandtribe.wordpress.com/2010/02/16/civil-society-state-and-the-tribal-society-a-case-study-on-young-mizo-association-mizoram/
10. http://mizoramsacs.nic.in/newsite/hiv_status/latest_status.html
11. The Census, 2011.

ANNEXURE:
SAMPLING METHODOLOGY

In order to bring together information on various human development indicators, both primary and secondary data have been collected for this report. The secondary information has been collected from district and block level offices, and other available relevant published material. There are several gaps in the available secondary data sets for the state and its districts in terms of coverage, periodicity and availability, particularly relating to human development dimensions at the household levels. Since averages conceal many things, we have not limited ourselves to three indicators of human development, such as income, education and health. We seek to collect information on several other variables, which are both the causes as well as consequences of these three traditional variables in human development reports. Also, though the National Sample Survey Organization (NSSO) and National Family Health Survey (NFHS) are the major data sources giving household information on various socio-economic parameters, the sample of these data sets for Mizoram is very small for undertaking any detailed analysis. In view of this limitation, it is necessary to collect detailed information from households on various indicators of human development in order to supplement the secondary information.

For the primary survey, a semi-structured interview schedule has been canvassed, which includes both open- and close-ended questions. The following sampling methodology has been adopted for the survey.

Sampling Methodology

Since one of the objectives of the study is to prepare various indicators of human development for each district of Mizoram, it is absolutely necessary to use a fairly representative sample for each district of the state. Thus, the minimum sample size for each district has been calculated by using 95 per cent confidence level and 5 per cent standard error or standard deviation on population and selected human development indicators of the district. For the selection of the sample, the major human development indicators taken are Infant Mortality Rates (IMRs), Work Participation Rates (WPRs), contribution of agriculture in the District Domestic Product, proportion of workers in the primary sector, and level of urbanization.

The following formula has been used for the calculation of the minimum sample size according to each indicator in the district:

$$S = \frac{P\,(1\text{-}P)}{\frac{A^2}{Z^2} + \frac{P\,(1\text{-}P)}{N}}$$

Here, S is the sample size; P is the population of the district in 2001 or the value of each socio-economic indicator; A is the proportion of standard deviation or error term; Z is the confidence interval; and N is the number of households in the district in 2001.

After calculating the minimum sample size required for each development indicator in the district, an average of all the indicators has been taken, which gives the minimum sample size required for the survey in each district (Appendix Table A). For the state as a whole, the minimum sample households required to obtain meaningful results is 2205.

After the sample size for the district as a whole is obtained, the sample size is further divided into rural and urban areas in proportion to the rural and urban households. However, the calculated minimum sample size is mainly based on the 2001 Census data. Therefore, in order to account for demographic changes and the change in household population over the years, the required sample size has been increased proportionately. This gives a wider and more accurate coverage for each district. For this, the sample size has been inflated by using the Design Effect methodology. This survey has been designed as stratified random sampling. Thus, in order to account for the difference in design from simple random sampling, the sample size has been multiplied by the design effect. In this survey, the design effect is assumed to be 1.5.

Appendix Table A: District-wise Minimum Sample of the Households Required

District	Sample Size by Human Development Indicators						
	Work Participation Rate	Infant Mortality Rate	Urbanization	Non-agriculture Workers	Literacy	Share of Agriculture in the DDP	Average Sample
Mamit	367	355	213	234	249	253	278
Kolasib	372	275	370	340	121	205	280
Aizawl	382	343	278	343	52	260	276
Champhai	353	376	359	272	123	183	278
Sercchip	355	368	370	279	71	236	280
Lunglei	378	361	370	337	203	210	310
Lwangtlai	372	315	0	285	342	199	252
Saiha	366	124	327	320	220	145	251

Therefore, the sample size is inflated as follows:

S = 2205 x 1.5 = 3308

A sample size of 3308 is a good representative sample of the actual population in Mizoram. Further, in order to account for any contingencies resulting from non-respondents, and inaccessibility, another 11 per cent has been added to the sample size.

Contingency = 11% of 3308 = 364

Now the final sample size is as follows:

S = 3308 + 364 = 3672

The second stage of sample selection entailed the selection of villages and urban wards in each district. The villages/urban wards were arranged in descending order of their respective populations and grouped into three strata in terms of their populations. The villages/urban wards with less than 20 households were excluded from the list. Among the remaining villages/urban wards, the first stratum constitutes the top 20 per cent of the population, the second stratum consists of the middle 50 per cent, and the third stratum consists of the bottom 30 per cent of the villages/urban wards.

Accordingly, the number of villages and towns that needed to be surveyed has been decided by dividing the total number of households in the district with the required sample size, that is, 20 households for each village/urban ward, and the total number of villages and urban wards for the state is calculated to be 184. The villages/urban wards in each sample block have been selected for the survey by taking into account the geographical spread. The number of villages/urban wards to be surveyed in each stratum would be directly proportional to the share of each stratum of villages/urban wards (according to the population) in the district population, subject to a minimum allocation of six villages for each stratum. The required number of sample villages/ urban wards from each stratum would then be selected as per the probability proportion to the size (PPS) with replacement, with the size being the total population of the village/urban ward as per the 2001 Census. This sampling methodology uses the NSSO blocks framework for urban areas for the sample selection. However, due to technical difficulties like the remote location of a particular village or scattered population in a village, we could cover only 166 villages and towns in the state and 3666 households[1] around the state. Thus, more than 20 households (ranging from 21 to 25) were taken from big villages.

All the households in a sample village/

1. 3672-3666= 6 households were left out due to no response and the problem of inaccessibility.

urban ward were divided into four groups on the basis of the criterion of the main source of income, viz. self-employment, regular salaried job, casual wage labour, and income from agriculture. The number of households in each village/urban ward has been selected through the stratified systematic random sampling method after collection of data based on the main source of income of the households. The survey made an attempt to collect data for at least two households for each category within a village. Finally, around 3,666 sample households, covering 166 villages

Appendix Table B: Total Number of Households and Sample Size

District	Minimum Households	Design Effect 1.5	Contingency 11%	Final Sample	HH total	
					R	U
Aizawl	276	414	46	460	111	349
Champhai	278	417	46	462	265	197
Kolasib	280	420	46	467	206	261
Lunglei	310	465	51	516	516	0
Lwangtlai	252	379	42	420	234	186
Mamit	278	418	46	463	383	81
Saiha	251	376	41	417	291	126
Sercchip	280	420	46	466	240	226
Mizoram	2205	3307	364	3671	1812	1859

and urban wards in eight districts, were selected for the survey. The details of the data pertaining to the households are given in Appendix Table B: Blowing up the Data by Using the Multiplier.

After the collection of the household level data from the all the eight districts, a multiplier has been used to blow it up at the 2008 projected population level.

The 2008 projected population and the number of households have been calculated in the following manner:

Taking into account the data for the 1991 and 2001 Censuses, the compound annual growth rate has been computed by using the following formula:

CAGR = [(Pn/Po)^(1/10)-1]

The number of households in 2008 has been calculated (compounded annually for seven years) by using the CAGR for the 1991 and 2001 Censuses.

The formula is as follows:

HH 2008 = (HH2001)*(1+CAGR)^7

The above exercise was undertaken for each district in both the rural and urban areas.

Once the number households in 2008 was computed by using the CAGR for the period 1991-2001, it was further used to calculate the population for each district, rural and urban, by multiplying the number of households with the average household size. The average household size has been devised for each district, rural and urban, from the household data (listing).

Now the population and number of households have been projected for 2008 by using the population projection based on the Census of India. The Census provides the state-wise population projection for all the years from 2001 up to 2026. Here, Mizoram's population projection for 2008, that is, 9,70,000, has been used.

Now, in order to divide the state's projected population for 2008, the proportion of each district, rural and urban in the overall state population, has been calculated. This has been done by using the population

calculated for 2008 with the help of the CAGR for the period 1991-2001 CAGR. Further, these proportions have been used for disaggregating the state's projected population given by the Census. This provides the district-wise rural and urban populations, and dividing this number by the average household size gives the projected number of households for 2008.

Further, the multiplier has been calculated for each village in each district, rural and urban, and each category of household (based on the main source of income).

The formula for the multiplier is as follows:

Multiplier* (c) = [PHHs/8 x DiHH] x [DiHH/Ni x VzHH] x Lczi/Sczi

where:

PHHs = Projected number of households in the state

DiHH = Projected number of households in the district i (i= 1 to 8)

Ni = No. of villages in the sample in the district i (i= 1 to 8)

VzHH = No. of households in Village z as observed in the listing data (z varies for each district)

Lczi = No. of households in Category c in Village z and District i as per the listing data (Category c comprises Agriculture/Casual Labour/Regular Salaried/Self-employed Workers)

Sczi = No. of households in Category c in Village z and District i as per the sample data (Category c comprises Agriculture/ Casual Labour/Regular Salaried/Self-employed Workers)

The listing of households as well as the sampled households provides details of the households in each category (Main source of income—Agriculture, Self-employed, Casual Wage Labour and Regular Salaried Worker) for each village in each district, rural and urban. Using the data from the listing and the sample, and the projected populations for the state and districts, a multiplier has been generated for each village within each district.

Since some of the sample categories in certain villages have no representative household for that category, an adjustment factor has been used to obtain the final multiplier.

The formula for the final multiplier is as follows:

Multiplier (c) = Multiplier* (c) x Adjustment factor

And the formula for the adjustment factor is as follows:

Adjustment Factor = DiHH / ∑ Multiplier* (c) x Sczi

where:

DiHH is the projected No. of households in the district i (i= 1 to 8)

∑ Multiplier* (c) x Sczi is the product sum of the first stage multiplier for each category within a village multiplied by the number of households in Category c in Village z and District i as per the sample data.

This multiplier for each district, rural and urban, and each category (main source of income) has been used to blow up the data to the 2008 level of the projected households.

BIBLIOGRAPHY

Alkire, Sabina and Severine Deneulin (2009), "The Human Development and Capability Approach", in Amartya Sen (ed.), ***An Introduction to the Human Development and Capability Approach: Freedom and Agency***, Earthscan, UK, pp. 22-48.

Anand, Sudhir and Amartya Sen (2003), "Concepts of Human Development and Poverty: A Multi-dimensional Approach", in Sakiko Fukuda-Parr and A.K. Shiv Kumar, ***Readings in Human Development***, Oxford University Press, USA, pp 114-27.

Chaltuahkhuma (1981), ***Political History of Mizoram***, L.B. Press, Aizawl, p. 77.

Clark, David (2006), "The Capability Approach: Its Development, Critiques and Recent Advances", in D.A. Clark (ed.), ***The Elgar Companion to Development Studies***, Edward Elgar, Cheltenham.

Comim, Flavio (2001), "Operationalizing Sen's Capability Approach", Paper prepared for the Conference on 'Justice and Poverty: Examining Sen's Capability Approach', Cambridge, 5-6 June.

Comptroller and Auditor General (CAG) of India (2010), Audit Report (Civil), Mizoram 2008-2009, CAG, New Delhi.

Deb, B.J. and B. Datta-Ray (2006), ***Changing Agricultural Scenario in North-East India***, Concept Publishing Company, New Delhi.

Deneulin, Severine (2009), "Ideas Related to Human Development", in Severine Deneulin and Lila Sahani, ***An Introduction to the Human Development and Capability Approach: Freedom and Agency***, Earthscan, UK, pp 49-66,.

Desai, Meghnad (1991), "Human Development: Concepts and Measurement", ***European Economic Review***, Vol. 35, Nos. 2-3, pp. 350-57.

DISE (2008), "District Information System for Education", District Report Cards, Vol. I and Vol. II, National University of Educational Planning and Administration, New Delhi. Also available at: http://www.dise.in/drc.htm, Accessed on 20 December 2009.

Doungel, Jangkhongam (2003), ***The Role and Working of the Lai Autonomous District Council, Mizoram***, Unpublished Ph.D Thesis, Manipur University, p. 6.

——— (2006), "Local Self-government in the Autonomous District Council Area of Mizoram with Special Reference to the Lai Autonomous District Council", Proceedings of the XVth Annual North East India Political Science Association (NEIPSA) Conference, Silchar, Assam, p. 50.

Export Import Bank of India, (EXIM Bank) (2009), "Mizoram: Export Potential and Prospects", ***Occasional Paper No. 135***, Quest Publications, Mumbai.

Government of Assam (1960), ***Report of the Committee to Examine Financial Conditions of Each District/Regional Council***, Vaghaiwalla Committee, Shillong, pp. 2-3.

GOI (2001a), Census of India, 2001, Table on Houses and Household Amenities, Series 16, Mizoram, Government of India, New Delhi.

——— (2001b), Census of India, 2001, "Mizoram, Data Highlights: The Scheduled Tribes", Government of India, New Delhi.

——— (2001c), "Statistical Abstract", Ministry of Statistics and Programme Implementation, Government of India, New Delhi.

——— (2002), "National Human Development Report 2001", Planning Commission, Government of India, New Delhi.

——— (2007), "RHS Bulletin", Ministry of Health and Family Welfare, Government of India, New Delhi.

——— (2011), Census of India, 2011, General Population Tables, Office of the Registrar General, Ministry of Home Affairs, Government of India, New Delhi, Available at: www.censusindia.net, Accessed on 15 January 2010.

——— (2008) "Eleventh Five Year Plan, 2007-2012", Volume II, Social Sector, Oxford University Press, New Delhi.

——— (Various years), "Selected Educational Statistics", Ministry of Human Resource Development, Government of India, New Delhi.

Government of Mizoram (1972a), ***Notification No. GAD 13/72/81***, Aizawl, 31 August.

——— (1972b), ***Notification No. GAD 13/72/88***, Aizawl, 1 September.

——— (1975a), ***Notification No. GAD 13/72/pt/65-68***, Aizawl, 29 January.

——— (1975b), ***Notification No. GAD 13/72/pt/69-71***, Aizawl, 29 January.

——— (2004), ***Statistical Handbook, Mizoram***, Directorate of Economics and Statistics, p. 1.

——— (2007), "Statistical Abstracts of Mizoram", Directorate of Economics and Statistics, Aizawl.

——— (2011) "Programme Implementation Plan, 2008-2009", National Rural Health Mission (NRHM), Mizoram, Aizawl.

——— (2009), ***Economic Survey: Mizoram 2008-2009***, Planning and Programme Implementation Department, Government of Mizoram, Aizawl.

——— (2011a), "Mid-Day Meal Programme—Annual Work Plan and Budget 2010, 2011, 2009", Government of Mizoram, Aizawl.

——— (2011b), ***Mizoram Sarva Shiksha Abhiyan,*** Various statistics available at: http://mz.ssa.nic.in/glance.html, Accessed on 15 May 2011.

——— (Various years), Annual Plans, Planning and Programme Implementation Department, Aizawl.

——— (Various years), Finance Accounts, Aizawl.

Government of Tripura (2007), ***Tripura Human Development Report 2006-07***, Agartala.

Haq, Mahbub-ul (1995), ***Reflections on Human Development***, Oxford University Press, New York.

Hnialum, R.T. (1988), "Road to Pawi Autonomous District Council, Lai Autonomous District Council, Lawngtlai", in Jangkhongam Doungel (ed.), "Local Self-government in Autonomous District Council Area of Mizoram with Special Reference to the Lai Autonomous District Council", Proceedings, Volume XV of the Annual NEIPSA Conference, p. 50.

India: Northeastern Region Capital Cities Development Investment Program, Draft Indigenous Peoples Development Framework, Document Stage: Draft for Consultation, Project Number: 35290-01-3, October 2008, Indigenous Peoples Development Planning Document

IIPS and Macro International (2009), ***National Family Health Survey, India, 2005-06***, International Institute for Population Sciences, Mumbai.

Islam, M. Shahidul (2008), "Bangladesh–China–North-east India: Opportunities and Anxieties", ***ISAS Insights, No. 36***, Institute of South Asian Studies, National University of Singapore, Singapore.

Jha, L.K. (1997a), ***Shifting Cultivation***, A.P.H. Publishing Corporation, New Delhi.

——— (1997b), ***Natural Resource Management***, A.P.H. Publishing Corporation, New Delhi.

Lalrinsanga (1999), ***Presbyterian Church and Mizoram Politics***, K.T.P. South Hlimen, p. 20.

Lalsangliana, F. (ed.) (1991), ***Mizo Hnam Tana Kristian Thuchah,*** (Christian Message to the Mizos), Synod Social Front, Aizawl, p. 1.

Lebowitz, Michael A. (2004), "The Rich Human Being: Marx and the Concept of Real Human Development", Paper presented at the Marx Conference, 4-8 May, Havana, Cuba.

Lianzela (1997), "Effects of Shifting Cultivation on the Environment with Special Reference to Mizoram", ***International Journal of Social Economics***, Vol. 24, Nos. 7/8/9, pp. 785-90.

Mahajan, Samir (2009), "Attainment of Human Development: A Study of North-east India", ***Delhi Business Review***, July-December, Vol. 10, No. 2. pp 63-71.

Maithani, B.P. (2005), ***Shifting Cultivation in North-East India: Policy Issues and Options***, Mittal Publications, New Delhi.

Ministry of Finance (2009-10), "Agriculture and Food Management", Chapter 8, ***Economic Survey—India, 2009-10***, Government of India, New Delhi.

Ministry of Human Resources and Development (MHRD) (2009a), ***Annual Report 2008-09***, Government of India, New Delhi.

——— (2009b), ***Statistics of School Education 2006-07***, Government of India, New Delhi

National Commission for Women, "Gender Profile", Mizoram, Available at: http://ncw.nic.in/pdfreports/gender%20profile-mizoram.pdf Accessed on 20th January 2011

Nunthara, C. (1996), ***Mizoram: Society and Polity***, Indus Publishing Company, New Delhi.

Patnaik, Jagdish Kumar (2008), ***Mizoram, Dimensions and Perspectives: Society, Economy and Polity***, Concept Publishing Company, New Delhi.

Poonte, B. (1965), ***Zoram Thlirna***, Deputy Commissioner, Mizo District, Aizawl, pp. 4-5.

Prasad, R. and P. Chakraborty (2006), ***Administration of Justice in Mizoram***, Mittal Publication, New Delhi.

Pudaite, Lal, (2005). "Mizoram", in Mayumi Muryama, ***et. al.*** (2005), "Sub-Regional Relations in Eastern South Asia: With Special Focus on India's North Eastern Region" ***Joint Research Program Series No. 133***, Institute of Developing Economies, Japan. Also available at: http://www.ide.go.jp/English/Publish/Download/Jrp/pdf/138.pdf, Accessed on 20 February 2011.

Puri, S. and P. Panwar (2007), ***Agro-forestry: Systems and Practice***, New India Publishing House, New Delhi.

Ranis, Gustav and Frances Stewart (2001), "Growth and Human Development: Comparative Latin American Experience", ***Centre Discussion Paper No. 826***, Economic Growth Centre, Yale University.

Ray, A.C. (1982), ***Mizoram: Dynamics of Change***, Pearl Publishers, Calcutta, p. 144.

Registrar General of India (RGI) (2009), ***SRS Bulletin***, Vol. 44, No. 1, October, New Delhi.

Robeyns, I. (2003), "Sen's Capability Approach and Gender Inequality: Selecting Relevant Capabilities"***, Feminist Economics***, Vol. 9, pp. 2-3, pp. 61-92.

Saikia, Anuva "Performance of the Agricultural Economy of North-Eastern India: Constraints and Priorities", National Centre for Agricultural Economics and Policy Research (NCAP), New Delhi, Available at: http://www.ncap.res.in/uploadfiles/workshop/wsp10/html/chapter3.htm

Scialabba, N. and C. Hattam (2002), "Organic Agriculture, Environment and Food Security", ***Environment and Natural Resources Series 4***, FAO, Rome.

Sen, Amartya (1999), ***Development as Freedom***, Oxford University Press, Great Britain.

Spence, Randy and Severine Deneulin (2009), "Human Development Policy Analysis", in Amartya Sen, ***An Introduction to the Human Development and Capability Approach: Freedom and Agency***, Earthscan, UK.

Tawnenga, Uma Shankar and R.S. Tripathi (1997), "Evaluating Second Year Cropping on Jhum Fallows in Mizoram, North-Eastern India: Soil Fertility", ***Journal of Bioscience***, Vol. 22, No. 5, pp. 615-25.

Tisdell, Clem and Kartik Roy (1997), "Sustainability of Land Use in North-East India: Issues Involving Economics, the Environment and Biodiversity", ***International Journal of Social Economics***, Vol. 24, Nos. 1/2/3, pp. 160-77.

UNDP (1991), ***Human Development Report 1991***, Oxford University Press, New York.

——— (1995), ***Gender and Human Development***, Oxford University Press, New York.

UNESCAP (2010), "Financing and Inclusive and Green Future", United Nations Economic and Social Commission for Asia and the Pacific, United Nations, Thailand.

UNICEF (2009), "Mizoram Fact Sheet", Coverage Evaluation Survey Report, New Delhi.

United Nations (UN) (2003), "Monterrey Consensus of the International Conference on Financing for Development", United Nations, Washington DC.

Vanlawma, R. (1972), ***Ka Ram Leh Kei***, (My Country and I), Zalen Printing House, Aizawl, pp. 165, 182.