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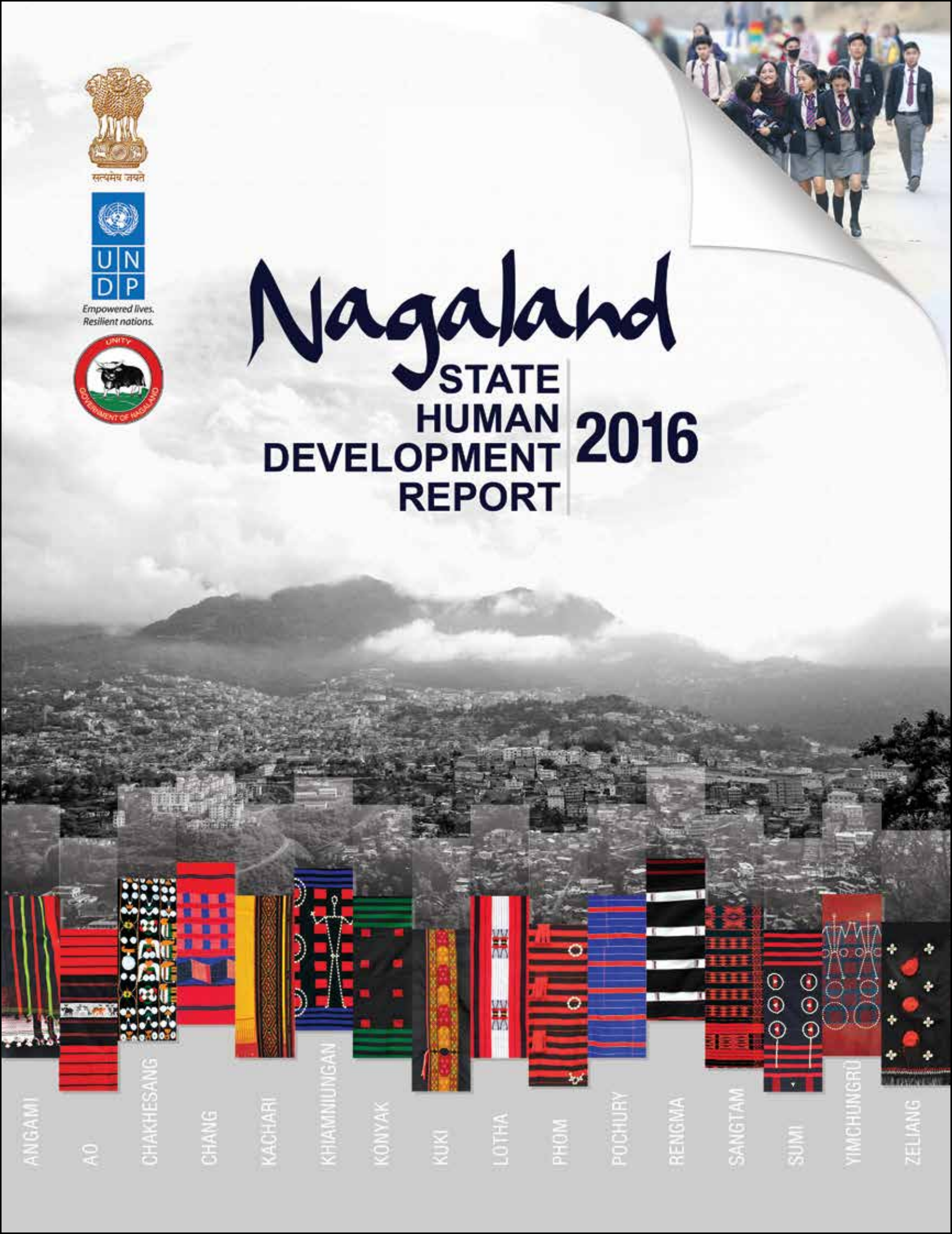


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Nagaland

STATE HUMAN DEVELOPMENT REPORT 2016



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YIMCHUNGRU

ZELIANG



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NAGALAND

STATE HUMAN DEVELOPMENT REPORT

2016



Government of Nagaland
DEPARTMENT OF PLANNING AND COORDINATION
Nagaland - Kohima 797 001

NAGALAND STATE HUMAN DEVELOPMENT REPORT

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Government of Nagaland

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P.B. ACHARYA
Governor of Nagaland



RAJ BHAVAN
Kohima-797001



MESSAGE

It is a matter of great pleasure that the Government of Nagaland is bringing out the second Human Development Report (HDR) with assistance from United Nations Development Programme (UNDP) and Government of India. I am sure this report will enhance better understanding of dynamics of growth and development in the State since the publication of the first report in 2004.

Nagaland, along with other hill states has a major stake in environment issues vital for the Nation as a whole. The HDR has sought to sow the course for development of the State. It will specifically highlight geographical, social, economic and institutional diversities of the State and their implications on aggregate human development outcomes.

As a whole, Nagaland has made impressive improvement in its Human Development Indices over the last decade, except in few districts. I congratulate the Government of Nagaland for this noble exercise and its commitment towards sustainable human development. I am confident that this initiative will result in doubling our efforts to make Nagaland a more equitable progressive State.

I felicitate all the concerned Government officials, academicians, civil society and all those who have directly and indirectly contributed their service for bringing this valuable Report. I am sure that this Report will be of immense help to policy makers in designing better plans at the grassroot level and to further the cause of human development in the State.

Let it be the base for the road map to strengthen the effort of our Hon'ble Prime Minister Shri Narendra Modi ji and work with the spirit of 'Sabke Saath Sabka Vikas'.

(P.B. ACHARYA)



CHIEF MINISTER
NAGALAND : KOHIMA



MESSAGE

It gives me great pleasure to learn that the Government of Nagaland with assistance from United Nations Development Programme (UNDP) and Government of India is bringing out the second edition of Nagaland Human Development Report (NHDR).

The Report, drawn vastly from the experiences gained and lessons learned over the last 12-13 years since publication of the First Nagaland Human Development Report in 2004 has a section dedicated to 'Peace and Conflict and its impact on the overall developmental scenario of the State', which is indeed noteworthy and of much significance in our context.

The upward growth of our GSDP, as also the 7-8% growth of our economy, the general rise in the developmental indices during the period under report amongst others are facts we take due pride in. Yet, at the same time, we should be alive to the challenges our State needs to play in the overall improvement of issues relating to environment and climate change. Most importantly, taking due cognisance of the intra-state disparity existing in our own State especially in between the 4 (four) Eastern Nagaland districts of Tuensang, Mon, Kiphire and Longleng vis-a-vis areas in and around Kohima and Dimapur districts, we should earnestly seek to fill up these gaps to ensure all round and equitable development in the days ahead.

I extend my heartiest congratulations to all the Government departments/ agencies, individuals who had worked with much dedication and perseverance for bringing out this exhaustive and well researched Report. I am more than confident that this Report will serve as a valuable guide for policy makers, bureaucrats, technocrats and the people alike in formulating our future strategies for all round development of the State.

(T.R. ZELIANG)

Date: 3rd August, 2017





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MESSAGE

We congratulate the Government of Nagaland on the release of the second State Human Development Report of Nagaland. We also take this opportunity to congratulate the State Government in taking this initiative to the district level.

The Nagaland State Human Development Report reiterates the importance of peace for sustainable development and notes with hope the progress shown by the recent Framework Agreement. It also emphasises Nagaland's critical role in and responsibility towards environment conservation and preservation as part of India's commitment to the sustainable development agenda.

The report highlights the State's major achievements during the last one and a half decades. The real per capita income in 2000-2001 was around the same as the national average. By 2013-2014, this rose to around 25 percent higher than the national average. The State fares better than, the national average on literacy rates and life expectancy, which suggests improvements in educational and health attainments.

The sustainable development agenda revolves around the principle of "leaving no one behind". The Nagaland State Human Development Report indicates that while substantial progress has been made on a number of parameters, addressing regional and gender disparities is important. It identifies districts that need special attention and highlights that political participation of women is essential for gender equality. Sectorally, the report notes infrastructure development and access to livelihoods and income as two major areas of focus.

The Nagaland State Human Development Report provides useful situation analysis, and we hope that findings of the report will be used for planning and budgeting for sustainable and inclusive growth.

We felicitate the Government of Nagaland on the publication of the Nagaland State Human Development Report. We value our strong partnership with the State Government and look forward to supporting the priority efforts outlined in this Report.

JACO CILLIERS
Country Director,
UNDP



NATIONAL INSTITUTION FOR TRANSFORMING INDIA

NITI AAYOG, PARLIAMENT STREET,
NEW DELHI-110001

MESSAGE

The Nagaland Human Development Report provides a comprehensive review of the State on a number of socio-economic parameters. There have been dramatic changes in the collection of statistics and collation as compared to the first Human Development Report published way back in 2004. The NITI Aayog-UNDP project; Human Development towards Bridging Inequalities (HDBI) had scope for preparation of State level Human Development Reports, District Human Development Reports, Regional Human Development Reports, Research based policy advocacy, Capacity Development, Strengthening Statistical Systems and use of Community Monitoring Tools.

The economy of the State of Nagaland has grown at 7-8 percent in real terms over the decade prior to 2014. While the report captures the statistics related to human development, it has also analysed the intra-state disparities which might help planners to ensure sustainable development in the State. Even though Nagaland had impressive improvements in HDI over the decade, the intra-state disparities call for urgent planning to ensure inclusive and sustainable development for the State.

Nagaland being a pure agricultural economy has also shown a changeover in aspects related to urbanization. The report captures the levels of urbanisation in districts of Dimapur and Kohima 2004 onwards. The report has highlighted the inequality in road infrastructure and access to income/livelihood as major parameters that divide the rural and urban districts.

We commend the Government of Nagaland on release of the Nagaland Human Development Report and hope that it is used by planners for developing an inclusive and sustainable development strategy harnessing the State's tremendous growth potential.

12/04/2017



AMITABH KANT
Chief Executive Officer

The first Human Development Report for the State of Nagaland was brought out in the year 2004. It provided an insightful glimpse into the administrative and developmental ethos of the State as well as a snapshot of the human development indices for the districts and the State as a whole. A decade later, a need was felt to bring out the current status of social and economic development in the State in terms of the human development indices resulting in the second Human Development Report for Nagaland.

The statistical data base utilized for the present edition of SHDR has undergone significant improvement. Apart from the availability of data of the Census, 2011, the data obtained by Department of Economics and Statistics (DES) in a comprehensive survey conducted in all the 11 districts of the State and presented in the District Human Development Reports (DHDRs) has been a valuable resource. This has enabled a more robust estimation of the Human Development Indices.

The second SHDR also presents views of stakeholders, including access to services and expectations of the people. The chapter “Voices of the People” summarizes views of stakeholders in each of the districts based on consultations held during the period 2009-2011. This imparts a unique flavour to the SHDR.

The method of calculations of the HDI indices used in 2004 has been maintained to facilitate comparison, subject to data upgradation. In addition, an attempt has been made to assess the state of the forest and environment in the chapter on ‘Forest and Natural Resource Management’.

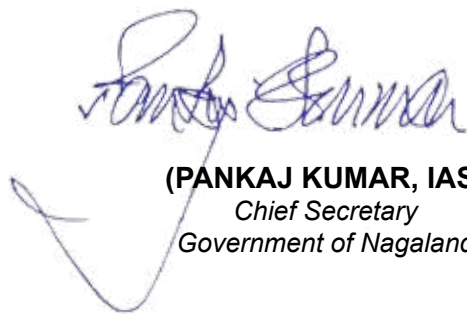
FOREWORD

The Report is written entirely with the State's own resources of data and manpower and hence it is a distinct step forward from 2004. In a sense this process of "indigenization" of the Report was desirable for greater ownership of the Report by the stakeholders as well as to build their capacities. This process reflects partnership of the government, academia and civil society in charting the growth path of the State.

Any effort of this magnitude can only be the outcome of the team work and contribution of the various stakeholders. However, a special mention needs to be made of the efforts put in by Prof. Manoj Pant of Jawaharlal Nehru University, the consultant and also lead author of this Report, and Ms. Kevileno Angami, Secretary, Economics & Statistics and Officer on Special Duty, Planning & Co-ordination who spent many hours in coordinating the efforts of the authors, review committee and the editorial team to give this Report its final shape.

Any SHDR must also constitute a report card on the progress in areas like health, education, income generation. This Report captures the all round progress made by the State in all these areas since 2004. The Report also goes further to indicate that focus must now shift to improving and furthering inclusive development and reducing the regional disparities. I hope that the second SHDR will be utilized as a resource in planning for human development.

Dated: 27th June 2017, Kohima



(PANKAJ KUMAR, IAS)
Chief Secretary
Government of Nagaland

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The Nagaland State Human Development Report (SHDR) brought out in 2004 was the first attempt to assess the status of human development in the State. As a follow-up to this exercise with the support of Government of India and UNDP and with Planning & Co-ordination as the nodal Department in the State, the second SHDR is being brought out under the project 'Human Development towards Bridging Inequalities'. The focus of the Report is on inclusion and sustainable growth to enable tracking and decadal comparison of human development attainments in the State.

The exercise was a challenging proposition given the enormity of the task. However, under the leadership and guidance of the past Chief Secretaries and the dynamic mentorship of the present Chief Secretary, Shri Pankaj Kumar, IAS who is also the Principal Co-ordinator for the project and the dedication of the team of officers and stakeholders the second State Human Development Report could materialise.

The preparation of the Nagaland State Human Development Reports 2016, based on data collected in 2014 was entirely in-house optimising the available human capital within the State. Subject experts from within and outside the Government, researchers and academia from Nagaland University, Non Governmental Organisations and various stakeholders engaged in writing the various chapters of the Report include Shri Alemtemshi Jamir, IAS, Rtd. Chief Secretary, Shri C. J. Ponraj, IAS, Rtd. Chief Secretary, Dr. Anungla Imdong Phom, Joint Director, Department of Under Developed Areas, Dr. Meripeni Ngullie, Associate Professor, Dimapur College, Dr. Anungla Aier, Principal, Science College, Kohima, Dr. B. Kilangla Jamir, Professor, Department of Economics Nagaland University, Lumami, Shri Temjenzulu Jamir Assistant Professor, Department of Economics, Nagaland University, Shri Vengota Nakro, Rtd. Mission Director, Soil and Water Conservation, Er. K. Wapong Longkumer, Editor, Eastern Mirror, Dimapur, Dr. Abraham, former Principal, St. Joseph College, Jakhama, Dr. Nandira Changkija, Rtd. Principal Director, H&FW, Dr. Iris Odyuo, Associate Professor, Sao Chang College, Tuensang, Dr. Buno Legiese, Head of Department of Education, Nagaland University, Shri Neichute Doulo, Entrepreneurs Associates, Ms. Narola Chuba, Nagaland University, Shri Kesonyu Yhome IAS, Deputy Commissioner, Dimapur, Shri Imti Longchar, Researcher, Shri David Sachu, Researcher, Dr. Nishena Nekha, Associate Professor, Wankhao College, Ms. Imtienla Ao, IFS, Secretary, Environment & Forest and Ms. Ella Mary of Yard and Ms. Manenkala Longkumer. The Report is attributed to the analysis, findings and research of the

above team of authors and researchers who were responsible for sourcing and generating data and documents and in organising series of focussed group discussions to bring out the final Report. Their enthusiastic participation and efforts to bring out the Report is gratefully acknowledged. Here mention must be made of Shri Alemtemshi Jamir, IAS, Rtd. Chief Secretary for spelling out the Way Forward for the State.

Prof. Manoj Pant, Dean of Students Jawaharlal Nehru University, New Delhi who was also the Lead Author conceptualised the format of the Report and provided technical inputs and guidance for the various chapters besides authoring the chapter on Human Indices. We appreciate his contributions and his availability for the Human Development projects inspite of his busy schedule.

Mention must also be made of Shri H.K. Khulu, IAS Rtd. Additional Chief Secretary & Development Commissioner for initialising the project during his tenure. Acknowledgement is also due to Smt. Banuo Z. Jamir, IAS Rtd. Chief Secretary for advancing the value of the project by organising a series of consultations with the various stakeholders during her tenure as Chief Secretary of the State. And as Peer Review Member, the critical inputs and suggestions given by her led to review which resulted in cohesiveness and factual correctness of the Report.

The commitment of the Core Committee headed by Chief Secretary, Pankaj Kumar, IAS and its members Shri Abhijit Sinha, IAS, Home Commissioner, Shri K. D. Vizo, ITS, Commissioner & Secretary, IT & C and Smt. Imtiena Ao, IFS Secretary Forest in reviewing the draft chapters resulting in enhancement in the quality of the Report deserves appreciation.

The editorial team comprising of Smt. Kevileno Angami, Secretary, Economics & Statistics and OSD Planning, Smt. Smita Sarangi, IAS Additional Secretary, Shri Rajesh Soundarajan, IAS, Deputy Commissioner, Kohima, Shri Mohammad Shihab, IAS Joint Secretary, Smt. Sutoli Anar, Assistant Professor, Ms Holivi Choppy, Statistical Officer and Smt. Shikali Wotsa who extensively proof read the chapters and ensured continuity and readability of the Report is gratefully acknowledged.

Most of the statistical data was made available by the State Economics & Statistics Department and we acknowledge the contribution of Shri Y. Sacheo Ovung, Director, Shri Neidilhou Angami, Deputy Director, Shri Charles N. Kikon, Assistant Director and Ms. Holivi Choppy, Statistical Officer for their co-operation and assistance. Special mention must be made of the contribution of Ms. Holivi Choppy for re-visiting the tables and graphs to make them compatible.

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It would be incomplete without recognising the secretarial support provided by the team of officers in the Human Development Cell in Planning & Co-ordination Department. Co-ordination with the GOI- UNDP team, meetings with the authors and coordination of the chapter placements was done by this team. Particular mention must be made of Smt. Shikali Wotsa, Steno and Ms. Vikehienuo Zhasa, Evaluation Inspector for their tireless dedication and the meticulous secretarial assistance in finalising the Report.

The Report would not have materialised without the investment of resources and handholding provided by UNDP-GOI and the support of the Government of Nagaland. We gratefully acknowledge their contribution.

On behalf of the State Government, I wish to thank the team mentioned above and all stakeholders for willingly taking up the challenge in bringing out the second Nagaland State Human Development Report 2016. I hope the Report will be extensively used as a tool for bridging gaps in human development attainments and for achieving holistic growth in the State.



(R. B. THONG, IAS)

*Additional Chief Secretary &
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State Co-ordinator for the HDBI Project*

Kohima, 19th May 2017





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ABBREVIATIONS

ABL	: Activity Based Learning
ADC	: Additional Deputy Commissioner
AEC	: Adult Education Centre
AIDS	: Acquired Immuno Deficiency Syndrome
ANC	: Antenatal Check-up
ANM	: Auxiliary Nursing and Mid-wifery
APMC	: Agricultural Produce Marketing Committees
APO	: Assistant Political Officer
ARSH	: Adolescent Reproductive Sexual Health
ART	: Anti Retro-Viral Therapy
ARWSP	: Accelerated Rural Water Supply Programme
AS	: Alternative Schooling
ASER	: Annual Status of Education Report
ASHAs	: Accredited Social Health Activists
ATMA	: Agricultural Technology Management Agency
AWC	: Angangwadi Centre
AYUSH	: Ayurveda, Yoga, Unanim Siddha, Homeopathy
B.Ed	: Bachelor of Education
BPL	: Below Poverty Line
BMS	: Basic Minimum Service
BRO	: Border Roads Organization
BSNL	: Bharat Sanchar Nigam Limited
CAL	: Computer Aided Learning
CBR	: Crude Birth Rate
CDR	: Crude Death Rate
CEDAW	: Convention to Eliminate All Forms of Discrimination Against Women
CGS	: Central Generation Stations
CHC	: Community Health Centre
CIC	: Community Information Centre
CL	: Customary Laws
CME	: Continuing Medical Education
CMO	: Chief Medical Officer
CPTE	: Certificate for Primary Teachers Education
CSC	: Community Service Centre
CSS	: Centrally Sponsored Schemes
CWSN	: Children with Special Needs
DA	: District Administration
DAO	: District Agricultural Office
DAP	: Development Action Plan
DAPCU	: District AIDS Prevention and Control Unit

ABBREVIATIONS

DC	: Deputy Commissioner
DCP	: Disease Control Program
DEO	: District Education Officer
DES	: Directorate of Economics and Statistics
DH	: District Hospital
DHDR	: District Human Development Report
DHO	: District Horticulture Officer
DHQ	: District headquarters
DIC	: District Industrial Centre
DIC	: Drop In Centre
DIET	: District Institute of Education and Training
DISE	: District Information System on Education
DLM	: District Literacy Mission
DNB	: Diplomate in National Board
DM	: District Magistrate
DMA	: District Mission Authority
DMC	: District Municipal Council
DMCS	: District Microscopic Centre
DONER	: Ministry of Development of North Eastern Region
DOTS	: Directly Observed Therapy Shortcourse
DPSP	: Directive Principles of State Policy
DRDA	: District Rural Development Agency
DWSM	: District Water and Sanitation Management
EA	: Entrepreneurs Associates
EAC	: Extra Assistant Commissioner
EBB	: Educationally Backward Block
EBRC	: Education Block Resource Centre
EGS	: Education Guarantee Scheme
EI	: Electricity Index
ENSF	: Eastern Naga Students' Federation
ES	: Executive Secretary
FDA	: Forest Development Agency
FRU	: First Referral Units
FTK	: Field Testing Kit
FUO	: Fever of Unknown Origin
GAD	: Gender and Development
GDI	: Gender Development Index
GDP	: Gross Domestic Product
GER	: Gross Enrolment Ratio
GHS	: Government High School

ABBREVIATIONS

GHSS	: Government Higher Secondary School
GIA	: Grant In Aid
GMS	: Government middle school
GNM	: General Nursing and Mid-wifery
GPK	: Government Polytechnic Kohima
GPS	: Government Primary School
GSDP	: Gross State Domestic Product
GER	: Gross Enrolment Ratio
GDP	: Gross Domestic Product
Ha	: Hectare
HAP	: Health Action Plan
HBE	: Home Based Education
HCs	: Health Committees
HCMC	: Health Center Management Committee
HD	: Human Development
HDI	: Human Development Indices
HDR	: Human Development Report
HIMS	: Health Information Management System
HIV	: Human Immuno - Deficiency Virus
HMIS	: Health Management Information System
HPI	: Human Poverty Index
HQ	: Headquarters
HSLC	: High School Leaving Certificate
HSSLC	: Higher Secondary School Leaving Certificate
HSS	: HIV Sentinels' Surveillance
IAY	: Indira Awas Yojana
ICAR	: Indian Council of Agricultural Research
ICDs	: Integrated Child Development services
ICT	: Information Communication and Technology
ICTC	: Integrated Counselling Testing Centre
ICU	: Intensive Care Unit
ID	: Institutional Delivery
IDRC	: International Development Research Centre
IDSP	: Integrated Disease Surveillance Project
IDUs	: Injecting Drug Users
IEC	: Information Education Communication
IED	: Inclusive Education For Disabled
IETC	: Integrated Extension Training Centre
IGNOU	: Indira Gandhi National Open University
IHHL	: Individual House Hold Latrine
II	: Infrastructure Index

ABBREVIATIONS

IMP	: Irrigation Master Plan
IMPs	: Indigenous Medical Practitioners
IMR	: Infant Mortality Rate
IPC	: International Potato Centre
IPHS	: Indian Public Health System
IPM	: Integrated Pest Management
ISTE	: In-Service Teacher Education
IT	: Information Technology
ITES	: Information Technology Enabled Services
ITI	: Industrial Training Institute
IUCD	: Intra Uterine Contraceptive Device
IUD	: Intra Uterine Device
JE	: Japanese Encephalitis
JFMC	: Joint Forest Management Committee
JLGs	: Joint Liability Groups
JMP	: Joint Monitoring Programme
JNV	: Jawarhar Navodaya Vidyalaya
JSSK	: Janani Shishu Suraksha Karyakaram
JSY	: Janani Suraksha Yojana
JV	: Joint Venture
KCC	: Kisan Credit Card
KGBV	: Kasturba Gandhi BalikaVidyalaya
KOMUL	: Kohima District Milk Producers' Union Limited
KVK	: Krishi Vigyan Kendra
LAC	: Linked Art Centre
LMP	: Licentiate in Medical Practice
LPCD	: Litres Per Capita Per Day
LPS	: Lower Primary School
MC	: Management Committee
MC	: Municipal Council
MCG	: Matching Cash Grant
MDG	: Millennium Development Goals
MDM	: Mid Day Meal
MGNREGA	: Mahatma Gandhi National Rural Employment Guarantee Act
MMR	: Maternal Mortality Rate
MMU	: Mobile Medical Unit
MO	: Medical Officer
MOU	: Memorandum of Understanding
MOSPI	: Ministry of Statistics and Program Implementation

ABBREVIATIONS

MIRP	: Mini Iron Removal Plant
MIT	: Ministry of Information Technology
MSMEs	: Micro Small and Medium Enterprises
MT	: Metric Tonnes
MU	: Metering Unit
MW	: Megawatt
NAP	: National Afforestation Programme
NABARD	: National Bank for Agriculture and Rural Development
NBA	: Nirmal Bharat Abhiyan
NBHM	: Nagaland Bee-keeping and Honey Mission
NBSE	: Nagaland Board of School Education
NCF	: National Curriculum Framework
NCPSI	: Nagaland Communitisation of Public Services and Institutions
NCRB	: National Crime Records Bureau
NCTE	: National Council for Teachers Education
NDDP	: Net District Domestic Product
NE	: North East
NEC	: North East Circle
NEGP	: Nagaland Electronic Government Programme
NEFA	: North East Frontier Agency
NERLP	: North East Rural Livelihood Project
NFHS	: National Family Health Survey
NEIIPP	: North East Industrial and Promotion Policy
NEPED	: Nagaland Empowerment of People through Economic Development
NER	: North Eastern Region
NER	: Net Enrolment Ratio
NFHS	: National Family & Health Survey
NH	: National Highway
NHHD	: Nagaland Handloom & Handicrafts Development
NHTA	: Naga Hills Tuensang Area
NIDC	: Nagaland Industrial Development Corporation
NIRMSC	: Nagaland Industrial Raw Material & Supply Corporation
NKVIB	: Nagaland Khadi & Village Industrial Board
NLA	: Nagaland Legislative Assembly
NLCPR	: Non Lapsable Central Pool of Resources
NRHM	: National Rural Health Mission
NGO	: Non Governmental Organization
NIC	: National Informatics Centre
NLEP	: National Leprosy Eradication Programme
NPCB	: National Programme for Control of Blindness
NPSC	: Nagaland Public Service Commission
NRBC	: Non-Residential Bridge Course

ABBREVIATIONS

NSACS	: Nagaland State AIDS Control Society
NSAPCC	: Nagaland State Action Plan on Climate Change
NSC	: National Statistical Commission
NSCB	: Nagaland State Co-operative Bank
NSDP	: Net State Domestic Product
NSSO	: National Sample Survey Organization
NST	: Nagaland State Transport
NSWC	: Nagaland State Women Commission
NTFP	: Non Timber Forest Product
NRBC	: Non-Residential Bridge Course
NRDWP	: National Rural Drinking Water Project
NRHM	: National Rural Health Mission
NUEPA	: National University of Educational Planning and Administration
NVBDCP	: National Vector Borne Disease Programme

OPD	: Out Patient Department
OSC	: Out of School Children
OT	: Operation Theatre
OST	: Other Substitute Therapy

PCI	: Per Capita Income
PCO	: Public Call Office
PD	: Postal Department
PHC	: Primary Health Centre
PHED	: Public Health Engineering Department
PLHIV	: People Living With HIV
PMEGP	: Prime Minister Employment Guarantee Programme
PMFP	: Promotion of Micro Financing Program
PMGY	: Pradhan Mantri Gramodaya Yojana
PO	: Post Office
PPP	: Private Public Partnerships
PPT	: Provisional Population Totals
PRA	: Participatory Rural Appraisal
PSC	: Phom Student's Conference
PSTE	: Pre-Service Teacher Education
PTR	: Pupil Teacher Ratio
PWD(R&B)	: Public Works Department (Roads and Bridges)

QoS	: Quality of Service
Qt	: Quintal

RAP/ILP	: Restricted Area Permit/Inner Line Permit
RBC	: Residential Bridge Course

ABBREVIATIONS

RBI	: Reserve Bank of India
RCH	: Reproductive and Child Health
R&D	: Research and Development
RDI	: Road Infrastructure Index
RGNDWM	: Rajiv Gandhi National Drinking Water Mission
RKS	: Rogi Kalyan Samiti
RMSA	: Rastriya Madhiyamik Shiksha Abhiyan
RNTCP	: Revised National Tuberculosis Control Programme
RO	: Revenue Officer
RTE	: Right to Education
RTRWH	: Roof Top Rain Water Harvesting
SARS	: State Agricultural Research Station
SBI	: State Bank of India
SBI	: Spice Board of India
SC	: Sub-Centre
SCERT	: State Council of Educational Research and Training
SDEO	: Sub-Divisional Education Officer
SDO	: Sub-Divisional Officer
SG	: State Government
SGSY	: Swarnjayanti Gram Swarozgar Yojana
SHBN	: Statistical Handbook of Nagaland
SHDR	: State Human Development Report
SHG	: Self Help Group
SHP	: School Health Programme
SIB	: Subsidiary Intelligence Bureau
SIS	: Sub Inspectors of Schools
SMS	: Senior Medical Specialist
SP	: State Plan
SPM	: Single Point Metering
SSA	: Sarva Shiksha Abhiyan
SSI	: Small Scale Industries
SSS	: State Sponsored Scheme
STD	: Sexually Transmitted Disease
STI	: Sexually Transmitted Infection
SUs	: Students' Unions
SWCTRC	: Soil and Water Conservation Training and Research Centre
TB	: Tuberculosis
TC	: Town Committee
T&D	: Transmission & Distribution
TEK	: Traditional Ecological Knowledge
TFR	: Total Fertility Rate

ABBREVIATIONS

TFC	: Twelfth Finance Commission
TFC	: Thirteenth Finance Commission
TI	: Target Intervention
TLI	: Transformative Livelihood Intervention
TLM	: Teaching & Learning Equipment
TRC	: Terrace Rice Cultivation
TSC	: Total Sanitation Campaign
TWB	: Traditional Well & Water Bodies
T&WRC	: Terrace and Wet Rice Cultivation
UDA	: Urban Development Agency
U/DISE	: Unified/District Information System for Education
UEE	: Universalization of Elementary Education
UIP	: Universal Immunization Programme
UNDP	: United Nations Development Programme
VCs	: Village Councils
VDB	: Village Development Board
VEMB	: Village Electricity Management Board
VEC	: Village Education Committee
VHC	: Village Health Committees
VDBs	: Village Development Boards
VEC	: Village Education Committee
VEMBs	: Village Electricity Management Boards
VHC	: Village Health Committee
VHND	: Village Health and Nutrition Day
WATSAN	: Water and Sanitation Committees
WIFS	: Weekly Iron Folic Acid Supplementation
WEC	: Ward Education Committee
WPR	: Work Participation Rate
WHO	: World Health Organization
WLL	: Wireless in Local Loop
WQMS	: Water Quality Monitoring and Surveillances
WR	: Women Reservation
WSSO	: Water and Sanitation Support Organization
YES	: Youth Employment System (Erstwhile Summit)

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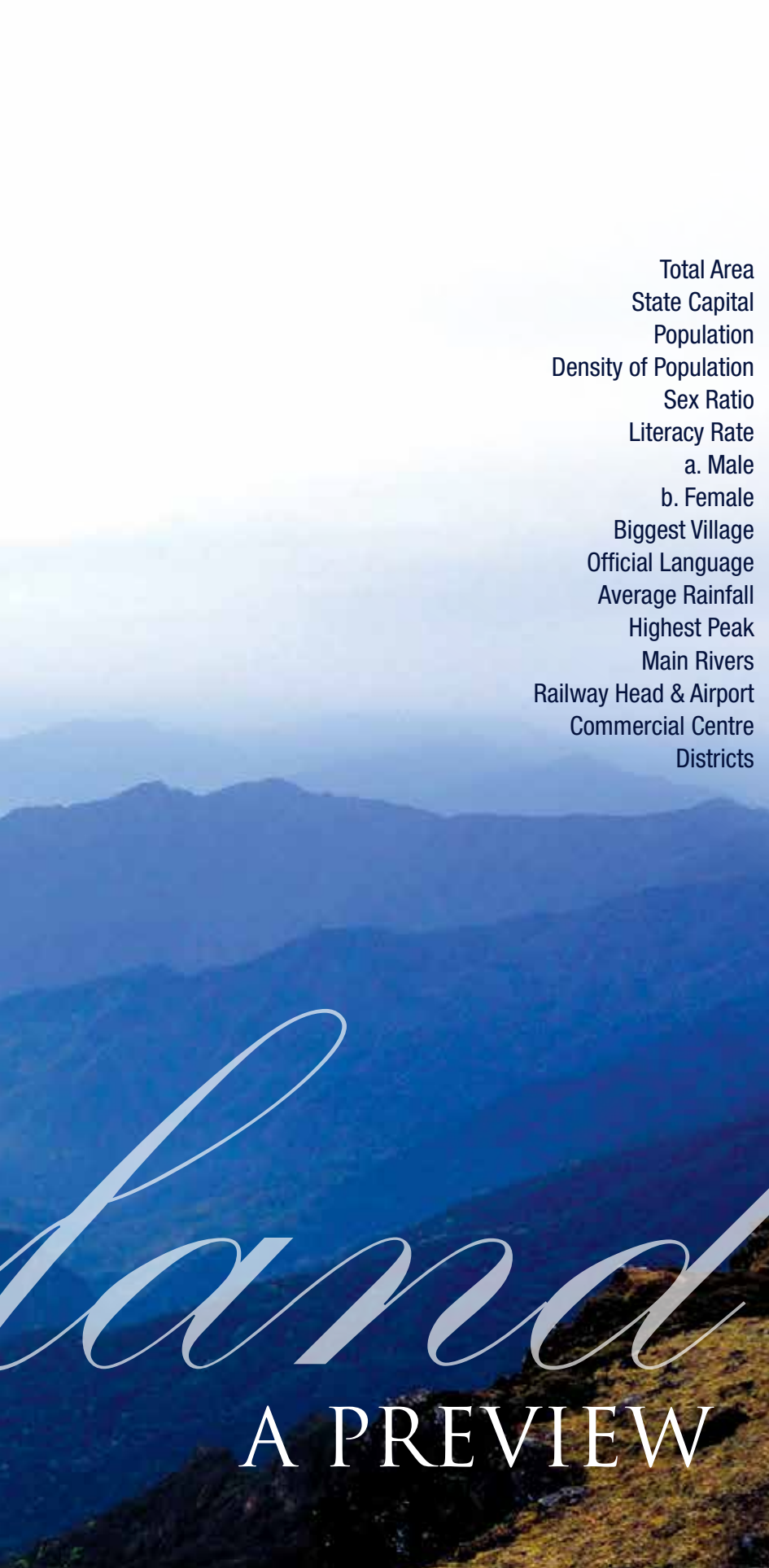
SECTION 1

Chapter 1 : Overview

Chapter 2 : Profile and Review

Chapter 3 : Governance

Nagasaki



NAGALAND

Total Area	: 16,579 Sq. Kms
State Capital	: Kohima (1,444.12 mtrs. Above Sea Level)
Population	: 19,78,502 Persons (Census 2011)
Density of Population	: 119 Per Sq. Km
Sex Ratio	: 931 F : 1000 M
Literacy Rate	: 79.55 Percent
a. Male	: 82.75 Percent
b. Female	: 76.11 Percent
Biggest Village	: Kohima Village
Official Language	: English
Average Rainfall	: 2500 mm
Highest Peak	: Saramati Peak, Kiphire District (3840 mtrs.)
Main Rivers	: Dhansiri, Doyang, Dikhu, Tizu, Lanye
Railway Head & Airport	: Dimapur
Commercial Centre	: Dimapur
Districts	: 11(Eleven)

TRIBES OF NAGALAND

LIST OF SCHEDULES TRIBES

- i. Garo
- ii. Kachari
- iii. Kuki
- iv. Mikir
- v. Naga

RECOGNISED NAGA TRIBES

- i. Angami
- ii. Ao
- iii. Chakhesang
- iv. Chang
- v. Khamniungan
- vi. Konyak
- vii. Lotha
- viii. Phom
- ix. Pochury
- x. Rengma
- xi. Sangtam
- xii. Sumi
- xiii. Yimchungru
- xiv. Zeliang





OVERVIEW

A little more than a decade has passed since the publication of the last State Human Development Report (SHDR) in 2004. Yet there has been many changes in the State since then, some of them quite dramatic. For one, the collection of statistics and their reliability has improved quite dramatically. To take one example, district level data collection and collation is now better compared to 2004 when no such data was available. Thus, it was possible, between 2008 and 2013 to generate District Human Development Reports (DHDRs). Second, local capacities have improved enormously. The present Report is prepared, edited and printed with resources from within the State drawn from the bureaucracy, academia and civil society so that ownership of the Report is ensured.

In many ways, a long distance has been travelled since the last SHDR. For one, following the peace initiative of 1997, one now has more than a decade to observe the effects of peace in the State. This development has been so important that a section on Conflict and Peace has been included in the Profile chapter. Second, since 2004 the eight districts have been further sub-divided into eleven with two new ones being carved out of the eastern districts of Tuensang and one from Kohima so that comparability over time is a little difficult. However, while this obviously applies to district level statistics, the overall picture does give some indications of the extent of progress at the State level. Finally, it must be recognized that Nagaland, along with other hill states, has a major responsibility in national environmental issues. This becomes particularly important in the context of the current international multilateral discussions on climate change.

The extent of forest cover in Nagaland will go a long way in India's contribution to controlling global environmental degradation. While the calculation of the various Human Development Indices does not factor in environmental issues, a chapter on Environment has been included in the SHDR to note Nagaland's role in this context. This has also been done in the various DHDRs already released.

As is well known, the Human Development Index (HDI) has three components: Income and Livelihood (HDI), Gender Issues (GDI) and Poverty Alleviation (HPI). Here, income is a function not only of the growth of the Gross State Domestic Product (GSDP) but of enabling factors like literacy, education and longevity (life expectancy plus the infant mortality rate). In the same way, the Gender Development Index (GDI) takes account of how inequalities in educational opportunities, health and income between males and females have changed overtime. Finally, the Human Poverty Index (HPI) recognizes that progress should also note how enabling factors like level of poverty and access to basic amenities have changed over time. The various chapters in this SHDR have been assembled to reflect details of these issues while the calculations of these indices and some broad summary is given in Chapter 12. However, it must be recognised that mere overall development is not enough and it is necessary to note how inclusive this development has been in the sense of district wise changes in the various indicators. In this Overview we will focus on this latter issue.

The overall growth in GSDP has been fairly impressive. The economy grew at about 7-8 percent in real terms over the decade prior to 2014 and this is commendable. In 2000-2001, Nagaland had about the same real per capita income as the national average. By 2013-2014 its per capita income was about 25 percent higher than the national average. Second, other indicators too have shown a healthy growth with literacy up to about 80 percent and life expectancy at around 73, both being well above the national averages. In addition there has been impressive growth in road and telecommunication infrastructure, while urbanization now stands at around 29 percent up from 17 percent in 2001.

The overall development also reflects in the general rise in all the three HDIs since about 2004. The aggregate HDI index at .63 for 2011 compares favourably with the all India figure of about .61 in 2014.

Yet, what these overall developments hide is the fact that there is considerable intra state disparity in the spread of the benefits of development. Here the major contrast is between the eastern districts of Kiphire, Longleng, Tuensang and Mon and those centred around Kohima and Dimapur. Tuensang (from which the new district of Kiphire and Longleng were carved out in 2008) and Mon remain at the bottom in terms of all three indices and this picture has not changed since 2004. In fact, the gap between these districts and the others has been widening over time. While the HDI numbers hide many small details, the causes for this growing regional disparities becomes clear when one looks at some macro indicators.

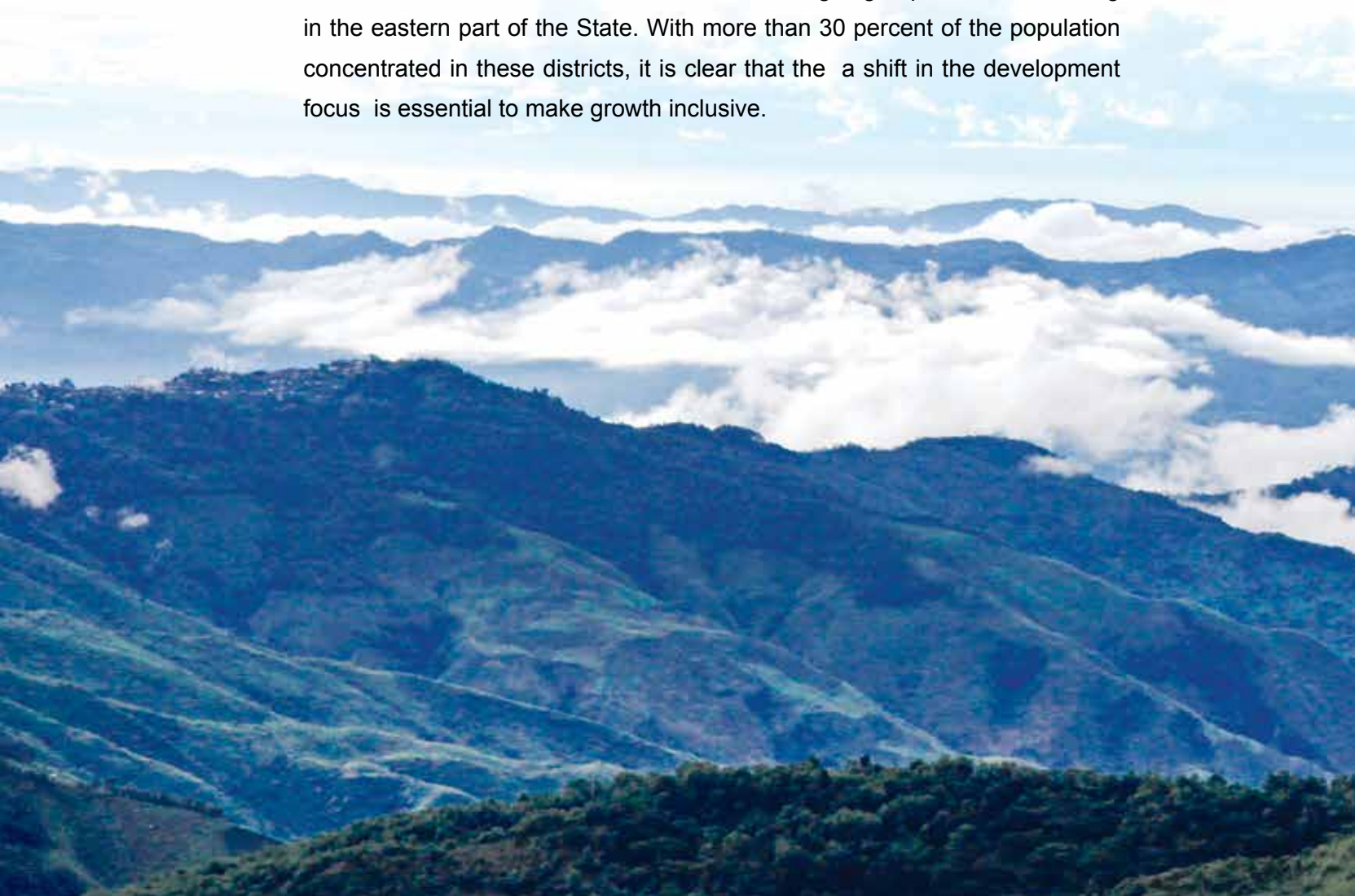
Consider urbanization. It must be recognized that one indicator of economic development is the changeover from a purely subsistence agricultural economy to one where there is growth in the tertiary and secondary sectors. This is normally reflected in the level of urbanization. Most developed districts of Dimapur and Kohima and those centered around them have seen their levels of urbanization change dramatically since 2004. Thus, in 2011 Dimapur had an urbanization ratio of almost 35 percent which is close to the national average. Yet the eastern district of Mon is still almost completely rural. The situation in other eastern districts like Tuensang is only slightly different from Mon.

This inequality is largely a function of two main factors. One, road infrastructure and, two, access to income and livelihood. While the overall growth in road length for the State has been impressive, it is seen that the growth in rural roads remains poor. If one adds to this the poorer quality of rural roads it becomes clear why districts like Mon and Tuensang have not had the same access to means of livelihood as the other districts.

Poor infrastructure also limits access to primary health centres and markets. The latter indicates why agriculture in these districts has remained largely subsistence since possibilities of raising incomes by producing for the markets are limited.

The unequal development in the State is also reflected in some other indicators. Thus, in Mon the literacy rate at 57 percent is well below the State average of about 80 percent. Similarly, the worker participation rates in Mon and Tuensang is among the lowest in the State. Poor access to roads and markets along with an unfavourable enabling environment for the population of these districts go far in explaining their backwardness. It also explains why the rural population has remained at the subsistence level and seems unwilling to respond to growth with greater movement to commercial crops and non-agricultural rural occupations.

Nagaland has made impressive improvements in its Human Development Indices over the last decade or so. Yet, this hides the fact that this growth is not reflected in the data for districts like Mon, Longleng, Kiphire and Tuensang in the eastern part of the State. With more than 30 percent of the population concentrated in these districts, it is clear that the a shift in the development focus is essential to make growth inclusive.







PROFILE AND REVIEW

INTRODUCTION

Nagas are an indigenous people, with their homeland stretching along the north eastern Indian states of Assam, Manipur, Arunachal Pradesh and north western Myanmar (Burma). Nagaland was created out of the Naga Hill areas of Assam and North Eastern Frontier Agency (NEFA) in 1963 becoming the 16th State of the Indian Union. The State consists of eleven administrative districts, namely, Kohima, Dimapur, Mokokchung, Wokha, Zunheboto, Longleng, Kiphire, Tuensang, Mon, Peren and Phek, with 144 sub-divisions, 26 towns and 1428 villages as per 2011 Census.

LOCATION

Nagaland lies between 25°10' N and 27°4' N latitude and 93°20' E and 95°15' E longitude in the northern extension of the Arakan Yoma ranges. Barail and Patkai are the main hill ranges. Nagaland is largely a mountainous State with altitude rising from the Brahmaputra Valley in Assam to an elevation of 3840 metres at Mount Saramati. The State has rich variety of forest and natural resource cover due to its unique geographical location and climatic conditions.

DEMOGRAPHY

Spread over an area of 16,579 square kilometers, the population of Nagaland is 19,78,502 out of which 71.14 per cent of the population reside in rural areas and 28.86 per cent in urban areas as per 2011 Census. Among the districts, Dimapur has the largest population with 19.14 per cent, followed by Kohima at 13.54 per cent. The least populated district is Longleng with 2.55 per cent. Total population of children in 0-6 age group was 14.72 per cent. The State has an average population density of 119 which is much lower than the national average of 382 per sq.km. In 2001, the density of Nagaland was 120 per sq.km, while the national average was 324 per sq.km. The Total Fertility Rate (TFR) as per the National Family Health Survey (NFHS-3) was 3.77 in 2005-2006. In the 11th Plan, the State's target of population replacement was 2.9.

Box 2.1: Nagaland at A Glance

Total Area	16,579 <i>sq.km</i>
State Capital	Kohima (1,444.12 m above Sea level)
State Boundaries	East - Myanmar and Arunachal Pradesh West - Assam North - Assam and Arunachal Pradesh South - Manipur
Population	19,78,502 (Census 2011)
Density of Population	119 per <i>sq.km</i>
Sex Ratio	931 Female : 1000 Male
Literacy Rate	79.55 %
Male	82.75 %
Female	76.11 %
Districts	1. Dimapur 2. Kiphire 3. Kohima 4. Longleng 5. Mokokchung 6. Mon 7. Peren 8. Phek 9. Tuensang 10. Wokha 11. Zunheboto
Number of Villages	1428 (Census 2011)
Number of Blocks	52
Number of Census Towns	26
Number of Sub-divisions	144
Biggest Village	Kohima Village
Official Language	English
Average Rainfall	2500 mm
Highest Peak	Mt. Saramati in Kiphire District - 3840 mtrs
Other Important Peaks	Mt. Japfu, in Kohima District - 3015 mtrs Mt. Zanibou, in Phek District - 2750 mtrs Mt. Kapamodzü, in Phek District - 2750 mtrs
Forest Cover	13,318 <i>sq.km</i> (80.33% of State's Geographical Area)
Main Rivers	Dhansiri, Doyang, Dikhu
Railway Head	Dimapur
Airport	Dimapur
Seasons	(a) Heavy Rain - May to August (b) Occasional - September to October (c) Dry Season - November to April
Commercial Centre	Dimapur

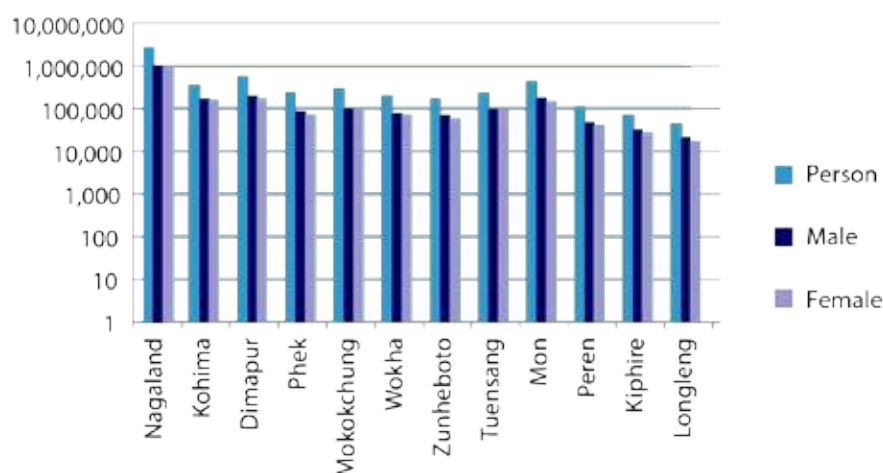
POPULATION DECADAL GROWTH

Nagaland recorded a high population growth rate, increasing from 73.55 per cent in 1961-1971 to 50.05 per cent in 1971-1981 to 56.08 per cent during 1981-1991, which again increased to 64.41 per cent during 1991-2001. However during 2001-2011, the State witnessed a negative growth rate of -0.58 percent which was a first in the history of Census in Nagaland.

The State's population declined from 1,990,036 in 2001 to 1,978,502 in 2011, a decline of 11534 persons. This unusual pattern may be attributed to the inconsistencies in the successive Censuses. "The 2001 Census was related to the expected loss of political representation due to impending delimitation, whereas deflation of population in the Census of 2011 is related to the inflation in the preceding decade" (Ankush Agrawal and Vikas Kumar 2012:55-56). Nagaland contributes 0.16 percent to India's total population and ranks 25th in the total population among Indian states.

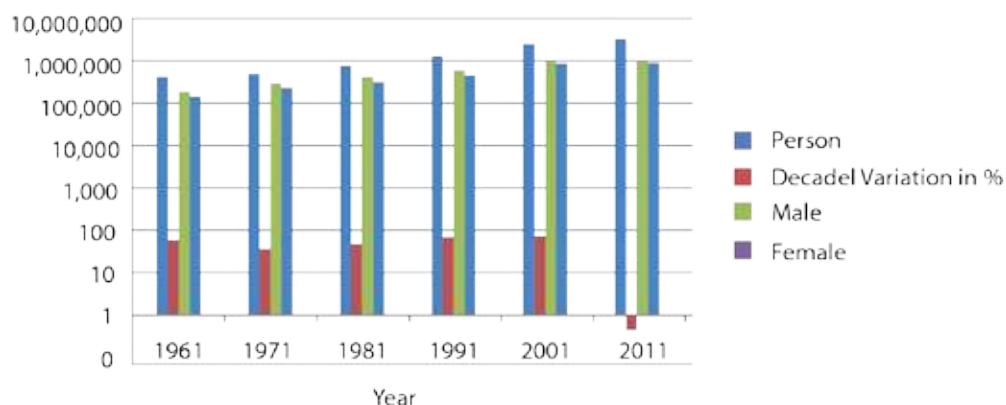
During Census 2011, Dimapur had the highest share of population comprising of 19.14 per cent, followed by Kohima with 13.54 per cent, Mon with 12.64 per cent and Mokokchung and Tuensang with equal share of 9.80 per cent. Meanwhile, Longleng has the smallest share in population with only 2.55 per cent followed by Kiphire with 3.74 per cent (Figure 1.1).

Figure No.1.1: District-wise Share of Population



Source: Census 2011

Figure 1.2: Population Decadal Growth Variation (in%)



Source: Statistical Handbook 2013

RURAL-URBAN DISTRIBUTION

As per Census 2011, Nagaland's rural population with 1,407,536 outnumbered urban population of 570,966. However, the level of urbanization in the State indicated an increasing trend from 15.54 per cent in 1981 to 17.28 percent in 1991 to 17.02 per cent in 2001 to 28.86 percent in 2011. (Census of India). During 2011 Dimapur had the highest urban population with 197,869 persons constituting 34.26 per cent of the total urban population of the State. While Mon had the highest rural population with 215,816 persons constituting 15.33 per cent of the total rural population of the State. Meanwhile, Longleng recorded the lowest proportion of both rural and urban population with 42,871 and 7,613 persons respectively and accounting for 3.04 per cent of the total rural population and 1.33 per of the total urban population of the State.

The State's rural population during 1991-2001 was 82.77 percent and its urban population 17.23 percent. During 2001-2011, its rural population decreased to 71.14 percent, whereas urban population increased to 28.86 percent. These figures indicate rural-urban migration fueling urbanization, especially in Dimapur and Kohima. Generally rural-urban migration is caused due to availability of better public utility services and employment avenues in the urban areas.

Box 2.2: Demographic Profile of Nagaland

Sl	Particulars	2001	2011
1.	Total Population	1990036	1978502
2.	Decennial Growth of Population(%)	64.61	-0.58
3.	Density of Population (per. sq. km)	120	119
4.	Percentage of Rural Population	82.26	71.14
5.	Growth of Urbanisation(%)	17.02	28.86
6.	Literacy Rate (%)	67.11	79.55
7.	Literacy Rate (Male)(%)	71.8	82.75
8.	Literacy Rate (Female)(%)	61.9	76.11
9.	Sex Ratio (Female per 1000 Males)	909	931
10.	Percentage of Workers	42.74	49.24

Source: Census 2011

DISTRICT - WISE LITERATE POPULATION AND LITERACY RATE

Literacy rate in Nagaland has risen to 79.55 percent as per 2011 Census which is above the national average of 72.98 percent. Male literacy stands at 82.75 percent and female literacy at 76.11 percent, which is also above the national average of 82.14 percent and 65.5 per cent respectively. In 2001, literacy in Nagaland stood at 67.11 per cent, with male literacy at 71.8 per cent and female literacy at 61.9 per cent. The gender gap is almost 6.60. percent in the State. Although Nagaland has considerably improved its literacy ratings with about 80 percent in 2011, gross disparity still exists between districts in terms of literacy. While Mokokchung recorded a high literacy rate with 91.62 percent followed by Wokha with 87.69 percent, Mon registered a literacy rate of 56.99 percent, an increase of only 14.77 per cent over the decade.

CULTURE AND HISTORY

The Nagas belong to multi-ethnic groups and sub-groups. Each group has its distinct language and well demarcated ethnic territory. On account of the prevalence of headhunting in the past, Naga villages were mostly established on ridges or hill tops for security reasons. Although, they do not have a common language or dialect, they have similar cultures and traditions. In Nagaland, there are 14 major Naga tribes viz, Angami, Ao, Sumi, Lotha, Rengma, Chakhesang, Khiamniungan, Chang, Konyak, Phom, Sangtam, Yimchungrü, Pochury, Zeliang and numerous sub-tribes.

Every aspect of the Naga life is entwined with agriculture. The Naga rituals, ceremonies and festivals are associated with the different aspects of agriculture. Amongst the Nagas, every man is a potential artist. Largely self-reliant, they built their own houses, weave and carve functional household articles. The art of tattooing, pottery and textile weaving are women's craft, while metal work, basketry and woodcarving are considered to be work of men. Artisans who specialise in their field of work are called upon to weave the intricate design and motifs of textiles, craft the weapons and ornaments and to undertake large-scale village projects which include building of the morung, village gates and the carving of the log-drum.

Until the advent of the British in the 1830s, the Nagas had little contact with the outside world apart from cultural contact with the Ahoms, who ruled Assam from the 13th to early 19th century. The British entered the Naga Hills after executing the Treaty of Yandabo with Burma (Myanmar) in 1826 through which Manipur, Assam and the Jaintia Hills became part of British India. Persistent raids carried out by Naga groups "on the new British subjects in the Assamese villages and the tea plantations in 1851, prompted a course of retaliation and ultimately, the successive capture of the Naga territories" (Michael Oppitz et. al 2008:12). In 1918, the first political organization 'the Naga Club' was established by the Nagas. In 1929, it submitted a memorandum to the Simon Commission stating that "the Nagas be under the control of the British and be excluded from the proposed changes to the Indian Constitution" (Charles Chasie and Sanjoy Hazarika 2009:3).

By 1946, the Naga resistance movement evolved into the Naga National Council (NNC) which demanded that they should be allowed to have their own independence based on its unique history, cultural practices and ethos. After India's independence in 1947, the Indian Government, on the basis of "its right as inheritor of British colonial power, refused the Naga case" (Chasie and Hazarika 2009:5). However, demands for "a Naga sovereign homeland intensified after the Government of India launched a series of military operations around the early fifties" (Dolly Kikon 2008:102). Subsequently, Nagaland was declared the 16th State of the Indian Union in 1963.

Box 2.3: Tribes and Festivals of Nagaland

Tribe	Sub-division/District	Main Festival	Celebrated during
Angami	Kohima	<i>Sekrenyi</i>	February
Ao	Mokokchung	<i>Moatsu</i>	May
Chakhesang	Phek	<i>Sükrünye</i>	January
Chang	Tuensang	<i>Naknyulem</i>	July
Kachari	Dimapur	<i>Bushu</i>	January
Khamniungan	Noklak in Tuensang	<i>Tsoküm</i>	October
Konyak	Mon	<i>Aoleang Monyu</i>	April
Kuki	Dimapur; Peren	<i>Mimkut</i>	January
Lotha	Wokha	<i>Tokhu Emong</i>	November
Phom	Longleng	<i>Monyu</i>	April
Pochury	Meluri in Phek	<i>Yemshe</i>	October
Rengma	Tseminyu in Kohima	<i>Ngada</i>	November
Sangtam	Kiphire	<i>Amongmong</i>	September
Sumi	Zunheboto	<i>Tuluni</i>	July
Yimchungrü	Shamatore in Tuensang	<i>Medümneo</i>	August
Zeliang	Peren	<i>Meileingi/Langsimngi/ Chegagadi</i>	March/October

Source: Department of Information and Public Relations Nagaland

Box 2.4: Developmental Progress Made during 50 Years of Statehood

Particulars	Unit	1963	2013
Total Length of Roads (<i>Under PWD</i>)	Km	837	14,377.80
Village Connected with Roads (<i>Unsurfaced</i>)	Number	NA	928
Water Supply	No. of Villages/ Habitation	Nil	1500
Generation of Electric Power	MW	0.20	105.13
Villages Electrified	Number	6	1,262
Literacy	Percent	20.2	79.55 (2011 Census)
Life Expectancy	Years	NA	73.4
Primary Schools(Government)	Number	592	1661
Middle/High Schools (Government)	Number	22	961
Government Hospitals	Number	8	14
Dispensaries/Sub-centres	Number	3	546
Hospital Beds	Number	613	2393
Area under Cultivation	000 hectares	-	499.311
Area under Irrigation	000 hectares	1.51	99.790
Foodgrain Production	000 Tonnes	61.82	583.680

Source: Statistical Handbook 2015; UDISE 2013; SHDR 2004

STATE DOMESTIC PRODUCT

At current prices, the Gross State Domestic Product (GSDP) for Nagaland which was Rs.5838.84 crores during 2004-2005 increased to Rs 20099.14 crores during 2014-2015. At constant prices (2004-2005 prices), the GSDP during 2014-2015 was Rs.12139.65 crores registering a growth of 7.52 percent during the period 2004-2005 to 2014-2015. The State's per capita income at current prices which was Rs. 32784 during 2004-2005 more than doubled to Rs 93095 during 2014-2015.

The sectoral composition of the GSDP indicates considerably change during the decade. At current prices, the percentage share of the Primary sector in the GSDP declined from 35 percent in 2004-2005 to 27 percent in 2014-2015 (Advanced Estimates), while the Secondary sector witnessed a marginal increase in its share from 13 percent to 14 percent during the corresponding period.

The Tertiary sector also witnessed considerable improvements in its share in the GSDP from 52 percent to 60 percent during the same period. During 2004-2005 to 2014-2015 (Advanced Estimates), the Primary sector, Secondary sector and the Tertiary sector registered growth rates of 4.35 percent, 7.14 percent and 9.27 percent respectively. The Primary sector includes agriculture, forestry, logging, fishing, mining and quarrying. Within this sector, the major contribution comes from agriculture. Within the Secondary sector, the construction sub sector has the highest contribution and in the Tertiary sector, real estate, ownership of dwellings and business services and public administration alone contributed about 55 percent to the sector.

AGRICULTURE

Nagaland is a predominantly agricultural economy with 71.14 per cent of the population dependent on agriculture. Agriculture is one of the significant contributors to the Gross State Domestic Product and is the largest employer of the workforce in the State. In addition to rice, maize, linseed, potato, pulses, soyabean, sugarcane, gram, cotton, castor oil are important crops cultivated in the State. Backyard poultry farming and livestock rearing is a common practice amongst the rural populace. This does not only supplement household income but also takes care of the protein requirement in the diet.

The diversification of agricultural activities to crops such as rubber, oilseeds, sugarcane, coffee and other horticulture crops in recent years is seen as a significant move towards production for commercial purposes. However, since agriculture in Nagaland is mostly dependent on monsoons, the erratic rainfall pattern is a cause for concern. The total area under irrigation during 2013 was 99790 hectares which is about 20 percent of the gross cropped area.

Although the State receives high rainfall, it suffers from excessive surface runoff. The State does not have major rivers but has perennial rivers and water bodies. This results in water scarcity especially for irrigation during winter season. Since 2009, UNDP, in partnership with the Government of Nagaland, has been assisting farmers in 70 villages to adapt sustainable agricultural practices to capacitate them to earn regular income from their farms.

Box 2.5: Land Use Pattern in Nagaland in 2012-2013

Total Area	Sq. km	16,759
Forest Cover	Sq. km	13,318
Forest Area	Sq. km	8,62,930
Gross Sown Area	Hectare	4,88,522
Net Sown Area	Hectare	3,80,222
Area Sown more than Once	Hectare	1,08,300
Irrigated Area	Hectare	92,450
Net Irrigated Area	Hectare	88,410
Area under Shifting Cultivation	Sq. km	937
No. of Cultivators	Persons	4,20,379
No. of Agricultural Labourers	Persons	22,571

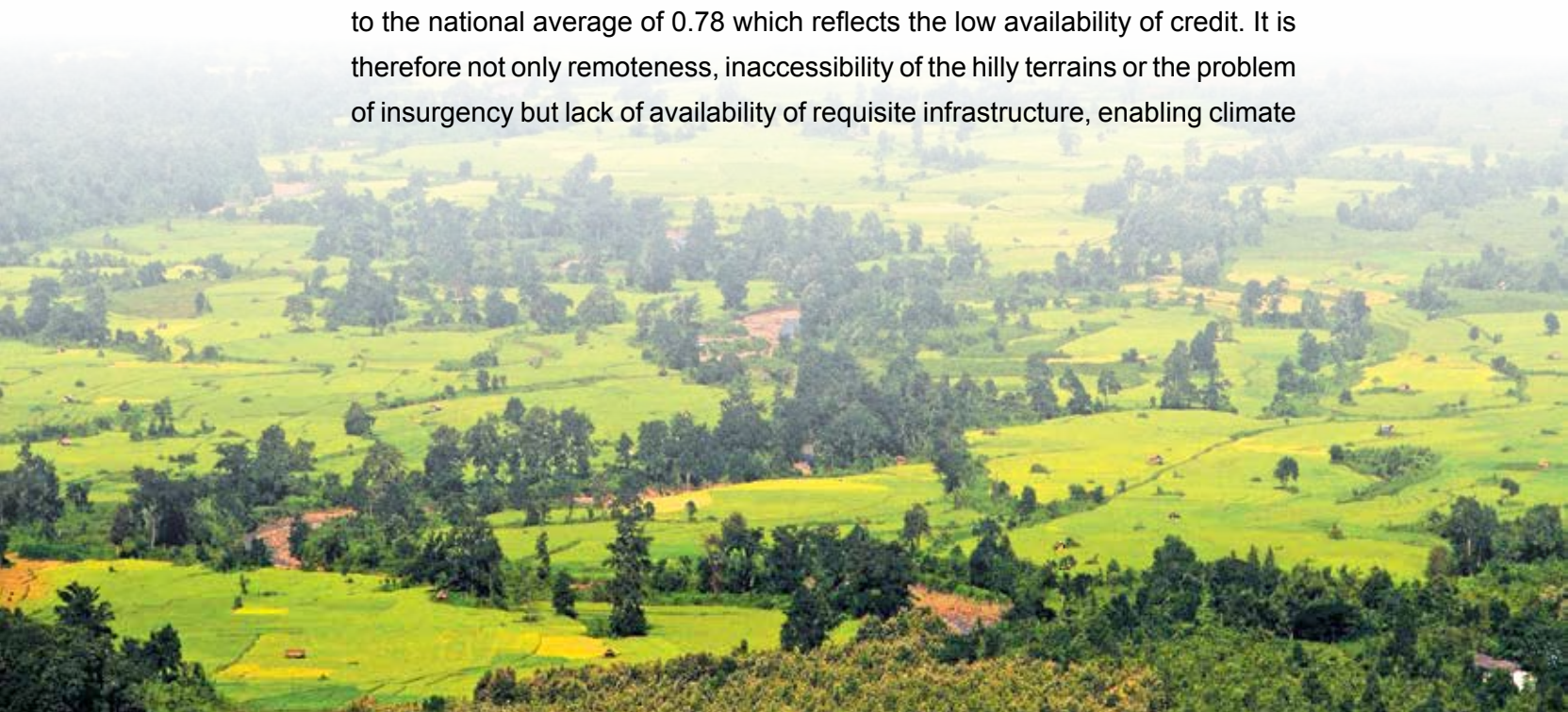
Source: Basic Statistics of NER 2013; India Forest Survey 2013

ECONOMY

In terms of socio-economic development, especially in the fields of infrastructure the State has made considerable progress during the decade albeit slow. Road connectivity and power supply to more than 75 percent of the villages have been achieved. Agriculture however continues to be subsistence in nature and the concept of commercial farming is yet to take off.

Consumption expenditure has risen over the decade with the increase in purchasing power. Per capita income of the people has also gone up. However, the State is yet to capitalize its rich natural and mineral resources and its geographical proximity to east and Southeast Asian markets.

The Credit Deposit Ratio (CDR) of Nagaland is reported at 0.27 as compared to the national average of 0.78 which reflects the low availability of credit. It is therefore not only remoteness, inaccessibility of the hilly terrains or the problem of insurgency but lack of availability of requisite infrastructure, enabling climate



for industrialisation and entrepreneurship, institutional capacity and access to finances and markets which stand in the way of development. The way forward for Nagaland would therefore be to follow a target and result-oriented formula-based approach that will instill accountability, improve performance and remove complacency.

WORKFORCE

As per Census 2011, the total workforce constitutes 49.24 percent of the total population of Nagaland. The share of main workers in the total population in 1981 was 47.53 percent which decreased to 42.29 percent in 1991 and to 35.62 percent in 2001. In 2011 the share of main workers in the total population increased to 37.46 percent. The share of marginal workers in the total population in 1981 was 0.70 percent which decreased to 0.39 in 1991 but which increased to 7.12 percent in 2001 and 23.92 percent in 2011.

The share of non-workers in the population in 1981 was 51.77 percent which increased to 57.32 per cent and to 57.26 per cent in 1991 and 2001 respectively. In 2011 the share of non-workers in the total population decreased to 50.76 percent. During 2011, among the workers, 59.76 percent were engaged in agriculture and allied activities, 1.28 percent in household industry and 38.95 percent constituted other workers. Government employees constituted 9.37 per cent of the total workforce in 2011. These figures reflect the agrarian character of the State's economy. Yet agriculture in the State is still subsistence in nature.

The Work Participation Rate (WPR) among males increased from 47.3 percent in 2001 to 56.18 percent in 2011. Among females it increased from 42.5 percent to 43.81 percent during the same period. The gender disparity in terms of Work Participaton Rate both in rural and urban areas has been declining over the last two decades. Among the districts, WPR of both male and female is almost at par in the districts of Phek, Longleng and Kiphire. Tuensang has Male WPR of 56.33 percent and Female WPR of 43.66 percent and Mon has Male WPR of 55.91 percent and Female WPR of 44.08 percent. Further the share of main workers engaged in agriculture was higher in Mon with 14.16 percent, Tuensang with 9.91 per cent and Phek with 8.58 percent. Within marginal workers, other workers in the State which constituted 20.1 percent in 2001, increased to 29.63 percent in 2011.

HEALTH

An important component of the people's Vision 2020 in the State Human Development Report 2004 was to achieve a high level of human development, raising the quality of education and health as goals in themselves and enriching the quality of life of people by expanding their choices. Health indicators in the State show steady progress. In 1999-2000 the number of health centres including urban hospitals, rural hospitals, primary health centres and sub-centres was 425 with 1633 beds, and 384 doctors. By 2013-2014, these figures, increased to 560 with 2393 hospital beds and 392 doctors. As on date the State's doctor population ratio stands at 1:3488 as against the national average of 1:1709.

Nagaland's Crude Birth Rate (CBR) in 2004 at 13.9 per 1000 population increased to 16.1 in 2011. Infant death also increased from 17 per 1000 population to 21 for the same period. However, the death rates are much lower than the national average of 44 per 1000 live births in 2011. In terms of Maternal Mortality Rate (MMR), the State's figure of 240 per 1000 live births in 2007 decreased to 160 per cent in 2012, as against the national average of 178 per cent.



Communitisation of health delivery system in the rural areas through transfer of ownership of the health infrastructure and management of the health personnel to the Village Health Committees has resulted in noticeable improvement in the delivery of health care in many villages albeit with failures too. Progress has been made in reducing incidence of HIV/AIDS, vector borne diseases such as Malaria, Japanese Encephalitis, Dengue and Cerebral Malaria. Success of any health initiative depends on consistent availability of trained manpower in which the State is lagging. Although the health insurance system introduced in some pockets of the rural areas was not successful in ensuring health care for all, the launching of National Rural Health Mission (NRHM) in 2006 resulted in perceptible improvement in health care delivery.

By the end of 2016-2017, expenditure on health was targeted to be hiked from the 2014-2015 level of 1.4 percent of the GDP to 2.5 percent with emphasis on providing basic infrastructure for health delivery system particularly, in rural areas. While increase in resource allocation is necessary, side by side provision of quality integrated health and family welfare services need to be stepped up with improvement of service coverage, provision of free generic medicine in Public Health Institutions, promotion of community participation, encouragement of tribal system of medicine under AYUSH and replication of successful efforts.

EDUCATION

The Human Development Index (HDI) for the State improved from 0.62 per cent in 2001 to 0.63 percent in 2011. This development is due to the increase of literacy rate in the State. Access to education has improved in the State. This is indicated in improvement in enrolment as well as in improved gender parity in schools. However, progress at all levels of education has been less than satisfactory.

The Annual Status of Education Report (ASER) 2013 shows that the enrollment of children in the age group of 6 to 14 years in schools in Nagaland is as high as 96 per cent but gross disparity still exists within the districts. The dropout rate (DOR) at the elementary level is 45.4 percent, which is higher than national average of 40.6 per cent. This clearly shows the need for intensive efforts in implementation of the programmes under the National Literacy

Mission (NLM), such as Total Literacy Campaign (TLC) and Post Literacy Projects (PLP) in the districts with low literacy rates. The pass percentage of the State in the matriculation examination 2013 was 63.51 percent, whereas in the higher secondary it was 67.53 per cent. In addition to the high dropout rates at Class 10 and 12 level, due attention is required on improvement of basic infrastructure in schools along with increasing the number of trained teachers for improving the quality of education.

Over the years, there has been a steady increase in the number of schools and higher educational institutions in Nagaland. The number of schools (Primary/Middle School/High Schools) increased from 614 in 1962-1963(SHDR 2004) to 2622 in 2013-2014. There are 61 degree colleges and one Central University in the State. Besides secular colleges, there are 11 professional colleges, three Polytechnic Institutes and 23 Theological Colleges recognized by the State. Three other universities operate in the State namely, the Indira Gandhi National Open University, the Nagaland Global Open University and the Institute of Chartered Financial Analysts of India. In the approach paper to the 12th Five Year Plan, teachers training institutes were proposed to be established in all the districts of the State. However, besides, improving access, facilities and infrastructure in schools, the primary focus should be on the improvement of qualitative learning. As for higher education, the central objective should be on building professional skills and entrepreneurial capacities as recommended in NER Vision 2020.

Nagaland has seen remarkable progress in the broad dimension of human development in the last 50 years. The HDI for the State improved from 0.62 in 2001 to 0.63 in 2011. Literacy rate increased from 20.20 per cent in 1961 to 79.55 percent in 2011. Enrolment in schools increased from a mere 522 in 1961 to 266710 in 2013. Nagaland sex ratio, CBR and IMR rates are relatively better than the national average. The per capita income is also better than the national average as per Census 2011 figures. However despite these progress, on closer examination, inequities and development challenges still exist between districts. The contrast between rural and urban areas and between formal and informal sector is immense. On gender issues, although the State's Gender Development Index (GDI) increased from 0.49 in 2001 to 0.58 in 2011, it is still lower than the national average of 0.828.

Gender equality is an important indicator of development itself. Women reproductive health indices for the State such as Maternal Mortality Ratio (MMR) and Adolescent Fertility Rate (AFR) which reflect women's status in the society indicates the need for special focus on the poorer segments of the population with better planning strategies. Information Education and Communication (IEC) in local dialects can play a vital role in creating awareness on health education in rural areas. Women's contribution to the economy is under valued and they are still largely excluded from decision making. Figures reflect increase in crimes against women, although the National Crime Records Bureau (NCRB) 2012 Report rated Nagaland as the lowest among the states in the country with low crimes against women. The disadvantages faced by women are still numerous.



These disadvantages need to be identified and addressed through sensitization of both men and women at the grass root level and of the tribal Hohos and policy makers on gains of gender equality which will consequently lead to development of people's abilities and economic gain. The World Bank 2011 defines poverty as pronounced deprivation in well being such as low level of health and education, poor access to clean water and sanitation, inadequate physical security, lack of voice and inefficient capacity and opportunity to better one's life. The Human Poverty Index (HPI) indicates that poverty in the State at 28.9 is an improvement from the 2001 figure of 40.02. But challenges such as high socio-economic inequality, rapid destruction of environment, high rate of educated unemployed youth, rural-urban migration and pollution must be factored in. Mechanism should be created to include youth in decision-making processes and generate employment through an improved macroeconomic environment to address the issue of youth unemployment in the State.

INFRASTRUCTURE DEVELOPMENT

Infrastructure is critical for progress and for the achievement of the social goals. It plays a crucial role in promoting economic growth and in the reduction of economic disparity, poverty and deprivations. Therefore, it should borne in mind that the response to rapid urbanization should also adapt to climate change issues and meeting environmental goals, while sustaining growth which will require an infrastructure that is less damaging to the environment and more resilient to natural disasters and other shocks. (Human Development Report 2014).

In terms of road infrastructure, out of the total length of 14377 km road in Nagaland during 2013-2014, rural surfaced roads increased from 212.90 km in 2001 to 1385 km. However, access, affordability and quality of service continue to be key issues in the infrastructure sector. Not surprisingly, the infrastructure aspirations of majority of the people in rural and peri-urban areas have not been met as envisaged by policy makers.

The State is connected with Assam and Manipur through National Highway (NH) -36, NH-39, NH -61, NH-150 and NH-155. The State Public Works Department (PWD) and the Border Roads Organization (BRO) maintain these roads in the State. The Nagaland State Transport (NST) is the primary provider of public transportation service across the State. The only railhead as well as the only airport in the State is located at Dimapur.

Although, the total length of roads increased to 14377 km in 2013-2014 with a road density of 86.72 km per sq. km, the total length of surfaced road under State Highways accounts for 1207 km as against the surfaced road under National Highway of 830 km in the State. In rural areas surfaced road is only 1385 km as against the total rural unsurfaced road of 3107 km during 2013-2014. Inadequate and poor quality of road infrastructure hinder access to public services and facilities. Besides, it prolongs transit time and limits access to entrepreneurial and employment opportunities and to education and health care services.

INDUSTRIAL DEVELOPMENT

Despite more than 50 years of statehood, the industrial sector has not witnessed much development. This can be gauged from the contribution of this sector to the Gross State Domestic Product which accounts for only 1.0 percent. The order of the Supreme Court banning felling of trees in 1997 led to the closing down of the timber industry which drastically brought down the share of the manufacturing sector of about 7 percent to the GSDP in the early nineties to almost 1 percent in 1997-1998. Experiments with the Sugar Mill in Dimapur, the Pulp and Paper Mill at Tuli, the Plywood Factory at Tizit, Mechanized Brick Plant at Dimapur and Fruit Canning Factory at Longnak in Mokokchung turned out to be unsuccessful. Except the Paper Mill at Tuli which is proposed to be revived, the other factories have since closed down.

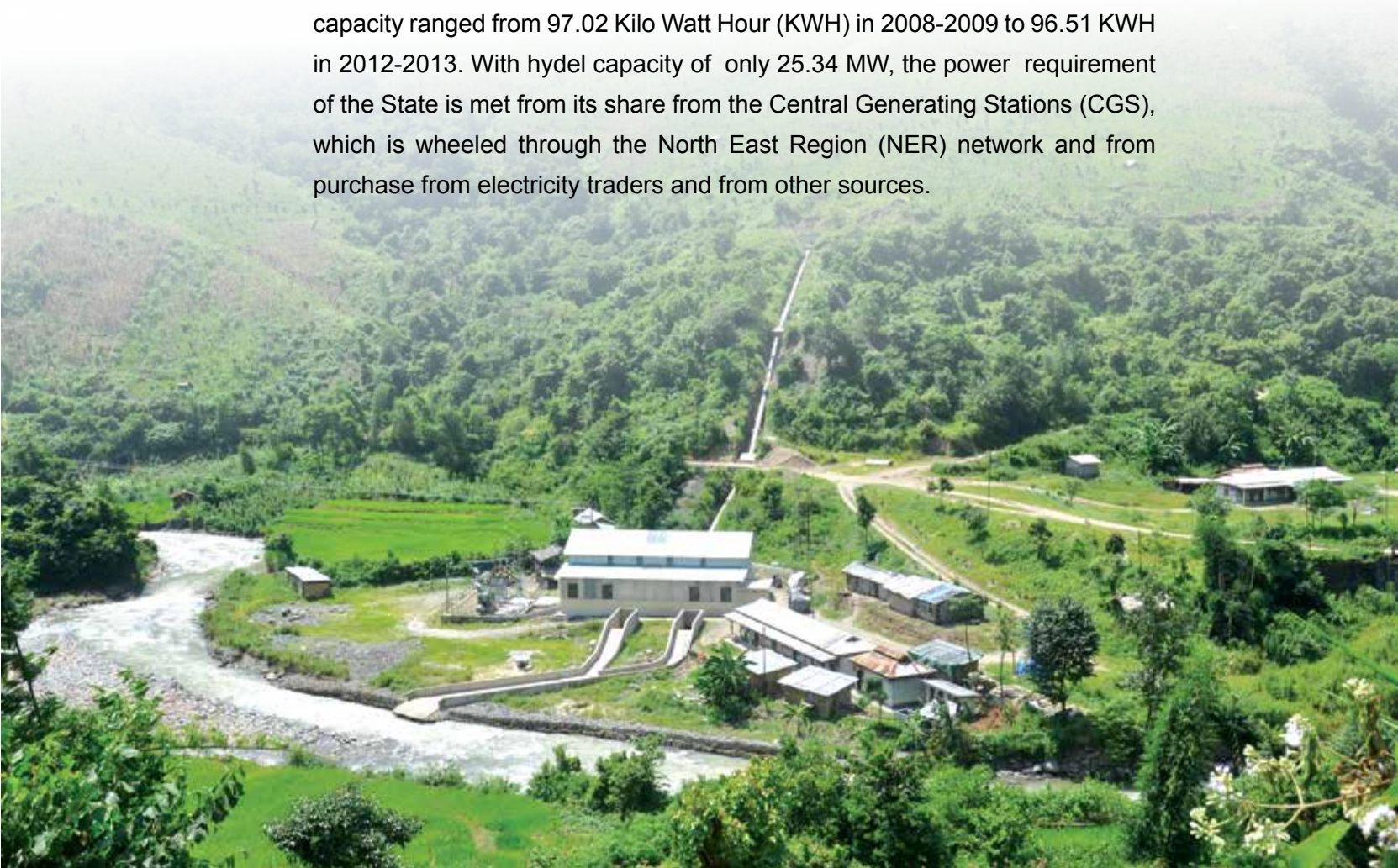
Proposed by Nagaland Industrial Development Corporation (NIDC), Government of India sanctioned establishment of an Export Promotion Industrial Park (EPIP) at Dimapur as a Special Economic Zone (SEZ) for agro food processing and an Industrial Growth Centre (IGC) at Ganeshnagar in Dimapur. However, these projects did not take off due to various reasons.

Yet, despite the set backs, there is potential for agro-food processing and development of bamboo, honey, horticulture products, sericulture, tourism, Information Technology (IT) and minerals as industries.

Considering the high rate of educated unemployed youth in the State, it is particularly important for the State Government to evolve policies to harness the creative and latent talents which would not only lead to creation of jobs but would also create an industry of art and crafts utilizing local material. At a time when countries are striving to shape the post-2015 Global Development Agenda and importance of culture is reflected as both a driver and as an enabler of sustainable human development, the cultural context should be taken into account, including diverse local values, conditions, resources, skills and limitations for transformative and sustainable change.

ENERGY

Energy plays a vital role in propelling the development of an economy. Yet, Nagaland has very low electricity generation capacity. The total installed capacity in Nagaland during 2012-2013 was 25.84 Mega Watt (MW), derived from hydro 25.34 MW and diesel 0.50 MW. The net generation from the installed capacity ranged from 97.02 Kilo Watt Hour (KWH) in 2008-2009 to 96.51 KWH in 2012-2013. With hydel capacity of only 25.34 MW, the power requirement of the State is met from its share from the Central Generating Stations (CGS), which is wheeled through the North East Region (NER) network and from purchase from electricity traders and from other sources.



The annual energy requirement in the State of 225 Mega Unit (MU) in 2001 increased to 634.03 MU in 2013-2014. The per capita electricity consumption in the State at 130 MU in 2001 also increased to 417.30 MU during the same period. In the State, the domestic sector is the largest consumer of electricity with 264.60 MU, followed by bulk consumers at 72.65 MU, and commercial sector at 47.80 MU and industrial sector at 21.60 MU.

The transmission and distribution (T&D) losses estimated by the Nagaland Electricity Regulatory Commission (NERC) for the year 2011-2012 was 38.89 per cent and (T&D) losses in MW was 202.47. During 2013-2014, the Department of Power was able to reduce the overall (T&D) losses to 28.00 per cent. Communitisation of the power sector through introduction of the single point metering system in the rural areas, has to an extent regulated the electricity billing system and in addressing the transmission and distribution losses while simultaneously improving collection of revenue in the rural areas.

WATER SUPPLY

The main source of water in Nagaland is surface water from rivers, streams, ponds, natural springs and sub-surface water occurring as ground water. Water is mainly sustained by the heavy rainfall received in the State, which is about of 2000-2500 mm - one of the highest amongst the Indian States.

In 2007-2008, the total number of habitats having piped water supply was 1108 which increased to 1500 in 2013-2014. In both rural and urban areas, there has been a gradual increase in the coverage of drinking water supply, under the stipulated norm of 40 litres per capita per day (LPCD). According to the survey carried out by the Nirman Programme for Rural Water Supply (NPRWS), for 2014-2015, the quality of water affected by iron contamination in the State was 38, with Dimapur as the highest at 29. With rapid urbanization, the pressure on making potable water available to the citizens has intensified. Therefore, integrated water resource management and conservation of water both above and below ground, rainwater harvesting, coupled with equitable and efficient management structures has become more critical.

GENDER DIMENSION

The sex ratio (female per 1000 males) in Nagaland steadily increased from 886 in 1991 to 909 in 2001 and further increased to 931 in 2011 (Census 2011). However, it is still below the national average of 940 females per 1000 males. Sex ratio in urban areas of Nagaland was 908, whereas in rural areas it was 940. District-wise, Zunheboto and Wokha recorded a high sex ratio at 976 and 968 percent respectively. Whereas, Mon and Longleng recorded very low sex ratio with 889 and 905 respectively which consequently resulted in Government of India declaring the two districts as gender critical districts.

ENVIRONMENTAL ISSUES AND MANAGEMENT OF RESOURCES

Nagaland has a rich biodiversity and natural resource cover due to its unique geographical location and climatic conditions. Its important natural resources are forests, mineral and water resources. Among all the natural resources, forest contribute maximum to the State's economy. Besides timber, forest provide a host of non-timber forest products such as bamboo, cane, wild vegetables, orchids, herbs, medicinal and aromatic plants, honey and broom-grass. However, these resources have increasingly been degraded in terms of ecosystem services. India's State of Forest Report (ISFR) 2013, indicates that the Northeastern region, which accounts for only 7.98 per cent of India's geographical area accounts for nearly one fourth of its forest cover. According to the Report, Nagaland has 80.33 per cent of green cover but has lost forest cover of 146 sq.km during the last decade.

The main reason behind the decrease, according to the Report is the biotic pressure on forest and shifting cultivation. Traditionally, the Naga way of life revolves around the system of Jhum cultivation. The innate relationship between the forests and livelihood of the rural population cannot be undermined. And contrary to the ISF Report, many research studies show that in the Nagaland context, shifting cultivation is not the major cause for depletion of forest cover. With the increasing trend of rural urban migration and increase in the number of educated youth seeking alternative livelihood opportunities, dependency on Jhum cultivation has decreased over the past decade. NEPED study indicates that area under Jhum cultivation decreased from 1.87 million in 2003 to 1.2 million hectares in 2005-2006. Illegal timber felling, coal mining and wood fuel consumption are the major causes for forest depletion in Nagaland.

Attempts are being made by the Government to reduce dependency of the people on firewood fuel by providing solar energy lighting, LPG and also tapping of pico/micro hydel power sources, in conjunction with the Non Renewable Energy (NRE) Department and Nagaland Environmental Protection and Economic Development (NEPED). However, to ensure success of the conservation measures there is a need to shift the strategy from focussing on agriculture and forestry stand alone efforts towards agro-forestry enterprise.

The State has a wealth of herbal, medicinal and aromatic plants with tremendous economic potentials. In many villages, people still depend on the traditional way of healing using herbs and plants. There is therefore an urgency, for the State Government to immediately institute measures for the preservation and protection of these traditional knowledge systems and to prevent illegal exploitation of these plants and herbs which if not checked would lead to its extinction. At the same time, villagers should be sensitised to the importance of optimising the use of such herbs and plants to prevent over exploitation. Propagation methods of these plants and herbs should also be developed as most of these species are endangered due to heavy biotic interference and reckless deforestation.

Nagaland has vast untapped mineral resources including coal, limestone, iron, copper, nickel, chromium, marble, platinum, basalt, serpentine and cobalt bearing magnetite, and substantial reserves of petroleum and natural gas. According to the Geological Survey of India 2010 in Nagaland, limestone which is associated with ophiolite suite and metamorphic rock belt occur in Mimi, Khonya, Salumi, Pang, Wui and Choklongan areas of Tuensang district. Coal deposits are located in Borjan-Tiru areas of Mon district, Changki-Chongliyimsen and Lakhuni areas of Mokokchung district and in Leo-Longidang areas of Wokha district. Nickel-cobalt bearing magnetite associated with cumulate ultramafic parts of the ophiolite complex are found in Phokphur areas of Tuensang district, Ziphu, Washello and Reguri areas of Phek district. Proper regulated exploitation of these minerals would not only generate revenue for the State but would also address the unemployment problem to a large extent by providing employment opportunities.

CONFLICT AND PEACE

Human development is more than economic growth. According to the UNDP, “Human development is a process of enlarging people’s choices. The most critical ones are to lead a long and healthy life, to be educated and to enjoy a decent standard of living.” In Nagaland, a society characterized by political conflicts since the early 1950s, the past decade and half has witnessed a turn for the better in various aspects of human development. The Indo-Naga conflict arose due to contesting claims of political determination for the Naga people. The Nagas claimed that they were always an independent people, only partially colonized by the British, and were never part of India at any point in their history. India, on the other hand, claimed that Nagas are a colonial legacy from the British Empire and has asserted domination over the Naga people. From India’s perspective, Naga nationalism is a separatist movement led by misguided leaders and has treated the Naga issue as a law and order problem. Through the years, the Indo-Naga relationship has been punctuated by alternating chapters of conflict and peace. The first ceasefire between the Nagas National Groups and the Indian Government in 1964 was short-lived and the Shillong Accord in 1975 created more underground factions. In attempts to resolve this conflict, military option has only deepened the scars of political violence. The current ceasefire agreement beginning August 1, 1997 between the Indian Government and the NSCN (IM) and the subsequent ceasefire agreements with the other Naga Nationalist Groups has held on for the last twenty years. Even though it has been interrupted by factional violence, this ceasefire has, by and large, provided an atmosphere of peace for the Nagas.

While much leaves to be desired, the resultant peace due to the ceasefire has ushered in an era of prosperity and economic progress in the Naga society. The standard of living has improved and people are beginning to live lives without fear. In many ways, more needs to be done in Nagaland to achieve the standard of human development aspired by the United Nations. A history of relationship underscored by ceasefires, negotiations and peace will make resolving conflicts easier. Peace is a necessary factor to leverage for human development. Further, with the signing of the Frame Work Agreement between Government of India and NSCN(IM) in August 2015, a final solution is anticipated by the people of the State.

HUMAN DEVELOPMENT

The HDI is a summary measure of the income, education and health achievements of the State. HDI (2011) of Nagaland was 0.63 as compared to 0.61 (2014) for the country as a whole. The overall performance, however, hides the fact that there were large inter-district disparities in performance. Within Nagaland, the HDI was highest in Dimapur with 0.81, followed by Kohima and Wokha both with 0.66 and Mokokchung at 0.61. On the other hand, Mon district had the lowest HDI with 0.50.

This inter district disparity seems to have changed little since 2001 with districts like Tuensang and Mon still at the bottom in 2011 along with districts like Zunheboto and the new district of Longleng. These eastern districts are also the worst performing in terms of indicators like spread of rural roads, worker participation, educational attainments, urbanisation etc.

The Gender Development Index for the State was 0.58 in 2011, which shows a considerable improvement over the figure of 0.49 in 2001. Here Dimapur had the highest index of about 0.72 followed by Kohima, Wokha and Mokokchung. As compared to 2001, Mokokchung's GDI ranking dropped from number 1 to number 4. However, the numbers are not too different for the districts of Kohima, Wokha and Phek. However, Dimapur is a clear leader in this regard.

What is, however, worth noting is that the position of all the five districts has improved considerably since 2001. On the other hand, the districts of Mon, Longleng, Zunheboto and Tuensang are clear laggards with the GDI lying below 0.50. As in the case of the HDI, the GDI of Mon continues to be at the bottom.

The Human Poverty Index combines availability of basic amenities like toilets and pucca houses, immunisation at birth, poverty levels with education facilities and illiteracy levels. The Human Poverty Index(HPI) for the State is at about 29 percent which also shows a clear improvement over the figure of 40 percent in 2001. Once again, the districts of Dimapur, Mokokchung and Kohima are clear leaders. More crucial, the eastern districts of Tuensang and Mon continue at the bottom in terms of changes in the HPI index between 2001 and 2011.







Personal Information Management System

for Manpower Management and Planning

Availability of timely information is the key to efficient management of service matters. To this end, the Personnel and Administrative Reforms Department, Nagaland conceptualised a comprehensive web enabled personnel management system known as Personal Information Management System (PIMS) and officially launched it on 21.4.2016. The ultimate objective is to create a Government-to-Employee (G2E) Portal, a self-service zone for State Government employees by automating the employees profile and providing a unified view of State-wide deployment of employee resources. The PIMS facilitates instant access to accurate information about State Government employees right from the date of their joining service till retirement including details of transfer, posting and service history. Information can be easily accessed on line at any time from the centrally stored data by logging into the web site using unique IDs assigned to the employees and administrators. The PIMS has four level of operation viz

- (i) Supper Administrator : P&AR Department.*
- (ii) Cadre/Sub-Cadre Administrator: Administrative Heads of the Departments.*
- (iii) Office Administrator: Heads of Departments, and*
- (iv) Employees: State employees with IDs.*

Introduction of the PIMs has not only saved time, resources and manpower but has simultaneously made relevant information readily available enabling timely promotion, deputation, transfer, posting, sanction of leave, travel and settlement of claims, deployment and budget planning. In addition it has led to detection of bogus employees, backdoor appointments and has streamlined the practice of random appointment which hitherto was a formidable task.

GOVERNANCE

Governance is identified as a process or activity objectified to achieve what is good for the society in totality. It is a management of collective goods which involves governing institutions and grassroot institutions with paragon decisions, policies and actions which aim at the welfare of all the people. Over five decades since its creation, the State of Nagaland, despite its political ambiguity, continues to be relatively stable.

This Chapter on Governance is an attempt to critically evaluate and examine the working of governance in the State considering the constraints, complexity, limitation and ground realities which disrupt equitable distribution of resources. A peek into the governance efforts in balancing traditional institutions and modern institutions to manage the affairs of the State at all levels and the assessment of progress of economic, political, social and administrative sectors become pertinent. The need to study the impact of the institutions of Communalization and exploring potentially emerging models of governance for adoption of such suitable models is a natural progression in this effort.

A *spatial approach* to the study of governance has been adopted and in so doing the governance structures and their effectiveness at the Village level, the District level and at the State level have been assessed critically. This approach provides a comprehensive direction and a rational ground to measure the quality of governance in the delivery of services. Spatial governance has spawned new ideas about space and role of holistic strategies in contemporary governance context.

Governance in the State also involves how government and other social organizations interact, how the grassroot institutions and the government interact to achieve utmost participative democracy, how these institutions in turn interrelate to common people and how decisions eventually get adopted. Governance involves the interface of existing cultural values, social norms, traditions and how it corresponds with formally defined institutions. Naga communities are largely identified with the clan, khel, village and the tribe. Despite the varied pattern of near-dictatorship and extreme democracy among communities as observed by Verrier Elwin, one cannot ignore the truism of the continuity of governance practice in various parts of the Naga villages. Propensity of ethnic loyalties, social identifications, political patronage, engagement of non-state actors and federal relation (federal coalitions) have conjured curiosity and fervour in the study of governance in Nagaland. An imperative criterion of successful governance is the ability to bring about a decision breakthrough in major areas while operating through relatively and orderly decision-making machinery within a time bound plan. Before embarking upon the discourse on the spatial approach to governance, it may be pertinent to appreciate the fact that regional inequality in the pace of development and in ensuring equitable distribution of resources in the State also has a historical dimension to it which has been briefly discussed here.



INEQUALITIES IN A HISTORICAL PERSPECTIVE

The present day eastern districts of Tuensang, Mon, Longleng and Kiphire were once part of undivided Tuensang. These districts essentially remained out of the British administrative umbrella until the post-independent era. "In June 1947, I toured for over a month in this part of the hills in the company of Mr. W.G. Archer, a member of the ICS who was in charge of Mokokchung. I saw how Tuensang was then divided into what were called 'controlled' and 'unadministered' areas...During the last War [WW II] it was possible to establish a wireless station here in a very remote village on the Burma border" (*Verrier Elwin Nagaland 1961*). Evidently, there was very little semblance of governance in these parts of the State till 1947. In 1948, Tuensang was only an administrative outpost of the Naga Hills district, and the administrative officer was designated as Assistant to Deputy Commissioner. In 1951, Tuensang was created as a Frontier Division of North East Frontier Agency (NEFA) and a Political Officer was appointed. In December 1957, Tuensang became a part of Naga Hills Tuensang Area (NHTA) and soon after this, a Deputy Commissioner was appointed in place of the Political Officer.

Prior to the advent of administration, no educational institution of any type was set up in the undivided district and people desiring to get formal education or primary education had to travel to Mokokchung to study there. The literacy figure of Tuensang as recorded in the Census of 1961 and 1971 may give us an idea of the state of affairs. Percentage of literacy of the district in 1961 Census was a paltry 4.47 percent and that for 1971 Census it was 13.31 percent. Besides, even in 1978, there was not a single college established in the district. So any person desiring to pursue college-education had to go elsewhere to Kohima, Mokokchung, Dimapur or outside the State. The picture becomes clearer if a comparison of the situation is made after 4 decades since the 1971 Census. The four districts which were part of erstwhile Tuensang recorded the lowest literacy rates out of the eleven districts of Nagaland as per the 2011 Census. Mon district recorded the lowest percentage in the State with 57.0 percent while Mokokchung recorded the highest literacy rate of 91.6 percent.

Being unadministered for a protracted period of time, Tuensang district lagged behind the other undivided districts of Kohima and Mokokchung.

The Nagaland Act (Act No. 73 of 1962) which was passed in the Parliament in 1962 and according to which the State of Nagaland was created and inaugurated by the then President on 1st December 1963, provided that Tuensang district being backward and inhabited by simple tribal, shall remain a special charge of the Governor for ten years. Following such policies, the modern system of elections was introduced in Tuensang district much later than the others. The first elections in Tuensang and Mon districts were held only during the Third General Election in 1974.

At the cost of repetition, Tuensang district came under the influence of modern administration only in 1948, though officially it was brought under Control Area in 1914. Prior to this, people were living a rudimentary life and their trade and commerce was also at best primitive in nature. Moreover, the mountainous terrain of the district made it practically difficult to establish road communications. Only after 1948 was, the region opened up for construction of roads and the first road (bridle path) was laid from Mokokchung to Tuensang headquarter. This road was later widened and made motorable. Then in 1968, the Border Roads Organization widened and metalled this road completing the work in March 1973.

Practically, no industry has grown up in these districts and so all the workers are land-based. It means they are either cultivators producing for themselves or wage-labourers. Besides cultivation, people found government sector as another employment source. The historical perspective provides the background basis for the rather under-developed status of the eastern parts of the State today. However, the delay in administration outreach is not the sole reason for the glaring inequality between regions. There are other major and more intricate factors, both internal and external, that continue to hamper the growth story of the region. The following discourse attempts to elaborate on this proposition.

Mon district has consistently recorded poor performance on various parameters among the districts of the State. The literacy standard is indicated in an earlier paragraph as it stood in the 2011 decennial Census. Various reports have also projected the under-performance of the district. An interesting environment of the traditional system prevalent in Mon district is that of the *Angh*.

The *Angh* concept of chieftainship endows absolute centralization of authority. The *Angh* has been given overwhelming and overriding powers of decision-making for the people of the villages under his control. This traditional system of governance has been effectively practiced to the present day even after the introduction of modern institutions of local government such as the Village Council and developmental bodies such as the Village Development Board. In essence, it has been observed that the space for egalitarian style of functioning has been restricted to a limited extent leaving not much ground for a democratic way of decision-making as envisaged in the emerging institutions of local self-government.

This particular pattern of autocratic governance at the grassroots is therefore an area of interest as well as a concern considering the correlation between the form of local governance and the level of human development and economic growth. For instance, Mon district was ranked the poorest on all the following indicators - HDI (Human Development Index), GDI (Gender Development Index) and HPI (Human Poverty Index) as per the *Nagaland Human Development Report* published in 2004 and the District Human Development Report for Mon. Whereas new institutions are being introduced over the years to cater to the various aspects of development, viz: Education, Health, Water supply among others, the fact that a traditional system, which is not quite in tune with participative endeavor of community, continues to assume all such authorities in one sole institution possibly indicates that appropriate levels of decentralization and delegation of power and functions prove far more effective in the delivery of public services in particular and governance at large.

Apart from the internal factors described above, some of the external factors responsible for the uneven growth of development are general concerns of governance not necessarily confined to the region *per se*. It has been realized over the course of time that there has been a failure to draw a near distinction between those institutions that are constituted to deliver public services using public fund and those traditional institutions that have existed since the evolution of the village communities. This vague delineation of duties and functions seem to have led to near redundancy of the development-based institutions before they could even find a foothold.

Similarly, effective governance largely depends upon the capacity of those who manage the affairs of the government. Hence, the village level functionaries define the success or failure of the development story to a large extent. It appears that decentralization of governance for development and resource management has been done rather prematurely without enhancing the capacity and the outlook of the village level functionaries. The lack of aptitude and orientation towards developmental schemes has thus weakened the foundation in building a robust governance system. For instance, many village-level functionaries are poorly equipped with the basic concept of book-keeping or accounting principles while they are expected to maintain all such accounts in lieu of the huge amount of fund received from the Government under various funds/schemes. Such weak capacity in turn encourages tendencies towards pilferage, misappropriation and misuse of development funds paralyzing both governance and development.

While regional inequalities have developed over the years owing to the various historical facets as discussed above, the broader subject of equitable distribution of resources through existing structures of governance defines the quality and effectiveness of governance in the delivery of justice and services. Having seen the historical dimension to regional inequality that exists till this day, discourse is oriented to the governance domain from a spatial perspective.

Admittedly, the issues highlighted here are of general pattern challenges and concerns across districts though the fact remains that even within a district there are clearly instances of extreme development on the one hand and areas assuming poor development scenario on the other. The three tier structure of governance at the Village level, District level and State level has been focused accordingly.



GOVERNANCE AT THE VILLAGE LEVEL

Local self governance constitutes a landmark in defining India's democratic spirit and was incorporated in the Constitution. Interestingly, Nagaland had institutionalized its traditional mode of local self- governance well before the commencement of the Panchayati Raj Act through the Nagaland Village and Tribal Councils Act 1978. Today the Village Councils and their subsidiary Village Development Boards (VDBs) are established modes of decentralized governance all over Nagaland. These institutions have evolved from indigenous practices of the Naga tribes and were later regularized through legislation, facilitating their easy assimilation with existing village system. Every recognized village in Nagaland has a Village Council and its development wing the Village Development Board. The variety of traditional institutional arrangements that existed was different from that of the rest of the country and therefore involves a different space in understanding the governance and spatial aspects. There is therefore, clearly a need to re-institutionalize governance and perspective building and to close the chasm of governance gap through such institutions.

In varying degree of participation of various segments of the society in such a framework, the Naga communities through their traditional local institutions of self-governance provide an emulative model of democracy. Since the pre-independent period, Nagas have enjoyed a distinct form of Village-State governance. Even after independence, the Nagas could retain their traditional form of local-governance structures through Article 371-A of the Indian Constitution. However, the effective independence of the Naga village and traditional leadership began to get somehow diluted over the years. There has also emerged an uneasy tussle among the newer institutions and traditional institutions. For instance, the traditional local institutions had been constituted based purely on customary norms and consensus on such grounds. Hence, the nomination and selection of members to constitute such an august institution was a matter of tradition which could not be randomly contested. However, while the Village and Tribal Councils Act sought to preserve the sanctity of the traditional institutions, certain incongruities have developed. The constitution of Village Councils has itself become a platform of weakness of governance. It has been seen on umpteen occasions that owing to allegiance of candidates to various established political parties or even clan-based affiliations, this new trend of electing members to the Village Councils based on grounds other than

on customary concepts have largely contributed to the weakening of local self government in the villages. The unity and common objective of the Village Council is compromised with the presence of Village Council Members having diverse allegiance pulling in different directions.

Secondly, following the scheme of Communitization of Public Institutions and Services, several new institutions have also emerged, viz: Village Health Committee, Village Education Committee, Water and Sanitation Committee among others. While these Committees are also meant to function within the overall ambit of the Village Council, the proliferation of several entities has to some extent caused some element of confusion in the minds of the common people who are unsure as to which body is really responsible for delivering the services and subsequently which one should be ideally approached for redressal of grievance. The situation is accentuated by the want of manpower in the villages who are acquainted with the prescribed norms of accounting and record-keeping necessary under the various schemes of the Government. Such multiplicity of institutions without coherence has also contributed to the growing problems of governance at the grassroot levels of government.

Thirdly, the institution of the *Gaonburas (GBs)* which acts as the formal agent of the Government at the village level has to some extent undergone a downslide in its delivery. The GBs are appointed in every recognized village who act as the ears and eyes of the Government at the grass-root level. They are expected to have a thorough knowledge and information about their respective villages such as the population of the village, number of households etc. They are also expected to perform a quasi-judicial role aiding the Government as agents of the State. However, over the years, it has been observed that getting accurate and credible data from these village-level agents of the Government has also become a predicament.

This failure to obtain reliable information from the lowest sections of the Government has become a major weakness stalling sound planning process at the State level which in turn has adverse implication in the governance of the State. The same also contributes to lack of a wholesome strategy and policy leading to inequitable distribution of resources.

It is conceded that good governance can reasonably testify a state of self-government too. To evaluate good governance at the grass root level with sound governance orientation, several indicators can be evolved, viz: (a) putting all the activities on a demand driven basis; (b) development activities which are people-centric and undertaken with the participation of people; (c) ensuring transparency in administration and decision-making process; (d) increasing efficiency and effectiveness in delivery of basic services; and (e) ensuring equity in the process of distribution of benefits to the needy.

GOVERNANCE AT THE DISTRICT LEVEL

The governance in the districts has seen a chequered history along with the evolutionary developments of the State. As it did, the pattern of governance in various districts has also been shaped to a large extent by the uniqueness of every district within the broad structure of the constitutional and local statutes. Some of the areas that deserve greater attention in the light of their effectiveness or otherwise are briefly discussed below.

It has been accounted, particularly in the last two decades or so, that financial authority has been highly centralized at the State level. Gradually the district level agencies have been almost deprived of any financial authority. Financially, therefore, the districts have become entirely dependent upon the State Government leaving not much room for undertaking any innovative venture for want of fund. This concern, it appears, is one that may require some degree of attention for review in order to reverse the phenomenon that has almost made district level agencies rather inconsequential particularly in comparison to the rapid pace of development in various sectors that has been witnessed in other parts of the country, most of which had their beginning at the district level. Closely related to this subject is the failure of the Government to generate revenue within each district based on their unique potentialities and resource wealth. The degree of practical success in relation to generating revenue may vary from one district to another; nevertheless, all the districts have prospects to build up resources. Respective departments vis-à-vis district compatibility can be focused to contribute to the State revenue. It is crucial to encourage progressive and constructive policies and create a healthy environment for competition. It is paramount in identifying potential areas and working out modalities for revenue generation within the district with

proper inter-departmental co-ordination. No intensive efforts have been made in this direction. For instance, there has not been any well structured policy to judiciously and optimally exploit the rich natural resources and minerals of the State. This has led to large scale unregulated mining or quarrying mainly by private sectors/individuals. It is only recently that the Government has brought about new mechanisms to regulate these potential sectors.

Another area of concern in the realm of governance at the district level is the inter departmental co-ordination of various line departments. Within the district, co-ordination is required much more in matters of execution detail than in matters of policy and planning. It is inevitably vital to ensure co-ordination among all these departments rather than witnessing one departmental action adversely affecting the work of another or duplication of works by separate departments which has been the case on many occasions.

Yet another major governance challenge is balancing required for ensuring Government's reach to the farthest extent possible on the one hand and the wherewithal to equip such facilities on the other. The setting up of administrative headquarters in different parts of the State has seen unprecedented enhancement over the past few years. While the intent to reach out to the people is widely accepted and found noble, the State Government does not have the adequate resources -both manpower and infrastructure to optimally operate such facilities leading to decay of the very institution that was created to uphold the trust of the people.

In the wake of the rapid growth of population and the trend of migration of people from rural areas to townships, urban governance across districts has seen unique problems and prospects. Urban local self government needs to be put in place in urgency to suitably tackle this growing urbanization which otherwise, could emerge as a major challenge for any government.

Imperatively both the district-level departments and the local bodies are focussed on the same objective, viz: delivering good governance. Therefore a cooperative and complimentary relationship between these two bodies assume high relevance and which necessitates a look into the domain of governance at the grassroot level.

GOVERNANCE AT THE STATE LEVEL

The State as a federal actor is required to deliver governance within its jurisdiction. The State vis-a-vis governance is a broad concept and refers to the process by which diverse elements in society interact and derive power and authority. The intended outcome thereby is governance by enactment of policies and decisions concerning public life and welfare in the State. Political parties reflect a means of ensuring that government has a popular basis for governing and for social conflicts to be mediated and settled within a process of dialogue under legal-constitutional frameworks. It is noteworthy, that the continuity of the Naga insurgency problem has not dismissively alienated the spirit of a working democracy; rather it has validated the emergence of various political parties and consistent elections to determine the government over the years.

The active democratic political system in the State has negated the stereotype of projecting Nagaland as a disturbed and troubled State from a democratic perspective. The overriding concern remains though - the inability of the Government to effectively deliver governance in tune with growing aspirations of the people, irrespective of political ideology or party or period of stay in power. An effective government can leave behind an inerasable concept of governance even within a short stint. Therefore the art of governance is more vital than longevity; its smart strategy and scheme of things, which decides things on priorities.

It is another matter that the practice of democratic ideals has been diluted to a large extent over the years with the local socio-economic dynamics playing a key factor. There is a real urgency to revisit the election practices that appear to conform more to social prescriptions rather than the statutory mandate. There is clearly a growing concern about the way elections are being conducted across the State.

The interplay of various forces combined with local traditional institutions has very often reduced the ideals of democratic practices into symbolic ceremonies. While the credibility of elected representatives cannot be questioned, there may be a necessity to relook at the process per se.

NGOs AND GOVERNMENT

Nagaland represents one of the spectrums of governance riddled with socio-political fetters. The routine issues of governance take a back seat to the larger question of perpetually maintaining a fine balancing act amongst various contesting forces in the State. The outcome of such management strategies is either undue delay in decision-making leading to irrelevance of the decision or no decision at all. There is a growing realization among institutions and a more aggressive demand from the common people that development and good governance are the need of the hour. In this regard, the ability of the Government to usher in the involvement of civil societies and the introduction of communitization policies has surely amplified governance in the State. The Government has adopted a policy of creating a viable environment wherein the Government will pursue and also continue to support civil societies in their venture towards reconciliation, peace and development. To this effect, the civil societies, NGOs and the churches have come to play a formidable role in the governance space in Nagaland in boosting any good governance effort and posturing social harmony.

However, it has also been observed that political culture and mobilization could not be succinctly demarcated from socio-regional sentiments as civil societies, NGOs and churches continue to be associated with their regions, social identities and interest as priority considerations and although they have often raised imperative issues. Such movements have often made subdued impact in making them as strong pressure groups for the same reason. Another diametrical opposite scenario to the above description is the ceding away of undue space to agencies outside the Government sector. Over the years, it appears that policies are being made to be taken outside the appropriate institutions. While, the basic premise of a democratic polity recognizes the larger opinion of the common people as the definitive decision, the same democratic system follows that the people shall elect a suitable leader who shall represent their collective judgment on a particular subject.

However, it has been seen that the elected members who represent the government of the day and are entrusted to frame policies and deliver, have been deprived of this privilege in taking important and decisive policy decisions

owing to the many opposing forces pulling in different directions often based on respective agenda.

This phenomenon has created a grave governance situation leading to what may be termed as 'policy-paralysis' or 'policy-deficiency'. For instance, the stalling of the implementation of the Nagaland Municipal Act after its passage by the highest policy-making body owing to strong opposing reactions by agencies outside the Government sector indicates either a compliant Government or an unduly strong non-governmental sector which does not augur very well for an established Government.

GOVERNMENT AS THE SOURCE OF EMPLOYMENT

One of the biggest challenges confronting the Government and its governance process today is the responsibility to provide livelihood opportunities to people in various fields. Considering the slow industrial progress in the State and lack of other employment options, the Government has become the only source of employment for the thousands of both the educated-unemployed and the uneducated-unemployed. This trend has led to very high intake of employees much beyond the capacity of the State. This unfounded intake of employees is accentuated by the low skill of employees for jobs needing specific capacities and training. The upshot is thus fatal both for the efficiency of the Government in delivering governance and also for the economy of the State which has to commit to wages and salaries far in excess of the limited fund available. There are over one lakh Government employees of all categories in the State with a ratio of Government employee to population standing at 1:17 which is the highest in the country.

It has also been observed over the years that the equitability of distribution of resources has suffered a setback. The gap between those having resources and those who are deprived (haves and have-nots) has shown increasing amplification indicating a systemic malfunction in governance in ensuring fair play in reaching out to all sections of the community.

Another area of governance concern is the failure to establish self-sustaining institutions and credible sources of revenue generation for the State in the

past five decades since statehood. The State Government continues to rely totally on the financial grants from the Union Government for its Plan and Non-Plan expenditure. Such undue dependence on the Central Government raises the issue of the stability and ability of the State Government in its governance vision, policy and implementation.

Finally vital aspect of governance is the ability of the State to deliver justice to its subjects. It may be pointed out here that the traditional institutions of the villages in Nagaland continue to play an important role till today in delivering justice to the people. The customary system of adjudication has been found favorable owing to the fact that it is invariably quick and cheap. The invariably cumbersome procedure that entails the modern courts of law seem to inhibit villagers in particular to approach them in the first place.

JUSTICE SYSTEM IN NAGALAND

It may be pertinent therefore to briefly sketch the broad contour of the traditional justice delivery structure in the State. Every village has a Village Council to manage the affairs of the village within the framework of prescribed guidelines. Such Village Councils predominantly comprise of responsible persons of the village with the *Gaonburas* (GBs) as members. The first point of contact for any aggrieved party in seeking justice is therefore the Village Council.

The Village Council Members normally try cases through customary traditions which are rarely codified. When there is a dispute between parties involving two or more villages, the respective Village Councils collectively get involved under the supervision of the area administrative officer.

The recourse to an appeal is found available to any aggrieved party out of the adjudication of the Village Council(s) in the form of the District Customary Court. The Customary Court which is traditionally attached to the Office of the Deputy Commissioner of the district assumes the role of Appellate Court. The *Dobashis* who are appointed by the State Government constitute the District Customary Court. This Court, as the name amply suggest, also try cases on the basis of traditional practices and customary conventions. While the Customary Courts are attached to the office of the Deputy Commissioner, who in the first place endorses cases to be tried by the former, the appeal finally

rest with the Deputy Commissioner in the event any party is aggrieved with the decision of the District Customary Court.

On the basis of the nature of the case, the Deputy Commissioner, who is also the District Magistrate may take up the matter for disposal. It may however be mentioned here that in recent times with the separation of the Judiciary from the Executive and also with the growing awareness of modern legal systems among the people, most cases, both criminal and civil are being tried in the modern established courts of law.

WAY FORWARD

The key to a participative and working democracy will necessitate the robust participation of the women folk in governance at all levels and sectors of government. The limited space offered to the women folk in the last fifty years is witnessed by the absence of a single woman representative in the State Legislative Assembly till date. Similarly, the role and space in decision-making given to the women folk in the village level institutions continue to show rather little improvements. This issue of lack of women representation has to be reversed strategically in order to enhance the quality of governance delivery as well as the policy design on various sectors of social concern. An integral part of governance is shared decision-making and assessment, evaluation and monitoring of the performance of the local institution.

Problems of governance are to be addressed at the macro and micro level in a holistic manner. For instance, a paradigm shift away from the highly centralized planning is the current need. Participation of local communities should start with identification of problems of the community by themselves. One of the biggest challenges in bringing about sound governance in the State will be to device mechanisms to ensure that decentralized planning is exhibited in letter and spirit. Naturally, such delegation should go along with capacity building of grass root level functionaries before they are eventually bestowed upon with the all important role of evolving plans for themselves.

There is a necessity to revisit the role and functions of traditional institutions such as that of the GBs. Such review is vital to assess whether they justify their very existence. Institutions that are entrusted to represent the Government

and act as agents of the State ought to enhance their credibility and reliability. A study of the overall impact of such institutions may be in order so as to identify and rectify the weak links in the chain and thereby augment the quality of delivery of governance.

Concerted efforts in the realm of instituting self-sustaining enterprises need to be made to ensure revival of local and State economy and to also amplify revenue generation of the State Government. Unless there is a stable source of revenue for the State Government, governance in its real sense may remain a far cry. The delivery of basic services in key sectors such as Health, Education, Social Security etc. rely very heavily on the consistent availability of resources. And the quality of governance is directly related to the indicators arrived from such sectors. The lack of resources eventually de-prioritize such agenda leading to collapse of social health, literacy and social harmony.

There is also a necessity to have a relook at the highly centralized financial management system as also the planning process in the State. There is little scope for innovation at the district level owing to the almost complete absence of financial powers with the district authorities. This rather undue necessitated reliance on the State level government discourages the ability for field officers to come about with novel systems and practices thereby nipping sound and potential governance models from emerging.



CONCLUSION

Some conclusions about governance practices in the State can be drawn from the above discussion. Firstly, consolidation of the Naga identity and its developmental philosophy has been the result of a process initiated by the spread of christianity in the pre-independent era on the one hand and contoured by the attainment of statehood after independence on the other. It was instrumental in assuring both continuity and change within the Naga society. The movement for political autonomy which has come to represent a key equation in governance dialogue has also had ramifications in articulation of the governance paradigm both by those within and outside the mainstream political process.

Secondly, there is incidence of a strong social capital among the Naga communities that is evidenced from their various traditions of local governance like the *Morungs* and Village Councils, and practice of Naga customary law. This is also indicative of a vibrant oral tradition and sound networking of indigenous institutions. The traditional systems of local self- government will remain vital to ensure sound social security and also to facilitate equitable distribution of resources available.

Thirdly, the traditional practices of governance and social networking in Nagaland have been successfully institutionalized within a modern framework both in National and State policy. Various constitutional provisions and State policies have taken cognizance of these unique traditions and assimilated them with modern governance philosophies. The unique social institutions of the Nagas thus give an enduring resilience to their culture. They however score low on social justice parameters by not creating adequate space for participation of women in the decision making process.

Sound governance is delineated with political accountability, bureaucratic transparency, exercise of legitimate power, freedom of association and participation, freedom of information and expression, sound fiscal management and public financial accountability, respect for the rule of law, credible justice system, respect for human rights, active legislature and capacity development.

A committed government must not only focus on establishing but create an unequivocal relevancy and orientation towards these objectives. If this exists there will be a semblance of sound governance at all levels of government.

***Box 3.1: Rightsizing the Work-Charged Employee Strength
in Public Health Engineering Department (PHED)***

The excessive number of work-charged employees has been a major problem in engineering departments like the Public Health Engineering Department (PHED). Once hired, it is difficult to fire a work-charged employee. In PHED, the problem assumed menacing proportions with the annual wage bill touching Rs. 21 crore in 1998-99. Precious resources were spent on a bloated work force of 7,504 work-charged employees. Alarmed, the Department issued a code number and a photo-identity card to weed out ghost employees. By 2002-2003, there was marginal reduction in the number of work-charged employees to 6,618 and the annual wage bill had reduced marginally to Rs. 19.20 crore. But this was not enough. Therefore, PHED worked out an innovative severance package in the shape of Voluntary Retirement Scheme. 3,143 work-charged employees opted for availing the package. This 'golden handshake' supported with loan from the Central Government, saved over Rs. 9 crore annually. In the subsequent years, PHED has consistently reduced the strength of the work-charged employees further through attrition. Today (as in November 2016), the Department is managing the water supply schemes with 1,972 work-charged employees involving annual wage bill of about Rs. 12 crore (with revised wages).

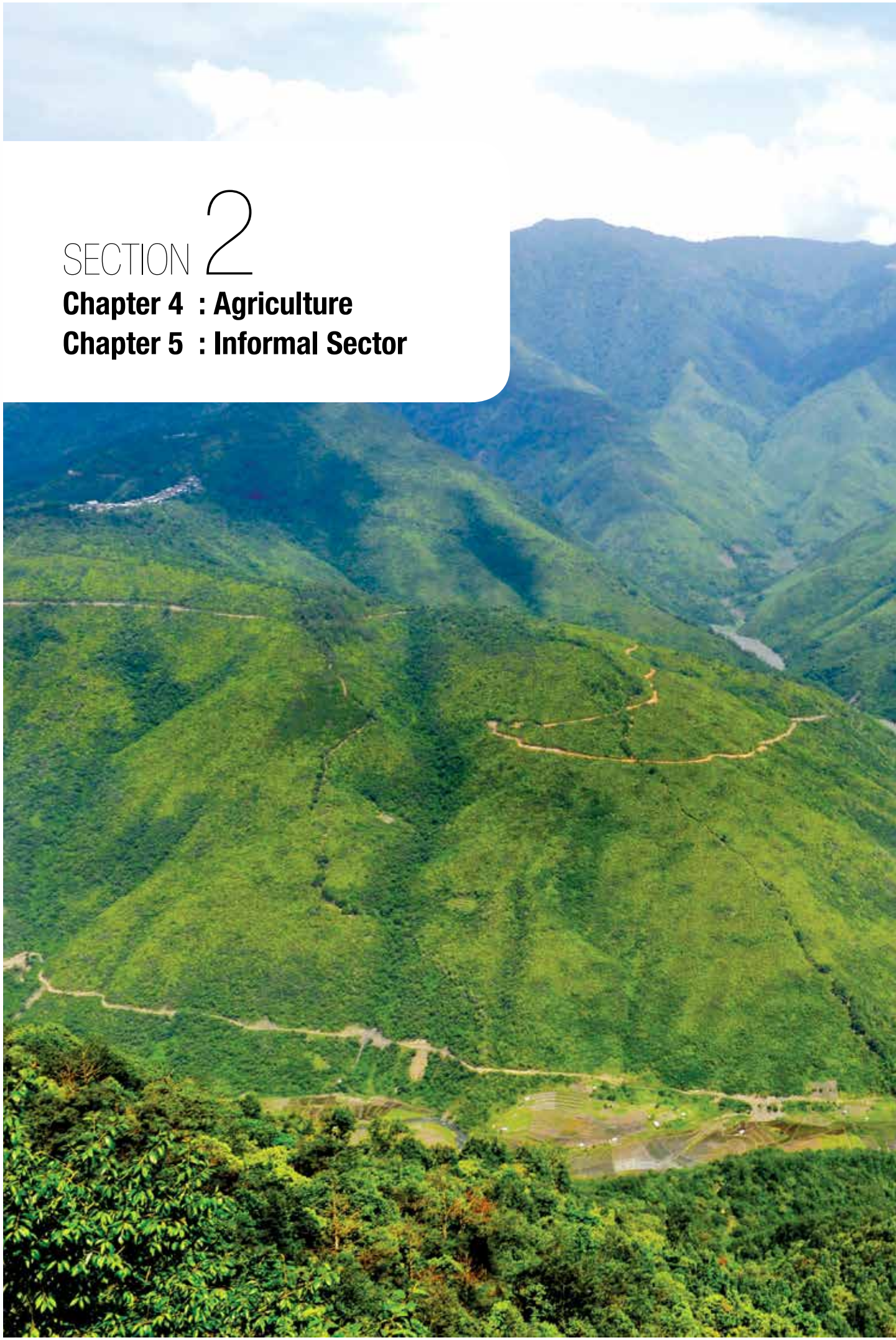
PREPAREDNESS AND IMPLEMENTATION OF GST IN NAGALAND

Post enactment of the One Hundred and First Amendment Act 2016 of the Constitution ushering in Goods and Services Tax (GST), the Nagaland Department of Taxes in consultation with the GST Council and Goods and Services Tax Network (GSTN) is diligently pursuing for smooth introduction and implementation of GST in the State. The backend processes for online platform on which GST will be implemented is developed by the GSTN while the Department is devising mechanisms for reduction of migration issues. Besides, familiarisation trainings and workshops for stakeholders on the concept and process of implementation of GST, 50 percent of the tax payers have enrolled in the GST portal as of March 2017. To provide seamless transmission of data through SWAN, the Department has tied up with the Information Technology Department and other internet service providers such as BSNL. Price Waterhouse Coopers (PWC) has been engaged as State Project Management Unit to outline the status of GST readiness in the State. Implementation of GST will be beneficial to the State on the following counts.

- i. **Benefit for Small Traders:** Small traders with turnover of Rs.10.00 lakhs or below will be exempted .*
- ii. **Benefit to Consumers:** Because of elimination of tax cascading, production cost will fall ultimately resulting in cheaper goods and services.*
- iii. **Revenue Gain:** State will get additional power to levy and collect tax on services. And since GST will be supported with robust IT system, it will induce prompt compliance by stakeholders. Simultaneously, widening of the tax-base will increase revenue collection.*
- iv. **Boost Overall Efficiency of the Tax System:** With tracking of every stage of transaction on the movement of goods and services under the GST regime from the original producer up to the retail level, overall efficiency of the tax system will improve.*
- v. **Increase in GDP Growth:** GDP growth is projected to increase by as much as 2 percent.*
- vi. **Efficient Movement of Goods:** Movements of goods will faster since transit time will be drastically cut due to removal of commercial tax check post barriers.*

SECTION 2

Chapter 4 : Agriculture
Chapter 5 : Informal Sector





Economic Livelihood Issues

Economic development has to positively impact on the augmentation of employment opportunities and the diversification of economic opportunities for the people that will lead to sustainable livelihood.

This requires focus on the dimensions of Institutional Development, Human Development and Participatory Development perspectives.



AGRICULTURE

INTRODUCTION

Agriculture is directly linked to human development which has a direct bearing on poverty reduction and sustainable development. In addition to providing food and raw material, agriculture provides employment opportunities to a large section of the population, having direct impact on the Gross Domestic Product as well as standard of living. Thus, rapid development of agricultural sector is vital not only for ensuring food security and improving the standard of living but also in fostering economic advancement.

In recent years, the agriculture sector in the State has witnessed improvements especially in food grain production, mainly due to awareness among the farming community on the importance of sustainable agriculture. This has led to adoption of improved cropping pattern and better management practices. This paved the way to move away from the age old practice of subsistence agriculture and move towards adoption of high income generating farming systems.

This chapter focuses on four major themes. The first section highlights the agricultural systems. The second section shows the contribution of agricultural sector to the State's economy and identifies resource utilization pattern –land, labour, water and other inputs. In the third, the focus is on cropping patterns and crop productivity. Finally it concludes with a summary of Government interventions and policy suggestions.

Figure 4.1: *Burning Before Sowing in Jhum Field*



4.2 AGRICULTURAL SYSTEMS

The three primary distinct agricultural systems in Nagaland are

Shifting (Jhum) Cultivation,
Terrace Rice Cultivation (TRC) and
Wet Rice Cultivation (WRC).

Shifting Cultivation (Jhum)

Shifting Cultivation (Jhum) is the dominant farming system which is practised mainly on the hilly regions. It involves a complex land use system requiring knowledge of stability and fertility of the soil, types of crops to be grown, climatic variations and water regime. After selecting the plot for cultivation, the forest cover is cleared manually using simple tools and the land is prepared for cultivation by burning the residue. The whole process is labour intensive. Under the system, plot rotation follows a yearly cycle. A plot is cultivated for 1-2 years and abandoned as fallow, so it regains fertility through natural process until the next cycle arrives.

The years of cycle thus determines the soil fertility and vegetative re-growth. In recent years, the duration of the cycle has been reduced from about 15 years to 10 years and below due to limitations in the availability of land resulting in low productivity and environmental issues. Mixed cropping is practiced on the Jhum plots wherein about 40 varieties of crops are estimated to be cultivated (NEPED, 2009), mainly kharif crops. Paddy is the main crop. Others are green vegetables, maize, millet, chillies, spices, garlic, ginger, cucumber, pumpkin, brinjal, beans, soya bean, other pulses, colocassia and tapioca.

The traditional cropping pattern is gradually changing. The subsistence traditional Jhum agriculture is gradually giving way to a more sedentary and commercial type of cultivation. Of late, orchards, plantation of cash crops, flowers and vegetable farms have come up in the State although sporadic, ushering in the prospect of intensive integrated approach of farming system.

Figure 4.2: *Integrated Farm Development*



Jhum fields; UNDP GEF SLEM Project, Mokokchung, Nagaland

Terrace Rice Cultivation (TRC)

Terrace Rice Cultivation (TRC), an irrigated agricultural system is traditionally practiced by the Angami and Chakhesang tribes of Nagaland on the hill slope with terrace benches. The location is determined by availability of water for irrigation, typically deriving most of it from streams, whereas the height and breadth of terrace bench is determined by the slope of the hill. Thus, abundant rainfall is an important input for this farming system. Paddy, the main crop is grown during monsoon. Crops like ginger, yam, beans and cow pea are grown in the contour bunds, risers and embankments. It is observed that growing legume crops such as soya bean results in higher yield of paddy than other crops.

Box 4.1: Some Indigenous Practices of Soil and Nutrient Management in Jhum Fields

- Alder tree based Jhum farming seems one of the best measures. The trees supply atmospheric nitrogen in the soil and prevents soil erosion.
- Both physical and vegetative barriers are used to prevent soil run off. Tree poles, boulder, bamboo and other materials are laid horizontally at regular intervals on the slope of Jhum field. Closely planted in line across the slope, crops such as maize, colocasia, arhar, soyabean etc. act as vegetative barriers.
- Adopting Jhum cum tree plantation (such as alder, kadam and gamari) as fallow management, lead to faster re-growth of vegetations and generate additional income.
- Plantation of cash crop such as ginger, cardamom, passion fruit and black pepper as measure of fallow management generates income to the farmers.
- Mixed cropping pattern maintains high agro biodiversity that minimize risk, stabilise yield, promote diet diversity etc.

Wet Rice Cultivation

Wet Rice Cultivation is practiced in the valleys and plain areas where shared cropping system prevails. The main crop is paddy, which is sown mostly during Kharif season. Rabi crops are vegetables, oil seeds and other cereal crops. Use of fertilizers and pesticides are minimal. Generally, cultivation is done with the help of farm animals but in recent years, farm machineries have been introduced in the larger farms.

Box 4.2: Zapu Farming, a Traditional Farming System in Kikruma Village, Phek District, Nagaland

- Integrated Terrace Rice Cultivation
- Runoff water from nearby forest and road sides
- Water collected in dugout ponds
- Cultivate paddy-vegetables-fishery during kharif season
- Replicable in the other hilly areas in the State.

Homestead Garden

Homestead Garden is a secondary agricultural system, practised especially by those farmers who own land closer to their villages. Traditionally, the crops were grown for family consumption, but in recent years, with increase in demand from the urban markets, varieties of vegetables, fruits and other crops are grown generating additional income for the farmers.

4.3 AGRO CLIMATIC ZONES

Nagaland is endowed with diverse agro climatic conditions which is conducive to growing a wide range of crops. By agro climatic conditions, the State is classified into four zones, namely High Hills, Low Hills, Foot Hills and Plain areas having distinct natural characteristics. Rice is the main crop in all zones and other subsidiary crops are maize, millets, vegetables.

Box 4.3: Rice Based Cropping of Nagaland by Agro Climatic Conditions

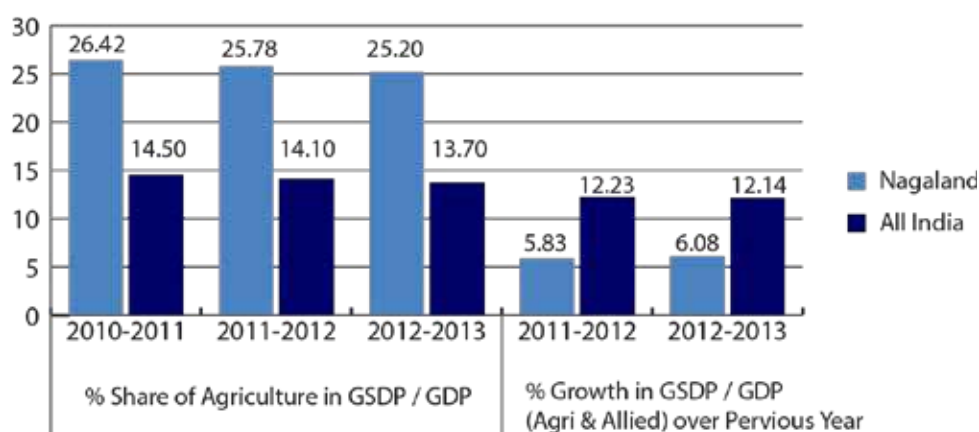
Agro Climatic Zones	Cropping Systems
High Hills	(i) Rice-potato/vegetable, (ii) Rice/maize-mustard and (iii) Rice
Low Hills	(i) Rice-wheat +mustard and (ii) Rice-potato
Foot Hills	(i) Rice- potato and (ii) Rice- vegetable
Plain Areas	(i) Rice-groundnut (ii) Rice- cowpea (iii) Rice-wheat-rice (iv) Rice-pulses and (v) Rice-linseed

Source: ICAR Research Complex for NEH Region, Nagaland Centre, Nagaland.

4.4 CONTRIBUTION OF AGRICULTURE

Agriculture continues to be one of the most significant sub-sectors in the State's economy although its share in Gross State Domestic Product (GSDP) and employment has gradually declined over the years. Figure 4.3 shows that in Nagaland, the share of Agriculture and Allied sector in GSDP was 25.20 percent in 2012-2013, which declined from 26.42 percent in 2010-2011. The same for All India average (GDP) was 13.70 percent and 14.50 percent respectively during the corresponding periods. Despite the decline in its share, there has been positive growth in the State's agriculture from 5.83 percent to 6.08 percent during 2011-2012 to 2012-2013. While All India growth in the agriculture sector declined marginally from 12.23 percent to 12.14 percent during the same year.

Figure 4.3: GSDP from Agri & Allied (at Constant Prices of 2004-2005)



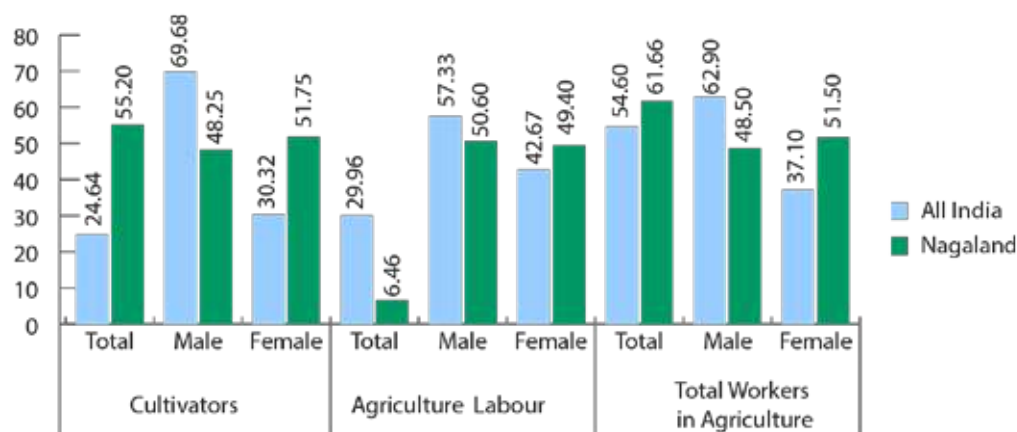
Source: All India Agricultural Census, 2013 Ministry of Agriculture, GOI.

4.5 RESOURCE USE

Employment in Agriculture

Agricultural sector employs the largest percentage of total workers. According to Census 2011, this sector employs 61.66 percent of the total work force in Nagaland. Out of the agricultural work force, 55.20 percent are cultivators and 6.46 percent are labourers. The proportion of the agricultural work force in the State is higher than the All India average of 54.60 percent, which comprises of 24.64 percent cultivators and 29.96 percent labourers.

Figure 4.4: Proportion of Agricultural Worker to Total Main Workers and Gender Composition (2011)



Source: Census 2011 and Registrar General of India 2011.

Figure 4.4 indicates the difference in the employment scenario in the State and All India level. In the State, the percentage of agricultural labourers in 2011 was negligible but it was about 30 percent at the national level.

During 2011, the total agricultural work force in the State comprised of 51.50 percent females and 48.50 percent males. While, at the All India level the composition of the agricultural work force was 37.10 percent females and 62.90 males. In Nagaland, the gender composition of the total agricultural labourers show that the proportion of females is marginally lower than that of males with 49.40 percent and 50.60 percent, respectively. While amongst cultivators, females were more than males with 51.75 percent while the proportion of males was 48.25 percent. On the other hand, the All India average shows a higher male composition both amongst cultivators and labourers.

The data reflects the differences in the employment pattern of the State and that of the country. While the proportion of agricultural labourers is negligible in the State registering 6.46 percent, it was about 30 percent at the national level. Further, the gender disaggregated employment data shows that in 2011, out of the total female main workers in Nagaland, 72.49 percent were engaged in agriculture, which was higher than the corresponding figure of 53.22 percent for males. Similarly at the national level, it was 65.10 percent and 49.85 percent respectively. (Table 4.2 in Appendix)

Agricultural Land Use

Land is the main input for agricultural activities. Over the years, the area under land use has undergone changes, indicating changes in the relative importance of activities. According to Nagaland Statistical Handbook, out of the total reported land area during 2012-2013, forests occupy the largest proportion of 52 percent, although its share marginally declined from 54 percent in 2009-2010. The second largest land use is under agriculture with 23 percent of the total area. This category indicated a gain of 1 percent in its share during the corresponding period. The proportion of fallow land shows a marginal decline and the land not available for cultivation shows an increase from 14 percent to 16 percent during the reference period.

Figure 4.5: Land Use in Nagaland
(2009-2010)

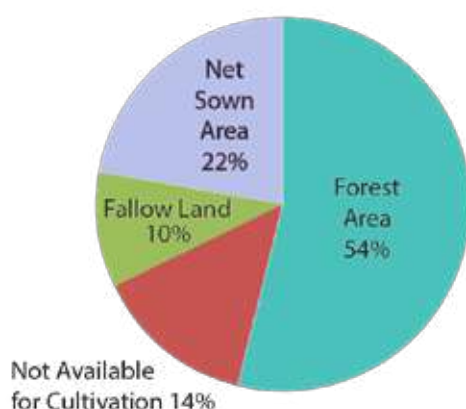
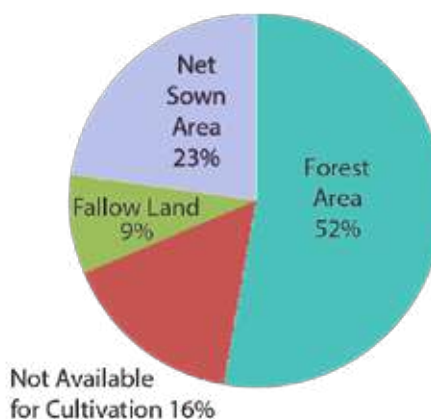


Figure 4.6: Land Use in Nagaland
(2012-2013)



Source: Statistical Handbook 2013, Government of Nagaland.

Figure 4.7 and 4.8 shows the difference in the land use pattern between Nagaland and the All India average. During 2010-2011 at the All India average, the largest proportion of reported area is under gross cropped area which is as large as forest and land under other uses added together. Whereas in Nagaland, forest occupies the largest area which is larger than the area under other uses such as gross cropped area, fallow land, others taken together. Proportion of fallow land in the State is marginally higher than the All India average. The differences is attributable to the topographical variations, as Nagaland is predominantly hilly with limited arable land, while the general topography of the country is plain. Thus geographical features determine the land use pattern.

Figure 4.7: Land Use All India
(2010-2011)

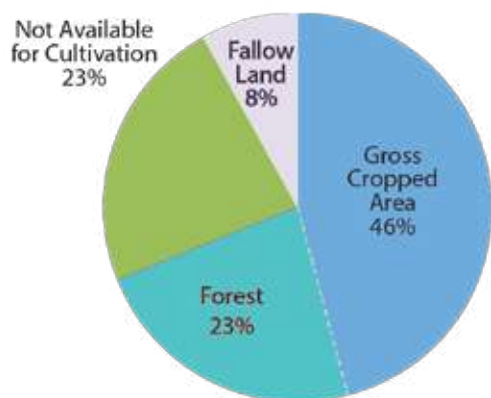
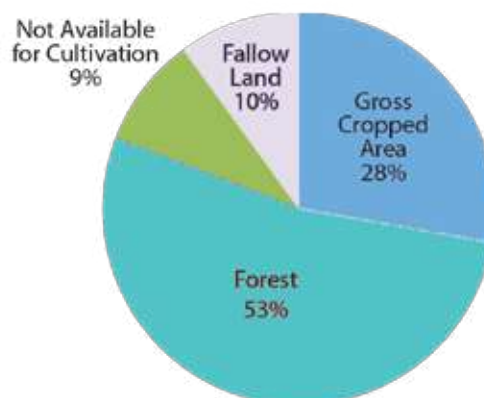


Figure 4.8: Land Use Nagaland
(2010-2011)



Source: Statistical Handbook 2013, Government of Nagaland and Agricultural Statistics, M/o of Agriculture, GOI

During 2012-2013 in Nagaland the Net Area Sown (NAS) was 380,222 hectares and the Grossed Cropped Area (GCA) was 488,522 hectares. The area sown more than once accounted for 22.17 percent of GCA, a decline from 25.14 percent in 2009-2010. During the period, GCA increased by a small margin of 1.5 percent with decline in the proportion of double cropped area by 10.5 percent. Consequently, the intensity of agricultural land use in Nagaland declined from 134 percent to 128 percent during 2009-2010 and 2012-2013 respectively. (Table 4.4 in Appendix)

As compared with country's average as given in Box 4.4, the cropping intensity, i.e., the agricultural land use efficiency in the State is lower. This may be due to the fact that crops are grown mainly under rain fed conditions in both Jhum and Terrace farming systems where the opportunity for double cropping is relatively limited especially in Jhum areas.

Box 4.4: Cropping Intensity

	2000-2001	2003-2004	2005-2006	2008-2009	2009-2010	2010-2011	2012-2013
Nagaland	-	121.2	125.2	127.3	134	124.9	128
All India	131.1	-	-	-	135.8	140.5	-

Source: (i) Pocket Book on Agricultural Statistics 2013, Ministry of Agriculture, New Delhi
(ii) Statistical Handbook 2013, Government of Nagaland

Land Use by Crops

The average allocation of land for various purposes varies by geographical regions. However, land use for agriculture depends on the decision of the farmer. This in turn is influenced by crop profitability, adaptability of the farmer to changes, his needs and the agro climatic conditions. In Nagaland the share of area under individual crops in Gross Cropped Area (GCA) has undergone changes during the last decade as indicated in Figures 4.9 & 4.10. Although paddy still occupies the largest area, it is worth mentioning that its share declined from 50 percent of the GCA in 2001-2002 to 45 percent in 2012-2013. This is on account of shift of area to commercial crops.

Figure 4.9: Agricultural Land Use by Crops 2001-2002

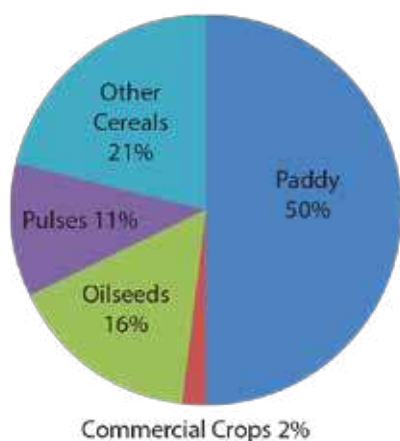
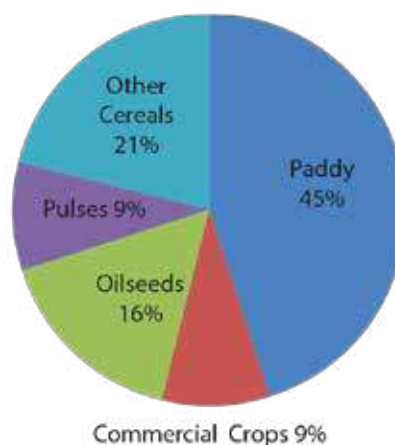


Figure 4.10: Agricultural Land Use by Crops 2012-2013



Source: Statistical Handbook, 2005 and 2013, Government of Nagaland

Paddy as the staple food in the State grows in both Jhum and Terrace/Wet fields. However the share of Jhum paddy in total paddy area declined from 57.51 percent to 51.77 percent during 2001-2002 to 2012-2013 as against terrace/ wet rice area which shows an increase from 42.48 percent to 48.22 percent during the same period. (Figure 4.11 and Table 4.6 in Appendix).

Figure 4.11: Jhum and Terrace/Wet Rice/Paddy in Nagaland (in %)



Source: Statistical Handbook 2013, Government of Nagaland

Irrigated Area

Irrigation is an important determinant for crop productivity. The total irrigated area in Nagaland is 92450 hectares as recorded in 2012-2013, which is 18.92 percent of Gross Cropped Area (Table 4.7 in Appendix).

In Nagaland, out of the irrigation potential of 1,03,217.85 hectares, only 59.06 percent of the area was utilized in 2006-2007, indicating under utilization of its resource potential. District-wise data shows that Dimapur has the highest share of irrigation potential with 27.48 percent while Longleng had the lowest share with 2.24 percent. In terms of utilization of the created potential, Tuensang registered the highest utilisation with 81.57 percent followed by Mon and Peren with 72.94 percent and 68.93 percent respectively. The lowest utilization was however recorded in Dimapur with 50.93 percent followed by Mokokchung and Kohima with 51.20 percent and 52.69 percent respectively. The figures indicate that the districts having higher irrigation potential were the ones with relatively lower utilization. (Table 4.8 in Appendix)

Box 4.5: Irrigated Area under Principal Crops during 2010-2011 (in %)

	Rice	Wheat	Cereals	Pulses	Foodgrains	Oilseeds	Cotton	Tobacco	Total Area (All Crops)
Nagaland	46.8	-	32.5	1.2	28.9	7.8	-	-	20.2
All India	58.6	92.1	56.2	14.8	47.8	25.1	33.8	47.1	44.9

Source: (i) Pocket Book on Agricultural Statistics 2013, Ministry of Agriculture, New Delhi
(ii) Statistical Handbook 2013, Government of Nagaland

From Box 4.5, it can be inferred that during 2010-2011, the total irrigated area under principal crops in Nagaland is only 20.2 percent of the total cropped area as against All India average of 44.9 percent. Rice, which is the dominant crop in Nagaland has the highest cultivated area under irrigation, while at the All India level, wheat holds the same position. Usage of irrigation for cultivation is relatively less for all the crops in Nagaland. This is primarily due to the over dependency on monsoon rains for cultivation and unavailability of irrigation facilities in most areas.

Fertilizer Consumption

In addition to irrigation, inputs such as quality seeds, fertilizers, pesticides, farm machineries are critical for crop production. In Nagaland, the use of farm machineries is limited because of the hilly topography while use of chemical fertilizers and pesticides is negligible. Backyard manure is the main fertiliser. Agriculture produce of the State is therefore organic by default. The Statistical Hand Book of Nagaland 2013 indicates that the total fertilizer consumption was 2167.2 metric tonnes in 2012-2013, an increase from a consumption level of 975.9 metric tonnes in 2001.

Box 4.6: Zone-Wise Consumption of Fertilisers ('000 tonnes).

State/Zone		2009-2010	2010-2011	2011-2012
All India	Total	26486.44	28122.21	27740.00
	Per Hectare	1 35.27	146.32	144.33
North East Zone	Total	279.42	312.38	310.36
	Per Hectare	50.48	52.01	51.67
*Nagaland	Total	0.95	1.43	1.50
	Per Hectare**	0.20	3.15	3.17

Source: (1). Department of Agriculture and Cooperation, INM Division.
Pocket Book on Agricultural Statistics 2013, Ministry of Agriculture.GOI

(2). *Statistical Hand Book, 2013, Government of Nagaland.

**Note: For Nagaland, per hectare is calculated in terms of Kg/hectare.

At the micro level, the consumption of fertilizer in the State was estimated at 3.2 kg per hectare in 2011-2012, an increase from 0.2 kg per hectare in 2009-2010. Although the consumption is rather insignificant and minimal as compared to the North East Zone and the All India average of 2011-2012 with 51.7 and 144.3 thousand tonnes per hectare respectively, there is an increasing trend in the consumption pattern of fertilizers in Nagaland.

4.6 CROP PRODUCTION AND PRODUCTIVITY

Cropping Pattern

Cropping pattern is determined by a number of factors like type of soil, climate, rainfall, temperature and farmers decisions. In Nagaland, crops are generally grown during kharif season due to existing farming systems where Jhum cultivation is predominant. Season wise major crops cultivated are given in Box 4.7.

Box 4.7: Season Wise Major Crops in the State

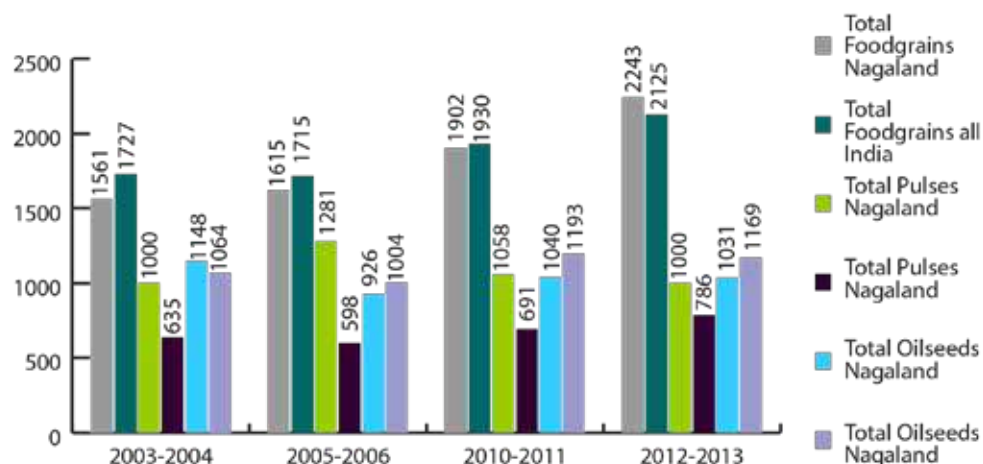
Crops		Season
Cereals	: Dry land rice, W/TRC Rice, Maize, Sorghum, Millets	Kharif
Cereals	: Wheat, Barley and Oats	Rabi
Pluses	: Arhar, Urd, Rice Bean, Cowpea, Beans, Rajmah, Horse Gram	Kharif
Pluses	: Pea, Lentil, Gram, Rajmah, Black Gram	Rabi
Oil Seeds	: Groundnut, Soyabean, Perilla, Castor, Sesamum, Sun Flower	Kharif
Oil Seeds	: Sun Flower, Rape seed and Mustard	Rabi
Commercial Crops	: Sugarcane, cotton, Jute, Potato, Tea, Tapioca, Colocossia, Mesta	Kharif
Commercial Crops	: Potato	Rabi

Source: Annual Report, 2010, Directorate of Agriculture, Government of Nagaland

Crop Production and Yield

Within the wide range of crops cultivated in the State, the major crops are rice, maize, small millets, rice bean, kholar, pea, soybean, sesamum, mustard/ rapeseed, linseed, colocassia, tapioca, ginger and linseed.

Figure 4.12: Crop Yield of Major Crops (Kg/Hectare)



Source: (i) Department of Agriculture and Cooperation, Ministry of Agriculture, GOI
(ii) Statistical Handbook 2013, Government of Nagaland.

Box 4.8: Change in Crop Yield(%)

Crops	State/Country	2003-2004 to 2005-2006	2010-2011 to 2012-2013	2003-04 to 2012-2013
Food Grains	Nagaland	3.46	17.93	43.69
	All India	- 0.69	10.10	23.05
Total Pulses	Nagaland	28.1	-5.48	0
	All India	- 5.83	13.75	23.78
Total Oilseeds	Nagaland	-19.34	-0.87	-10.19
	All India	- 5.64	-2.01	9.87

Source: (i) Department of Agriculture and Cooperation, Ministry of Agriculture, GOI
(ii) Statistical Handbook, 2013, Government of Nagaland

Food Grains:

In 2012-2013, the state's total food grain production was 5,58,510 metric tonnes with a yield of 2243 kg per hectare, indicating a higher yield than that of the national average of 2125 kg per hectare. The percentage increase in the yield of foodgrains in the State during 2003-2004 to 2012-2013 was 43.69 percent reflecting a higher percentage increase than that of national average of 23.05 percent.

Total Pulses: Arhar, moong, Naga dal, rajma, pea beans and gram are popular pulses in the State and are important source of protein with high economic value. The total production of pulses in Nagaland during 2012-2013 was 40450 metric tonnes with yield of 1000 kg per hectare. At National level the yield was 786 kg per hectare during the same period. While there has been an increase in the productivity of pulses by 23.8 percent during the period 2003-2004 to 2012-2013 at the national level, in Nagaland there has been no change in the productivity level.

Total Oilseeds: In Nagaland the major oilseeds are soya bean, rape seed, linseed, sesamum, sunflower, ground nut and castor. During 2012-2013, the total production of oilseeds was 68900 metric tonnes. Its yield per hectare was 1031 kg, which was lower than All India average of 1169 kg per hectare by about 14 percent. Data shows that the State's yield level has been consistently lower than the All India average during 2001-2002 to 2012-2013 except for 2003-2004.(Table 4.9 in Appendix).

Total Commercial Crops: Sugar cane, potato, tea, tapioca, yam, ginger, colocossia are major commercial crops in the State. Its total production was 443750 metric tonnes with a yield of 1031 kg per hectare in 2012-2013, which rose from 111220 metric tonnes in 2001-2002, indicating an increase of 299 percent. This crop group gained both in area and production, but its productivity declined by 12.6 percent during the corresponding period.

Figure 4.13: Percentage of Total Crop Production in Nagaland (2001-2002)

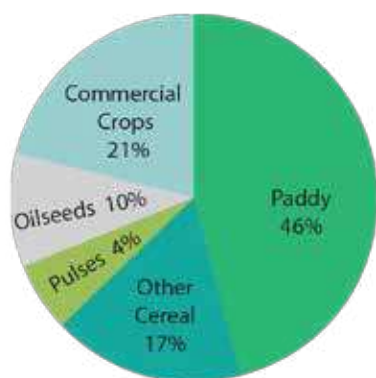
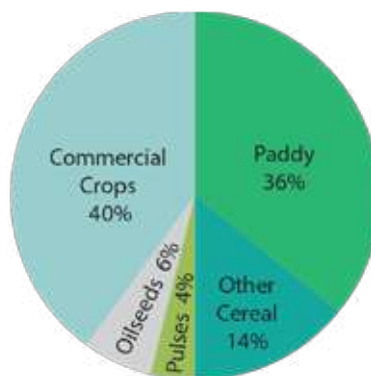


Figure 4.14: Percentage of Total Crop Production in Nagaland (2012-2013)



Source: Statistical Hand Book 2005 & 2013, Government of Nagaland.

Figure 4.13 and 4.14 reflects the proportional change in production amongst the broad crop groups during the period 2001-2002 and 2012-2013. Production of all crop groups declined during the decade, except for commercial crops which doubled. This group of crops emerged as the largest contributing crop in total crop production in the State. The share of pulses with 4 percent in 2012-2013 remained the lowest.

Among the individual crops, paddy remains the principal crop in Nagaland with cropped area of 45.3 percent during 2001-2002. However the share of paddy in total crop production which recorded 46 percent in 2001-2002 declined to 36 percent in 2012-2013. Its productivity at 2210 kg per hectare was lower than the National average of 2462 kg per hectare in 2012-2013. (Table 4.9 in Appendix).

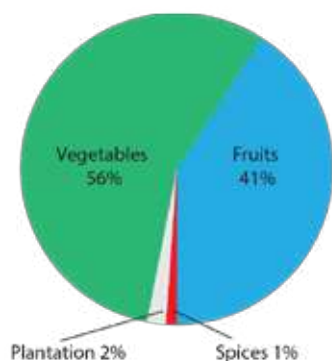
4.7 HORTICULTURE CROPS

With the introduction of Horticulture Technology Mission in the State and with the introduction of modern techniques of farming, quality seeds and new varieties of fruits and vegetables with high economic value and also with increase in the demand for fruits and vegetables, horticultural crops have gained importance in recent years.

The area under horticultural crops increased considerably from 77501 to 89600 hectares during 2010-2011 to 2012-2013. Production increased from 505541 to 736401 MT during the same period while productivity increased from 6.5 to 8.2 MT per hectare during the corresponding period. Awareness on health benefits of fruits and vegetables amongst the people and high commercial value of these crops have led to increased demand which in turn has increased cultivation of these crops.

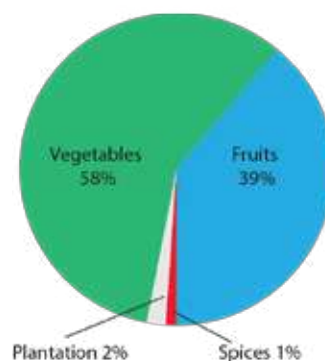


Figure 4.15: Horticulture Crop Production



(% in Total), 2010-2011

Figure 4.16: Horticulture Crop Production



(% in Total), 2012-2013

Source: Statistical Hand Book 2013, Government of Nagaland

In Nagaland among the horticultural crops, area and production of vegetables was the highest during the period 2010-2011 and 2012-2013. This was followed by fruits, plantation crops and spices. Productivity of vegetables was also the highest with 9.7 MT per hectare, followed by fruits with 7.6 MT per hectare, plantation crops with 3.2 MT per hectare and spices with 2.4 MT per hectare during 2013.

Figure 4.17: Production of Horticulture Crops

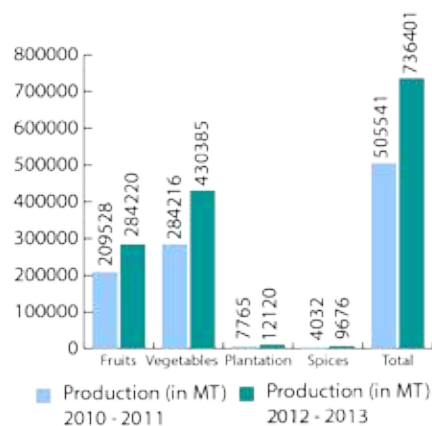
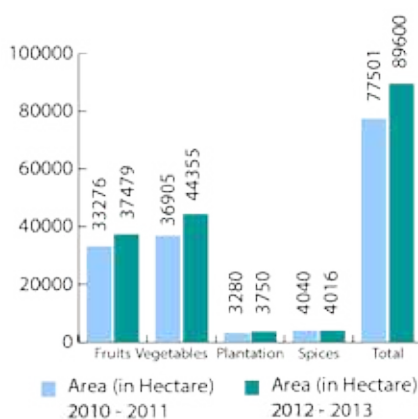


Figure 4.18: Area Under Horticulture Crops



Source: Statistical Hand Book 2013, Government of Nagaland

Floriculture is slowly gaining recognition in the State. With favourable climatic conditions, floriculture has tremendous potential. Improvement in transportation services and increase in demand have made farmers to quickly adapt floriculture as a means of livelihood. Rose and Lillium are the most popular flowers in terms of quality and demand, followed by Anthurium, Carnation, Heliconia and Alstromeria. With potential for growing orchids, new varieties of orchids have also been introduced in the State. The State's floriculture production with 17 lakhs stems (cut flowers in numbers) during 2010-2011 is insignificant compared to the All India figures of 69027 lakhs stems. However the State has the potential to cultivate exotic breed of flowers and orchids to cater to the niche market. (Table 4.13 in Appendix).

4.8 OTHER FACTORS INFLUENCING AGRICULTURAL PERFORMANCE

Market

Market linkage is crucial for commercialization of agricultural produce for absorption and for promotion of the surplus production. Developed institutional structure, legal framework and better road connectivity with minimum involvement of middlemen positively impact farming. Keep this in mind, the State Government has taken various initiatives to promote agricultural marketing through building of marketing yards, storage facilities and agri-link roads to facilitate farmers to market their produce which will ultimately boost production.

To encourage processing, to add value and to increase the shelf life of agricultural products, the State Government has provided grinders, dryers and small agro-machineries to the Agriculture Production Marketing Committees (APMC). However, farmers have not been able to optimally utilise these facilities due to lack of proper coordination between the farmers and the agency, poor marketing and transport facilities. Absence of a regulated market adds to the problems of farmers. Therefore removal of such impediments and awareness generation amongst farmers on better prices for graded agricultural products, on value addition, on improved seeds and inputs will go a long way

in incentivising farmers to adapt to new practices and technologies. Cold storage facilities and godowns at strategic areas will prevent farmers from sale of the produce at throwaway prices during peak season. Further processing, packaging of the products, labelling and organic certification by an appropriate agency will add value to the products. This will enable farmers to cater to the niche market and will upscale their income from agriculture.

Knowledge and Innovation

The progress of agriculture demands transfer and application of modern production technologies. Therefore it is essential to make modern technologies available to the farmers to enable them to meet the growing challenges for sustainable agriculture. To this end, many agencies in the State have been imparting training to farmers on updated technologies to equip them with the latest technical know-how in an attempt to transform subsistence agriculture into a vibrant market oriented economy while at the same time, focusing on food security.

- i. Research:* Agricultural research plays a very significant role in the process of transformation of the farming community. Introduction of new technologies, innovations and practices are made possible through extensive research works. Research stations and laboratories in Nagaland such as, the State Agricultural Research Station (SARS) at Yisemyong, soil testing, bio-control and bio-fertilizer laboratories at Medziphema, seed testing laboratory at Dimapur cater to the field problems and disseminate research findings. Krishi Vigyan Kendra, (KVK) also conducts 'on and off farm trials' for technology transfer.
- ii. Training for Developmental Skills and Knowledge:* Agriculture has never been more vulnerable than now due to rapidly rising prices and increasing effects of climate change. Under such circumstances, training enables farmers to quickly adapt to the changing conditions and respond readily to the challenges and opportunities. Several such training programs have been conducted by the Agri and Allied Departments as well as by the Agricultural Technology Management Agencies (ATMA), with focus on bridging knowledge gap and skills

at various levels; from grass root to extension workers and researchers. Besides, organising farmers' exposure trips, demonstration of new and proven technologies are conducted in the farmers' fields to enable them to 'learn by doing' and to motivate them by the results.

iii. Agricultural Information and Extension Programmes:

The Agricultural and Allied Departments organises exhibitions annually to enable farmers to participate at State and National level exhibitions. Seminars and workshops are also held to empower the farmers and to enable them to get access to important agricultural information, knowledge and skills. Field/ farm schools are also conducted to facilitate active participation of the farmers.

iv. Improved Inputs: Farmers need to be regularly encouraged to adopt integrated farming practices to increase production. Cultivation of improved seeds, practice of water harvesting, efficient resource and fallow management and mechanization are some of the activities under the RKVY programme in the State. Introduction of High Yielding Variety (HYV) crops by distribution of seeds, provision of bio-fertilizers and agricultural machineries at subsidised rates are co-ordinated by the Agri and Allied Departments to enable farmers to adopt improved farm practices.

v. Women in Agriculture: While the proportion of women employed in agriculture is higher than that of men in the State, their access to credit is limited. Therefore Self Help Groups are formed and financially assisted by the Agri and Allied Departments. Training on crop and live stock production are specifically conducted for women in the State. Recognizing that women are the seed keepers and the managers of natural resources in the traditional system of farming, conscious efforts are also being made to engender the development process in all schemes. Areas with potential and scope for involvement of women are identified to ensure women's full and equitable participation.

vi. UNDP GEF SLEM: United Nation Development Programme- Global Environment Facility Project ‘Sustainable Land and Ecosystem Management’ in Shifting Cultivation Areas of Nagaland for Ecological and Livelihood Security’ is currently being implemented in the State in collaboration with Government of Nagaland. The project envisages developing, demonstrating, up scaling sustainable land management practices for conservation of Jhum land. The main activities include maintenance of the ecosystem providing policy and enhancing the capacity of the stakeholders through replication of good practices in other parts of the region. Extensive research has been carried out in the districts of Mokokchung, Mon and Wokha.

CONCLUSION

The process of transformation of the traditional system of agriculture into a more commercial system has been initiated albeit sporadic progress. Farmers’ response to price signals and market demands is reflected by the increase in acreage under commercial crops and vegetables which is a positive response towards commercialization. Although there are changes taking place in the cropping pattern, agriculture in the State is still dominated by cereal food crops. The productivity for almost all the crops in the State is lower than the National average which indicates scope for improvement and which requires due attention of policy makers.

In order to reduce poverty in the State, which increased from 8.8 percent in 2004-2005 to 18.9 percent in 2011-2012 and to ensure food security it is extremely crucial to hasten the pace of development in the agriculture sector. For this purpose capacity building exercises need to be increased not only to improve the knowledge and skills of the farmers but also that of policy makers to reorient them to the importance of agriculture. With rural poverty at 19.9 percent which is higher than the State’s average, it is pertinent to reduce this figure through ensuring food security. There is need to transfer research findings and new technologies to farmers for sustainable production through effective trainings and field demonstrations. This will capacitate them to possess technical, managerial and entrepreneurial skills, while enhancing partnership and negotiation ability to get better pricing for their agricultural produce.



To promote agri business, marketing linkages and networks need to be established. Farmers have to be educated about the importance of grading, packaging, value addition and other post harvest management processes. Simultaneously infrastructure like road and transport system, storage facilities, information network have to be improved. Further, efficient credit and price support mechanisms have to be introduced to bring about progress in the sector. To this end, the State Government should work towards formulation of policies and mechanism to ease the process of availing credit for the farmers through introduction of special low interest credit packages with buy back policies of the produce.

Box 4. 9: Women in Land Use Planning



Involving women in Participatory Land Use Planning Empower them on Land Use and Related Issues.

Source: UNDP GEF SLEM Project Mokochung

Setting up of grading and packaging facilities, processing and export zones to promote agricultural products needs to be incorporated in the State development agenda for farmers. Zoning of areas according to the suitability of the crop will enhance its comparative advantage and will enable farmers to produce on commercial scale.

In summary, the crucial issue is to move from subsistence based agriculture to specialised productions. While doing so, the State must capitalise on its inherent advantage of organic production. This will not only increase farm incomes but will also lead to improvement in livelihood options.







INFORMAL SECTOR

INTRODUCTION

Informal sector refers to economic activities i.e. production and distribution of goods and services by the operating units of the households which essentially differ from the formal sector in terms of technology, economies of scale, use of labour intensive processes and virtual absence of the well maintained accounts.

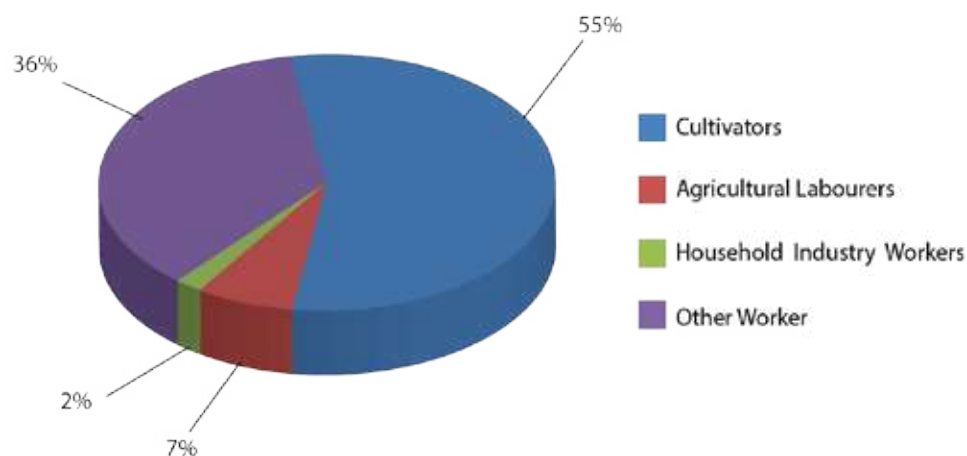
Informal sector is an integral part of the economy especially in developing and transition economies. It plays a major role in employment, production of goods and services and income generation. Lack of jobs in the formal sector as well as the lack of skill amongst a large part of the labour force has resulted in growth of a substantial informal sector in which most workers are in low-paid economy under unregulated and poor working conditions (ILO, 2004). According to the National Commission for Enterprises in the Unorganised Sector (NCEUS), “The informal sector consists of all incorporated private enterprises owned by individuals or households engaged in the sale and production of goods and services operated on a proprietary or partnership basis and with less than ten total workers.”

5.2 WORK PARTICIPATION RATE AND EMPLOYMENT

Nagaland has a total working population of 974,122 out of which 53.4 percent are male and 44.7 percent are female as per 2011 Census. The Work Participation Rate (WPR) of the State with 49.2 percent is much ahead of the National WPR of 39.8 percent. However, out of the total urban population of 5,70,966 in the State, there are only 2,13,762 workers accounting for 37.4 percent of the urban population. This is an

indicator of high unemployment which needs to be addressed early in order to prevent it from becoming an unmanageable challenge. The figure below shows the proportion of workers in the State.

Figure 5.1: Proportion of Workers in the State



Source: Primary Census Abstract 2011.

Except for the Government sector, almost all other economic activities in the State fall under the informal sector. Figure 5.1 indicates that 57 percent of the population comprises of cultivators, 3 percent of agricultural labourers, 1.3 percent of household industry workers while 38.9 percent comprises of other workers.

5.3 EMPLOYMENT

The State Government is the biggest employer in the State and most of the small towns thrive on the existence of spending of the administrative and Departmental offices in the blocks and towns. There has been no noticeable change in the structure of urban employment in the last three decades except for a slight increase in the service sector which can be attributed to the increase and expansion of urban areas. As of 2011, the State Government employed about 4.6 percent of the total population that is 9.4 percent of the working population under its payroll. Figure 5.2 indicates the total Government Employees from 2009-2013.

Figure 5.2: State Government Employees (2009-2013)



Source: Nagaland Economic Survey, Department of Economics and Statistics, Government of Nagaland.

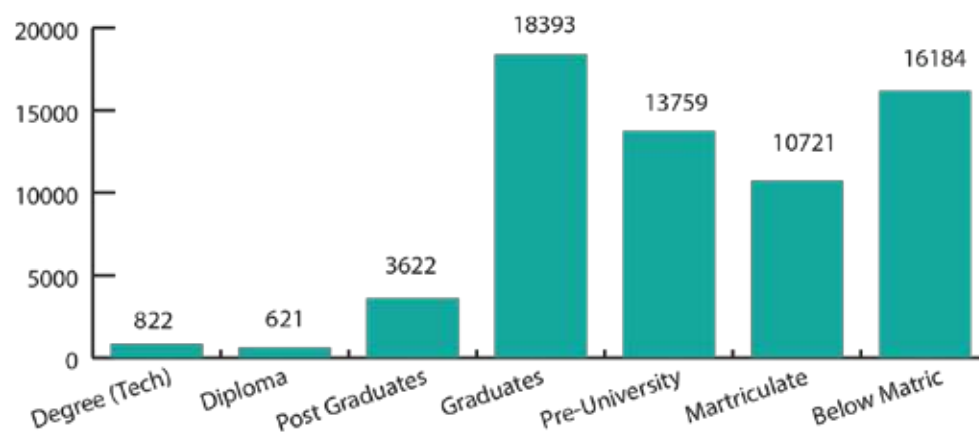
It is generally accepted that the State of Nagaland is increasingly moving towards chronic unemployment. It has been observed that the structure of employment and the nature of unemployment has been contributed by both natural population growth, the influx of migrants displacing the local populace and the absence of an organised private sector to absorb the growing population.

The total number of Government employees in the State as on March 2013 was 93,530 which accounts for 4.7 percent of the State's total population 19,78,502 and 9.6 percent of the total workers 9,74,122 in the State as per 2011 Census. During 2012-2013, as per record, there was an increase of 2159 Government employees in the State.

5.4 NUMBER OF JOB SEEKERS

The size of educated job seekers in the State poses a huge challenge to the State. The different category of job applicants in the Live Register of the State stood at 64121 as on 31st December 2014. The category-wise distribution of job seekers is shown in figure 5.3.

Figure 5.3: Category-Wise Educated Job Seekers in Nagaland during 2014



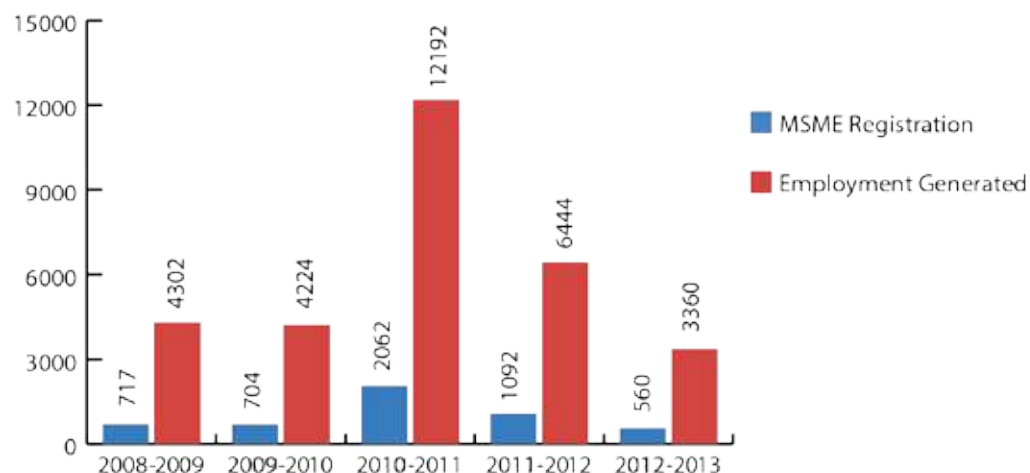
Source: Nagaland Economic Survey, Department of Economics and Statistics, Government of Nagaland.

5.5 MICRO, SMALL AND MEDIUM ENTERPRISES

The absence of a well established manufacturing sector contributes to the rising number of unemployment especially amongst the youth. The rate of employment generated by Micro, Small and Medium Enterprises (MSMEs) over the years has witnessed a sharp decrease. Since 2011-2012 there has been a drop of 47.2 percent as compared to the previous years. Moreover, during 2008-2009 to 2012-2013, as shown in Figure 5.4, 2012-2013 had the lowest MSME registrations with only 506 with a corresponding employment generation of 3360.



Figure 5.4: MSME Registration and Employment



Source: Statistical Handbook 2013, Government of Nagaland.

Realising the need to increase livelihood opportunities through MSMEs, the State Government announced the year 2010 as the 'Year of Entrepreneurs' where 1000 entrepreneurs were selected from the State and were given Entrepreneurial Development training at the Indian Institute of Entrepreneurship, Guwahati. After the training, the entrepreneurs were given handholding support by the State Government through provision of seed money for setting up their enterprises.

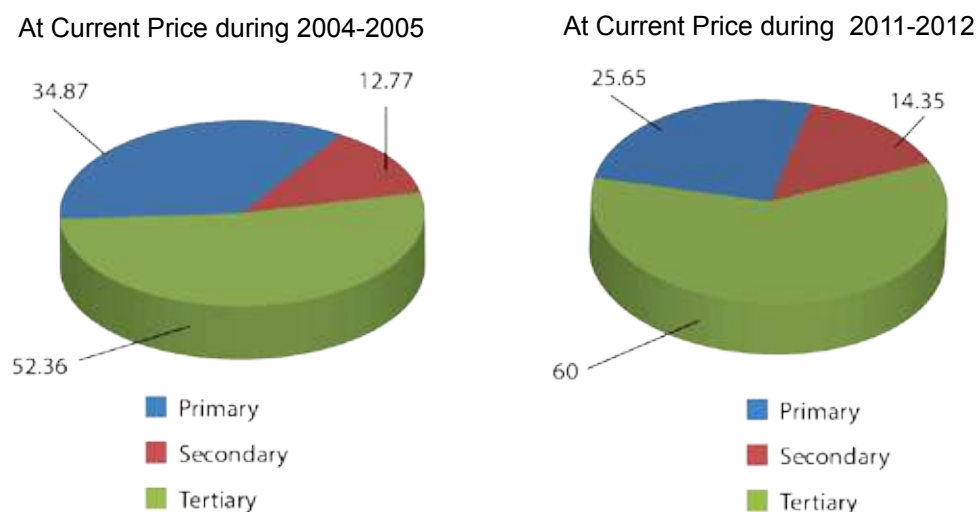
In 2013, the Department of Youth Resources in collaboration with an NGO called Youthnet launched 'Impact 5000 by 18' with an aim to enhance business, entrepreneurship and development of skill of 5000 youth in Nagaland by 2018. The planned activities included skill development in agro-sector, fine arts, handloom, handicraft, livestock rearing, business, services and entrepreneurship.

In Nagaland, the next big employer in the State after the Government is surprisingly the churches in Nagaland. The diverse nature of Naga society with its numerous strata and entities has been crucial in moulding the present facet of religion in the State. Beginning from 'khel' in big villages upto the wards in the towns, every entity at every level and location has a church that employ at least 5-10 families.

5.6 ECONOMY OF THE STATE

Along with the rest of the country, Nagaland has seen gradual changes and improvement in the economic livelihood of the people in the last 54 years of its statehood. As is the trend with any other people from around the world, Nagaland is gradually moving away from the prevailing unorganised agrarian economy albeit with many challenges. The economy of Nagaland is predominantly agrarian with more than 60 percent of the population dependent on agriculture for their livelihood. Rice is the staple food and is cultivated in about 70 percent of the net cultivated area. The production of rice was 4,54,140 MT during 2014-2015. During 2014-2015, Agriculture and Allied Sector achieved a growth of 4.1 percent and contributed 24.7 percent to the GSDP. Figure 5.5 and Figure 5.6 indicate the GSDP at current and constant price respectively.

Figure 5.5: Comparative GSDP at Current Price by Industries of Origin 2011-2012 (2004-2005 Series) in %

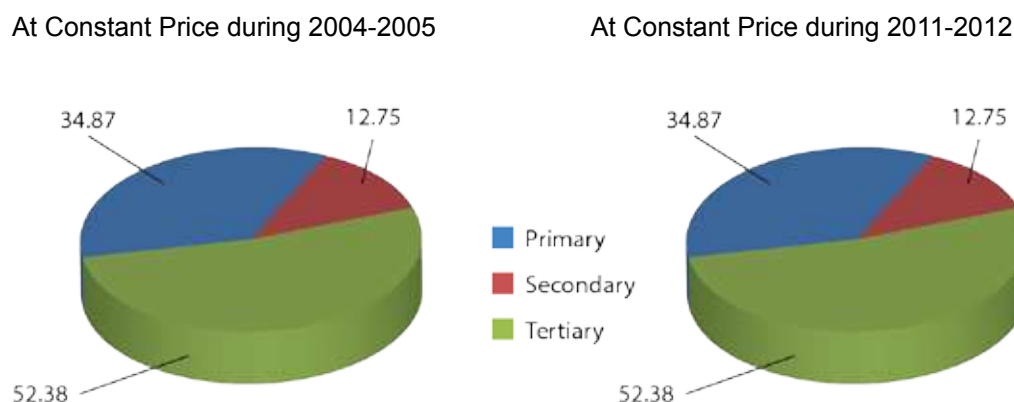


Source: State Domestic Product 2004-2005 to 2011-2012 (2004-2005 Series), Department of Economics & Statistics, Government of Nagaland.

An analysis of the percentage share of the Primary, Secondary and Tertiary sector in GSDP at current price shows that since 2004-2005 the Tertiary Sector continues to be the major contributor towards the State's economy. In terms of the percentage, the share of Tertiary sector increased from 52.4 percent in 2004-2005 to 60 percent in 2011-2012. The share of the Primary sector in GSDP steadily declined from 34.9 percent in 2004-2005 to 25.7

percent in 2011-2012, while the contribution of the Secondary sector to the GSDP remained consistently low due to the slow rate of industrialization in the State. The overall contribution of the Secondary sector to GSDP in 2004-2005 ranged between 12.8 percent to 14.4 percent in 2011-2012.

Figure 5.6: Comparative GSDP at Constant Price by Industries of Origin 2011-2012 (2004-2005 series) in %



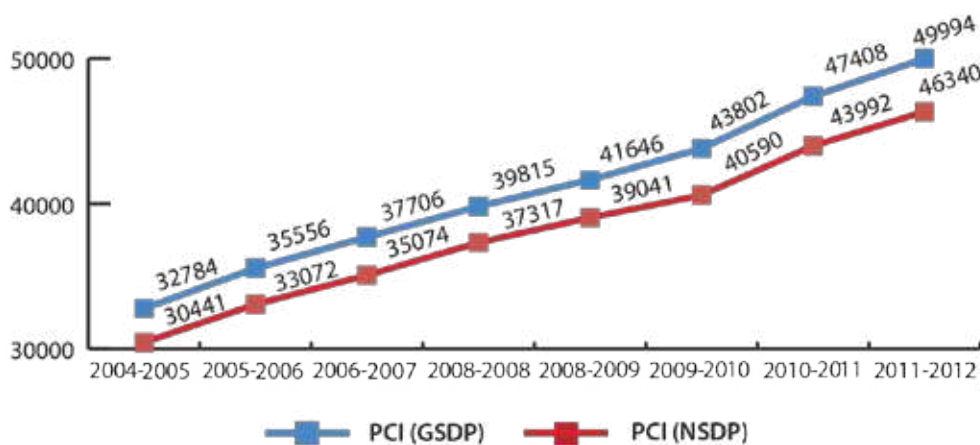
Source: *State Domestic Product 2004-2005 to 2011-2012 (2004-2005 Series)*,
Department of Economics & Statistics, Government of Nagaland

At constant price, the share of the Primary sector in the GSDP declined from 34.9 percent during 2004-2005 to 26.8 percent during 2011-2012. While the share of the Secondary sector marginally increased from 12.8 percent to 13.1 percent during the corresponding period. The Tertiary sector which contributes more than 50 percent of the State's GSDP improved its share in the GSDP and moved from 52.4 percent in 2004-2005 to 60.1 percent in 2011-2012.

With the share of Agriculture & Allied Sector falling to less than a quarter of the State's Income (GSDP), a proper assessment of the cause of its decline is necessary since the sector is a major source of livelihood and employment for people in the rural areas. The Tertiary sector with a share of more than 60 percent in the GSDP reflects the progress of the State from an agrarian economy to a higher paradigm of economic development. Therefore, the increasing dominance of the service sector should be capitalized by investing and concentrating resources in more profitable areas with higher potential for employment generation.

The State's young demographic profile with about 30 percent of its population in the age group of 15-29 years places it in an advantageous position in terms of manpower availability. Therefore, to optimally realise its potentials, it is necessary to invest in building the capacity and skill of its human resources. This will not only expand its economy but also provide level playing field to all the sections of the society. Further necessary avenues and platforms should be created to enable absorption of the available man power in the labour market.

Figure 5.7: Per Capita Income of Nagaland (GSDP/NSDP) at Constant Price.



Source: State Domestic Product 2004-05 to 2011-12 (2004-05 Series),
Department of Economics & Statistics, Government of Nagaland.

An analysis of the trend of Per Capita Income(NSDP) at constant price shown in Figure 5.7 reveals that the compound annual growth rate of the PCI was 6 percent during the period 2004-2005 to 2011-2012. In terms of percentage increase over the base year, the PCI (NSDP) at constant price increased by 52.4 percent during 2011-2012.

In Nagaland the Tertiary sector has become the prime mover of the economy since 2004-2005. Within the Tertiary sector, the sub-sectors such as real estate and business services are the prominent contributors with a share of 18.3 percent in 2011-2012 followed by public administration with a share of 15.6 percent. Transport, storage and communication contributed 11.3 percent. While the contribution of trade, hotels and restaurants, banking and insurance

and other services, towards the GSDP since 2004-2005 was only around 1.0 percent. The overall picture shows that the State's economy is steadily moving away from Agri and Allied dominated economy to a more service based economy.

5.7 ECONOMIC LIVELIHOOD

Development of human society to a large extent depend on economic well being of the people. Providing sustainable livelihood opportunities to the increasing population is one of the biggest challenge facing the State today. Livelihood promotion not only allows the poor to have choices and opportunities but it also brings about social upliftment as increase in purchasing power leads to access to better education and better health care facilities. It also facilitates political stability and promotes economic growth.

5.8 LIVESTOCK AND POULTRY

Livestock and poultry farming has been an integral part of the economy of the State since time immemorial. It is symbolic to the health and wealth of a Naga family. Animal husbandry plays a pivotal role in supplementing family income and generating employment in both rural and urban areas besides meeting protein requirement in food. The livestock sector also contributed to supply of manure for the farms.

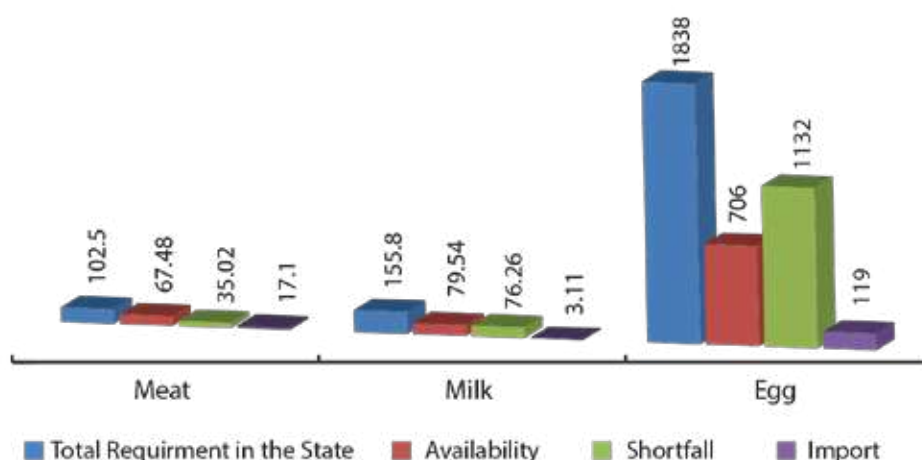
As per the 19th Livestock Census conducted in 2012, the total livestock population of the State was 31,91,149 compared to 50,23,269 in 2007 Census showing a negative growth of 36.47 percent. The Census also reveals that, out of 10,67,454 animals, pig accounted for 47.19 percent followed by cattle with 22 percent, dog at 10.7 percent and goat at 9 percent while buffalo and Mithun population accounted for about 3 percent each. Poultry birds and ducks constituted 66.5 percent of the total livestock population in the State.

Livestock development in Nagaland has gained popularity both in the rural and urban areas and has seen improvements through adaptation of various strategies. The improvement is largely due to charting out road

maps and revival of traditional backyard livestock and poultry farming and setting up of private commercial and rural breeding farms on Private Public Partnership Mode.

Production of milk, meat and egg in the State during 2013-2014 was 79.5 thousand tonnes, 67.4 thousand tonnes and 706 lakh numbers respectively, the growth rate of which over the preceding year were 1.5 percent, 2.5 percent

Figure 5.8: Meat, Milk and Egg Production 2013-2014 (in '000 tonnes)



Source: Department of Veterinary & Animal Husbandry, Government of Nagaland.

and 14.2 percent. Over the years, increase in the level of production of animal husbandry products has reduced the amount of imports. The value of import of meat, eggs and diary products which stood at Rs.215.46 crores in 2013-2014 registered a fall of Rs.0.72 crores during 2014-2015 due to increase in internal production on account of implementation of various livestock and poultry production enhancement programmes in State. Given the demand for meat in the State, there is a ready market for the livestock produce. Therefore fodder cultivation and establishment of fodder processing units will not only have ready market for its produce but will also ensure continuous supply of locally produced livestock.

5.9 FISHERY

Fisheries, especially in developing countries contribute to livelihood as food and also as a source of income and livelihood which ultimately reduce vulnerability and poverty. During 2014-2015, the total quantity of fish production in the State was 7835 metric tonnes. Taking into account the domestic production and the imports, the State's per capita consumption of fish in 2014-2015 was 5.91 kg per person.

Nagaland has large tracts of land with potential for fishery activities. However, out of a total potential area of 1,12,500 hectares in 2015-2016 only a negligible area was utilized for the purpose. In percentage terms, 5.4 percent of the potential area was utilized for inland culture fisheries and 57.5 percent for inland captured fisheries.

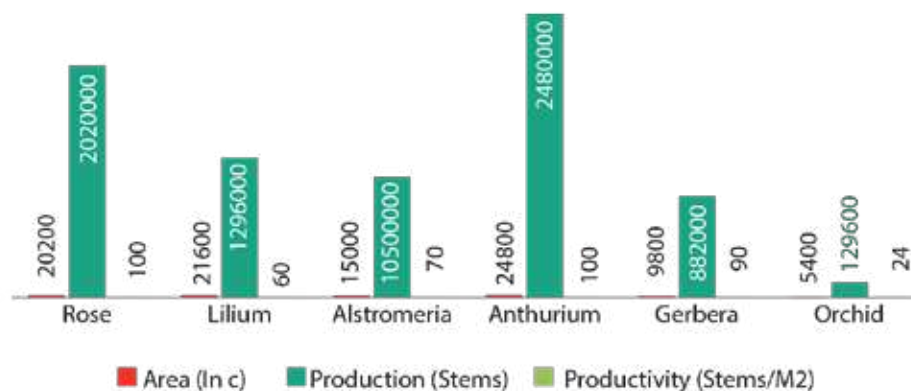
In the year 2014-2015, the total quantity of fish production increased to 7835 metric tonnes from 7465 metric tonnes in 2013-2014 registering a growth of 5 percent. With regular heavy rainfall the water bodies can be utilised for pisciculture. In addition farmers can be encouraged to take up traditional practice of paddy cum fish culture in the terraced field.



5.10 FLORICULTURE

Nagaland has a huge potential for increasing output in the floriculture sector. The wide diversity in topography and geo-climatic conditions across the State offers scope for cultivation of different varieties of flowers. Floriculture as a means of livelihood is relatively new to the State. However during the last few years, the sector has made tremendous strides in terms of coverage area and production through support provided by the State Government. Provision and installation of hi-tech structure, inputs in terms of seeds and extension services, post harvest handling and provision of market linkages for the commercial farmers have boosted floriculture in the State. This has led to establishment of florist shops hitherto unknown and increased use of locally produced fresh flowers for functions and occasions which were earlier imported from other states. Flower Growers Associations have also been formed for the welfare of the flower growers enhancing their bargaining power as a collective in the supply demand chain.

Figure 5.9: Area, Production and Productivity of Flowers (2013-2014)



Source: Nagaland Economic Survey, Department of Economics and Statistics, Government of Nagaland.



Blessed with favourable climatic conditions, improvement in transport services and increasing market demands, floriculture is now recognised as an emerging area of commercial potential in the State. Rose and Lillium are the two important flowers in terms of quality and demand in the State. Anthurium, Carnation, Heliconia, Alstromeria, orchids and other exotic flowers also have potential. Although insignificant as compared to the national total production, during 2008-2009 to 2010-2011 production of cut flowers in the State was about 17 lakh annually. According to the Department of Horticulture, a total area of 96,800 square metre produces 78,57,600 stems with productivity of 100 stems per square metre. Potentials of the State in this sector have to be realised through provision of essential inputs, capacity building of farmers and construction of cold storages.



5.11 TOURISM

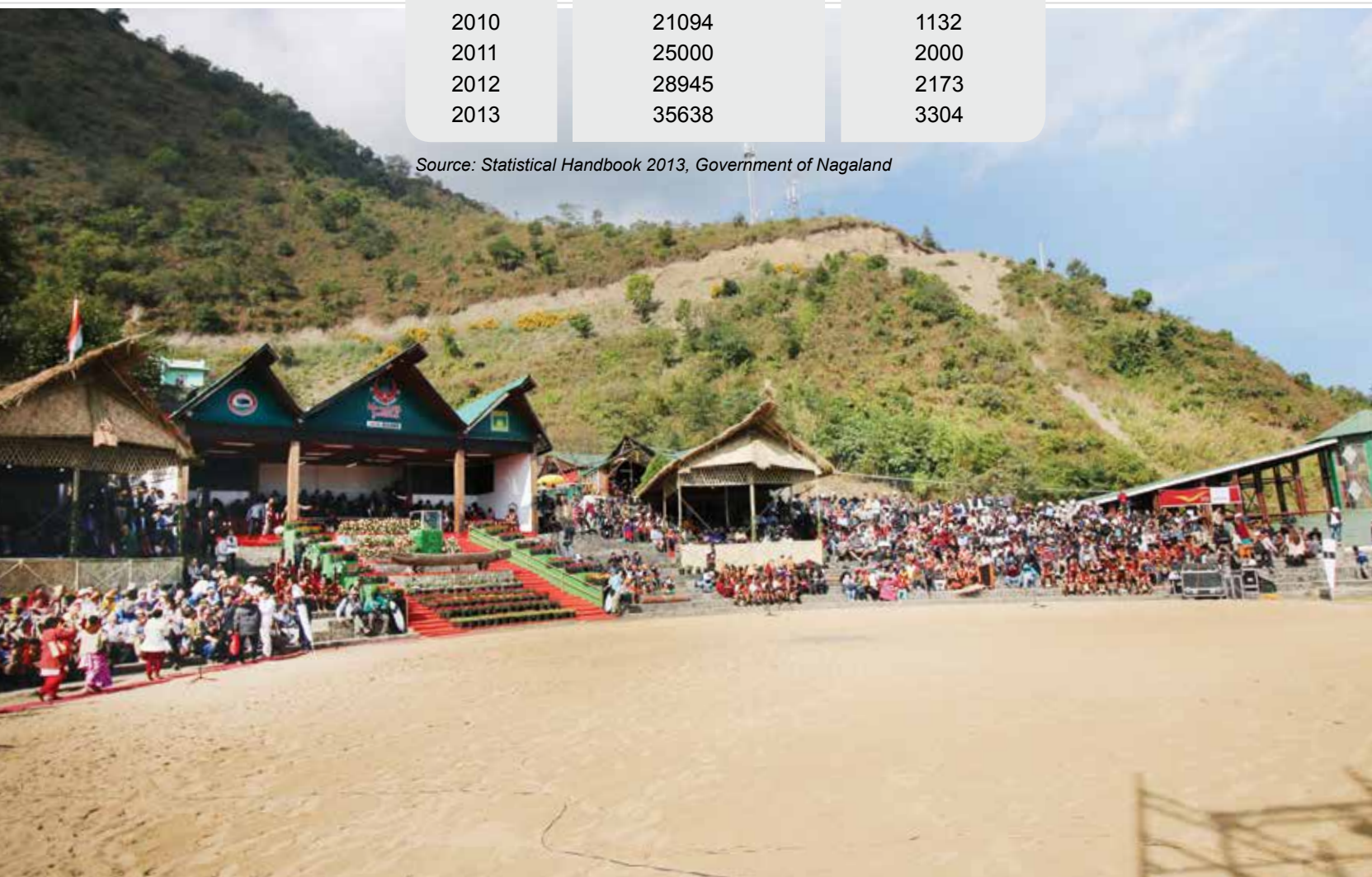
Nagaland with its rich culture and panoramic landscape is a traveller's paradise. Over the years with the promotion and scaling up of the activities of the Hornbill Festival which takes place in December, it has emerged as a mega tourism event in the State. It is one of the most significant initiatives taken up by the State Government to promote sustainable tourism based on the rich Naga cultural heritage. The Hornbill Festival is promoted to revitalize, protect and to preserve the richness of the Naga heritage. Since 2007, international cultural troupes have been taking part in the festival and is now etched in the global tourist map. As a result, inflow of both domestic and foreign tourist to the State has increased.

Box 5.1: *Inflow of Tourist in the State.*



Year	Domestic Tourist	Foreign Tourist
2005	17470	883
2006	15850	576
2007	22085	936
2008	21129	1219
2009	20953	1423
2010	21094	1132
2011	25000	2000
2012	28945	2173
2013	35638	3304

Source: Statistical Handbook 2013, Government of Nagaland



The Hornbill Festival alone accounts for attracting 44.6 percent of domestic tourists and 44 percent of foreign tourists in the State. Though tourism activities in Nagaland are still at its nascent stage, Nagaland has the potential to become one of the North-East's tourists' destinations. Therefore, focus for promotion of tourism in Nagaland should not lose sight of conservation of natural resources and traditional habitats, rural tourism while giving due attention to adventure sports and eco-tourism. In an economy where conventional form of industrialisation is not feasible, tourism in the State can be transformed into a major industry increasing livelihood opportunities for the people.

Nagaland is endowed with abundant natural resources and scenic beauty. Each district prides itself with the availability of tourist attraction spots. The State therefore should set up tourist cottages, accommodation facilities and tourist reception centres across the districts. Simultaneously, the State should put in place suitable policies to prevent over exploitation of the local habitats and conserve its natural resources.



5.12 ENTREPRENEURSHIP IN NAGALAND

Local entrepreneurs in Nagaland have come a long way in establishing themselves as capable and enterprising. Despite the lack of infrastructure support, power connectivity and suitable policies for entrepreneurs to thrive, many first generation entrepreneurs have established themselves and continue to innovate and adapt with the changing times. There has been a shift albeit slow in the attitude of the younger generation from dependency on Government jobs to need to be self employed. With exposure to the vibrancy of the private sector outside the State and the simultaneous saturation in Government employment, many young people are now moving towards self employment by virtue of their hard work. They dream bigger dreams with the belief that bigger things are possible only when they are in control of their own fate. At present, youth in Nagaland have few opportunities for expanding their horizons and to realise their potential. Therefore creation of an enabling environment and skill enhancement in entrepreneurship is critical. While the literacy rate in the State is 79.6 percent, the employability of the youth in the State in skill-intensive activities and within the manufacturing and service sector is low. A study conducted in 2015 by the National Skill Development Corporation estimates that Nagaland will have an excess supply of minimally skilled people by 2022 and shortage of semi skilled and skilled labour force. Focus on skill development is therefore critical to expand people's choices for the employment and also to create a pool of employable skilled personnel. This will further attract private investment. For example, the expansion of the hospitality industry, which has great potential in the State due to the inherent pleasant nature of the youth, requires a large number of trained personnel. Capitalising on the comparative advantages will lead to higher returns on the employment front.

Areas with potential for gainful employment include agro-processing, information technology, paramedic, entertainment, sports, aviation and hospitality industries. However, proper regulation of the quality of training, vocational education, placement, access to financial support such as bank loans is necessary to prevent non discriminatory practices in employment and for career progression of the youth.

Box 5.2: The Zynorique Initiative

Ar. Richard Belho, an architect by profession, started his architectural firm Zynorique (a portmanteau of the words Zyn, for design, original and unique) with an associate architect Kezhagwetuo Peseyie in March 2003. Beginning by training the masons working with bamboo constructions, he has now trained hundreds of youngsters in RCC construction, metal work, bamboo construction and steel fabrication in partnership with the State Government. The firm works with over 200 people including its 50 permanent employees.

Subsequent to setting up Uniqraft and creation of bamboo prototypical motorbikes, he took over a defunct and loss making bamboo treatment plant at the Nagaland Bamboo Resource Centre in Dimapur. Within three years, returns from his investment doubled. Apart from private and consultancy work for the Government, Zynorique's outlet 'Chapru' sells crafts and retails ethnic food.

Ar. Richard Belho's three units- Bambonyte, Chapru and Uniqraft ensures guaranteed employment and business to its employees. The firm has expanded its presence beyond the State through supply of prefabricated bamboo structures, structural bamboo, bamboo toys, furniture and Naga food.



**Box 5.3: *The Eleutheros Christian Society (ECS):
The Story of Micro Finance and the SHGs***

The ECS a faith based NGO in Tuensang district, in its effort to empower women initiated the formation of Self Help Groups(SHG) in the district in 1997. The SHGs were focussed to fight against domestic violence, social discrimination, exploitation, subjugation, traditional conditionings, social denial and to improve livelihood. Today ECS has 671 SHGs and 186 Joint Liability Groups(JLGs). Under the JLG, 623 SHG members availed loans from State Bank of India and Cooperative Bank amounting to Rs.100,35,500/-(One crore three lakhs fifty five thousand only) and invested in varied activities such as Piggery, Poultry, Retail shop and Goatery. Besides the SHGs were trained and skilled in flower making, vermi-compost manure making, mushroom cultivation, sewing and cutting, making of soaps, candles, juice, jam, pickles etc. Economically empowered through undertaking of entrepreneurial activities these women now have say in social and in decision making at the family level.

Initially, many people objected to the idea of SHGs that allowed women to venture out of their homes to earn. The SHG Federation is now recognised as an important institution in the villages. SHGs lends money without interest for social purposes e.g. construction of church and helping Village Councils etc. Status of women in these villages in terms of rights and participation considerably improved with their economic empowerment.



Box 5.4: Myki Transformative Livelihood Intervention

The Transformative Livelihood Intervention (TLI) Project initiated by the Department of Women Resource Development during 2006-2007 for the socio-economic uplift of women in the State through the SHG movement and livelihood intervention activities has economically empowered and impacted the lives of many women. This innovative common platform was developed to facilitate the marketing needs of the women. It also doubled up as an institution whereby women in the State could access basic facilities to aid their businesses and enterprises. A nomenclature 'Myki' (which literally means women in Nagamese) was given to this initiative and 'Myki' came into existence. The Myki programmes include the TLI Project and various other activities from eri silkworm rearing, to weaving, designing, food processing, packaging and marketing of indigenous fruits and vegetables, Naga apparels and furnishings with traditional themed motifs and designs. These 'Myki' products are sold in leading outlets/stores within and outside the State. Besides, the Myki Training Centre for tailoring at Dimapur undertakes skilling of educated/school dropout unemployed young girls and women to enable them to earn their livelihood. A 'MykiFed', a state level federation of SHGs has also been set up for improving the bargaining power of the women SHGs and to facilitate scale of production. A Curcumin Extraction Plant is also proposed to be set up at Jalukie, Peren for large scale production of turmeric powder for export purpose. These activities are envisaged to scale up the economic status of women in the State.





Photo - Er. Z. Tokishe Kiba

Box 5.5: Public Private Partnership for Promotion of Livestock and Piggery Enterprise

Pork is the most favoured meat item for the people of Nagaland. However, the State is yet to attain self-sufficiency in terms of meat production owing to the prevailing traditional practice of pig rearing. According to Sample Survey Report of 2014-2015, Nagaland produces 66.6 percent of the total requirement of livestock with import of livestock worth Rs 214.74 crore, of which 60 percent is that of live pigs. In this backdrop, in collaboration with Navajbai Ratan Tata Trust (NRTT) and the farmers, the State Department of Animal Husbandry & Veterinary introduced a convergence programme 'Livelihood Initiative through Piggery' in 2015 to enhance productivity and to convert the system of household pig breeding into a sustainable enterprise. In the first phase 3 districts were covered involving 30 villages and 540 beneficiaries.

Up scaling the project, through Public Private Partnership the '**Household Piggery Enterprise**' was introduced. In this partnership, the Department of Animal Husbandry & Veterinary provided the services, the Tata Trust through North East Initiative Development Agency (NEIDA) provided the investments and implemented the work for enhancing the quality of lives of the rural households while the beneficiary farmers contributed their matching share in the form of local building material and labour for construction of the pig sties. Ten thousand rural households in 90 villages in the three districts of Kiphire, Tuensang and Phek were covered with a target production of 2.7 lakhs piglets and 2.00 lakhs fatteners annually.

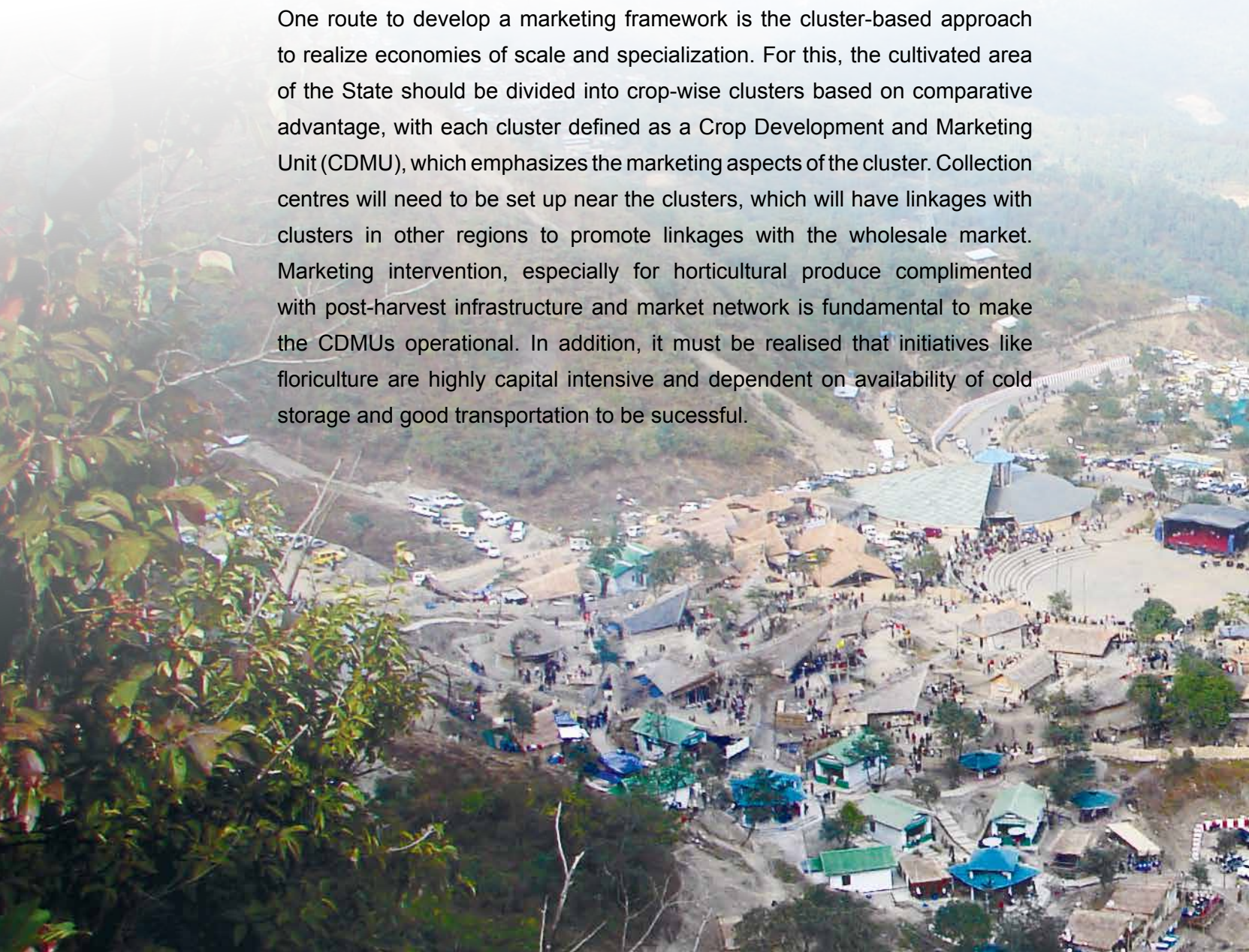
Further to improve the genetic trait of the existing swine population of the State, the '**Nagaland Pig Breeding Policy**' the first of its kind in the country was framed by the Department and released on August 6, 2016 by the Union Minister for Agriculture and Farmers Welfare, Shri Radha Mohan Singh. Adoption of this breeding policy is envisaged to lead to development of appropriate pig breed suitable to the agro-ecological context of Nagaland manageable by small time farmers. To achieve its objectives, the Department has initiated convergence of various related activities in partnership with NGOs like NEIDA, Eleutheros Christian Society, Chakhesang Women Organisation and village level local authorities. Simultaneously it streamlined the activities of the Department by making public delivery systems responsive and transparent by leveraging technology.

Another innovative project being implemented by the Department of Animal Husbandry and Veterinary in collaboration with NEIDA is the Livestock Service Provider Model where one volunteer from each project village is selected and trained to function as an animal health care provider under the supervision of a qualified veterinarian using what's app on mobile phones. Introduced in 120 remote villages in the State, the model ensures availability of scientific livestock health care service at farmers' door-step. It not only reduced cost of livestock health care services by almost 90 percent but also created employment opportunities for the youths in the villages.

5.13 THE WAY FORWARD

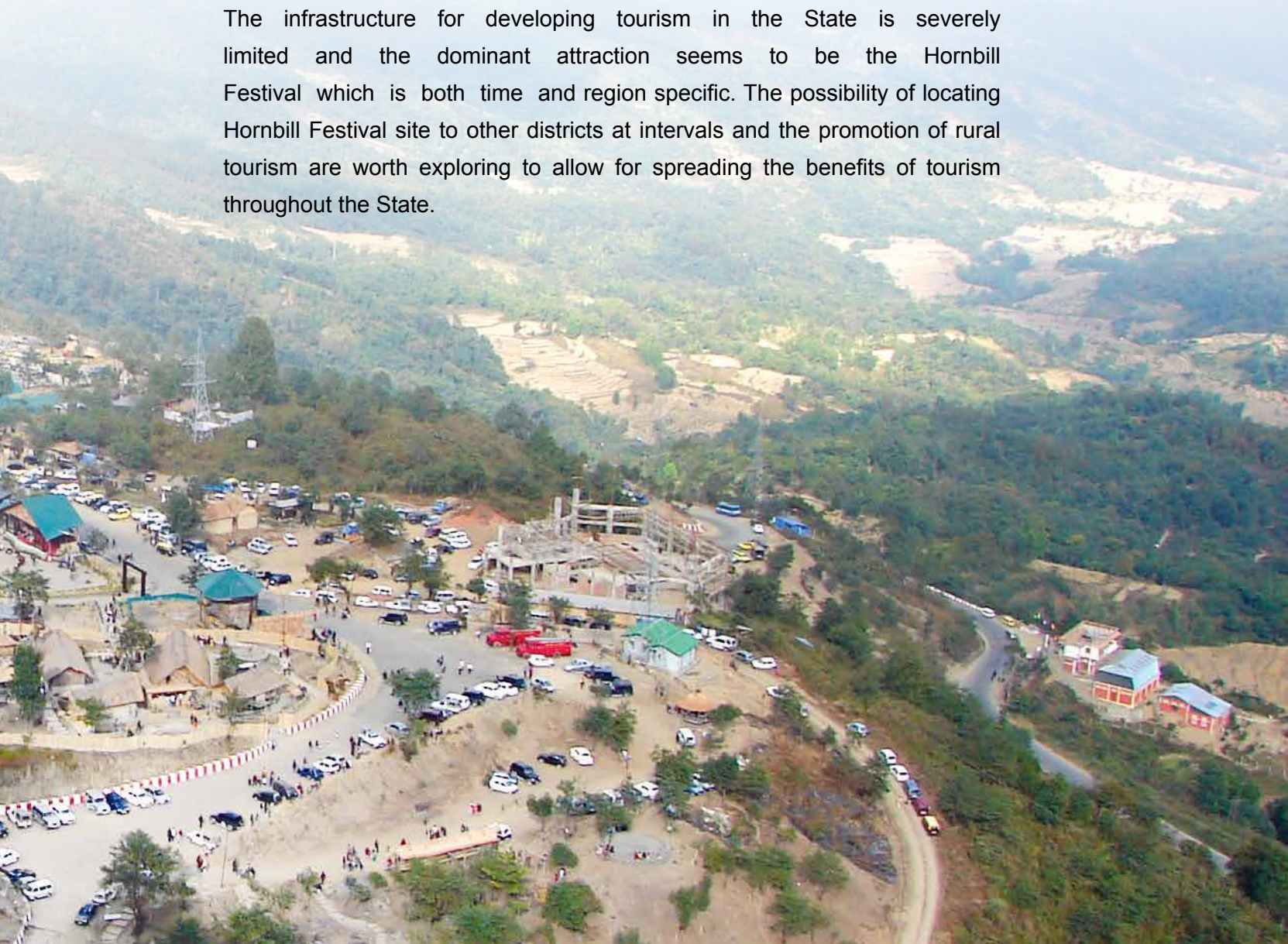
In an agrarian economy, agriculture continues to be one of the major employment providers. And with different agro-climatic zones, diversification and specialisation in crops best suited for the district will ensure higher returns. However, the fact that this has not happened so far can be attributed to farmers reluctance to move away from subsistence farming unless they have guarantees in terms of marketing and access to markets, assured prices and some crop insurance schemes in case of failure of crops. Further value addition in terms of grading packaging and processing will increase shelf life of the agricultural produce. Agricultural extension programmes, information dissemination on prices and linking of credit access along with identification and addressing of the critical constraints to commercial farming are essential for farmers to shift to cash crop cultivation and commercial scale farming.

One route to develop a marketing framework is the cluster-based approach to realize economies of scale and specialization. For this, the cultivated area of the State should be divided into crop-wise clusters based on comparative advantage, with each cluster defined as a Crop Development and Marketing Unit (CDMU), which emphasizes the marketing aspects of the cluster. Collection centres will need to be set up near the clusters, which will have linkages with clusters in other regions to promote linkages with the wholesale market. Marketing intervention, especially for horticultural produce complimented with post-harvest infrastructure and market network is fundamental to make the CDMUs operational. In addition, it must be realised that initiatives like floriculture are highly capital intensive and dependent on availability of cold storage and good transportation to be successful.



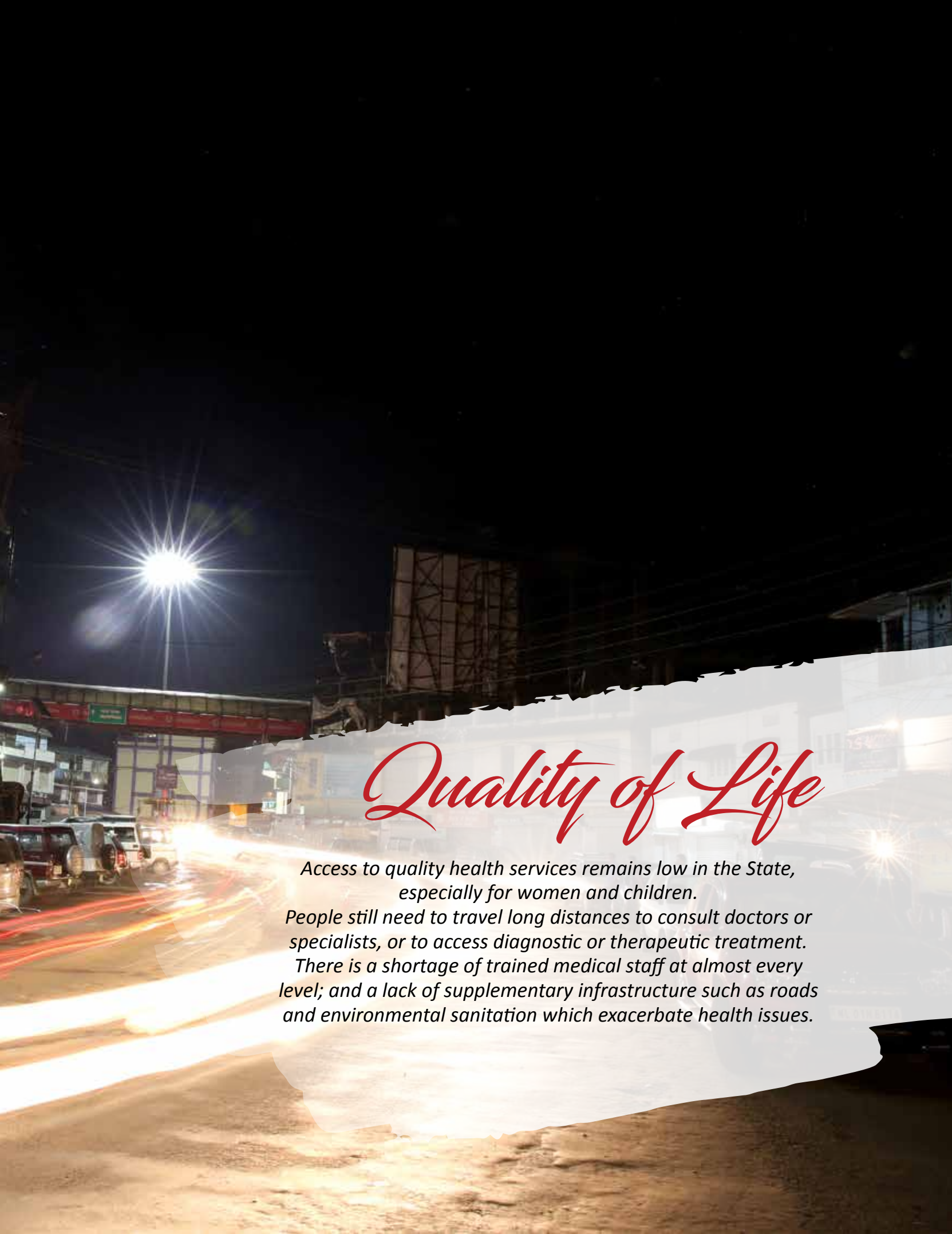
It must be noted that rural non-farm activities like food processing, animal husbandry and dairy farming take the pressure off land through provision of alternative livelihood to the people. It also releases labour for non-farm employment reducing disguised employment in cultivation. However, unlike in other parts of the country the dominant labour force in the State is owner cultivators. In most parts of the State, people are not dependent on hired agricultural labourers except in the foothills. Therefore release of labour for the non-farm tertiary sector is not without impediments. From the point of view of sustainable livelihood the way forward seems to lie in the tertiary sector where with skill development particularly in the area of entrepreneurship, employment generation and wealth creation can take place. It may be borne in mind that while entrepreneurship is a production function and impacts economic output, it contributes to human capabilities leading to human development.

The infrastructure for developing tourism in the State is severely limited and the dominant attraction seems to be the Hornbill Festival which is both time and region specific. The possibility of locating Hornbill Festival site to other districts at intervals and the promotion of rural tourism are worth exploring to allow for spreading the benefits of tourism throughout the State.



SECTION 3
Chapter 6 : Health





Quality of Life

Access to quality health services remains low in the State, especially for women and children.

People still need to travel long distances to consult doctors or specialists, or to access diagnostic or therapeutic treatment.

There is a shortage of trained medical staff at almost every level; and a lack of supplementary infrastructure such as roads and environmental sanitation which exacerbate health issues.



HEALTH

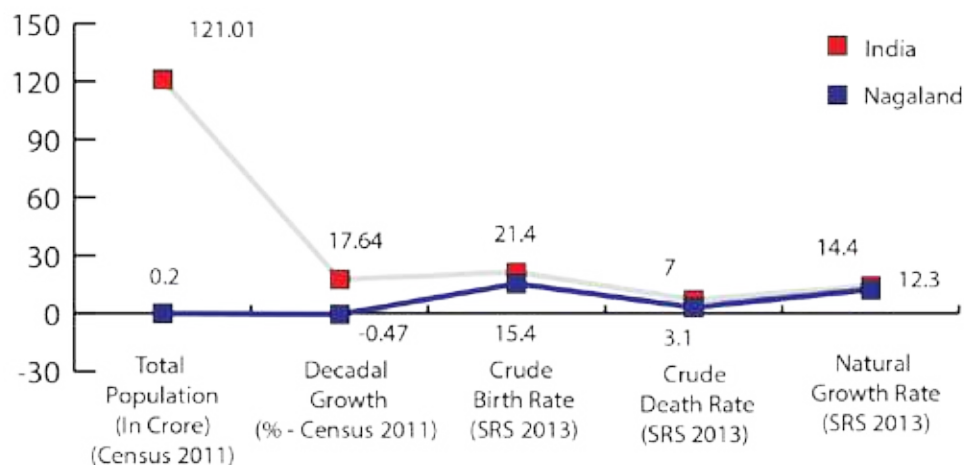
INTRODUCTION

A clear recognition has emerged on the necessity to integrate health dimensions with cross-sectoral policies and development sectors such as housing, safe and adequate water and sanitation that expose people to potential health risks. Despite significant achievements in health indicators, challenges of the Millinium Development Goals (MDGs) which could not be resolved particularly on issues of availability of timely health care services are likely to remain challenges during the stipulated period of the Sustainable Development Goals (SDGs). Provision of affordable and quality healthcare for the vast majority of the population particularly in 70-80 percent of rural areas is another challenge. Most public health institutions are unable to provide the desired services. This compels patients to incur high out-of-pocket (OOP) expenditure on health, mainly on drugs, consumables and diagnostics. The OOP expenditure as a proportion of total health expenditure is as high as 61.7 per cent in India as compared to the global average of 20.5 per cent. As per the report of the National Sample Survey Organization (NSSO), high medical cost continues to be one of the leading causes of poverty in India. Needless to say, a healthy body and mind is essential to realise the constituents of human development: livelihood, education and basic necessities.

6.2. HEALTH INDICATORS : DEMOGRAPHIC/HEALTH STATUS

Although, poised on the threshold of 54 years of statehood, Nagaland's vision on healthcare, quality of life without burden of diseases and achievements in human resource development are yet to reach satisfactory levels.

Figure 6.1: Vital Statistics Profile



Source: Department of Health & Family Welfare, Government of Nagaland

Figure 6.1 indicates that the population growth trend in Nagaland vis-a-vis the national trend. Health profile of the State is given in Figure 6.2. As the graph clearly shows, while Nagaland has performed better than the national average in terms of maternal and infant mortality, in terms of use of contraceptives, institutional deliveries and immunization coverage, Nagaland is well below the national average and which can be attributed to low awareness amongst the people and low availability of health facilities.

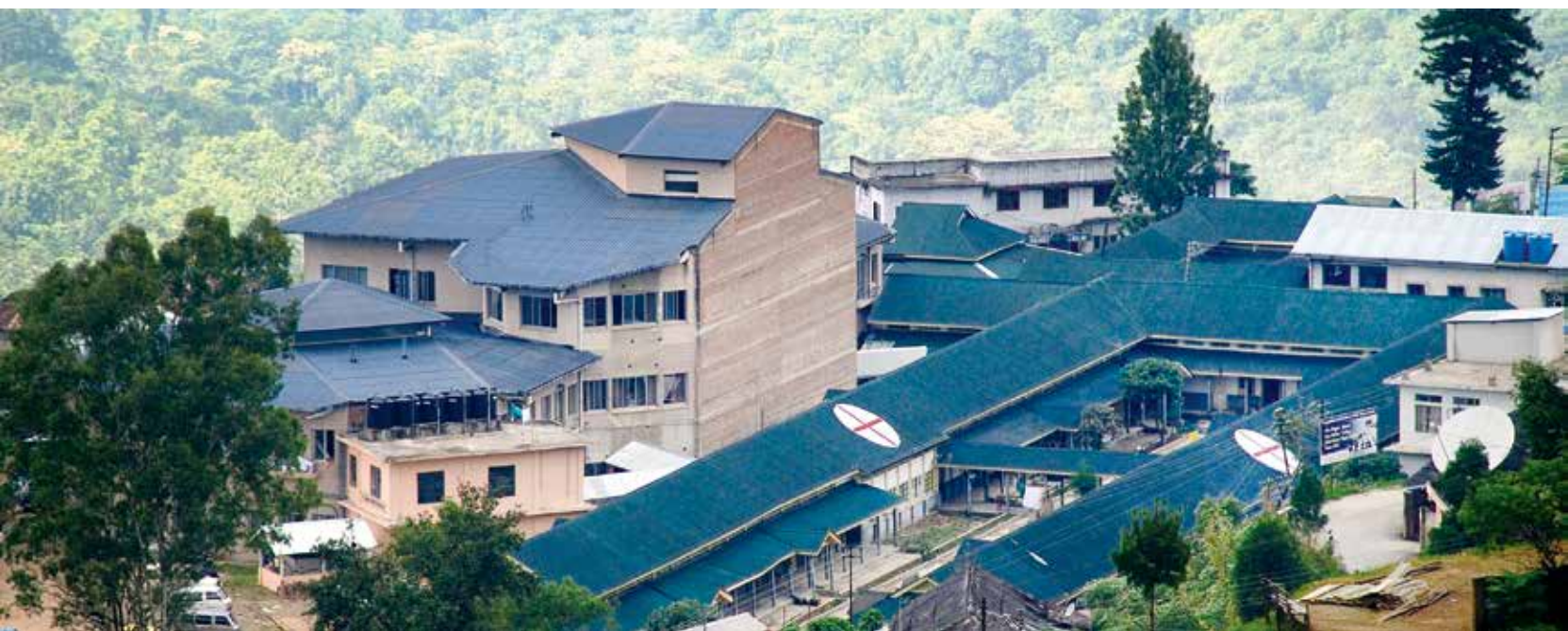
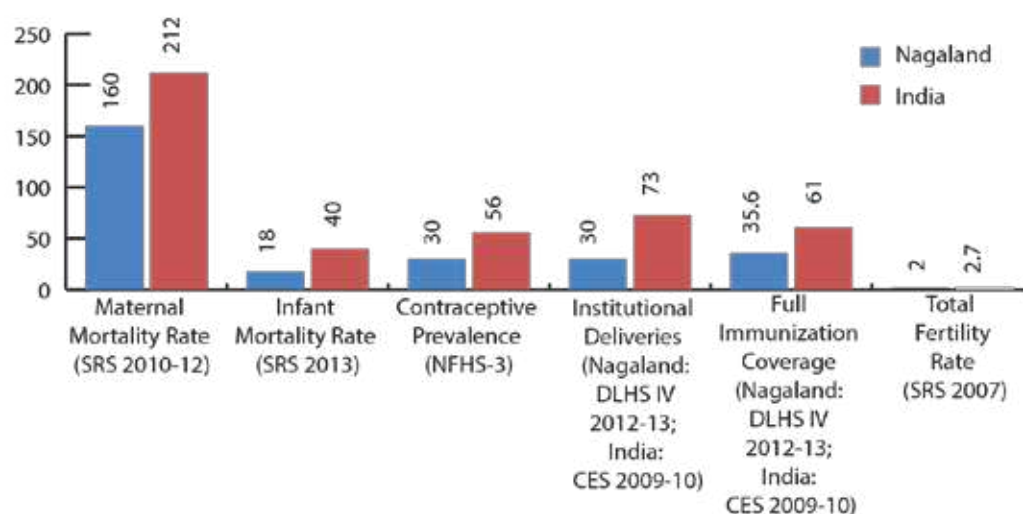


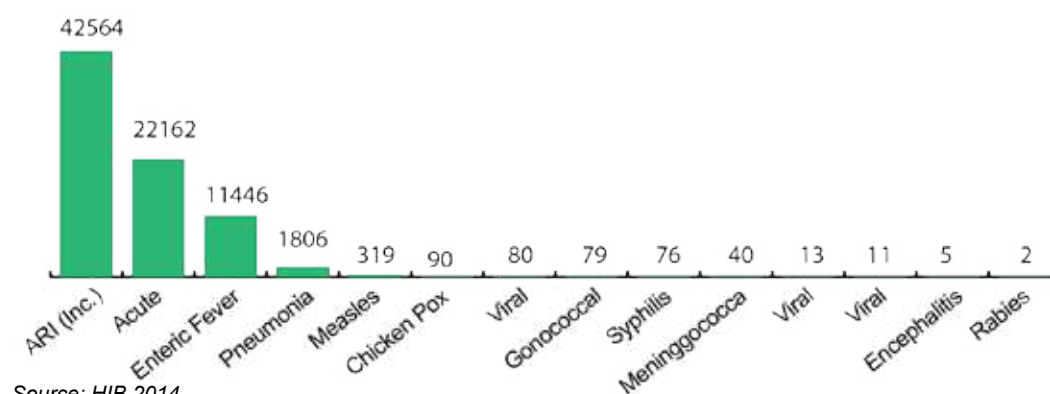
Figure 6.2: Health Indicators Profile



Source: Department of Health & Family Welfare, Government of Nagaland

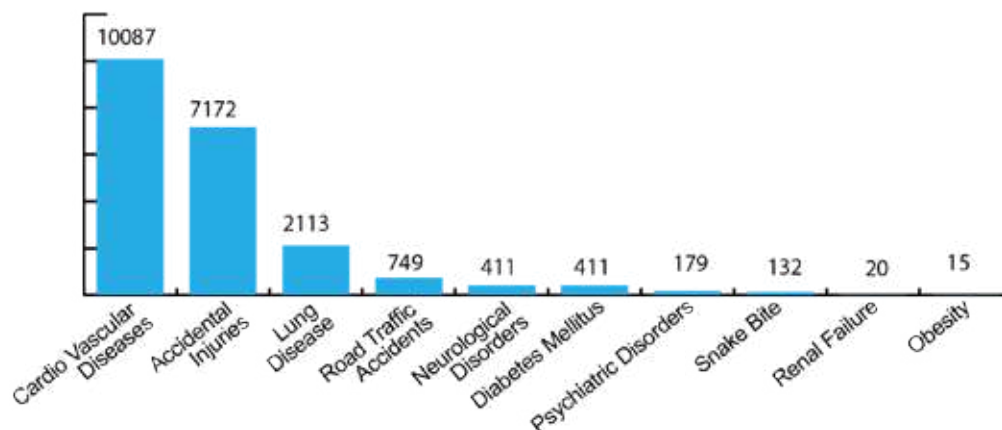
Figure 6.3 and 6.4 indicate rising trends of lifestyle diseases and non-communicable diseases in particular cardio-vascular, cancer, diabetes mellitus, hypertension, stress related mental illness and road traffic accidents. What is also worrying is the dominance of communicable diseases mainly infection related which are usually controllable with vaccines.

Figure 6.3: Communicable Diseases Profile



Source: HIB 2014

Figure 6.4: Non Communicable Diseases Profile



Source: HIB 2014

In 2006, 21 percent of children were fully immunized as per National Family Health Survey(NFHS-3). By 2013, Nagaland's level of full immunization in children had gone up to 36 percent with which however, is low as compared to national level of 44 percent. As expected, immunization coverage is higher in urban areas compared to rural areas of the State. However, the overall increase in the immunization rate has been largely in the rural areas with growth from 8 percent to 36 percent as compared to that of urban areas from 17 percent to 36 percent between 2006 to 2013.

Although vaccines under Universal Immunisation Programme(UIP) are supplied freely to all the states, due to erratic power supply and lack of cold chains, storage of the vaccines and its management pose as threat to achieving full immunisation especially in the districts of Phek, Kiphire, Zunheboto, Tuensang and Longleng. Alternative energy/back up service is feasible in the headquarters, while immunisation is required to be administered to the entire population who are scattered in hard to reach areas with severe communication facilities. Despite these challenges, every attempt is made to cover them without compromising on the quality and temperature of the vaccines through carriers and on foot.

6.3. BURDEN OF DISEASES

Nutritional Profile

As per District Level Health Survey(DLHS-4) during 2012 to 2013, 26 percent of children under 5 years were underweight (weight for age) with 28 percent in urban areas and 34 percent in rural areas. The National Family Health Survey-3(NFHS-3) estimated that 30 percent of under 5 years in Nagaland were underweight in 2006 as compared with the Old India of 40 percent. This would make it appear that Nagaland's performance on child nutrition is better than that of the country.

Nagaland as a whole, fares better in nutritional status with adequate dietary intake and almost nil cases of hunger. The area of concern is in the concept of 'Balanced Diet' with the right combination of nutrients and requirement. Awareness of, as well as increase of the incidence of lifestyle diseases specially hypertension, diabetes, cancer, cardiac vascular diseases has led to a shift towards healthier food habits. Today fruits, vegetable, lentils and proteins in various forms are seen on most dining tables. But the message on healthy food and lifestyle is yet to make inroads to a large section of the society mostly in urban and semi-urban areas. While in the rural areas, economic compulsions make most farmers to sell their harvest depriving them of their nutritional needs.

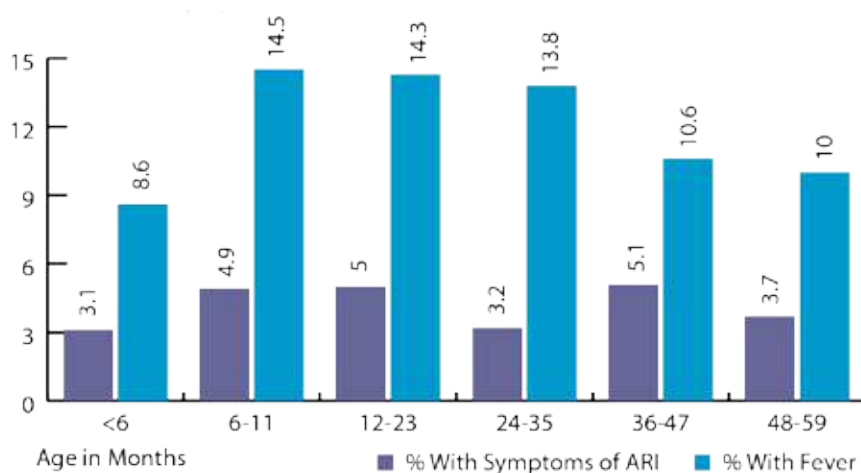
Despite enjoying a socially better status than their counterparts in other parts of the country, Naga women suffer from poor health and nutritional deficiency with anaemia as one of the common ailments. Nutritional deficiency in the form of low iron and vitamins intake is similar across urban and rural areas and has serious implications for maternal and child health. Poor intake of iron, zinc, folic acid and a mineral rich diet is one of the root causes for anaemia. Realising this, efforts are being made by the State to ensure that iron supplements are distributed to expectant mothers and women.

On issues of maternal mortality and infant mortality, with Maternal Mortality Rate (MMR) of 100 and Infant Mortality Rate (IMR) of 18,(SRS2013), the State is better placed than the country's MMR of 212 and IMR of 40. However, there is no room for complacency. And efforts have to be continued to tackle issues that adversely influence health habits of women such as traditional practices and wean them towards utilising health care facilities.

Prevalence and Treatment of Symptoms of Acute Respiratory Infection and Fever

Among children under age five, the figures on children with symptoms of Acute Respiratory Infection(ARI) and fever have been inferred from a sample survey of 2178 children under age five. The results are shown in Figure 6.5 and 6.6.

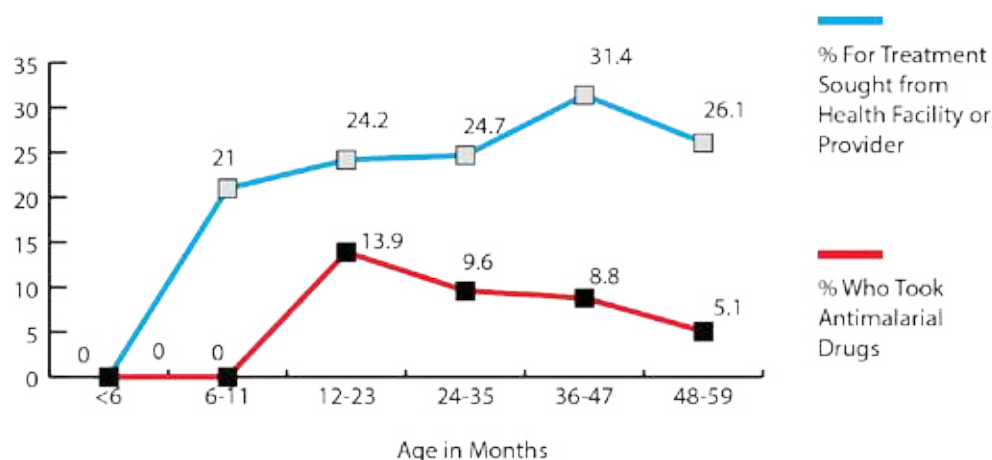
Figure 6.5: Children Under Age Five with Symptoms of Acute Respiratory Infection & Fever (% of Total)



Source: Sample Survey on Health, Department of Health & Family Welfare, Government of Nagaland



Figure 6.6: Children Under Age Five Who Sought Treatment for Fever (% of Total)



Source: Sample Survey on Health, Source: Department of Health & Family Welfare, Government of Nagaland

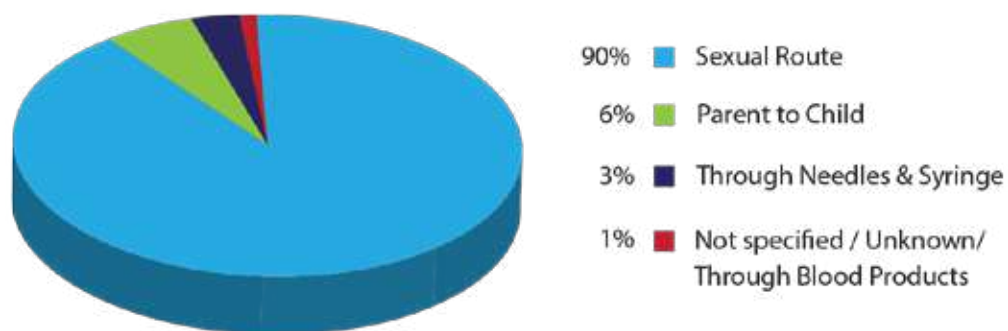
Symptoms of Acute Respiratory Infection (ARI) are cough accompanied by short, rapid breathing which is chest-related and is considered a proxy for pneumonia. The percentage of children less than 5 years of age who sought treatment for symptoms of ARI could not be deduced because of fewer than 25 un-weighted cases. However, Figure 6.6 gives data for those children with symptoms of fever who received specific treatments. It may be noted that health units are now well equipped with better investigative and diagnostic tools for treatment of cases with symptoms of ARI.



HIV/AIDS Scenario in Nagaland

Nagaland has been battling with the problem of HIV/AIDS for almost two decades now with the support of the National AIDS Control Program (NACP). The first case of HIV (Human Immuno Deficiency Virus) was detected in 1990 from amongst Injecting Drug Users (IDU) in the State. Realising the high prevalence rate, HIV/AIDS was categorized as a priority disease in the State to control the epidemic. With an adult HIV prevalence rate of 0.73 and a General Population Prevalence Rate of 0.88 during 2012-2013. Nagaland is one of the top six high prevalence states in India (NACO Technical Report). In Nagaland the main cause of transmission of HIV is the sexual route accounting for about 89.99 percent of the cases, while parent to child transmission accounts for 5.61 percent and infected needles and syringes, 2.53 percent.

Figure 6.7: *Route of Transmission of HIV*



Source: Department of Health and Family Welfare, Government of Nagaland.



In Nagaland, service delivery points have been established in all the health centres starting from the Primary Health Centre (PHC) and is being expanded on a need based manner. These centres provide comprehensive package to People Living with HIV/AIDS (PLHIV) which includes detection, integrated HIV care, support and treatment services with primary/secondary health care system. Anti Retroviral Therapy (ART) being the core of HIV treatment, the establishment of ART Centers and Link ART even for hard-to-reach population has enabled increase in access to ART services to the PLHIV. According to NACO, while there has been significant decline in all traditionally high prevalence states, Nagaland has shown a comparative high prevalence of 0.88 during 2012-2013. However, it is lower than in 2003 when the general HIV prevalence stood at 1.63. The decline in prevalence rate has been substantial and this can be attributed to the active interventions of the NGOs, faith based organizations and civil societies working with government agencies. Emerging trends also show appreciable decrease in the mode of transmission amongst the high risk population but the spread to the general population has risen dramatically, causing serious concerns. This trend stipulates the need to accelerate the process of reversal and to further strengthen the epidemic response in the State.



6.4 ACCESS TO HEALTH CARE AND RELATED ISSUES

Delivery of health care is determined by access to health care, quality of care and infrastructure. Over 70 percent of the population in Nagaland is in the rural areas spread across villages in far flung areas with very poor connectivity and transportation systems. The scenario is not better in the semi-urban areas. Besides the difficult topography, monsoons which last for over six months of the year causes landslides and road blocks and further aggravates the constraints of access to the health care facilities.

Second, Nagaland is perennially faced with shortage of qualified and trained manpower such as doctors, nurses and allied paramedics. This explains the State's inability to conform to the Indian Public Health Standards (IPHS) right from the District Hospitals down to the Sub-Centres in the villages. The State is yet to establish a Medical College, although 4 Public Schools of Nursing (GNM/ANM) and 1 College of Nursing on Public Private Partnership mode exist in the State. Shortage of paramedics such as Lab/ERG/X-Ray/OT/CT/MRI technicians and medical maintenance crews add to the woes of healthcare delivery. However, it is possible to offset the shortages through need based human resource planning and rational distribution of the available manpower. Rationalisation of policy in areas of recruitment, tenured transfer and postings for all categories of human resource in the medical profession will improve the quality of service delivery and boost the morale of its manpower. Besides, regular capacity building and skill development programmes should be made mandatory for all medical personnels to enable them to keep pace with the advances in medical science.

Third, the health units should be strategically located to facilitate access to the facilities. This has to be complemented with placement of qualified requisite medical personnel and installation of basic health infrastructure and equipments.

Through the Communitisation of Public Institution and Services Act 2002 the management of health care units in the rural areas as well as the ownership of the assets has been transferred to the community. The quest is to improve the delivery of service to the grass root in partnership with the community. While the communitisation of the public services has to an extent ensured

presence of the medical personnel in their places of posting, sensitisation and capacity building of the community leaders on their role along with provision of incentives for the services rendered will go a long way in strengthening and invigorating the partnership in the delivery of services. In addition, besides installation of the basic health care facilities, better communication network and provision of quarters for the medical personnel will facilitate the delivery of services.

Fourth, in the health sector, infrastructure development is not just construction of buildings but also development and improvement of the health care facilities and equipments. The basic requirement for any health care unit is adequate water supply and proper sanitation system. Waste generated from health care units need utmost care in management and in disposal, especially bio-hazardous materials. Uninterrupted and alternative power supply, modern medical equipments and provision of ambulance services are other criteria mandated for any health facility to enable proper and timely treatment. Unfortunately, there are no laid down regulations to ensure presents of these vital facilities in the public/private health units in the State. These issues require to be taken up in seriousness by the State Government.

Box 6.1: Health Infrastructure Status in Nagaland

Particulars of Health Care Units	Required	In Position	Shortfall
Sub-Centre	468	396	72
Primary Health Centre	70	126	*
Community Health Centre	17	21	*
District Hospital	-	11	-

Source: National Health Profile 2015, CBHI

National Health Mission (NHM) (Rural/ Urban Mission)

With the introduction of National Rural Health Mission, despite initial hiccups, a number of service delivery and health indicators have improved. Through the various flagship programmes, there is increase in institutional delivery which has reduced child and maternal mortality and has increased immunization coverage. The focus of the Mission being preventive health care, population stabilization, provision of better health care facilities, increasing trained manpower and improved infrastructure, the health care system has seen considerable improvements during the last 10 years. Introduction of ASHA (Accredited Social Health Activities) and recruitment of more than 1800 ASHAs with presence of at least one ASHA in almost all the villages to assist the professional health workers has been one of the key game changers.



Box 6.2: Weaving a Dream

A people's initiative for improvement of health care services introduced by Rev. Dr. Chingmak Kejong, Executive Director Eleuthorous Christian Society, Tuensang is a collective effort where village communities finance and manage the health care services. Member villages contribute towards the hospital management through provision of labour for development and construction of staff quarters and the hospital kitchen. Every Village Council annually contributes Rs 2000 and every member of any Self Help Group in the area contributes Rs.30 towards the health centre. Churches in the Changsang range contribute towards the management of the hospital canteen while 16 churches in the area contribute Rs 2000 annually towards the hospital up keep. People in the area also contribute 1 Rupee to the hospital for each orange tree planted in their orchards. The network of community partnership not only led to the improvement in the delivery of services but simultaneously reduced the cost of healthcare.

Mothers Club have been formed and counselling for pregnant mothers is conducted by the Auxilliary Nurses and Mid-Wifery(ANM), ASHAs and AWN facilitated by the school teachers in the area.

In order to insure health for all, the project village members and Women SHGs from these villages subscribe an annual policy premium of Rs. 50 through the Edou Banks. Every household made a one-time deposit of Rs 50 to Rs 200 with Birla Sunlife Insurance. The Village Councils from 11 villages in the area enrolled every member in the village in a phased manner. They have also been empanelled under the Rashtriya Swasthya Bima Yojana (RSBY), the National Health Insurance Programme under the Ministry of Labour and Employment.

Traditional 'Morung' or 'Sochum' in all these villages were revived as centres for imparting skills for progressive living for restoration of traditional values and health education. Health Newsletters were also regularly brought out in local dialects.

'Onou' which means 'Grace' in Chang dialect, is a special scheme for pregnant mothers to promote institutional delivery. Under this scheme ECS along with the Village Councils contribute Rs 700 to the mother in addition to the financial incentive provided under Janani Suraksha Yojana. Rs 100 is also provided to ASHAs as incentive for bringing pregnant women to the Longphang Primary Health Centre. For nutritional supplement, 5kgs of rice and a bottle of 'Horlicks' is provided to the pregnant mothers by the community and the Village Councils.

Box 6.3: Comparative Statement of Institutional Delivery and Immunization in Changsang Range, Tuensang

Year	No. of Villages Covered	Institutional Delivery	Immunisation
2009	17 villages with a population of 25491 (2001 Census) were covered	17.6 percent pregnant women received full ANC. 9 out of 10 deliveries were conducted at home	42 percent of the children were fully immunized. The average annual expenditure on health care per family was Rs 5000/- to Rs 10000/-
2012	18 villages with a total of 8000 households were covered	Institutional delivery improved from 8 percent to 75 percent in the area with 100 percent increase in institutional delivery in villages having close proximity to the PHC	Immunization improved with enhanced involvement of the Village Health Committees

Source: Eleuthoros Christian Society, Tuensang

In October 2010, an MOU was executed between the State Health Society, NHM and the community wherein technical human resource, finance, basic equipments, skill upgradation and infrastructure development was agreed to be provided under NRHM. This led to improvement in service delivery and implementation of all national vertical health related programmes which include promotion, prevention and curative health services including HIV/AIDS.

The collaboration between the Government agency and the community ensured community ownership and management of the health care units while the technical support provided by the Government agencies facilitated creation of assets and access to better health care services at the grass root level. Continued handholding, monitoring and evaluation will promote trust and will lead to rich dividends in terms of access and delivery of quality health services.

6.5 POLICY ISSUES

In the context of policy issues in health care, two factors are critical; funding and communitisation. Nagaland continues to depend almost entirely on the Government of India for funding the health sector. Budget cuts on health care add to the woes of poor service delivery.

Due to inadequate budgetary provisions, the State Department of Health and Family Welfare has not been able to meet the State's requirement of drugs and diagnostic facilities. In Nagaland the average per capita allocation of fund on drugs and diagnostics was Rs. 27.16 during 2015-2016 as compared to Rs.53.39 for Kerala during 2011-2012. Therefore, support through the National Health Mission (NHM) is seen as boon to the health care sector.

Procurement and Supply Chain Management (PSCM) systems in the State function on manual processes. Absence of IT enabled infrastructure, lack of proper warehousing, poor distribution system and poor training support system leading to inefficiency in PSCM practices. The existing PSCM encourages pilferages, leakages and wastages. Therefore, to obtain more value for money and to mop up additional resources for procurement of essential life saving drugs, there is a pertinent need for a paradigm shift from the existing procurement and supply chain management system.

Second, to optimise the social capital of the traditional Naga society, the Nagaland Communitisation of Public Services Act 2002 was promulgated. The sectors which were first communitised under the Act were Education, Power and Health. This Act enabled the community to take ownership and to manage the basic facilities to improve service delivery. Wherever people understood the concept and took the initiative, the programme worked and resulted in better attendance of medical personnel and improvement in infrastructure through contribution of labour and kind by the community. However in many villages the programme did not take off as expected.

Assessed objectively, the communitisation programme failed in areas, where the Health Committee members were not aware of their roles and responsibilities. Therefore sensitization/workshops at the grass root level on roles and responsibilities, on accountability, monitoring and evaluation along with co-ordination with various Departments will remedy the shortcomings. Further, presence of women and youth in the Village Health Committees will ensure voicing out of the health needs of these sub-categories of the society.



CONCLUSION

In Nagaland too, like in many parts of the world there has been erosion in the culture and traditions, food habits, social practices over time. With increased intake of high calorie processed food coupled with sedentary life-styles, health issues and disease profiles, both in communicable and non-communicable which were hitherto unknown have become very common. Poor connectivity, harsh geo-physical terrains and lack of proper planned policies aggravated the problem by limiting access to health care facilities. Yet despite the challenges, over the years there has been increase in the number of qualified human resource in the State albeit insufficient, up-gradation of facilities to the tertiary level, investment in infrastructure, nurturing of the social capital of the Naga tribal community and revival of the traditional medical practices and medicines in the health delivery system.

To strive forward, promotion of health care services both preventive as well as curative is necessary. 'Good Health' can become an expensive asset without preventive measures and curative facilities. Health promotion is a continuous process and the health sector need to be accorded due priority by the State Government. Critically important are financial resources, strategic planning, political will and sustainability. Challenges will always exist. But preparedness to meet outbreak of epidemics and other health issues due to lifestyles will offset lost of lives and huge financial implications.

Recognising the universal acceptance of 'Right to Health' the State Government has strengthened health services particularly through client centred policies and approaches. However, to improve the existing health systems and to increase more efficiency of the available public health services, besides upscaling of the awareness generation activities in the rural areas, capacities of the community have to be enhanced. While there are a number of issues that need to be addressed by the State for provision of quality health services, demographic profile of the State needs to be analyzed. This will provide the data base for larger research initiatives. The various apps in mobile phones can be customised to create awareness and also to address health issues in the rural areas. This can be done through linking up with medical professionals placed in the diagnostic centres. Information technology should be harnessed



to circumvent the gap of inaccessibility and shortage of skilled manpower. Tele medicine should be introduced in all the 11 district hospitals to support consultation, dissemination of medical knowledge and collaboration amongst health professionals, health care provides and the community.

Provision of financial resources on time is critical to timely delivery of service. Financial shrinkage for this sector over the years has adversely affected the quality of health care in Nagaland. Upscaling of the budget provision for infrastructure, equipments, drugs, maintenance, capacity building and recurring expenses is necessary. Besides, regulation and monitoring of the various central schemes need to be taken up in all seriousness to ensure quality care and delivery.

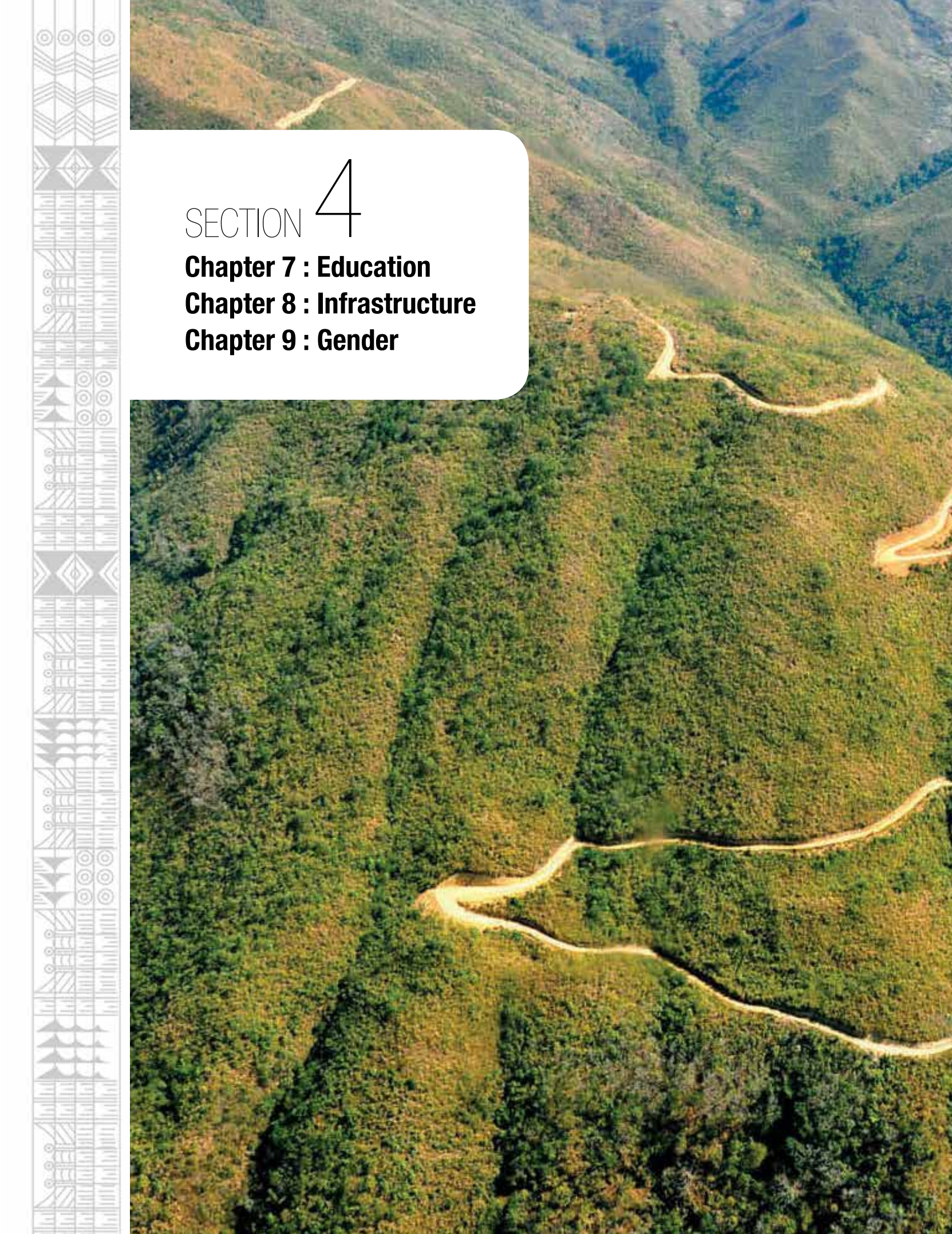
Establishment of a medical college and paramedical/technical institutes in the State should be taken up in earnest. This will not only address the health care needs of the people but will also provide an opportunity for nurturing of medical professionals. It will also absorb the large pool of the qualified unemployed youth for gainful employment in the health care profession and in its subsidiary units. Public Private Partnership (PPP) in these ventures should be encouraged as it will not only mitigate resource constraint issues but will also lead to accountability and delivery of quality services in the health care sector.

Limited qualified health professionals, poor human resource planning and management are some of the major challenges in the State. These issues can be addressed through capacity building and skill upgradation of the existing administrative and medical personnel in the health sector to enable them to

multi task given the shortage of manpower. Traditional medicine and healing is still an alternative health care system for people of State. Therefore integration of the traditional knowledge and use of medical herbs for healing along with modern medicine should be explored. In the long run, success of such health care practices will not only benefit the people of the State but also the country. Given the seriousness of the emerging medical challenges, as well as the lack of understanding of these issues of how best to tackle them, disease prevention, awareness and control programs should be given more emphasis.

Further convergence and coordination between the Departments agencies will widen the circle of service providers. This will optimise the utilization of skilled human resources and will ensure better coverage in the delivery of health services.



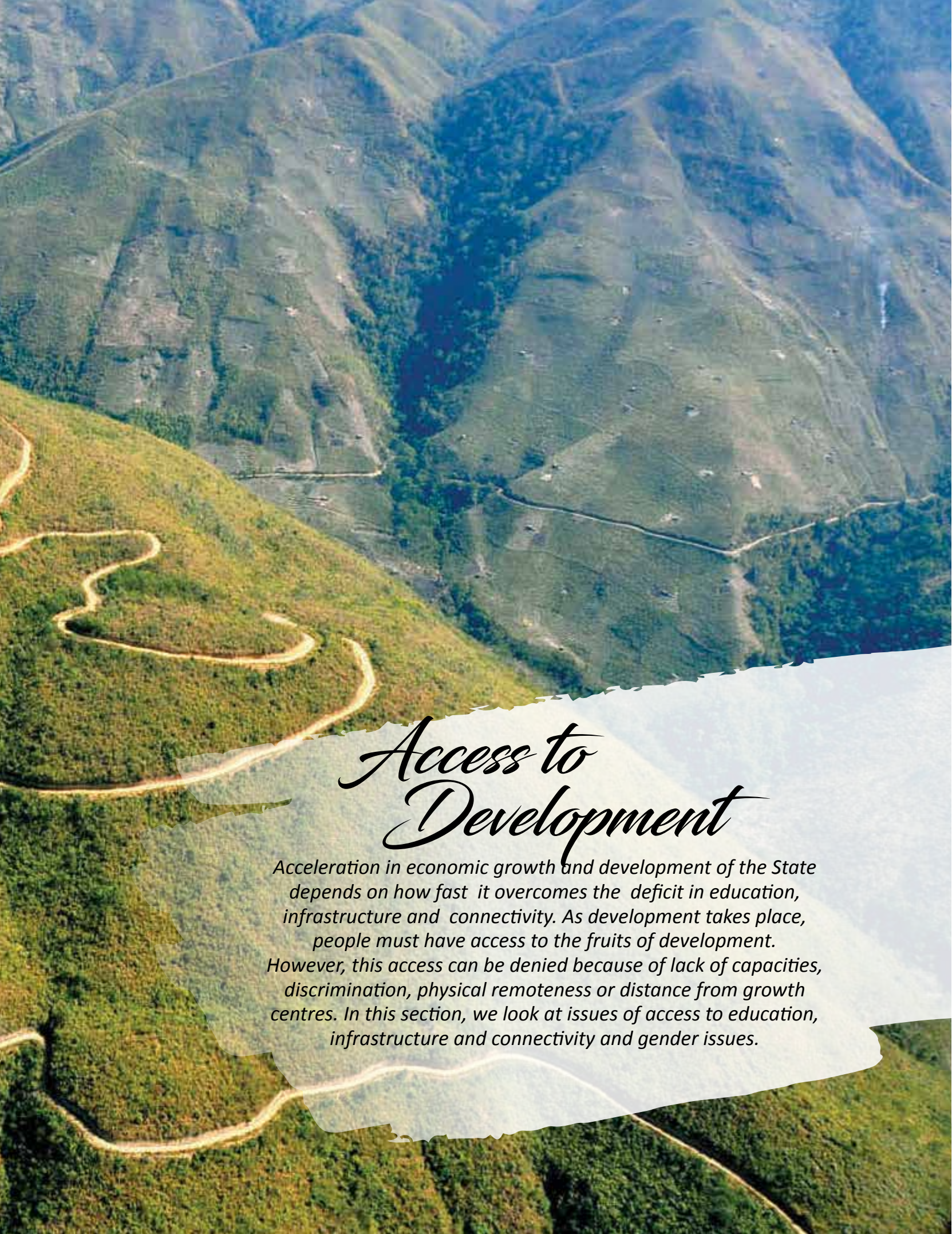
An aerial photograph of a winding dirt road through a dense, green forest. The road is light brown and curves through the lush vegetation. The background shows more forested hills under a clear sky.

SECTION 4

Chapter 7 : Education

Chapter 8 : Infrastructure

Chapter 9 : Gender



Access to Development

Acceleration in economic growth and development of the State depends on how fast it overcomes the deficit in education, infrastructure and connectivity. As development takes place, people must have access to the fruits of development. However, this access can be denied because of lack of capacities, discrimination, physical remoteness or distance from growth centres. In this section, we look at issues of access to education, infrastructure and connectivity and gender issues.



EDUCATION

INTRODUCTION

Crucial to human development is the issue of education and the key to harnessing the State's rich demographic dividend is education. Education creates conditions for participation in political and community life. It is a determinant of all the three Human Development Indices (HDI). Education also plays a crucial role in enabling a better understanding of the issues of gender parity, social issues, along with optimising opportunities and understanding of environmental sustainability. Sustainable development of a country/state, to a large extent depends on its investment in human resource development. And although the State has made substantial investments, the education sector continues to face many challenges. Whether the education system is enabling children to develop critical and analytical skills or to make them employable are some issues which require attention.

This chapter presents a picture of the educational scenario in the State and tries to analyze the challenges by looking at the indicators such as enrolment, dropout, retention and other programmes in the education sector.

LITERACY RATE

The literacy rate of Nagaland as per the Census 2011 stands at 79.55 percent which is above the national average of 74.04 percent. A cursory look at the 2001 Census figures shows that there has been an increase of 12.44 percentage points in the literacy rate of the State. The male literacy rate in 2011 was 82.75 percent, comparable to the national average of 82.14 percent and the female literacy rate at 76.11 percent is above the national average of 65.46 percent.

District wise figures show wide variation in education attainment amongst districts, with Mokokchung district reporting the highest literacy rate and Mon district with the lowest literacy rate.

Box 7.1: District Wise Literacy Rate

<i>District</i>	<i>Literacy Rate</i>	<i>District</i>	<i>Literacy Rate</i>
Mokokchung	91.62	Peren	77.95
Wokha	87.69	Tuensang	73.08
Zunheboto	85.26	Longleng	72.17
Kohima	85.23	Kiphire	69.54
Dimapur	84.79	Mon	56.99
Phek	78.05		

Source: Census 2011



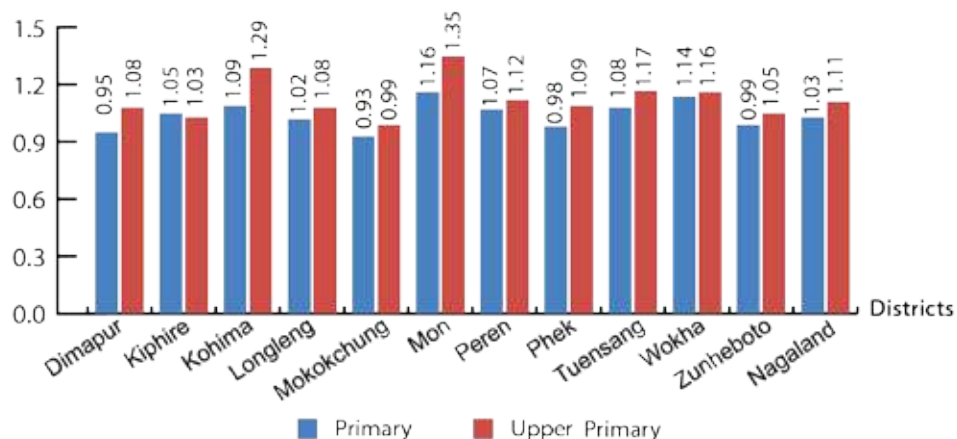
7.2 ELEMENTARY EDUCATION

Elementary education comprises Classes 1-8. It is further segregated into Class 1-4 known as 'Lower Primary' and Class 5-8 termed as 'Upper Primary'. This stage of education is very crucial as it deals with the formative years of a child. Moreover the subsequent learning stages depend largely on the quality of learning experienced at this stage.

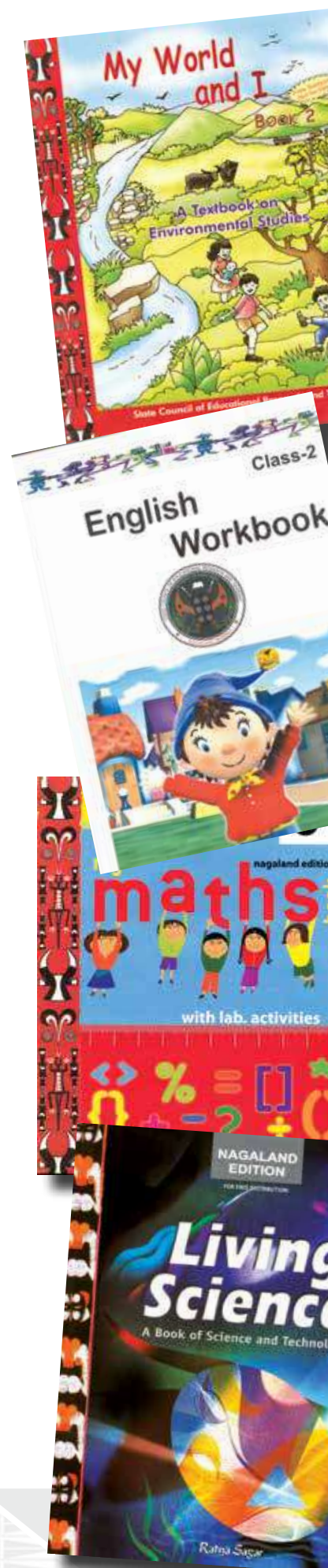
As per the UDISE data of 2013-2014, the total enrolment of students in the elementary stage in the State was 4,11,695. This figure is inclusive of Government and aided schools. The Gross Enrolment Ratio(GER) in this stage (Government + Aided) was 113.01 percent and Net Enrolment (NER) was 97.04 percent. Out of School children was estimated at 9,606. While the total number of teachers for Government Elementary Schools was 16,424. The GER of boys during the period was 102.38 percent and that of girls was 106.26 percent. Enrolment ratio of girls was higher than that of boys. Likewise, Net Enrolment Ratio(NER) for boys was 81.5 percent as compared to that of girls which was 83.8 percent.

Figure 7.1 indicates that there is no gender gap as far as enrolment in elementary stage is concerned. At the primary level the Gender Parity Index (GPI) for the State is 1.03 and at the Upper Primary level, it is 1.11. All the districts except Mokokchung show a GPI higher than 1 at the Upper Primary level.

Figure 7.1: Gender Parity Index (GPI) in Enrolment in the Elementary Stage



Source: District Information System for Education



While the GER for the State is satisfactory, the retention rate is not. Data for 2013-2014 shows that the retention rate for the first five years of elementary education is 79.20 percent while the retention rate at Class 6-8 is only 49.54 percent. Non-retention of such magnitude in elementary education needs urgent attention. The reason for low retention particularly in the rural areas could be attributed to lack of financial support, unattractive teaching-learning environment, inadequate infrastructural facilities, non-receipt of textbooks and uniforms on time and teacher absenteeism. The dropout rate and retention rate indicated no gender difference at both lower and upper elementary levels (Table 7.4 in Appendix).

Impact of Right to Education (RTE) 2009

The Constitution's Eighty Sixth Amendment Act, 2002 inserted Article 21-A in the Constitution of India which stipulates free and compulsory education for all children in the age group of 6 to 14 years as a Fundamental Right.

Article 21-A and the Right to Education Act(RTE) came into effect on April 1, 2010. Compulsory education makes it obligatory for the Government and its agencies to ensure admission, attendance and completion of elementary education by all children in the 6 - 14 age groups.

One of the provisions under the RTE was mandating that no child is detained in a class until the completion of his/her elementary education. This was part of the Continuous and Comprehensive Evaluation (CCE) to ensure all round development of students. However, this policy proved counter-productive affecting both the students and the teachers' attitude towards education. Taking cognizance of the situation, the State Government has since taken a decision not to implement this provision of the Act as it is observed to adversely undermine the quality of education in the State. Subsequently, a new revised guideline of Non Detention Policy has been formulated to ensure quality education in the State.

Mid-Day Meal

To enhance enrolment, retention and attendance and to simultaneously improve nutritional levels among children, the National Programme of Nutritional Support to Primary Education (NP-NSPE) was launched as a Centrally Sponsored Scheme on 15th August 1995, initially in 2408 blocks in the country. By the year 1997-1998 the NP-NSPE was introduced in all blocks of the country. Mid Day Meal guidelines envisage providing hot cooked mid-day meal with 450 calories and 12 gram of protein to every child at the primary level and 700 calories and 20 gram of protein to every child at upper primary level. In Nagaland, preparation of the midday meal is assigned to the community.

To ensure delivery of materials for the Mid-Day Meal and to address transportation issues 26 Pick-Up trucks were procured by the State Government in 2016 and were distributed to all 26 Sub-Divisional Education Officers in the State.

The recommended Pupil-Teacher Ratio under the RTE is 1:30. Maintenance of the ratio is essential to enable teachers to attend to the individual learning needs of each student. One of the major concerns is adverse PTR (Pupil-Teacher Ratio). There are cases where rural schools in remote locations suffer from shortage of teachers. While in many government urban primary schools the enrolment of students is less and the number of teachers employed in the school is in excess of the requirement. Box 7.2 shows that there are 1947 Government schools with surplus teachers. The overall figure of surplus teachers in the elementary stage was 8,509 as against the requirement. Redeployment of teachers to get the right pupil-teacher ratio is an issue which requires due attention to achieve quality education.

Box 7.2: Pupil-Teacher Ratio

	Year 2013-2014	
Lower Primary	Total Schools (Government)	1661
	Total Primary Schools with Adverse PTR	63
	% of Schools with Adverse PTR	3.79
	Surplus Teachers	6009
	Schools with Surplus Teachers	1429
Upper Primary	Total Schools (Government-Surveyed)	942
	Total No of Schools with Adverse PTR	31
	% of Schools with Adverse PTR	3.29
	Surplus Teachers	2500
	Schools with Surplus Teachers	518

Source: UDISE – 2013-2014

PUBLIC PRIVATE PARTNERSHIP in Implementation of *Mid Day Meal* Scheme

Along with the rest of the country Nagaland is implementing the Mid Day Meal Scheme which stipulates provision of hot cooked meals to students of Pre Primary to Class 8 in Government schools for 220 days in a year. However the stipulations posed formidable challenges for the Department. Therefore, the School Education Department entered into a Memorandum of Understanding (MOU) with the Eleutheros Christian Society(ECS), Tuensang on 31.10.2016 and with the Phom Community Development Society(PCDS) on 28.11.2016 for implementation of the MDM scheme on Public Private Partnership mode in Tuensang district and Longleng district respectively.

In this Public Private Partnership Model the Self Help Groups of the 2 NGOs, Village Councils, Village Education Committees, School Management Committees, Church Leaders and the Women Groups in the district are made the stakeholder partners in the delivery of service. Food grains are transported from the Sub Divisional Education Offices to the different schools under the supervision of Departmental officials and representatives of the 2 NGOs. The Women Groups cook the food items and honorarium for the cook-cum-helpers (CCH) are directly credited into the account of the 2 NGOs. These steps not only checked leakage of funds but also led to provision of cooked meals to the children as stipulated in the guidelines of the scheme. Given the success, the Department intends to replicate this PPP model in all the other districts in collaboration with partner NGOs.



Communitization of Elementary Education

With the enactment of the Nagaland Communitization of Public Services 2002, elementary education was one of the first three public services to be communitized where management and ownership of schools at the grass root level was transferred to the community. Since then all Government primary and middle schools have been communitized in the State. The core idea of communitization is to create a sense of ownership among the people and to enable participation of the community in the management of elementary schools in the villages and towns.



Box 7.3: Sochum, An Alternative Education System

‘Sochum’ is a Chang word for dormitory where young boys and girls get together in their respective dorms for social interaction, to learn and to disseminate cultural ways of life. In ‘Sochum, children learn to preserve one’s culture which is fast eroding. Thus, ‘Sochum’ is a contextualized modern education in a wider sense and plays a crucial role in educating the rural populace on ways of life. Sochum was initiated by the Eleutheros Christian Society, a Tuensang based NGO with the support of the Action Aid International in 18 villages. Later, the Community appointed a warden in the Sochum and whose honorarium is paid from the contribution of the different institutions in the village.

The Sochum also helps children in covering the syllabus through the “We-donge soudak thangjam”, a body that consists of student union members, teachers and the Village Education Committee who help the children in learning. This has created a ‘Check and Balance’ in the school performance.

Sochum facilitates realisation of the dream of universalisation of Elementary Education. Since the Sochum system admits only regular school going students, most drop-outs have started going back to school. It has, a reverse migration effect since parents now don’t migrate to urban areas for the purpose of education of their children.





IS PIPHEMA BAZAR AFTER SSA



Under the communitisation scheme, Village Education Communities/ Ward Education Committees have been constituted in the villages and in the urban areas with members drawn from the community and with representatives from the teachers to monitor and manage the affairs of the school. Attendance of teachers and implementation of 'No Work No Pay' policy and infrastructure requirement are monitored by the community. The communitisation process which has been hailed as one of the innovations for improving public services, has been successful in many villages and towns notwithstanding the fact that it has utterly failed in some regions for many reasons such as ignorance of the community on their role in the communitisation process, low education level besides others. Therefore awareness creation on the role of community in the communitisation set-up is one of the foremost requirement to make the process successful.

Intervention of SSA (Sarva Shiksha Abhiyan)

The policy of communitization could not have been implemented at a more opportune time to facilitate the SSA programme which began in 2003 in Nagaland. The communitization process has created positive synergy in many parts of the State resulting in improved infrastructural facilities like construction of much needed school buildings, extension of the existing buildings and toilets with the contribution of the community. Additional teachers were augmented through local arrangements. Till March 2014, 268 new primary schools were sanctioned under SSA and all the schools are operational. However, problems persist, both at the administrative level and the community level. Teachers augmented could not be sustained for non-payment of salaries, and some of them were retrenched within a few months of recruitment. At the community level, a sound understanding about the two programmes as well as about their



own role was missing. Therefore sensitisation of the community on the provisions of SSA will ensure better understanding and implementation of the programme.

In terms of infrastructure, the mandatory investments stipulated under SSA led to construction of new school buildings and additional classrooms. Separate toilets for boys and girls, installation of drinking water facilities in the schools and incorporation of the concept of Building as Learning Aide (BaLA) in the new schools were the visible infrastructural changes.



Box 7.4: Sarva Shiksha Abhiyan

In 2005 an informal centre under the Education Guarantee Scheme of the Sarva Shiksha Abhiyan was started by the community at Keyake, a colony in the east side of Kohima, with 10 children. A few ladies in the community volunteered to help out at the centre. They developed innovative teaching-learning strategies and techniques suited to local needs. Gradually the Centre began to attract more children. So much was the progress of the Centre that by 2009 the Centre was recognised as a Government Primary School and within four years in 2011, it was upgraded to a Government Middle School. Today it is a regular Government Middle School with regular teachers and with a student strength of 145 in the GPS section and 54 in the GMS.

The developments in the school was on account of the concerted efforts and sense of ownership by the community. The community donated land, machinery and labour for construction of the school building. Approach road, cash for school construction, building and repairing of the school, articles and toys for use of children and free service were contributed by the people. Pooling of community's resources and channelizing them in a goal-driven manner, the community continues to remain involved in the school with a vision to get it upgraded to a Government High School.



7.3 SECONDARY EDUCATION

With the transition to the 10+2+3 system many government and private high schools have been upgraded to the higher secondary level. According to Nagaland Board of School Education (NBSE) there were 678 government, private and permitted private high and higher secondary schools in the State during 2014. In addition, 28 colleges continue to offer +2 courses. More than 50 percent of these schools are located in the three districts of Kohima, Dimapur and Mokokchung indicating inter-regional inequality in access to schools. (Table No.7.5 in Appendix)

Rashtriya Madhyamik Shiksha Abhiyan (RMSA)

The launching of the RMSA programme in the State in March 2010 with a vision to make quality education available, accessible and affordable to all children in the age group of 14-18 years is a positive step in ensuring universalisation of secondary education. The RMSA envisages universal access to secondary education with Gross Enrolment Ratio(GER) of 100 percent by 2017, universal retention by 2020, higher level of equity by providing access to secondary education with special reference to focus groups i.e. economically and educationally backward sections, girls and disabled children residing in rural areas and other marginalized categories like SC, ST, OBC and Educationally Backward Minorities (EBM). In the State, so far, the RMSA has provided facilities like laboratories, toilet blocks and drinking water in schools. Hostels for girls are under construction in 11 educationally backward blocks. A total of 201 teachers have been appointed and teacher training programmes have been conducted for 4817 teachers. Despite, the developments, there are still schools with very poor infrastructure and without basic facilities. Majority of the schools do not have separate toilets for girls, handrails and ramps for children with special needs. There have also been instances where new school buildings have been constructed but these new buildings have not been handed over to the school authorities by the contractors due to non-payment of construction bills. Such administrative bottlenecks result in cost overrun and impede delivery of education. Mechanisms should be devised to overcome such impediments.

Quality Concerns

While quantitative expansion is visible both in terms of infrastructure and enrolment, there is a need to assess whether there has been parallel qualitative growth of education. The HSLC results show disturbing trends in Government schools. The overall pass percentage was recorded at 63.05 percent in 2015, down from 65.19 percent in 2014. As many as 40 schools recorded 'Nil' pass result. Thirty eight were Government schools, indicating the low performance of Government schools and that it has not improved from that of the level reflected in the 2004 SHDR. It can also be seen that the relative performance of districts have remained more or less the same with little or no improvement over the last few years. Attention therefore is required especially to performance in the districts of Kiphire, Longleng and Mon whose pass percentages have invariably remained below or just above 20 percent.

The performance of schools of Tuensang, Wokha and Zunheboto are just marginally better. However, the corresponding pass percentages of the private schools in these districts are better off. Thus the fact remains that the issue of quality education in the Government schools of the State is a matter that must be revisited and addressed with seriousness. (Table No. 7.8 in Appendix)

Box 7.5: Rashtriya Madhyamik Shiksha Abhiyan (RMSA)

Objectives

- To enhance access to secondary education and to improve its quality.
- To remove gender, socio-economic and disability barriers, providing universal access to secondary level education by 2017, i.e., by the end of 12th Five Year Plan and achieving universal retention by 2020.

Important Physical Facilities under the Scheme:

- Additional class rooms
- Laboratories
- Libraries
- Art and crafts rooms
- Toilet blocks
- Drinking water provisions
- Residential hostels for teachers in remote areas.

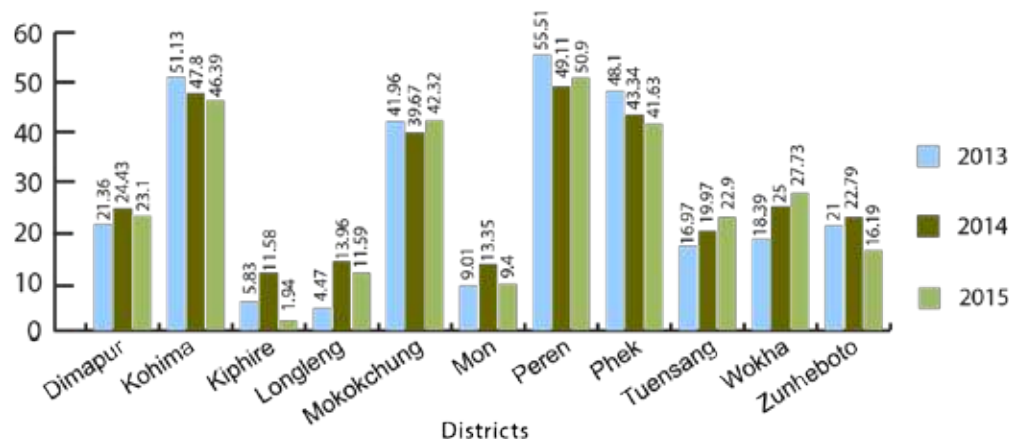
Quality Interventions under the Scheme:

- Appointment of additional teachers to reduce PTR to 30:1
- Focus on Science, Math and English education
- In-service training of teachers
- Science laboratories
- ICT enabled education
- Curriculum reforms
- Teaching learning reforms

Equity Interventions under the Scheme:

- Special focus in micro planning
- Preference to Ashram schools for upgradation
- Preference to areas with concentration of SC/ST/Minority for opening of schools
- Special enrolment drive for the weaker section
- More female teachers in schools; and
- Separate toilet blocks for girls.

Figure 7.2: District-wise Performance of Government Schools (2013 to 2015)



Source: Nagaland Board of School Education Results, Gazette.

As mentioned in the SHDR 2004, the pass percentages at the higher secondary level have remained higher than at the matriculation level. Comparatively better than the figures reported in 2004, the 2015 higher secondary exam results show pass percentages of 69.91 in the Arts Stream, 66.86 in Commerce and 79.64 in the Science Stream. Gender disaggregated data shows that the performance of boys has been marginally better at the matriculation level, while girls performed marginally better at the higher secondary level in all the three streams.

Box 7.6: Effective Community Participation in Süngratsü Village

In Süngratsü village the Government high school and its surroundings are maintained by community. The village denizens constructed the hostel for the school and the officers forum of the village contributed the furnishing for the hostel. All Class 10 students of the village are made to compulsorily reside in the hostel by paying a nominal mess fee. All other expenses are borne by the community. Educated young people are also paid to help the students with their studies. Besides, expert artisans are engaged to teach the students different traditional crafts, culture and folklore. These efforts paid rich dividends resulting in the school achieving 100 percent pass in the HSLC exams during 2011 and 2015. Such exemplary community participation has resulted in reforming the education sector in pockets of the State.

Out of School Children

The Annual Survey of Education Report (ASER) 2013 shows that 1.9 percent of children in the 11-14 age group and 9.1 percent children in the 15-16 age group are out of school. Interestingly, a higher percentage of boys are out of school in both the age groups; 2.5 percent in the 11-14 age group and 10.8 percent in the 15-16 age group as against 1.3 percent and 7.4 percent respectively for girls. These data pertain to rural areas of the State. This trend raises questions as to why male children drop out from school when traditionally they get preference over female children in terms of parental support, especially in the economically weaker section. The detailed data by age group of children is in Table No. 7.7 at Appendix.

One of the concerns in the implementation of the Right to Education Act in the State has been the policy of non-detention of children up to Class 8. Because of the poor quality of education in the rural areas of the State, many of the children who pass Class 8 from these areas have not been able to acquire the necessary competencies needed to enter secondary school. Further, infrastructural deficiencies make it difficult for schools to accommodate all children who pass Class 8. Among those who do get enrolled in Class 9, many of them do not clear the Class 9 board exams, adding to the number of Out of School Children (OoSC). There has been an increase in the percentage of OoSC in all age groups, while that in the age group 15-16 has doubled in just a year. A thorough review of the provisions of the RTE is therefore essential keeping the local context in view.

The unemployment statistics of the Employment Exchanges shows that a large number of persons registered with the Exchanges have qualification below matric level, especially among the males. Paucity of initiatives to bring the OoSC back to school along with the lack of skills amongst these children has resulted in high number of people remaining unemployed. Thus the issue of scaling up vocational education and skill development at the secondary level needs to be given credence. The Industrial Training Institutes (ITIs) impart skill oriented training to the youths, who are mostly school and college dropouts, to equip them with suitable industrial skills and also to engage them in self-employment ventures. The Annual Administrative Report 2014-15 of the Department of Employment and

Craftsmen Training shows that a total of 6666 trainees passed the All India Trade Test. The Government is also taking initiative to give vocational training to the youth of the State under the Skill Development Initiative (SDI) Scheme through the ITIs in partnerships with Private Vocational Training Providers. A total of 10195 trainees have been trained under this scheme out of which 1530 trainees got placements.

Activity and Competency Learning

Early literacy programme incorporated in the existing project called Activity and Competency Learning (ACL) is a learner-centred education system that promotes creative learning. The customised teaching and learning materials used under the project positively impacts interest in the learners. ACL has been introduced in 690 primary schools in all districts. And in phased manner all primary schools in the State will be covered.

Kasturba Gandhi Balika Vidyalaya (KGBV)

The Kasturba Gandhi Balika Vidyalaya (KGBV) schools set up for underprivileged girls to educate them and to prepare them for life through vocational trainings are attached with hostels. These schools are located in the districts of Kiphire, Longleng, Mon and Tuensang. Altogether 1100 girls mostly from the BPL families are enrolled in these hostels with 100 girls in each hostel. Life skills imparted to these girls during their schooling years is anticipated to make them employable and to enable them to earn their livelihood.





Inclusive Education

Enhancing inclusive education, aid and appliances, spectacles, wheel chairs and hearing aids are distributed to children with special needs in schools after ascertaining the nature and degree of disability amongst children through assessment camps. These camps are conducted by the State Department of School Education in collaboration with Health and Family Welfare Department, NRRC Dimapur and Star Key Delhi. Corrective surgery camps for the visually impaired/locomotor and hearing impaired are also organised in collaboration with the Health and Family Welfare Department and the North East Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS). While Oking Hospital Kohima and Smile Trained Shija Cleft Project Imphal, Manipur have been roped in to conduct corrective surgery for children with cleft lips and palate.





Communitization of Integrated Child Development Scheme (ICDS) in Tuensang District

The Integrated Child Development Scheme (ICDS), a centrally sponsored programme under the State Social Welfare Department was brought under the ambit of communitised programmes with the execution of an MOU between the Social Welfare Department and Eleutherous Christian Society, Tuensang (ECS), an NGO on 30th August 2014. In the first phase, the scheme covered 3 blocks i.e. Noklak, Noksen and Sangsangnyu with 11 pilots villages spread over three ICDS projects and 22 Anganwadi Centres in Tuensang district of Nagaland. Committees were constituted at the State Level, District Level and Village Level to review, audit progress and for implementation of ICDS Programme in the Communitized Anganwadi Centres.



- At the Village Level, Management Committees were set up in all the selected villages. These Committees comprised of Mothers, SHG members, Village Council members and ECS representative.
- Mother's Club were formed in all the 11 targeted villages who were entrusted with the responsibility of preparation of the menu in the Anganwadi Centres and also for procurement of supplies.
- The Management Committee were also responsible for mobilizing resources not only from the Social Welfare Department but also from within the community, well wishers and from the allied Departments such as Medical and School Education. Revenue realised from any source as well as from defaulting Anganwadi workers was deposited in the common pool and was used for procurement of toys and medicines for children.
- The Anganwadi Centre provided an integrated six packages of services as per the guidelines of the Ministry of Women and Child Development.
- Necessary services was extended to adolescent girls, pregnant women and lactating mothers as enshrined in the policy of the ICDS program.
- Fresh enrolment of the children below the age of five, pregnant women, lactating women and adolescent girls were done by the Committee and submitted to the Department.
- All funds pertaining to the ICDS are transacted through the joint accounts operated by ECS and members of the committee. Similar joint accounts are operated by the beneficiary villages whose pass book and cheque books are kept in the custody of the Village Council.
- On the personnel management front, the Village Level Management Committee serves notice to absentee Anganwadi workers who remain absent for more than 5 days in a month. If attendance of the employee does not improve despite this action, clan members are informed. However, if the above steps fail, as a last resort the Committee terminates the service of the Anganwadi worker. The Committee will then nominate a suitable candidate for the vacant post and forward the name to Child Development Project Officer(CDPO) for appointment. Consequent to the execution of the MOU, all fresh appointments within the jurisdiction of the ECS will be on probationary basis and training will be provided by ECS before deployment.
- The Village Management Committee submits monthly progress / activity report with photographic evidences to the district authority who in turn forwards it to the State.

This partnership between the Social Welfare Department and the Eleutherous Christian Society, Tuensang(ECS) has not only ensured proper implementation of the ICDS programme as envisaged in the guidelines of the Ministry but has also provided an opportunity for community participation in nutrition management of children in the remote areas of the State. With the Anganwadi Centres becoming source of employment for mothers and centres providing wholesome meals for children, children, mothers and the community are incentivised to ensure proper functioning of the Anganwadi Centres.

7.4 HIGHER EDUCATION

This section dwells on the existing scenario of higher education in the State and examines as to what extent access to higher education has impacted human resource development, gender parity on one hand and on the other hand brings out issues and challenges relating to employability of the educated youth.

The history of higher education in Nagaland dates back even before the State was granted statehood in 1963. The first college, Fazl Ali College in Mokokchung was established in 1959. This was closely followed by setting up of Kohima Science College at Jotsoma in 1961 which has now been granted autonomous status. Patkai Christian College at Chümoukedima was set up in 1974 and is an autonomous college which offers arts, science and vocational studies in music. The growth and development of higher education since then has been steadily progressing. At present the State has a total of 61 colleges, up from 42 as recorded in 2004 SHDR, with 15 government colleges and 46 private colleges. Besides the secular colleges, there are 11 professional colleges, 3 polytechnic institutes and 25 theological colleges which are recognized by the Government of Nagaland.

The State has one Central University- Nagaland University which was established in 1994. It was carved out of the erstwhile North Eastern Hill University Kohima Campus. Nagaland University is located in three campuses- Kohima, Medziphema and Lumami. The School of Engineering and Technology and Management (SETAM) is temporarily located at Dimapur. Three other universities also operate in the State namely, the Indira Gandhi National Open University (IGNOU), the Nagaland Global Open University and the Institute of Chartered Financial Analysts of India (ICFAI).



The Nagaland University is the main centre for higher learning in the State, having the following schools; Humanities and Education, Social Sciences, Sciences, Agricultural Sciences and Rural Development, Engineering Technology and Management and the School of Education. Thirty four (34) academic departments under the above mentioned schools provide Bachelors, Masters, M.Phil. and Ph.D. courses. Several short term courses and trainings are also provided in centres such as the Tribal Research Centre, Women Studies Centre, Department of Mass Communication, Herbal Ayurveda Research Centre and Krishi Vigyan Kendra. New departments and centres viz. Environmental Science, Anthropology, Forestry Science, Hindi, Centre for Naga Tribal Languages have been added recently. Nagaland also boasts of National level institutions such as the Central Institute of Horticulture, the Mithun Research Centre at Medziphema and National Institute of Technology at Dimapur that caters to the need of higher and technical education in the State. The College of Veterinary Sciences and Animal Husbandary under the aegis of the Central Agricultural University (CAU) Manipur has also been established in Jalukie, Peren.



State Government Initiatives in Higher Education

Over the last decade, the State has remarkably transformed its higher education landscape through the Government's policy to provide at least one Government college for each district. This policy was taken up in the Sixth and Seventh Plan period when the State Government took over six private colleges to cater to the educational needs of the districts. Subsequently, five more colleges were taken over. A College of Teacher Education was also set up in Mokokchung.

With these government initiatives, the number of Government colleges increased from 9 in 2004 to 15 in 2014 spread over all the districts. This growth and expansion has created accessibility and educational coverage for students in all the districts. However in this changing landscape, it is the private institutions that have played a dominant role as a game changer as the percentage share of student enrolment in these institutions have been much higher than the Government institutions.

Box 7.7: District-wise Number of Colleges

<i>District</i>	<i>Government Colleges</i>	<i>Private Colleges</i>	<i>Total</i>
Kohima	3	17	20
Dimapur	1	23	24
Mokokchung	2	3	5
Wokha	1	1	2
Phek	2	-	2
Zunheboto	1	-	1
Mon	1	-	1
Tuensang	1	1	2
Peren	1	1	2
Longleng	1	-	1
Kiphire	1	-	1
Total	15	46	61

Box 7.8: Higher Education at a Glance, 2016

<i>Sl.</i>	<i>Institution</i>	<i>No.</i>
1	Central University	1
2	Private University	2
3	Institute of National Importance	1
	Total	4
<i>Sl.</i>	<i>Colleges</i>	<i>No.</i>
1	Government	15
2	Private	48
	Total	63
<i>Sl.</i>	<i>Teachers</i>	<i>No.</i>
1	Trained	9924
2	Untrained	20882
	Total	30806

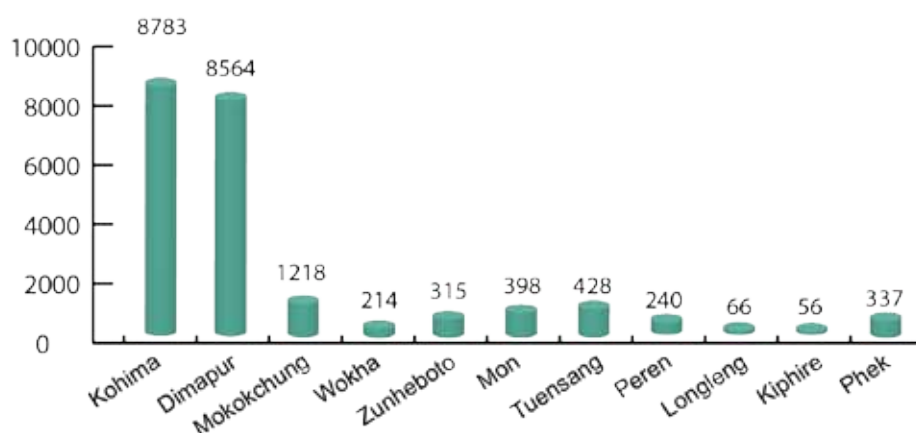
Source: Department of Higher Education Department, Nagaland.

Gross Enrolment Ratio (GER)

Student enrolment in both Government and Private colleges has seen an upward trend since 2004. The total number of enrolled students in 2004 was 11,231 which rose to 14790 in 2008-2009 to 28918 in 2013-2014. The total enrolment in Government colleges in 2008-2009 which was 4499 increased to 7875 in 2013-2014. While private colleges which had higher student enrolment of 10291 in 2008-2009 increased its enrolment to 21043 in 2013-2014.

According to All India Survey on Higher Education(AISHE) Report of 2011-2012, the Gross Enrolment Ratio (GER) of higher education in Nagaland is 17.9 as compared to the National GER of 20.4. In spite of the increase in enrolment in colleges, the State's GER is still lower than the National average. This can be attributed to the outflow of students to other universities outside the State and which raises question on the facilities and the quality of higher education available in the State. If the State has to raise its GER and achieve the current target of 20.4 percent, concerted efforts must be made for a planned expansion of institutional and infrastructural capacity at the district level. Simultaneously, a student- centric model of education need to be developed to enhance learning outcomes.

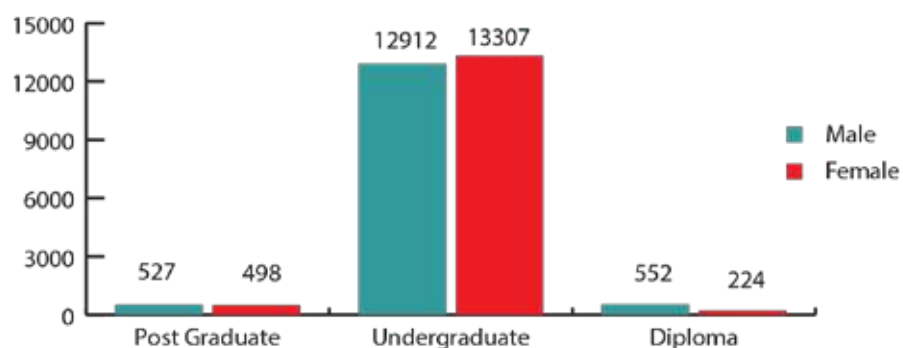
**Figure 7.3: District-wise Enrolment of Students in Degree Courses
(In Both Government and Private Colleges)**



Source: Annual Administrative Report 2014, Department of Higher Education, Nagaland

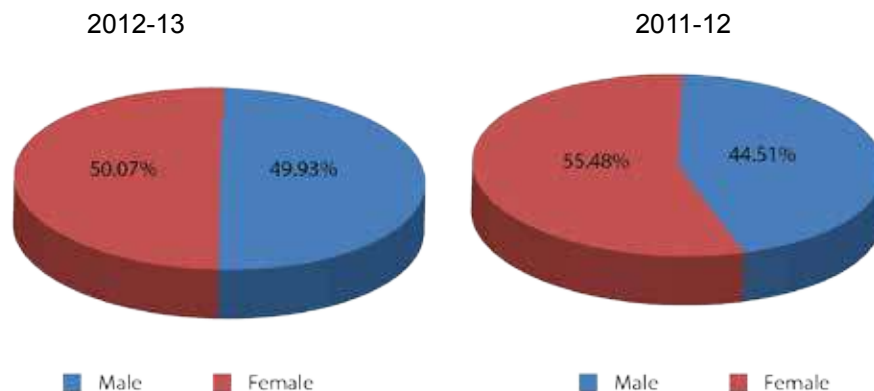
The enrolment data shown in Figure 7.3 indicates that the highest concentration of student is in the urban areas of Kohima and Dimapur district and the least is in the far flung districts. This trend raises questions on the reason for concentration of students in only two districts. The Government therefore has to review its plans and policies to improve the educational institutions in the rural areas through provision of learning facilities, quarters for teaching staff, IT Communication and internet accessibility, introduction of vocational courses and creation of academic environment. This would not only check the outflow of students from the districts but would help reduce the enrolment disparity between the urban and the rural areas.

Figure 7.4: Male and Female Student Enrolment in Higher Education 2012-2013



Source: AISHE

Figure 7.5: Proportion of Male and Female Students Enrolment in Higher Education



Source: AISHE Student-Enrolment Report 2012-2013

Gender equity is characterized by the level of access of girls to education at all levels as compared to the ratio of the males. The total enrolment rate of girls in higher education as shown in Figure 7.5 was 50.07 percent in 2012-2013 which was higher than the boys' enrolment at 49.93 percent. The female ratio in higher education showed a comparable improvement in reducing the gender gap in the State. But in order to achieve parity, the index value should be greater than 1(one) like in the states of Meghalaya and Assam.

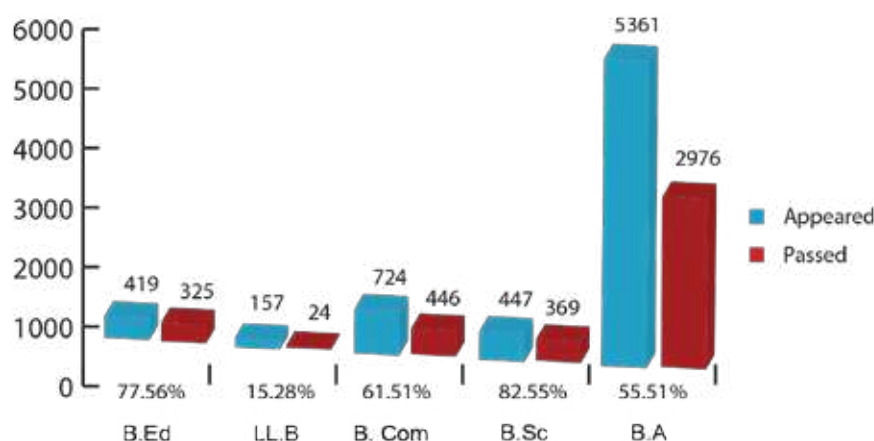
There is no doubt that there is a large number of students passing out from the colleges and universities every year. However, there is a growing concern over the lack of choices in the course of studies offered by the institutions in the State. With limited choices, the scope of whether the study courses are relevant and suitable to the demands of the employment market has to be delved on by policy makers and educationists.

Box 7.9: Gender Parity Index of Northeast States 2013

State	Gender Parity Index
Assam	1.01
Manipur	0.86
Meghalaya	1.29
Mizoram	0.96
Nagaland	0.65

Source: [data.gov.in/catalog/gender-parityindex-gpi-higher education](http://data.gov.in/catalog/gender-parityindex-gpi-higher+education).

Figure 7.6: Nagaland University Results, 2013



Source: Annual Administrative Report 2014, Department of Higher Education, Nagaland

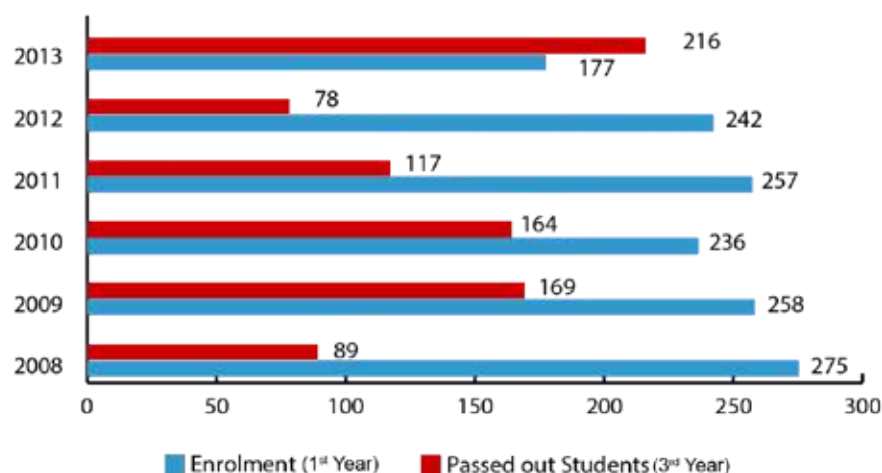
7.5 TECHNICAL EDUCATION

The progress of technical education in the State has been very slow and limited. Even after attainment of fifty years of Statehood, there exist only three Government Polytechnic Institutes till date viz Institute of Communication and Information Technology, Government Polytechnic and Kheloshe Polytechnic. The State run technical institutes have seen upswings and downswings in their enrolment. In 2008, the total number of enrolled students was 275 as against the total 330 seats approved by All India Council of Technical Education(AICTE). During 2009-2012 there was enhancement in enrolment but during 2013 it came down to 177. The number of enrolment and number of students passing out from the State Polytechnics is shown in Figure 7.7. It may be pointed out here that the number of an enrolment refers to enrolment in the first year of the 3 years course. While pass out number reflect students of the final year. The absence of job avenues for these technical students in the State has also adversely impacted enrolment and has resulted in shift of students to non-technical courses. According to Directorate of Technical Education, the job placement for polytechnic students is just about 7 percent while it is about 7-10 percent for students pursuing higher studies in engineering courses. If technical education is made relevant to the demands of the industry, it would ensure employability of these students. In the field of technical education, sadly, Nagaland still does not have a medical institution which makes it the only state in the Northeast without one. However, since the time the State Human Development Report was brought out in 2004, some progress has been made towards the development of infrastructure for fulfilling this long felt need in the State. The foundation stone for establishment of a medical college at Kohima was laid in March 2014.

Box 7.10: Diploma Courses Offered in the Polytechnics

- | | |
|---|-------------------------------|
| * Civil Engineering | * Modern Office Practice |
| * Electronics & Electrical Engineer-ing | * Fashion Technology |
| * Mechanical Engineering | * Computer Engineering |
| * Automobile Engineering | * Electronics & Communication |
| * Computer Application | * Information Technology |

Figure 7.7: Student Enrolment and Passed-Out Students from the State Polytechnics



Source: State Council for Technical Education (SCTE), Nagaland.

Box 7.11: Government Initiatives in Higher Education

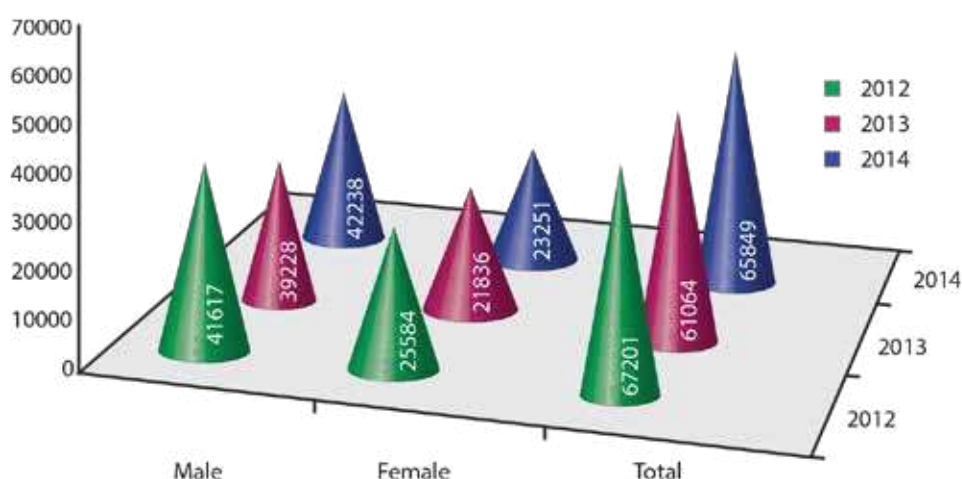
- Opening of 2 (Two) Community Colleges under UGC scheme
- Introduced Rashtriya Uchchatar Shiksha Abhiyan(RUSA) programme for higher education
- Under RUSA initiated (i) construction of hostels, library, auditorium and play grounds (ii) vocationalised higher education (iii) created teaching posts for new courses/subjects

Two colleges namely St. Joseph's College, Jakhama and Dimapur Government College, Dimapur now offer diploma courses in tourism and hotel management under the UGC Community College Scheme. As of 2014 the number of students enrolled in St. Joseph's College was 10 while 24 students were enrolled in Dimapur Government College. Students pursuing courses in Dimapur Government College were given job placements.

Education and Unemployment

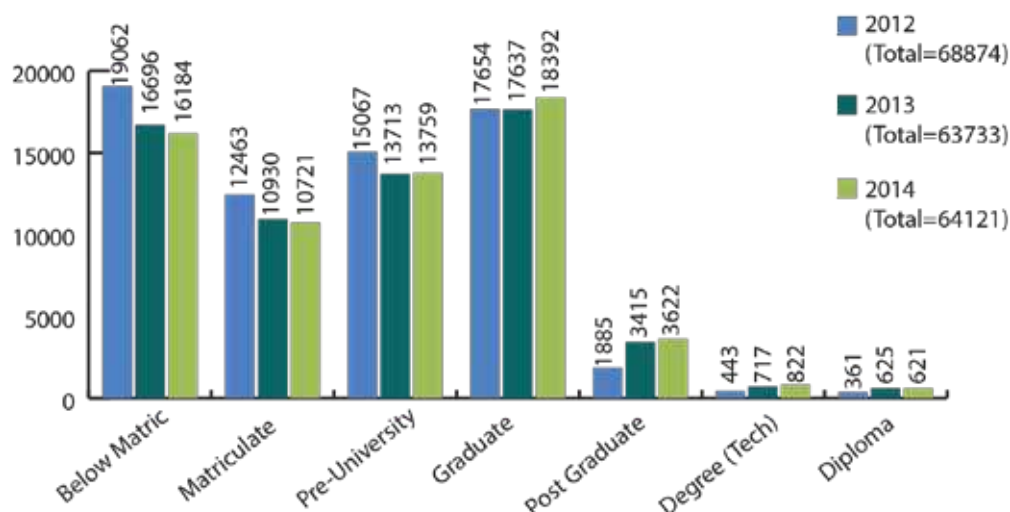
Every year thousands of students passed out from colleges and universities increasing the number of job seekers in the State. Many of these students seek employment outside the State given the limited employment opportunities within the State. With lack of industries and an organised private sector, Government is the largest employer in the State. While employment in the Government sector has reached a saturation point. Over 65,000 educated unemployed youths are registered in the live register of the employment exchange. However this figures does not reflect the actual employment aspiration status since many unemployed educated youth do not register with the employment exchanges due to inability of the employment exchanges to provide job placements for them. The number of unemployed youth in the State would be much more. While graduating in inappropriate course of study not suitable to the demands of the labour market could be one reason, reluctance of the youth to look beyond government jobs, attitudinal problems averse to self-employment, lack of capital/finances for setting up enterprises and absence of private sectors in the State are some of the other causes of unemployment in Nagaland. The following figures show the number of male and female unemployed and job seekers by educational level as recorded in the Live Register of the Employment Exchange.

Figure 7. 8: Registered Job Seekers: Male and Female as on 31st March 2014



Source: Annual Employment Review 2011-2012 & 2013-2014,
Directorate, Employment and Craftsmen Training, Government of Nagaland.

Figure 7. 9: Job Seekers by Educational Level in the Live Register as on 31st December 2014



Source: Annual Employment Review 2013-2014 & AAR 2014-2015,
Department of Employment and Craftsmen Training, Government of Nagaland.

The trend in the State shows that the percentage of unemployed amongst females is less than that of the males. This can be attributed to the better suitability of female for job opportunities in the service sector like hospitality, tourism, catering and nursing. Prospects for self-employment especially for enterprising women is also better than that of men both in the organized and unorganized sectors. The challenge therefore is to train Naga youths in the requisite skills as per the demands of the job market and also to take advantage of the potentials for entrepreneurial activities. This will help reduce the problem of unemployment in the State.

In the backdrop of a high literacy rate of 79.55 percent, tackling unemployment of the educated labour force is a big challenge in the State. The onerous task is therefore to create employment opportunities for the educated youths. Simultaneously, introduction of vocational studies and creative studies in the education system will go a long way in mitigating the educated unemployment problem. Most importantly there must be a change in the mindset of the Naga youth from a government job centric approach to self employment or for employment in the private sectors.

7.6 TEACHER EDUCATION

The number of schools in the State has increased over the years and with it the number of teachers have also gone up. On the one hand there is a steep increase in the number of teachers but the percentage of trained teachers is very low as shown in Box 7.12.

Box 7.12: *Number of Teachers, Trained and Untrained in Government Schools*

	2005-2006				2007-2008			
Type of Institution	Total No. of Teachers	Trained	Untrained	% Untrained Teachers	Total No. of Teachers	Trained	Untrained	% of Untrained Teachers
Primary	7926	2977	4949	62.44%	8531	3218	5313	62.28%
Middle	3407	1155	2252	66.10%	3579	1333	2246	62.75%
Secondary	NA	NA	NA		1997	510	1487	74.46%

Source: *State Study Report on the Demand and Supply of Teacher and Teacher Educators at School Stage: 2007-2008 and 2016 - 2017, SCERT, Kohima*

Given the scenario of abysmally low percentage of trained teachers in the State, since 2008 Government has organised several teacher training programs under SSA and RMSA schemes. This has resulted in the decline in percentage of untrained teachers in the State. To improve the quality of education in the State, there is an urgent need to improve the quality of teachers. The National Policy on Education 1986 states ‘the status of the teacher reflects the socio-cultural ethos of the society; it is said that no nation can rise above its teachers’. It is in this context that importance should be given to the quality of teacher preparation programs. The history of teacher education can be traced back to the establishment of Nagaland College of Teacher Education in 1975 in Kohima. Twenty years later, in 1995 Salt Christian College of Teacher Education Dimapur started its B.Ed course. This was followed by the Bosco College of Teacher Education Dimapur in 2003. The latter two colleges are private institutions. IGNOU too started offering B. Ed course through distance

programme in 2002 and Certificate Course in Primary Education (CPE) in 2005. Presently, there are six Government District Institutes of Education and Training and three private colleges/institutes offering pre-service and in-service teacher education course for primary school teachers. The growth and development of teacher education in Nagaland was slow in the initial years. However, today the situation has remarkably improved. The number and type of teacher education programs available in the State is given in Table No. 7.8 in Appendix.

The introduction of the M.Ed Course in 2014 in the State College of Teacher Education is expected to boost the quality of education. The short term and medium term training courses for in-service primary school teachers organised by DIETS, the State Council of Educational Research and Training (SCERT) and by private colleges of teacher education is expected to lead to improvement in the quality of teachers particularly in the context of Right to Education (RTE) 2009, the Sarva Shiksha Abhiyan (SSA) and Rastriya Madhyamik Shiksha Abhiyan (RMSA). Diploma in Physical Education, Diploma in Art Education (Visual) and Diploma in Art Education (Performing Arts) have also been introduced in SCERT. The State has also introduced the new B.Ed. and M.Ed. programmes beginning July 2015-2016 in line with the policy of the National Council for Teacher Education to reform teacher education residential facilities and hostels for the student-teachers. All these institutions are equipped with library and laboratory facilities. However, access to internet connectivity and IT facilities is limited while some of these institutions are understaffed. Therefore improvement in the staffing pattern is an area which requires attention. The intake capacity of most of the colleges of teacher education is one hundred and each DIET has an intake capacity of hundred. Meanwhile, the private institutions and SCERT's training institute for primary school teachers (D.El.Ed course) have an intake capacity of fifty. It may be highlighted that most of the centres for training pre-school teachers which have sprung up in recent years have been established through private initiative.

Of late, applicants for the IGNOU B.Ed course which is a long distance programme have increased. However, learning via mass media without daily interaction with faculty is still an arrangement which many are yet to get accustomed to. For many probable aspirants, not being computer literate and internet savvy is a barrier. Further, lack of internet connectivity particularly in the remote areas of the State remains a major deterrent to opt for long distance learning. Despite the bottlenecks, the IGNOU B.Ed course has attracted an increasing number of people with its innovative program of utilizing self-taught material and information technology.

Box 7.13: Rationalization in the School Education Department

The focus on expansion of Government Primary and Middle Schools to cover all areas over the years has brought about its own attendant problems in terms of a bloated strength of schools as well as teachers. There were incongruities such as schools with no student and shortage of math and science teachers even as the student : teacher ratio became as low as 11 : 1. To arrest the growing number of school teachers, the Cabinet ordered a freeze on fresh appointments, including filling up of vacancies, in May, 2013. To partially address the problem of shortage of teachers in the districts of Kiphire, Longleng, Mon and Tuensang, a special recruitment of 102 math and science teachers and 211 primary teachers was permitted in 2015 against the unfilled vacancies. Further, the School Education Department embarked upon an exercise of rationalization of schools spearheaded by Hon'ble Minister of School Education in 2015. In consultation with the stakeholders, the total number of schools was reduced to 2,070 from 2,254 schools, a reduction of 184 schools. It has been gratifying to note that the rationalization in school education has also been taken up by Ministry of Human Resource Development, Government of India in 2016. The rationalization process in School Education Department is continuing.

7.7 THE WAY FORWARD

To enhance the quality of education and to assist the process for positive change, attention must be paid to early childhood care and education. A regulatory body may be set up for monitoring the quality of the programs and pedagogy employed in the teaching and learning at the foundational stage. The existing pre-schools under whatever nomenclature - nursery or kindergarten schools must be registered with the Nagaland Board of School Education or a regulatory body.

Notwithstanding the improvements made, particularly in the physical infrastructure in many government primary and middle schools as a result of Sarva Shiksha Abhiyan Scheme and the communitization process in the State, there are still several aspects of school education that needs to be looked into such as construction of library, laboratory, playground, hall/auditorium, ICT facilities to cite a few. There are also several school buildings which were constructed during the British era which might be preserved due to its structural designs and may be maintained as heritage buildings. Another concern for the government schools across the State is the protection of government land and property from encroachment and its maintenance.

A good coordination among all school education authorities – SMA, SSA, RMSA, DMAs, EBRC, DEOs, SDEOs, SCERT, School Education Directorate, the DIETs, CTEs and the NBSE through linking up of plans and programs will prevent duplication and wastage of resources. This will also help in addressing emerging educational issues effectively .

Infrastructural facilities in all institutions of higher education including professional education must be strengthened with state-of-the art facilities. Information Communication Technology should be utilised to ensure that learning is made more interesting and effective while also stimulating creativity. Smart classrooms can pave the way for better teaching-learning process. The curriculum at all levels of education must be realigned to encourage young people to diversify into newer areas of study suited to the changing global and local scenario.

The education system must be geared towards development of knowledge competence as well as life skills inculcating values.

Setting up institutions for medical sciences, veterinary and animal husbandry, museology and archaeology, music, cultural studies along with establishment of national institutions like Indian Institute of Management, Indian Institute of Technology, National Institute for research and statistics should be the way forward.

To maintain high standard in the quality of teacher education in the State, a regulatory/monitoring body both at the State level or University level should be constituted. While it is important to recast the teacher education programmes in line with national educational policies, preservation of identity, culture and traditional knowledge systems should not be lost sight of so that education is progressive and at the same time rooted in the culture of its people.

Educational institutions should not become 'teaching shops', but should be centres of excellence, rekindling interest amongst students and teachers for research and innovation. Research being an inseparable component of higher education, inter-disciplinary research centres must be set up in the State.







INFORMATION TECHNOLOGY AND e-GOVERNANCE IN NAGALAND



Within a span of 3-4 years, the State Department of Information Technology and Communication (IT&C) has put Nagaland on the e-Governance map of the country .

- Nagaland became the first State to take over State Portal and State Services Delivery Gateway (SP&SSDG) core infrastructure project.
- It is the only State in the country where the State Data Centre is run by the IT & C Department without engaging private Data Centre Operator (DCO).
- It is also the only State in India where the Department acts as Service Centre Agency (SCA) for running Common Service Centres (CSC)without engaging private companies. The two hundred twenty (220) Common Service Centre (CSC) covering all 11(eleven) districts provide Government to Citizen (G2C), Business to Citizen (B2C) and Business to Business (B2B) services in remote areas. These CSCs provide various citizen centric services including DTH recharge, mobile recharges, post paid and data card bill, Microsoft digital learning, online shopping, advertisement, ticketing, financial inclusion services, Pan card/Aadhaar services, passport application and birth/death registration services, application forms of Nagaland Public Service Commission, scholarship forms etc.
- Online Inner Line Permit(ILP) application format will be operationalised shortly and this facility will greatly ease the process of obtaining ILP and will boost the tourism sector.
- Nagaland is now ranked in Number No. 1 category in India in the e-District Mission Mode Project along with Gujarat, Haryana, Madhya Pradesh, Punjab, Uttar Pradesh and West Bengal.
- Nagaland is the first State in North Eastern Region to implement Aadhar based Biometric Attendance System in the State Civil Secretariat.
- Out of seven selected states (Gujarat, Nagaland, Karnataka, Chandigarh, Kerala, Pondicherry & Uttarakhand) for implementation of the National Information Infrastructure (NII) pilot project, Nagaland became the first State to commission the project. With commissioning of the project on 6th January 2017, 86 (eighty six) villages in Peren district will be connected on a wireless ring network.
- Commissioned on 27th January 2017, Nagaland can pride itself to have the largest BPO (Call Centre) in North Eastern Region with 400 seats.
- Memorandum of Understanding has been executed for setting up of a Software Technology of Park of India (STPI) centre at Kohima to cater to the needs of entrepreneurs and that of the software industry, .
- To make the procurement system transparent and efficient in the State, e-procurement and e- tendering system has been introduced.

IT & C PROJECTS IN THE PIPELINE

- (i) **Enterprise Architecture** (ii) **e-Naga Village/ Digital Village** (iii) **e-Naga Training/e-Governance Academy**
(iv) **Aerial Optical Fibre Network Connectivity** (v) **Wireless Connectivity and Wi-Fi Hotspot**
(vi) **Centralized Electronic Integrated Security Systems.**

INFRASTRUCTURE

INTRODUCTION

Economic development is inconceivable in the absence of infrastructure such as power, telecommunications, roads, railroads, ports, shipping and connectivity. Improved performance of infrastructure enables countries to achieve efficiency gains, a higher level of delivery of services from the existing resources. It also facilitates access and delivery of essential services. Presence of infrastructural support promotes significant gains in industrial and agricultural production.

Infrastructure is generally defined as the physical framework of facilities through which goods and services are provided to the public. And its importance for sustained economic development is well recognized. Infrastructure is in fact the catalyst for economic development and for human development whether in terms of creation of livelihood opportunity, education, health or delivery of basic amenities. This sector covers a wide spectrum of economic and social services such as roads, energy, transport, communications, banking, finance and insurance, water and sanitation, hospitals, schools, hotels etc. All these facilities collectively constitute infrastructure of an economy, development of which is a precondition for increasing agricultural and industrial production and facilitates movement of labour. Of late, the growth of various sectors of the economy has placed increasing stress on infrastructure which already suffers from deficit in terms of capacity as well as efficiency in the delivery of critical services.

This Chapter looks at the present status of infrastructure in Nagaland such as roads transportation, communication, power, banks and postal services and makes a comparative analysis with other North Eastern states and with the country as a whole. The comparison is made to understand and highlight the achievements made in the Nagaland over the years, to assess its status and to determine the requirements to bring about well rounded infrastructure in the State.

8.2 TRANSPORT

In a globalised economy where generation of economic opportunities is increasingly related to mobility of goods and services, a developed transport sector is critical for integration. An effective transportation system enables connectivity between regions, in furthering trade and in improving quality of life. Transportation is an organised service industry and the social, economic as well as political development of an economy depends on an efficient transportation system, which ensures regularity, cost effectiveness, safety, speed and adaptability. Potential areas of the State being agriculture, tourism and services where efficient movement of goods and services to markets within and outside the State is a necessary condition, a well develop transportation system would add as a catalyst to realise its capabilities. Transportation system consist of the following distinct services (i) Road transport (ii) Railways (iii) Inland water transport (iv) Shipping and (v) Air transport.

i. Road Transport

Roads in India are divided into the following categories

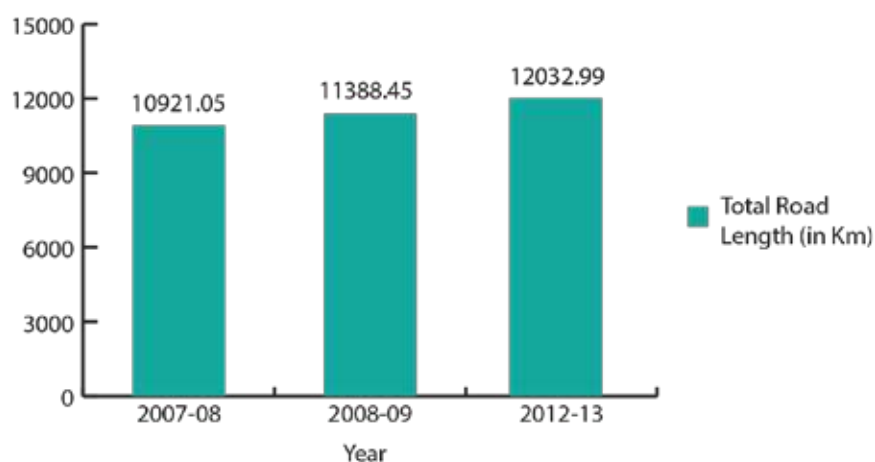
- National Highways (NH)
- State Highways (SH)
- Major District Roads (MDR)
- Other District Roads (ODR)
- Village Roads (VR).

National Highways are intended to facilitate medium and long distance inter-city passenger and freight traffic across the country. State Highways carry the load of traffic along major centres within the State. Other District Roads and Village Roads provide villages accessibility to meet their economic and social needs and to transport their agriculture produce from villages to nearby markets. Major District Roads provide the secondary function of linkage between main roads and rural roads.

In many states, railways are the most important mode of transportation system. However, in Nagaland because of the hilly terrain, roads remain the most important mode of transportation connecting all the districts and the villages.

Roads in Nagaland are maintained by the State Public Works Department (Roads and Bridges) and the Border Roads Organisation. The total road length in Nagaland during 2008-2009 was 15708 km which includes National Highways, State Highways, District Roads, Village Roads and roads under Department of Development of Underdeveloped Areas (DUDA), Department of Forest and Environment and Department of Rural Development. During 2008-2009, the length of road per 100 sq km was 94.8 km and per thousand population was 7.9 km. The total road length of National Highways in Nagaland was 830 km which is 5.3 percent of the total road length in the State. The National Highways per 100 sq km of area in Nagaland is 5 km and per thousand populations is 0.4 km. (Table No. 8.1 in Appendix)

Figure 8.1: Total Road Length under PWD, Nagaland

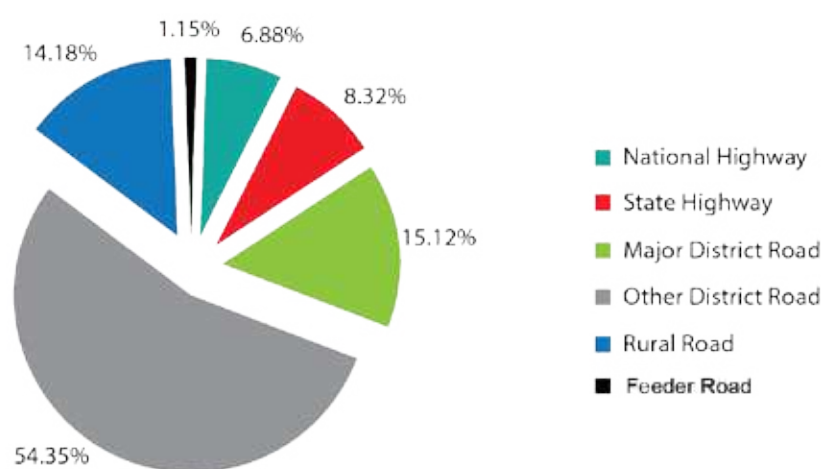


Source: Statistical Hand Book 2013, Government of Nagaland

Figure 8.1 shows the total length of roads in Nagaland maintained by the State Public Works Department (R&B). Over the years, there has been an increase in the total road length from 10921.1 km in 2007-2008 to 11388.5 km in 2008-2009. This further increased to 12033 km in 2012-2013, registering a compound annual growth rate (CAGR) of 2 percent. The various types of roads in the year 2012-2013 is indicated in Figure 8.2, where Other District Roads constitute the highest proportion of roads registering 39.4 percent in 2007-2008 which increased to 54.4 percent in 2012-2013.

Major District Roads and Rural/Village Roads are the next two longest roads as a proportion to the total length of roads in Nagaland. While the CAGR of total road length registered about 2 percent during the period 2007-2008 to 2012-2013, it was negative in case of Major District Roads and Rural Roads on account of upgradation of these roads to State Highways or other roads. Length of feeder roads remained constant and its proportion to total road length declined marginally from 1.3 percent to 1.1 percent over the same period.

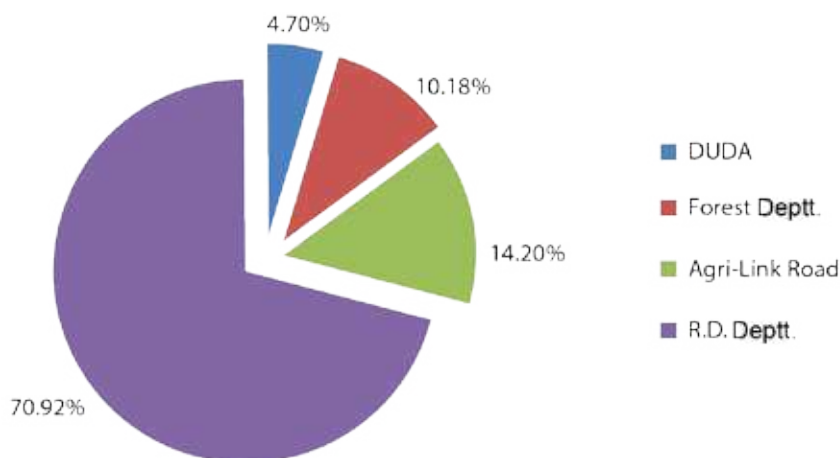
Figure 8.2: Proportion of Different Roads, Nagaland during 2012-2013



Source: Statistical Hand Book 2013, Government of Nagaland

Apart from the above mentioned roads, there are other roads in the State that falls under Department for Under Developed Areas, Department of Forest and Environment, Department of Agriculture and Department of Rural Development. Figure 8.3 shows the proportion of roads under the four Departments. The total road length under the four Departments in 2007-2008 was 2851.6 km. Amongst the four, roads under Rural Development Department constitute 70.9 percent with 2022.3 kms, followed by Agri-Link roads with 405 km indicating a share of 14.2 percent. District wise data indicates that Zunheboto has the longest road network with 769.8 km and the shortest road length was in Kiphire with 48.1 km. The total length of surfaced roads under these four Departments was only 108 km which is 3.8 percent of the total road length.

Figure 8.3: Proportion of Other Roads (Under Four Departments)



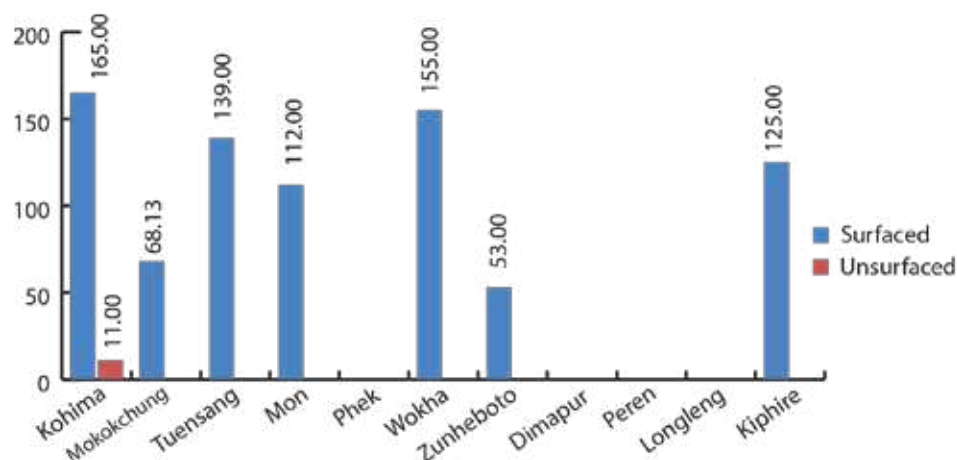
Source: Statistical Hand Book 2013, Government of Nagaland

National Highways in Nagaland are of two types: Single/ intermediate lane and two-lane. During 2012-2013, the total length of National Highways maintained by the State Public Works Department (R&B) was 828.1 km. Kohima district has the longest road length of National Highways followed by Wokha and Tuensang. The entire length of National Highways was surfaced except for 11 km in Kohima district. Meanwhile, the total road length of State Highways was 1001.2 km out of which 250 km constituting 25 percent was unsurfaced. The entire road length of the State Highways with a total of 434.2 km in the districts of Dimapur, Mokokchung, Longleng, Zunheboto and Mon were surfaced. Wokha was the only district where the entire length of the State Highways with 93 km was unsurfaced.



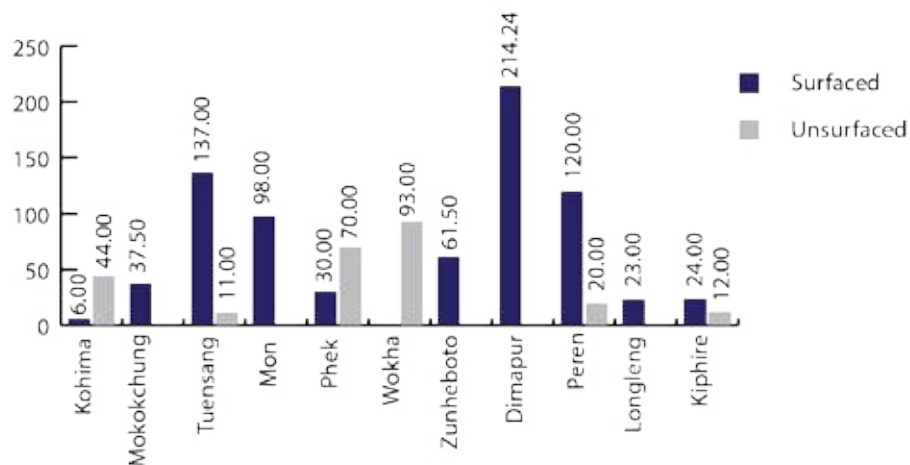
The district wise road length of National Highways and State Highways for the year 2012-2013 is shown in Figure 8.4 and Figure 8.5 respectively. Surfaced roads of State Highways fall under two categories viz. Water Bound Macadam (WBM) and Black Top/ Cement Concrete (BT/CC). In 2009, out of the total surfaced road length of State Highways, only 131 km constituting 24.2 percent was WBM but which increased to 193 km in 2010 and by 2011 the WBM road length increased to 333 km. (Table No. 8.5 in Appendix)

Figure 8.4: National Highways under PWD during 2012-2013 (in km)



Source: Statistical Hand Book 2013, Government of Nagaland

Figure 8.5: State Highways under PWD during 2012-2013 (in km)



Source: Statistical Hand Book 2013, Government of Nagaland

According to the data of Ministry of Road Transport and Highways, Government of India, in comparison to the other North Eastern States, Nagaland is second only to Assam in terms of the total road length with 34146 km. Nagaland has a road density of 206 km per 100 sq km and 17.3 km per thousand population as on March 2011. The road length of Nagaland constitutes 9.1 percent and 0.7 percent of the total road length of the North Eastern States (including Sikkim) and India respectively. The State has 494 km of National Highways which is 5.8 percent of the total National Highways of the North Eastern States (including Sikkim).

Figure 8.6: Total Road Length in the NER

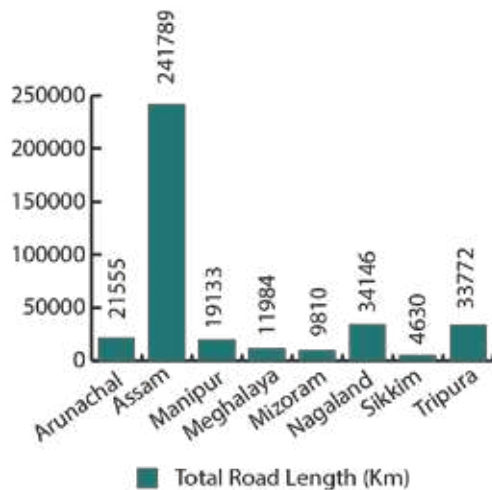
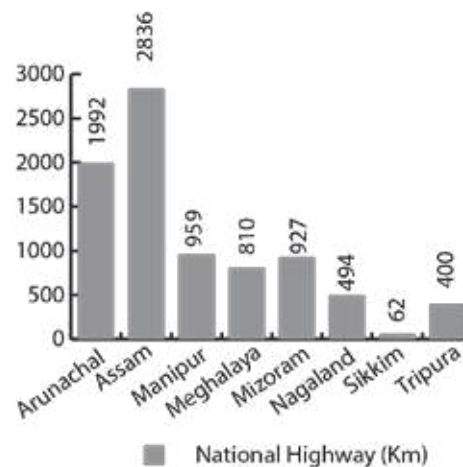


Figure 8.7: National Highways in the NER



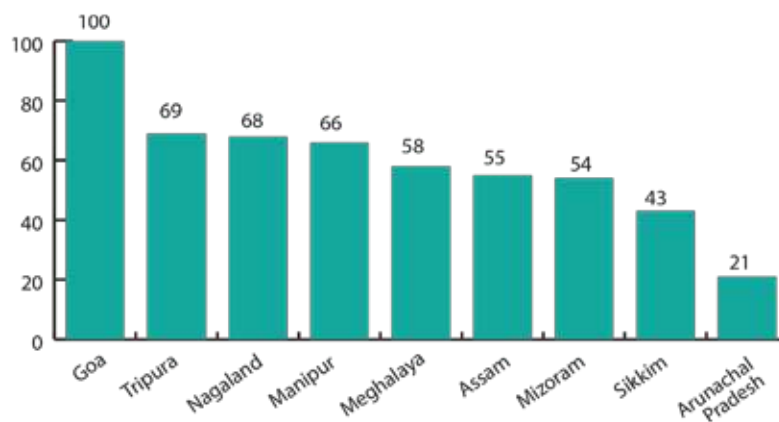
Source: Basic Road Statistics of India 2008-2009, 2009-2010 & 2010-2011, Transport Research Wing, Ministry of Road Transport and Highways, GOI.
*Including Roads under Jawahar Rozgar Yojana

In a hilly state like Nagaland, bridges are an important constituent of the road network. Two bridges sanctioned by the Ministry of Development of North Eastern Region and constructed across the Tizu river (100M Span) and Chizute river (24M Span) considerably improved connectivity to the eastern part of the State. This facilitated not only the movement of goods and services, but access of the people in these areas to education and health care services available in other districts.



Index values of roads as estimated by Infrastructure Development Finance Company indicate that during 2006 the state of Goa had the highest value with 100 while the least was Arunachal Pradesh with 21. The index value of roads for Nagaland was 68 and 71 during 2006 and 2010 respectively which was ranked second amongst the North Eastern States. During 2010 Tamil Nadu led the ranking with 108 while the least was Jammu & Kashmir with 28.

Figure 8.8: Index Value of Road Infrastructure 2006



Source: www.idfc.com/images/news-release/Infra-Index-131210-pres-sent-to-int.pdf

Figure 8.9: Index Value of Road Infrastructure 2010



Source: www.idfc.com/images/news-release/Infra-Index-131210-pres-sent-to-int.pdf

ii. Railways

India has a total railway network of about 64,460 kms spread across 7,146 stations with 19,000 trains operating on the routes every day. It has 17 railway zones and North East Frontier Railway is one of them. This zone covers the Northeast India, West Bengal and Bihar. In the north east due to uneven terrains, the only place with reasonable rail network is in Assam with approximately 2434 km of railway route.

In Nagaland, Dimapur is the only city with rail connectivity. It has a railway station on the main line of the North East Frontier Railway connected to Guwahati and Tinsukia with a number of trains that shuttle between the stations every day.

The on going new railway projects in the North Eastern Region during 2012-2013 were (i) Agartala to Akhaura, (ii) Jiribam to Imphal, (iii) Dimapur to Zubza, (iv) Teteliya to Byrnihat, (v) Dudhnoi to Mehendipathar, (vi) Harmuti to Itanagari, (vii) New Maynaguri to Jogighopa, (viii) Sivok to Rangpo, (ix) Agartala to Sabroom, and (x) Bogibeel Rail-cum-Road Bridge (xi) Byrnihat to Shillong, (x) Bhairabi to Sairang and (xi) Murkangselek to Pasighat. In Nagaland the foundation stone for construction of Dimapur to Zubza railways of 88 km which was approved by the Ministry of Railways in 2007-2008 was laid in August 2016. Although it was considered to be a project of national importance, on account of issues of land compensation, the project could not take off as scheduled. However, the process of acquisition of land for the project has now been initiated and the project is stipulated to be completed by March 2020.

This railway project makes Kohima the last of the capitals of the North Eastern states to be included in the national railway map. The railway connection will not only ease transportation of goods and passengers, but will also facilitate access to education and health services and will boost tourism. In addition, construction of railway network from Tizit to Dimapur is also being proposed to ease movement of goods and services, reduce dependency on roads and to cut down travel time.

Box 8.1:
*Length of Railway Lines
in NER during 2010-2011*

State	Route (Km)
Assam	2434
Arunachal Pradesh	1
Nagaland	13
Manipur	1
Mizoram	2
Tripura	151
NER	2602
India	64460

Source: Indian Railways

iii. Airways

Air transport is the fastest and most efficient means of transporting people and goods from one place to another. India has a vast network of air connectivity both within and outside the country. However, air connectivity in the Northeast, particularly in Nagaland is poor. Difficult topography and terrain, frequent landslides makes air connectivity not just an option but a necessity for travel. The State has only one airport, located at Dimapur which caters to not only the people of the State but which also caters to the air transportation needs of citizens of Assam living in the borders of the State.

However, the number of airlines operating in Nagaland is very low although in recent years, daily flights have started operating from the airport alleviating the travel woes of the people. In Nagaland construction of a Greenfield airport was formerly proposed at Cheithu under Kohima district. However, due to the hilly terrain and undulating terrain, the proposal was abandoned. A new modern airport is proposed to be established at Razaphema in Dimapur district to meet the air travel needs of the people and for handling cargo. Construction of landing feeder air strips in all the districts is also being proposed by the State Government to make air travel accessible to all.

Helicopter services were introduced in Nagaland way back in 1987. However the service was discontinued and it was re-introduced only recently. This service has proved to be very convenient especially for people with medical emergencies.



Photo source- Internet

8.3 POWER

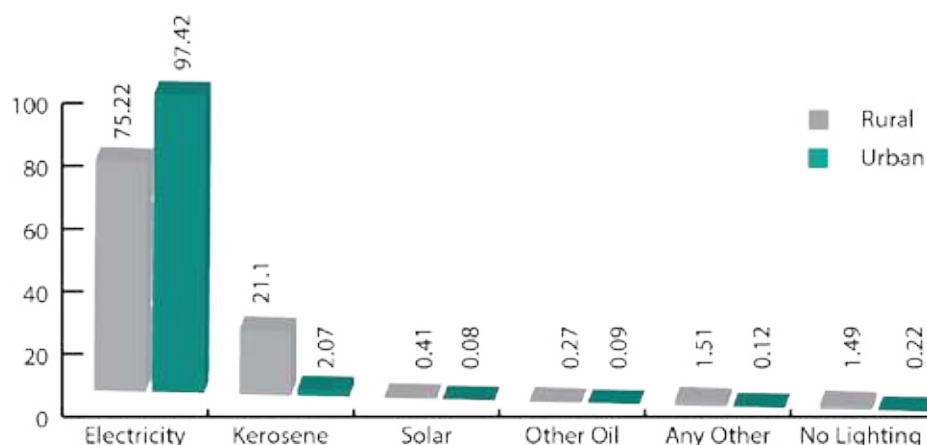
Power is considered to be a core sector as it facilitates development across various sectors of the economy such as manufacturing, agriculture, railways and services. Businesses and factories can function unimpeded only when power supply is un-interrupted. Besides an efficient power supply system will upscale the delivery of health services, education services, information technology and will lead to improvement in the quality of life. As per the demarcation of Regional Power Grids of India, the North Eastern Regional Grid of the country covers the seven states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. Nagaland's electricity requirement is primarily met from the Central Electricity Generating stations, wheeled through the Power Grid Corporation of India.

During 2012-2013 Nagaland had total installed capacity of 25.84 Mega Watt (MW) comprising of 25.34 MW hydro and 0.50 MW diesel. The power generated from the installed capacity was 96.51 Mega Kilo Watt (MKWH) from hydro while energy purchased was 457.47 MKWH during the year. (Table No. 8.8 in Appendix)

As per Census 2011, the main source of lighting in Nagaland for 81.6 percent of the households was electricity. The ratio is higher when compared to NER and All India for both rural and urban areas. For 5.6 percent of the households kerosene was the primary fuel for lighting. While the percentage of households with no access to lighting constitute 1.1 percent in the State, for the NER and All India it was only 0.6 percent and 0.5 percent respectively. Figure 8.10 shows the level of access to energy in rural and urban areas of Nagaland. Almost 98 percent of the urban population have access to electricity while it is only 75 percent in rural areas. Use of kerosene as an alternative source of lighting is 21 percent in rural areas while in the urban areas it was only 2.07 percent. Use of solar energy as a source of lighting is a recent introduction in the State and tapping of solar energy as fuel is yet to take off.



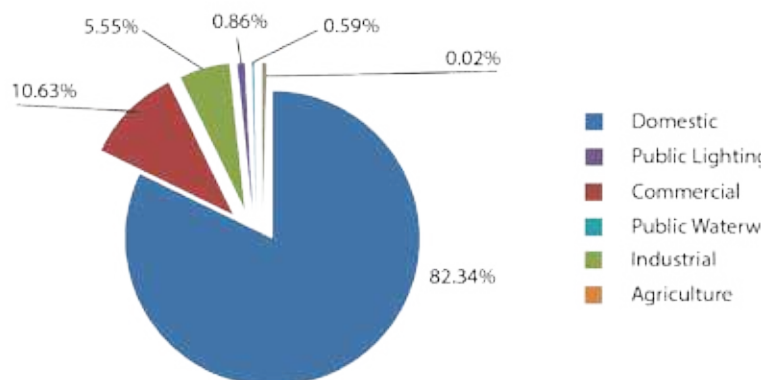
Figure 8.10: Source of Lighting in Nagaland (in %)



Source: Census of India 2011

The total energy consumed in the State during 2009-2010 was 213.6 Mega Unit (MU) which is an increase of 35.8 MU from 2005-2006. The annual energy consumption rate in the State was 4.7 percent during the corresponding period. The trend of energy consumption show positive annual growth rates (AGR) for domestic, commercial, public lighting and agriculture purposes while for industrial and public water works, consumption of energy saw a decline. The highest growth in energy consumption was recorded under public lighting with 62.9 percent. The data on electricity consumed under different activities during 2009-2010 shows that more than 80 percent of the total electricity is consumed for domestic purpose. Commercial and industrial activities consumed 16.2 percent of the total energy utilised while public lighting and public water works consumed only 1.5 percent.

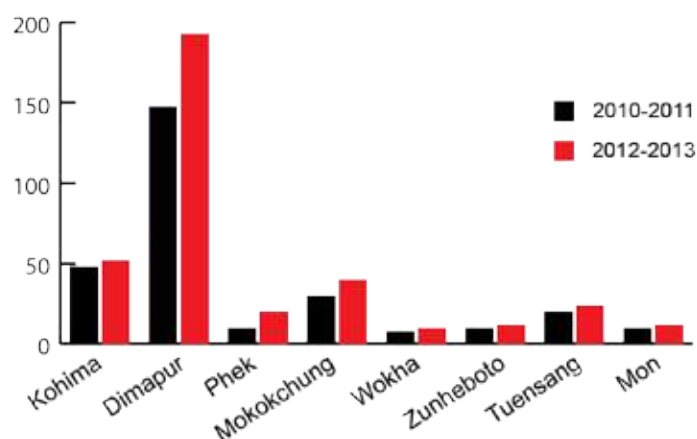
Figure 8.11: Share of Electricity Under Various Activities



Source: Department of Power, Government of Nagaland

Figure 8.12 shows the consumption of electricity in eight districts during 2010-2011 and 2012-2013 in terms of Mega Units. Since, segregated information on electricity consumption patterns for the districts of Peren, Kiphire and Longleng which were carved out of Kohima and Tuensang districts are not readily available, figures indicated for Kohima and Tuensang districts are inclusive of these districts. During 2012-2013 Dimapur district consumed the highest units of electricity while Zunheboto consumed the lowest. Dimapur alone consumes 54 percent of the total electricity consumption of the State.

Figure 8.12: Electricity Consumption in Districts



Source: Statistical Handbook 2013, Government of Nagaland

With more than 70 percent of its population residing in the villages, importance is accorded by the State Government for electrification of the villages. In many of the villages, electricity is increasingly being utilized by the rural non farm sector for livelihood activities. Therefore availability of uninterrupted power supply has become more critical. In 2012-2013, Nagaland had a total of 1258 electrified villages and 17 un-electrified villages. Amongst the districts, Dimapur had the highest number of electrified villages with 215 villages while Longleng had the lowest number of 35 electrified villages. (Table No. 8.13 in Appendix)



Box 8.2: Power Supply Status During 2010-2011

State/ Region	Peak (MW)		Peak Shortage (-)/ Surplus (+)		Energy (MU)		Peak Shortage (-)/ Surplus (+)s	
	Demand	Met	(MW)	%	Reqd.	Availability	(MU)	Met
Nagaland	118	110	-8	-6.8	583	520	-63	-10.8
NER	2020	1793	-227	-11.23	5891	5351	-540	-9.1

Source: Working Group on Power for 12th Plan

The electrification status of the villages in Northeastern states and per capita consumption are shown in Figure 8.13 and 8.16. Excepting Assam and Sikkim, the percentage of electrified villages in the NER is quite low as compared to the National average. In India apart from Sikkim in the NER, the other states which have been declared as completely electrified are Andhra Pradesh, Goa, Delhi, Haryana, Kerala, Punjab and Tamil Nadu. The state with the lowest percentage of electrified villages in the country during 2013-2014 was Nagaland with 70.1 percent followed by Tripura with 71.2 percent which were much below the NER average of 83.9 percent. Nagaland also has one of the lowest per capita consumption of electricity in the country. Per capita consumption of electricity in Nagaland is 257 kwh which is much below the NER average of 470 kwh. Among the Northeastern states, only Sikkim had a per capita consumption of 886 kwh which was higher than the National average of 884 kwh.

Figure 8.13: Villages Electrified in NER as on March 2012 (in %)

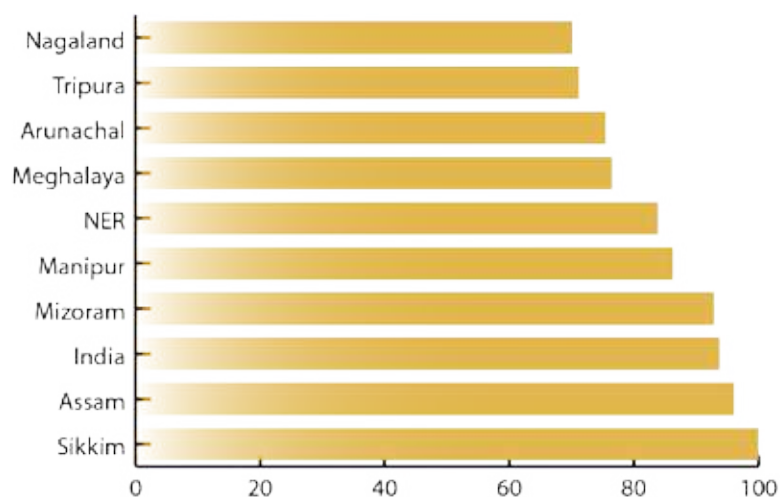
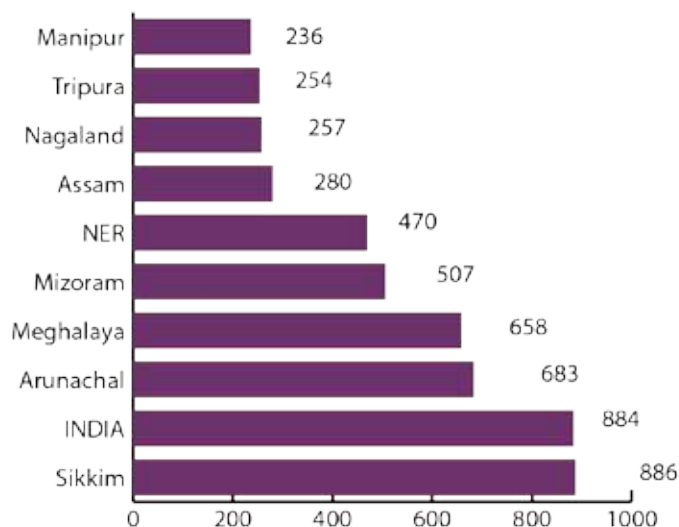


Figure 8.14: Per Capita Consumption of Electricity 2011- 2012 in NER (Kwh)



Source: Annual Report 2013-2014. Working of State Power Utilities and Electricity Departments (Power & Energy Division) Planning Commission, GOI.

Alternative Energy

The estimated potential reserve of coal in Nagaland is 317 million tonnes and is found in the districts of Tuensang, Mon, Wokha, Longleng and Mokokchung. With regulation, exploration and exploitation of the minerals would not only increase employment and livelihood opportunities for the people but would also provide an alternative source of energy. The district wise coal production and pithead value is given in Box 8.3

The index value of power infrastructure in India as estimated by

Box. No. 8.3: Production of Coal

District	Annual Production and Pithead Value Per Metric Tonne					
	2013-2014	Price	2014-2015	Price	2015-2016	Price
Mon	8741	3000	10689	3500	17003	3200
Mokukchung	12858	2500	16000	3000	33327	2500
Longleng	9182	3000	8655	3500	9993	3200
Wokha	5010	1500	5389	2000	2993	1800
Total	35791		40733		63316	

Source: Department of Geology and Mining, Nagaland

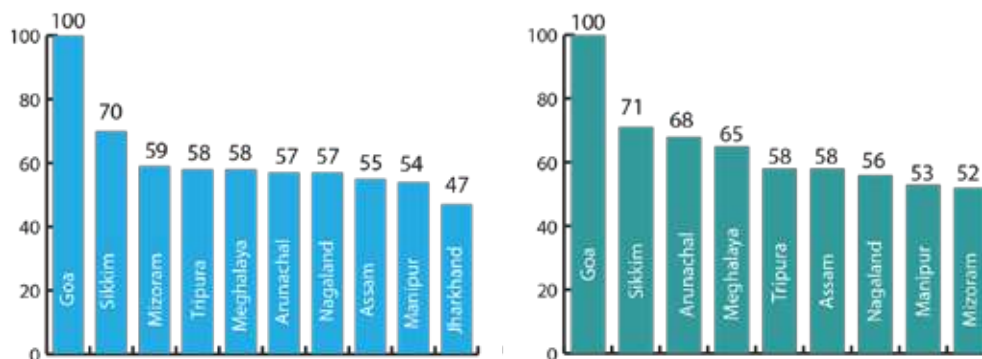


Box.No 8.4: Activities for Renewal Energy in Nagaland

- a. **Small Hydropower Projects:** 2x50kW Mayemong Hydro Electric Project at Choklangan Village under Noklak Sub-Division was commissioned on 21st May, 2015.
- b. **Energy Efficiency & Conservation Programme**
- c. **Special Area Demonstration Projects (SADP)**
- d. **Solar Radiation Resource Assessment (SRRA)**
- e. **Jawaharlal Nehru National Solar Mission (JNNSM)**

Infrastructure Development Finance Company shows that Goa has the highest index value during 2006 and 2010. During 2006, Jharkhand recorded the lowest with 47 and during 2010, Mizoram was ranked last with 52. Among the NER states Sikkim had the highest index values of 70 and 71 during 2006 and 2010 respectively. The index values of power infrastructure in Nagaland was below the NER average of 58.5 and 60.2 during 2006 and 2010 respectively. It is indeed a matter of concern that the power infrastructure in the State has remained very low.

Figure 8.15: Index Value of Power 2006 Figure 8.16: Index Value of Power 2010



Source: www.idfc.com/images/news_release/Infra-Index-131210-pres-sent-to-mint.pdf



8.4 COMMUNICATION

In a digital era, internet and communication services are amongst the fastest growing sectors. It is an integral component of the economy and is crucial especially in hilly terrains where travel is difficult and expensive. Over the years, this sector has evolved from a predominantly provider of voice services into a diverse, competitive and interconnected industry using terrestrial, satellite and wireless transmission system. A solid and extensive communication network allows for rapid and free flow of information, which increases overall economic efficiency by ensuring ease of business communications and facilitating swift decision by making relevant public-private information readily available. A well-developed communication infrastructure network is therefore a prerequisite for accessing information on core economic activities and services.

Telecommunications has emerged as a rapidly growing segment of infrastructure. Most modern communication systems are telecom based and the strength of this sector is vital for socio-economic development of a country. It is one of the prime support services essential for rapid growth and modernization of various sectors of the economy. In the North Eastern Region there are three telecom circles excluding Sikkim. These are Assam Telecom Circle, NE-1 Telecom Circle Meghalaya, Mizoram, Tripura and NE-2 Telecom Circle Arunachal Pradesh, Nagaland, Manipur.

With the upgradation of Dimapur Telecom district into a Telecom Circle the telecommunication network in the State has grown at a rapid pace and is expected to grow even faster. In Nagaland the mobile service providers are Bharat Sanchar Nigam Limited (BSNL), Aircel, Airtel, Tata Teleservices, Reliance, Idea, and Vodafone.

The number of phone users in Nagaland is 53.1 percent which is higher than the average of NER with 49.3 percent but is lesser than that of the National average of 63.2 percent. Similarly, the percentage of mobile users in Nagaland is higher than that of NER but is lesser than the National average.

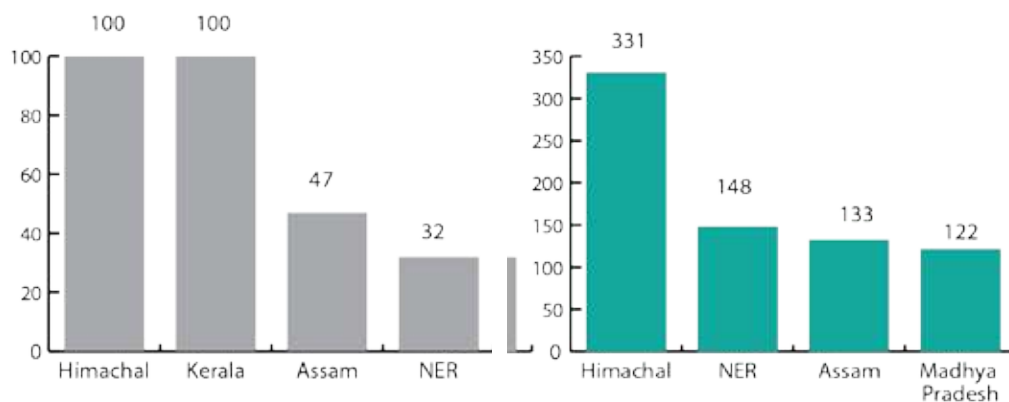
The proportion of landline use in Nagaland as compared to National average and that of the NER is quite low which is attributed to the increased use of other modes of services for communication. (Table No.8.16 in the Appendix).

Tele-density refers to the number of landline telephones in use for every 100 persons living within an area. The overall tele-density in India reached 72.9 percent at the end of February 2013. As per Telecom Regulatory Authority of India, in 2012 urban tele-density was 146.2 percent and in rural areas it was 40.8 percent. In 2009, tele-density in Nagaland was 27.6 percent which was lower than the average tele-density of the Northeastern region of 30.8 percent. Amongst the Northeastern states, Mizoram recorded the highest tele-density with 45.5 percent while Sikkim recorded the lowest with 20.8 percent.

The telecom index values estimated by Infrastructure Development Finance Company shows that Himachal Pradesh and Kerala led the ranking with 100 each during 2006 while the lowest in the country was the Northeastern region with 32. However during 2010 Himachal Pradesh with 331 led the ranking while Madhya Pradesh recorded the lowest with 122. The NER witnessed a high growth of 126.4 percent in the telecom sector during 2006 to 2010.

Figure 8.17: Telecom Index Value 2006

Figure 8.18: Telecom Index Value 2010



Source: www.idfc.com/images/news_release/Infra-Index-131210-pres-sent-to-int.pdf

Current status of digital/IT connectivity in the State is through Optical Fibre Cable and mobile technology. The area covered and the status of connectivity indicates a tele- density of 69 percent. Simultaneously, there is an extensive State Wide Area Network (SWAN) in place with 47 (Forty Seven) Nagaland SWAN Point of Presence (PoP) locations. Several digital and IT services are provided by the Common Service Centres (CSC) to the people through Government to Citizen (G2C), Business to Citizen(B2C) and Business to Business (B2B) services.

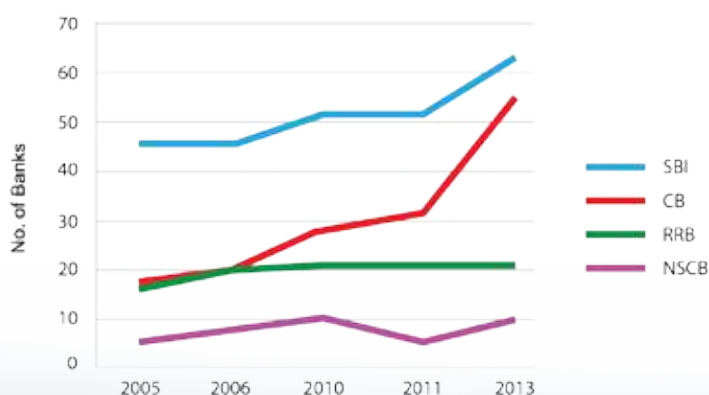
Besides, the e-District Mission Mode Project which is implemented in the State, Nagaland became the 1st State in the North Eastern Region to commission the National Information Infrastructure (NII) project in Peren district. Under this project, unified e-governance infrastructure will be created by integrating existing Information Communication Technology (ICT) infrastructure to provide connectivity up to the village level. A Business Process Outsourcing (BPO) Centre with seating capacity of 400 and which is considered to be one of the biggest in the North Eastern Region has also been established at Kohima. This project is anticipated to go a long way in addressing the unemployment problem in the State. These installed communication and IT infrastructure in the State has not only improved communication, but has also streamlined and improved efficiency in service delivery in many sectors cutting down travel costs, saving time and resources.



8.5 BANKING

In an economy the banking sector performs three primary functions : the operation of the payment system, the mobilization of savings and the allocation of savings for investments. In Nagaland, the banking sector is the major source of credit. In 2005 there were 85 bank offices which increased to 146 during 2013 registering a compound annual growth rate of 6.99 percent. During 2013, 24 different banks were operating in Nagaland with 146 branches. Of these, 61 were establishments of State Bank of India, 54 were Commercial or Nationalised Banks, 21 were Nagaland State Co-operative Banks and 10 were Regional Rural Banks. District wise comparison reflects that banking facilities are unevenly distributed across the State with Dimapur having the highest number of banks with 47 offices which is 32.19 percent of the total banks. While the lowest number of banks was in Longleng with only one bank. The average area under the jurisdiction of one bank in the State is 113 sq km and population served by a bank is 13551 persons. On an average, each bank in Dimapur district caters to only 8059 persons while in Kiphire each bank caters to as many as 50484 persons. With 47 banks, area covered by one bank in Dimapur district was 19 sq km while it was 562 sq. k in Kiphire district.

Figure 8.19: Growth of Banks in Nagaland

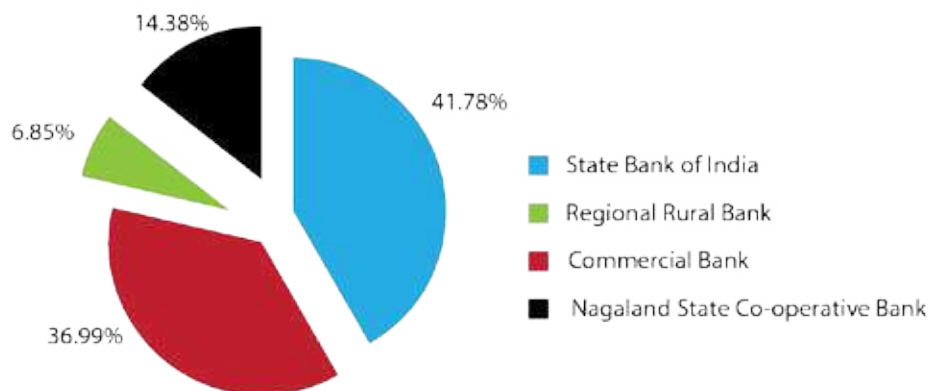


Source: Statistical Hand Book 2013, Government of Nagaland



During 2005 to 2013, amongst the banks, Commercial Banks registered the highest growth rate with 14.7 percent while the lowest was the Nagaland State Co-operative Banks. Figure 8.19 shows the growth trend of the banks from 2005 to 2013. As reflected in Figure 8.19 Commercial Banks saw a tremendous increase during 2012-2013. However, the increase in the number of Commercial/Nationalised Banks during the period was concentrated only in the three districts of Kohima, Dimapur and Mokokchung. Meanwhile, the growth of Co-operative Banks and Regional Banks remained almost stagnant.

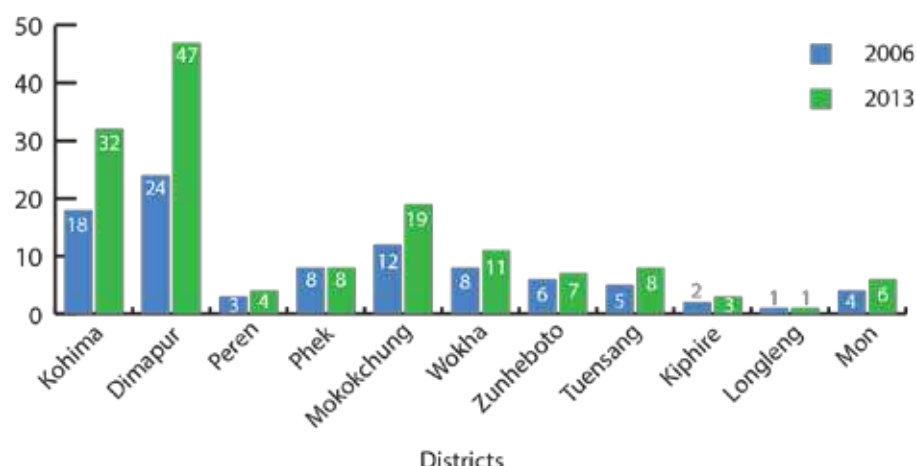
Figure 8.20: Proportion of Banks in 2013



Source: Statistical Handbook 2013, Government of Nagaland

Figure 8.20 shows the share of various banks in the banking sector of the State during 2013. State Bank of India with 61 branches spread across all the districts dominates the banking sector in the State. During 2005, SBI had 44 branches which accounted for more than 50 percent of the total banks in Nagaland and which increased to 61 branches in 2013. However, the percentage share of SBI declined to 41.8 percent on account of the entry of Scheduled Commercial Banks in the State and whose share increased to 37 percent during 2013 from 21.2 percent during 2005. Meanwhile Nagaland State Co-operative Bank and Regional Rural Bank had a share of 14.4 percent and 6.9 percent respectively during 2013.

Figure 8.21: Bank Branches Across the Districts of Nagaland



Source: Statistical Handbook 2013, Government of Nagaland

Figure 8.21 indicates the bank branches in the districts of Nagaland during 2006 and 2013. Dimapur has the highest number of bank branches with 47 banks followed by Kohima with 32 banks and by Mokokchung with 19 banks. Longleng is the only district which has only one bank branch.

Credit Deposit Ratio(CDR) is the ratio of how much a bank lends from out of the deposits it has mobilized. It is an indicator of a banks health. Nagaland has one of the lowest Credit Deposit Ratio and deposit to GDP ratio in the country. Low Credit Deposit Ratio indicates low availability of institutional credit and low utilisation of the deposit resources for lending by the bank. A high ratio indicates more reliance on deposits for lending. The Credit Deposit Ratio of Scheduled Commercial Banks improved from 18.9 percent in 2004 to 31.1 percent in 2011. The overall deposits increased by 241.6 percent and credits by 461.7 percent from 2004 to 2011. During the corresponding period deposits and credits also registered annual growth of 19.2 percent and 28 percent respectively. This is however not the same for the Regional Rural Banks(RRBs). In 2004, the CDR of Regional Rural Banks which was 52, doubled to 109.8 the following year but it plunged to a low 27.7 in 2011, indicating the deteriorating health of RRBs in the State. (Table No 8.22 in Appendix).

Quarterly publications of RBI indicate that the CDR in Nagaland as on 2011 was 28.4 which was relatively lower than the average of NER. During the same year the CDR for India was 75.5 which was more than double of Nagaland and NER. Among the NER, Mizoram has the highest CDR ratio of 42 while the lowest is Meghalaya with 25.5. (Table No. 8.23 in Appendix)

8.6 POSTAL SERVICES

The Indian Postal Service is one of the world's most widely distributed postal system. It has an evenly distributed network divided into 22 postal circles. The composite North East Postal Circle was bifurcated into Assam Circle and North East Circle in 1988. The headquarters of the North East Circle is located at Shillong in Meghalaya under the administrative control of the Chief Postmaster General. The North East Circle covers six states of Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. Nagaland Postal Division covers 1 Head Post Office at Kohima and 40 Departmental Sub Post Offices spread across the State and 287 Branch Post Offices located in the rural areas of the State. Nagaland has the distinction of having two all-women post offices which is the fourth state in the region after Agartala, Meghalaya and Mizoram to have such all women post offices.

The total number of Post Offices in Nagaland during 2012-2013 was 328 including the Head Post Office, Sub-Post Office and Branch Post Offices. Mokokchung and Dimapur have the highest number of Post Offices with 55 and 53 respectively. While Longleng district has the least number of Post Offices with 7. On an average, in Nagaland, a post office serves a population of 6032 with an area coverage of 50.6 sq.kms while in NER one post office serves 4710 persons with area coverage of 60.3 sq.kms. (Table No.8.24 in Appendix)

8.7 WATER SUPPLY, SANITATION AND WASTE MANAGEMENT

The pressure on the supply of basic amenities such as potable water supply, safe disposal of waste and sanitation has increased with the increase in population and with the spread of urbanization. The coverage status of water supply by the public delivery system is indicated in Box 8.5.

Box.No.8.5: *Villages/Habitations Covered by Water Supply*

Sl.	Coverage	2013-2014	2014-2015	2015-2016
1	No. of Villages/Habitations fully covered	42	84	41
	No. of Villages/Habitations partially covered	42	84	41
2	No. of Villages/Habitations W/Q* issues	57	36	38

Source: Department of Public Health Engineering, Nagaland

Nagaland's first Solid Waste Management Facility located at Kohima and constructed as part of the North Eastern Regional Capital Cities Development Investment Program (NERCCDIP) was inaugurated in February 2016. With the operationalisation of the facility, the burden of waste disposal and management in Kohima city is anticipated to be reduced.





Box 8.6: Swachh Bharat Initiatives in the State



To achieve the vision of Swachh Bharat by 2nd October 2019 and to make all villages “Open Defecation Free” the PHED has undertaken extensive awareness campaign in the villages. Trainings on sanitation and cleanliness has been organized for all WATSAN and School teachers and the community. Essays and painting competitions have also been organised for school children to generate awareness on cleanliness and sanitation. In rural areas 66.75 percent of the villages have been covered with Individual House Hold Latrines(IHHL) and the whole State is expected to be covered by March 2018. Construction of Community Sanitary Complex (CSC) and Solid and Liquid Waste Management (SLWM) have also been taken up in 1122 villages. To incentivise villages, trophy and certificates are issued to Open Defecation Free villages. During 2015-2016, 161 villages were verified as ODF villages and 141 villages were verified as ODF villages during 2016-2017. Mokokchung, Zunheboto, Phek, Kiphire, Longleng and Dimapur are expected to be ODF districts by March 2017.



Box 8.7: Act East Policy and Nagaland

Nagaland being one of the frontier states in the Northeast with international borders, stands to gain in the Act East Policy initiative provided it develops its infrastructure and connectivity and links up with the international highway. Implementation of the Act East policy would not only boost the local economy but would also promote cultural ties and relations with countries in the South East Asian countries. In this vein, the Department of the Industries and Commerce formalised a holistic developmental framework christened as Nagaland Trade Investment and Industrialization Policy (N-TIIP) to tap into the economic benefits of the Act East Policy. The State Government has initiated development of 5 (five) Border Trade Centres along the Indo-Myanmar border. And although unregulated, trade between people along the Indo-Myanmar border already exist. Agricultural tools and implements, livestock, handloom and handicraft products, processed food items such as skimmed milk, sugar, tea, biscuits, dry fruits, fruit juice and other beverages, apparels and textile products, electronic items, foot wear, steel and aluminium utensils are the commonly traded items. With development of the requisite infrastructure along the borders and given the demand in Myanmar, there is potential for exports of construction materials such as cement, iron rods, CGI sheets, ply boards, electrical goods and two wheelers. While India can explore to import gemstones and jewellery items and timber products of Myanmar which have high demand in the country.



Solid Waste Disposal Plant at Kohima

8.7 CONCLUSION

The combined index values of road, power and telecommunications as per the estimates of Infrastructure Development Finance Company is shown in figure 8.22. The index values for infrastructure during 2006 shows that the states of Goa and Kerala led the index with 100 each while Arunachal was the lowest with 43. The year 2010 saw Himachal Pradesh leading in the index value placement with 190 while the lowest was Madhya Pradesh with 93. During 2010, among the North Eastern States, Tripura had a higher index ranking with 111 and the lowest was 98 Arunachal Pradesh.

Figure 8.22: State Wise Combined (Infrastructure) Index 2006

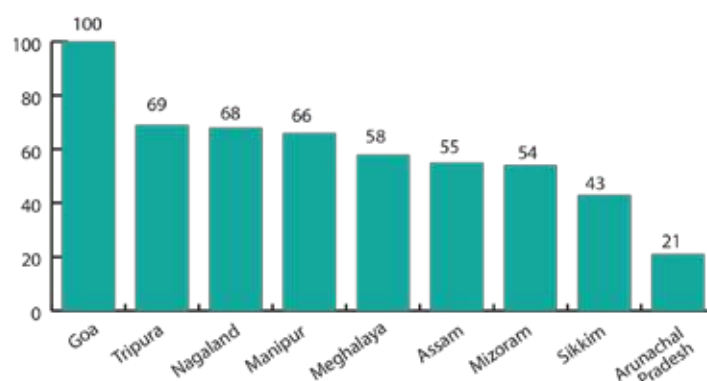
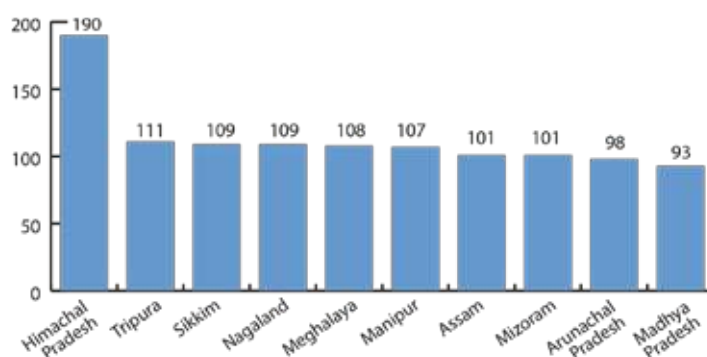


Figure 8.23: State Wise Combined (Infrastructure) Index 2010



The above table reflects the status of infrastructure in Nagaland. The index values of Nagaland indicate better placement over many north eastern states. However the quality of infrastructure is still very poor. Therefore investment for infrastructure development has to be upscaled along with proper monitoring at the implementation stage. Stress also needs to be placed on workmanship and on the suitability of the material used for construction of the infrastructure especially with reference to the topography of the State.







GENDER ISSUES

INTRODUCTION

Gender is a term used to draw attention to the different social roles of women and men, rather than to the biological differences between the sexes. The concept of gender includes the ways in which the social categories of male and female interact in various sphere of social activity which determine access to resources, power and participation in cultural, economic and decision making activities. Gender also denotes the social meanings of male and female, and what different societies perceive as normal and appropriate behaviour. It also defines the attributes for women and men. Although the details vary from society to society, and change over time, gender relations always include a strong element of inequality between women and men.

Thus the general gender concerns that surrounds the debates about and approaches to improving governance structures to secure better development outcomes dwells on the question of gender inequality. The concept of gender as an analytical tool of measuring structural linkage between system of governance and development in general and human development in particular is made amply clear by Mukhopadhyay (2004, p.13) who noted that 'If the desired goals of good governance is distributional equity and a balanced development, integrating gender equality concerns should stand high on the agenda of development'. With this understanding the chapter on Gender Issues will explore the achievements made so far and also the challenges that hinder gender equity. Census 2011 for Nagaland indicates a slight increase in the sex ratio of the State with 931 females per every 1000 males against 909:1000 (2001 Census).

The Nagaland State Human Development Report of 2004 indicated GDI of 0.42 against HDI of 0.62 and has noted that Nagaland has consistently maintained a GDI of 0.70 and above in comparison to the national average of 0.60. The contributing factors to the notable GDI in Nagaland as observed by the Report are education and the improving opportunity for livelihood as well as the Naga tribal values and practices that provided a unique framework of gender relations and access to health and nutrition (Nagaland State Human Development Report. 2004 p.176).

In the same HDR Report, a road map for addressing issues of gender and women empowerment identified five key areas of intervention: Education, Health, Income and Livelihood, Crime against women and Governance. Among the various focal areas envisioned, some of the important targeted areas were on improving literacy rate, building knowledge and information base on women's issues, improve awareness and access to reproductive health care, ensure greater access and equal land rights to women, institutional instruments to be set up to deal with crime against women and ensure law enforcing machinery to be more gender sensitive and reservations for women to 'kickstart' their participation in democratic political institutions at all levels of governance. Over the last one decade, some of the targets have been achieved and some are yet to be fully realised. In this chapter on Gender Issues, some of the key issues within the larger framework of gender will be revisited to better understand the status of women in the context of human development in the State.

9.2 EDUCATION AND LITERACY RATE

Education is the key that unleashes various innovative ideas and opportunities that impel development of the modern society and operates as an important indicator of development. In most families, women tend to play a more proactive role in education related activities of the children. It is therefore crucial to empower both girls and boys by making quality education available without any gender discrimination. Following the general notion of the linkage of education and development, literacy rate is taken as the index of education and ultimately of human development.

The above analysis of the decadal growth and differences in the literacy rate of the State clearly shows that although Nagaland as a State registered a 12.44 percent increase in literacy rate with an overall state literacy rate of 79.55 percent in the 2011 Census as against 67.11 percent in 2001, when the data is broken down to gender specific literacy rate, it is found that the gap between male and female literacy rate is widening as shown in Box 9.1. Although the overall literacy rate of the State indicates a positive trend, when we look at the gender disaggregated data, it presents just the opposite with a growing gender gap.

Box 9.1: Comparative Literacy Rate 2001 and 2011(%)

<i>Census</i>	<i>Total Literacy Rate</i>	<i>Male Literacy</i>	<i>Female Literacy</i>	<i>Gender Gap in Literacy Rate</i>
2001	67.11	71.77	61.92	9.85
2011	79.55	82.75	70.01	12.74

Source: Census 2001 and 2011

9.3 ENROLMENT AND PROGRESSION OF STUDENTS

At the terminal level of school education i.e Class 10 and Class 12, the data do not show much gender differences. The gender disaggregated data on the enrolment and progression of girl and boy students show that the gender gap is gradually closing. The data on the enrolment pattern in institutions of higher education up to the undergraduate level also indicate a similar trend. Over the last five years, more and more girl students are enrolled. In 2014-2015 the total number of girls enrolled in colleges in Nagaland was higher than that of boys (Table No. 9.3 in Appendix).

During the last decade, the growth of educational institutions in the State has made access to educational facilities easier for people both in rural and urban areas. Free education upto elementary level is provided in all the Government institutions. Under the SSA, the NRBC and RBC, programs are implemented to reach out to 'never enrolled' children between 6- 10 years and 'drop out students' between 11-14 years of age respectively. To bridge the gap between the male and female elementary schooling, Kasturba Gandhi BalikaVidyalaya (KGBV) a Government of India initiative

was established under various EBRC where female literacy rate was found to be lower and which were declared as Educationally Backward Blocks (EBB). The KGBV centres are normally residential facilities for students Class 6 to 8. It also imparts vocational and life skill trainings, conducts cultural activities and health check-ups from time to time. Initiatives such as these encourage girl students to pursue studies and help to bridge the gender gaps in elementary school education level to an extent.

9.4 GENDER GAP IN THE LITERACY RATE

That literacy rate of the State is increasing is well supported by the increasing number of enrolment in schools and colleges. The data also indicates that the number of girl students is also increasing both in the school and college levels. However the decadal gender disaggregated data on male and female literacy rate show that although the female literacy rate has increased from 61.92 percent in 2001 to 70.01 percent in 2011, compared with the increase in male literacy rate from 71.77 percent to 82.75 percent during the corresponding period, gender gap has also increased from 9.85 percent to 12.74 percent respectively.

The increasing trend of gender gap in the literacy rate of the State despite the increasing enrolment of girl students in schools and colleges is an issue of concern and needs a much deeper probe to ascertain the actual cause. Basing on the available data, it is probable that gender gap exists because the percentage of girls out of the total female population of school going age group accessing the facilities of educational institutions is much lower than boys. This also points to the existence of hidden factors hindering equal access to education for male and female members of the community. It also indicates presence of a wide array of social and cultural issues.

9.5 ECONOMIC LIVELIHOOD AND GENDER

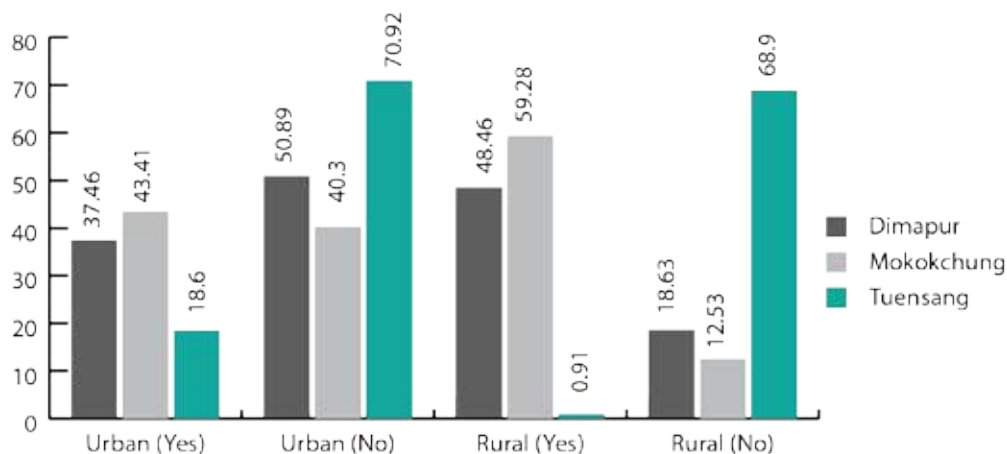
Engagement in gainful employment and livelihood is a basic requirement for both men and women to secure the right to live. Traditionally, the Naga society was a farming society where the roles of both women and men were clearly assigned. However, with the gradual transformation of the economy from a rural farm based economy to an urban based monetised economy, the livelihood focus has shifted more towards market and employment driven activities such as jobs in the Government and private establishments, wage labourers and self employed entrepreneurial activities. Although both men and women have taken to the emerging new demands by engaging in non-traditional economic activities in the pursuit of securing a decent livelihood, there is huge gender disparity. Some of the causes of gender disparity are given below.

Disparity in Asset Ownership

In Naga society, inheritance of land and property by males has the sanction of the customary laws. In rural Nagaland the practice still remains without any change. Deviation from the traditional practices is forbidden. In the townships and urban areas the situation is slightly better because women who have earnings can procure land and property. However, very few women are in a position to purchase and develop their own property due to limitations in employment avenues. The result is that the ownership of economic assets such as land, forest, buildings and other economically viable assets largely rests with men.

In the 2014 District Human Development Report(DHDR), in the survey schedule a query was posed as to whether women should be given equal rights of ownership of assets acquired by couples after marriage. Given below is a sample of the response from five districts which gives an idea on the general attitude regarding this issue. Figure 9.1 indicates that the proportion of those against giving ownership rights to the wife on equal terms as that of the husband even for properties acquired jointly by the couple after marriage and those in favour of it.

Figure 9.1: Views on Equal Property Rights for Acquired Property (in Urban & Rural Areas of Three Districts)



Source: DHDR, 2014

In the Naga context, land is an inalienable right and an identity. It connotes tribal territorial control. The issue is therefore more complex than it appears as it goes beyond the rhetoric of gender. In such a scenario, issue of giving equal ownership rights to women with regard to ancestral property that has been traditionally passed on from father to son and through the clan ancestry is bleak.

Access to Credit Support and Markets

Access to credit facility and market is another crucial area that can either contribute or impede to the livelihood of the people. As already mentioned, the existence of the gender disparity in the ownership of assets is a limiting factor for women to avail credit support from financial institutions. This needs no further elaboration since assets that can be mortgaged to obtain loans are registered in the name of men. Women therefore are constrained to access credit. The SHG movement however has provided a helpful mechanism for women to avail credit as a group. In almost all the villages, women SHGs have been formed under various Government schemes. Such women groups avail credit from the banks for income generation activities. Although all such initiatives do not bear the same result, there are positive results motivating women both individually and

also as a group to engage in income generation activities. Since women do not have ownership of land and forest, their products are confined to agricultural and non timber forest products rather than timber products. The income generated by women is small compared to the men who have right to forest and land and activities such as sale of firewood and timber. Although these are seasonal, men are in a better position to bring in the bulk of the income at a time. Such practices also impact the gender relation between men and women in private as well as in public spheres of their lives.

Box 9.2: Concept of *Edou*

“*Edou*” in local Chang dialect means ‘farmers’ cooperative saving’. Eleuthoros Christian Society an NGO in Tuensang district started *Edou* in October 2003 to build a Corpus for the women SHGs, to finance group members charging nominal interest rates. The interest accrued was retained with *Edou* which was used for further lending. This secured the borrowers from availing private loans at high interest and enabled them to pursue their activities without fear of compounding high interest rates. Over the years, 17 *Edou* Federation have come into existence in clusters, 15 *Edou* under Tuensang district, 1 under Mokokchung district and 1 in Zunheboto district with 302 SHGs registered in the *Edou*.

The total saving mobilized through *Edou* was Rs. 2,11,51,356/- (Two crore, eleven lakhs, fifty one thousand, three hundred fifty six only), with a cumulative loan disbursement of more than Rs.20 crores in 2015. Through the *Edou* every group gets a loan with an additional 75 percent against their saving in the Corpus. The amount is loaned for six months at 2 percent interest rate. After the completion of six months, the interest earned is shared among the groups as dividends. This micro finance project sustains itself through the service charges. The success of the ‘*Edou*’ is attributed to each individual SHG member who contributes and support the functioning of the whole system by ensuring 100 percent timely recovery. Today, many of the ‘*Edou*’ members are engaged in businesses with counterparts in other towns. With the financial backup of ‘*Edou*’ many of these women support their children studying outside the State, many own vehicles, land and buildings. These women have finally found voice in the society. The SHG movement has infused in the women a strong sense of social commitment towards their community.

Labour and Wage Imbalances

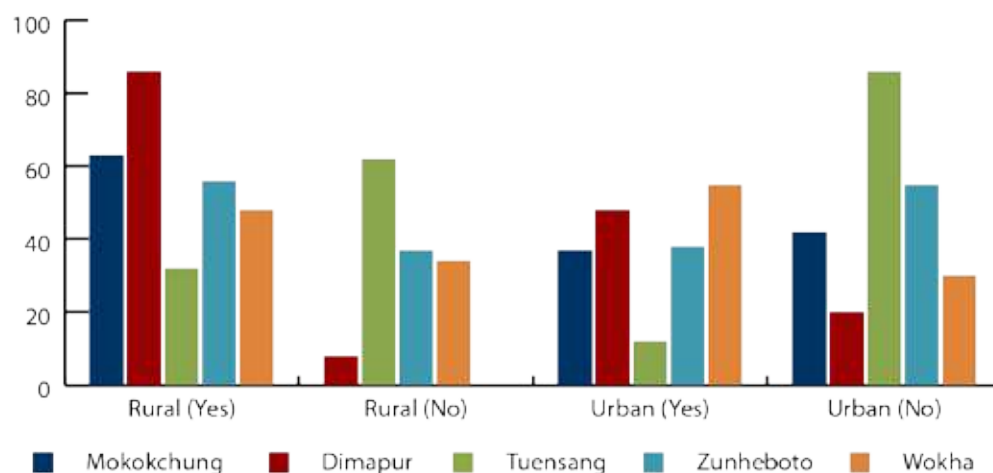
Equal pay for work of equal value is a prerequisite condition for balanced gender growth and development. Unequal pay and wages for men and women is rooted in gender-based stereotypes about women's roles and aspirations. It is therefore crucial to address gender bias in wage structures for ensuring inclusive growth. It also requires sustained effort at various levels of policy making. The existence of substantial gender wage divide across many nations and societies is recognized by the International Labour Organization (ILO).

The gender wage gap which refers to the difference between wages paid to women and wages paid to men has been a source of both political controversy and economic research throughout the past several decades. The gap is commonly measured as the ratio of the median earnings of women and the median earnings of men, which indicates the proportion of the median male earnings and the median female earnings. When the ratio is calculated for all men and women who are paid wages or salaries or for all wage and salary earners who work full-time and year-round, the measure is often called the raw gender wage gap. Factors such as type of occupational preference of men and women, human capital development, work experience, career interruption, motherhood and nature of work in the industry sector are some of the areas that individually and collectively account for appreciable portions of the raw gender wage gap.

Labour as a primary factor of production is determined by the size of its adult population. In Nagaland, majority of the labour force is in the agricultural sector where women are the main workers. However, in this sector it is difficult to quantify the earnings and wage disparity of the workers. In the District Human Development Report(s) 2014, a preliminary survey was conducted to assess the prevalence of the practice of wage disparity. The survey clearly indicates the existence of disparity in the daily wages given to men and women for manual labour in the agricultural sector. Figure 9.2 indicates that wage disparity is overwhelmingly higher in the rural areas than in the urban areas.

Although in the Government Sector, gender discrimination in wage structure is not practised the distribution of men and women employed in various categories of government services indicates that the bulk of employees at every level of the bureaucracy consists of men. And gap between men and women in the higher echelon of the bureaucracy is significantly high with only 1046 women against 2942 men (Class -1) and 604 women against 2136 (Class-II) in 2014. Due to dearth of reliable data it is not possible to ascertain the ratio of men and women employed in the private and unorganized sector. However, since Nagaland does not have any industry or business houses of significance, the Government is the largest employer. As such, the gender disparity of the Government employees is significant as regards to the disparity of earnings by men and women. (Table No. 9.6 in Appendix)

Figure 9.2: Existence of Wage Disparity



Source: DHDR 2014

9.6 HEALTH CARE

Access to health facilities is a basic right of every human being in a welfare state. And the Government takes upon itself the responsibility of making health care services available to the people. In Nagaland, the State agencies continue to be the major players in health care and service delivery although many private health care service providers have been established in the urban areas.

The health status measured through life expectancy along with Infant Mortality Rate (IMR) is one of the important indices of assessing the social values in calculating the HDI. Health care and longevity of life as a central and integral component of the Human Development Index bring issues of gender specific needs to the forefront. The health care needs of men and women are biologically determined due to the differences particularly in reproductive health needs. With regard to the reproductive health, women face greater risks to life due to their biological disposition as females. Health care during the period of pregnancy and delivery of a child as well as the frequency and spaces in between pregnancies are critical factors in the measurement of life expectancy of the mother and child.

The health care facilities present in the State are less than the required numbers. However the number has steadily increased over the years simultaneous with improvement in quality. The improvement in availability of facilities is also indicated by the increasing number of women availing the facilities for Ante Natal Care(ANC) and Post Natal Care(PNC) during pregnancies and within 48 hours to 14 days after delivery of the baby
(Table No. 9.7 in Appendix)

9.7 GENDER BASED VIOLENCE

Gender based violence reveal as well as reinforces gender inequalities in the society. Generally victims of gender based violence are women and girls and the unpacking of such violence reveal dimensions of economic and political inequalities between men and women. The use of violence as a tool of domination over women and men's aspiration to control women's lives is a widespread phenomenon. For reasons such as this, Margaret Urban Walker (Margaret Urban Walker 2009, cf. Dyan Mazurana and Keith Proctor,2013

) proposes the concept of “gender normative violence” to coercion, domination, violence, and silencing of women and girls. Although India as a nation is a signatory of the UN Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) marked the recognition of the need to protect women from violation of human rights and various forms of violence, domination and coercion; violence and crimes against women and girls still continue to be one of the burning problems of the country. Compared with the national statistics, Nagaland’s statistics on gender based violence is minimal. However, many of such incidences do not get reported. And when reported, most cases are tried in the customary courts which do not have the necessary redressal mechanism that provides justice to women victims.(Table No. 9.8 & 9.9 in Appendix)

Today with increasing number of working Naga women in Government Departments/Offices, it is the utmost responsibility of the Government to provide a safe working environment especially against sexual harassment that may go unreported if not addressed in a certain acceptable way given the sensitivity of the case. Perhaps, setting up of a an empowered committee at the State level and in the Departments to deal with this issue can be considered. Meanwhile, efforts in spreading awareness and sensitising Government servants of rights at the workplace can effectively combat and avoid such misgivings in workplaces.

9.8 QUESTIONS ON EMPOWERMENT

Questions and issues of empowerment and gender automatically shift the focus on women because between the two major genders, women almost always find themselves at a disadvantageous position due to the social and cultural conditions. Recognizing that men and women have differential access to power and decision making, in 1995 UNDP introduced the Gender Empowerment Measure (GEM) which was intended to measure women’s and men’s abilities to participate actively in economic and political life and their command over economic resources. The GEM focuses on opportunities and captures gender inequality in three key areas:

Although women are active participants as electors, in Nagaland when it comes to women as candidates for any decision making positions starting from the Village Councils to the Municipal Councils, State Legislative Assembly and the two Parliamentary seats, women are nowhere to be seen. Late Smt Rano Mese Shaiza was the first and only woman to be elected to a decision making body during more than 50 years of the State's existence. She was the first woman Member of Parliament for one term during 1977.

'Political participation and decision-making power', as measured by women's and men's percentage share of parliamentary seats; *'Economic participation and decision-making power'*, as measured by two indicators – women's and men's percentage share of positions as legislators, senior officials and managers and women's and men's percentage shares of professional and technical positions; and *'Power over economic resources'*, as measured by women's and men's estimated earned income (MWCD, 2009).

Box 9.3: Social Welfare Department : Empowering Lives

Programmes like ICDS, SABLA, IGMSY, SNP and NSAP implemented by Department of Social Welfare have empowered lives of the weaker sections of the society especially adolescent girls, senior citizens and widows in the State. **'Nirbhaya' Shelter Home** -a Short Stay Home has been set up by the Department in Kohima to provide social defence mechanism for women and girls in difficult circumstances due to exploitations and atrocities. The objective of setting up the home is to enable them to lead a life of dignity and conviction again. With a capacity of 30-50 women per home such shelter homes will be set up in every district connected with a women's help line and toll free telephone No. 181.

Political Participation

One of the central agenda of the Naga women's activism over the last few decades has been for equal treatment including recognition of their rights to be represented at various levels of decision making. Till today however, women's participation in all the areas of decision making is found to be minimal. Not a single women legislator has been elected to the State Assembly during the last fifty years of its existence. Although Women Reservation Bill in the local

civic bodies has been passed in 2006, the Act is yet to be implemented. According to the Census 2011, women comprises almost half of the total population. However, out of the 60 legislative members of the State Assembly, there is not a single woman in the State legislature.

Power over Economic Resources

In accordance with the customary practices women have no right to inherit land that renders them powerless over major economic resources thereby restricting their participation in economic decision making. Women's share in the State bureaucracy is much lower than that of men which is also indicative of women's share in other areas of employment except in the agricultural work force. This and the prevalence of wage disparity between men and women indicate that the earning capacity of women is lower than men.

To deal with such issues of marginalization of certain section of the society and to eradicate poverty and discrimination, decentralization is seen as the panacea to improve governance, making it more transparent and participatory, bringing government structures closer to people and therefore more relevant to peoples' lives. However, many of these myths have been debunked precisely

The understanding that formal equality does not guarantee structural equality between women and men; rather it obscures and legitimizes real inequalities between women and men which emerge unmistakably only when we unpack the practices of rights in the society as revealed by the Naga women experiences.

because these have been interrogated from the point of view of women (Mukhopadhyay, 2004). Citing examples of experiences in Kerala, Pakistan and Namibia, it is argued that since local government is more embedded in local social structures than National government and since prevailing gender ideologies are more concentrated at the local level, it is more difficult for women to penetrate as independent political actors or for them to raise controversial gender issues at this level. Secondly, even where attempts are made to put in place structures for people's participation in local level institutions this does not mean women are taken into account. Procedures

“There is no peace without development, and no development without peace- and neither peace nor sustainable development without the active participation of women in both processes” - Ms. Rosa Emilia Salamanca, Keynote Remarks U N General Assembly: ‘Ensuring Stable and Peaceful Societies’, 24th April 2014

were found to be gender neutral and gender blind in decentralized development despite strict guidelines for democratic decision making, women’s participation and budgetary allocations. There was the incorrect assumption that women and men have equal power and status and the model of development did not consider the need to transform unequal gender relations. Cases such as these serves as a reminder of the functioning of the Village Development Boards (VDBs) and the Village Councils that are in existence in Nagaland as well. In most of these Village Development Boards(VDBs) and Village Council women

are voiceless and are not taken into account. Although the State Government stipulates 25 percent of the total members in the VDB to be women, in most villages, women members in the Village Development Boards exist only on paper.

In some, the women suffers from the ‘*Tea Women*’ syndrome where women members are inducted only to prepare and serve tea to the men members of the boards. Even in those villages where the women component is featured as a success story and the 25 percent women share of the development budget is utilized by the women themselves according to their own needs, they are not involved in the decision making for the utilization of the remaining 75 percent of the development fund.

9.9 WOMEN AND PEACE

Over the past two decades, interest in the relationship between gender, peace and security has increased dramatically, manifested in new research agendas, policy debates and development programmes in conflict-affected countries. The debates on the shape of the post-2015 development framework include strong call for goals on both gender equality and peace and security. Armed conflict has been recognised as one of the most significant structural barriers to development, with the UN Task Team on the Post-2015 UN Development Agenda stating that “violence and fragility has become the largest obstacle to the Millenium Development Goals” (UN Women, 2013).

Women have always played key roles in armed conflict in one way or the other as caregivers, combatants or workers. Women also contribute to peace in a multitude of ways. Yet these contributions often go unrecognised and remain undervalued because they take place outside official high-level fora. In Nagaland also, which is a conflict affected State for the past half century, the experiences of women are not any different. In the context of these prevailing situations outlined above, multiple questions on gender and empowerment loom large especially in connection with negotiating the different layers of conflict and the process of peace building in the local community. One of the major areas of concern is with regard to the exclusion of women in peace building processes across the Naga society.

Women Representation in Tribal Organisations

In all the structural levels of the Naga society, the formal institutionalized organizations starting from the Village Councils to the Tribal Hohos (Apex Tribal Organisation) which presumably represent the entire community, the inclusion of women is not uniform. In some Tribal Hohos women representatives are included but not in all the Hohos. And wherever women are included, their numbers are much less than the men members that they are not sufficiently visible. Consequently, in situations requiring peace negotiations be it at the clan, village or tribal level, it is always only the men who are considered as the legitimate representative of the group as per customary practices.

Though women are excluded in the tribal organizations, they have been very active in the informal spheres of the peace process. One of the main achievements of women's movement in Nagaland is seen to be the strategy of setting up women organizations at the tribe and inter-tribe level. Thus alongside the tribe organizations, women exclusive organizations such as the Watsü Mungdang, Sümi Totomi Hoho, Lotha Eloi Hoho, Angami Miapfu Krotho, Konyak Nyupuh Sheko khong, Naga Mothers Association to name a few are actively engaged in peace initiatives at the community level. Time and again women have proven that they are not any less than men in their abilities to mobilize, create the right environment and even negotiate a peaceful solution in difficult situations. Yet these contributions often go unrecognized and remain under-valued because they take place outside official high-level forum. Often at the higher level of discussions and deliberation women are not included or nominated as members of peace delegations or committee who are authorized to speak on behalf of the community.

Such exclusion and under-representation of women has been associated with trivialization of women's experiences and sufferings. In the Naga context when all the arguments for excluding women in the higher level of representations are unpacked the fundamental question of the practice of gendered citizenship emerge because by tradition representation of the clan, village or tribe politically in public is considered as men's responsibility and the right to represent is not shared with women.



Cultural Troupes at the National Commission for Women Meeting, 2015

9.10 GENDER MAINSTREAMING AND RESPONSIVE BUDGETING

In line with Government of India's policy, the Government of Nagaland has taken initiatives for gender mainstreaming and gender responsive budgeting (GRB). The State endorses the importance of GRB for promoting inclusive growth and development. The first attempt for gender mainstreaming was inclusion of work-plan 'Engendering of State Plans and District Plans' in its GOI-UNDP project 'Strengthening State Plan for Human Development'. As an operational strategy a State Gender Task Force was constituted headed by Smt Banuo Z.Jamir (IAS) the then Additional Chief Secretary and Commissioner, Nagaland with members drawn from various Departments. The Gender Task Force took the following initiatives to bring about a Gender Responsive Planning and Budgeting in all the Government programmes.

Gender Budgeting Manual

With the support of the GOI-UNDP, the State Government through the Gender Task Force developed a Gender Budgeting Manual customized to local requirements. The manual has been circulated to all the State Departments for use as guide book for gender responsive planning and implementation of departmental development programmes from a gender perspective.

Capacity Building

Recognizing the need for capacity building and sensitization on the concepts and issues of Gender Responsive Budgeting (GRB), the Gender Task Force co-ordinated and organized sensitization workshops to familiarise the Government officials/AHODs/HODs. To further the agenda of GRB, the elected representatives of the State were also sensitised on the importance of GRB and Gender Mainstreaming. GRB has been included as a training module in the Administrative Training Institute (ATI) and the State Institute of Rural Development (SIRD). The institutionalization of GRB both in ATI and SIRD as a component of their academic and training calendar is a positive development.

Constitution of Gender Budgeting Cell

Pursuant to the recommendations contained in the Gender Budgeting Manual, a Gender Budgeting Cell was constituted under the Planning and Co-ordination Department in November 2012. The Gender Cell is mandated to analyse the Annual Plans of the Government Departments from a gender perspective. However, to activate GRB in the State would require much more support and encouragement of policy makers.

Reaching Out to the Non-Government Sector

Recognising that the mandate of Gender Budgeting Cell is limited to only the Government sector, to widen the scope of gender mainstreaming in the non Government sector as well, in 2013 a Gender Core Group was constituted with members drawn from both Government and non Government sectors.

To make these efforts a continuum and to strengthen the agenda of gender mainstreaming, the Government of Nagaland signed an MOU with the UN Women in September 2014. Both the Governor in his address in the Nagaland Legislative Assembly and the Chief Minister in his budget speech during 2016 re-affirmed their commitment towards gender mainstreaming to bring about inclusive growth. All these policy initiatives stand as clear signposts of the Government's commitment towards achieving gender equity. However, unless policies are translated into actions the gender divide will remain.



**Box 9.4: North East Network :
The Nagaland Chapter**

North East Network (NEN) is a women organisation established in 1995 as a women's collective for decisive action for societal progress. The Nagaland chapter of NEN based at Chizami village in Phek district began functioning in 1998. Subsequently NEN Resource Centre was established at Chizami in 2005 and a Resource Centre was set up at Kohima in 2015.

- NEN is involved in mobilising women weavers, agricultural producers, vendors at the grassroot. NEN has registered 1406 women workers from Dimapur, Kohima and Phek as members with Self Employed Women's Association (SEWA). 'Chizami Weaves' one of NEN's project has 400 women weavers under its aegis and keeps alive the unique back strap weaving tradition. Through preservation of the traditional designs while diversifying its products, NEN has increased visibility, utility and marketability of the products.
- NEN also engages children and youths in creating database of the biodiversity and wildlife of the region besides organising awareness campaigns. The NEN Hoolock Gibbon Eco Club, Chizami has documented 81 species of birds, 217 species of butterflies, 10 species of dragon flies, 8 species of damselflies, 43 species of moth, 105 species of medicinal plants and 5 species of amphibians.
- NEN has created a vibrant space for learning, sharing and exchange of knowledge, ideas and skills while reviving and restoring community based knowledge systems. The network has facilitated perspective and skill enhancement trainings, participatory research, women's leadership, environmental conservation and addresses Gender Based Discrimination & Violence Against Women (GBDVAW). Through NEN, the unheard and invisible efforts of women, farmers, seed keepers, weavers and women vendors could be visibilised.



9.11 CHALLENGES AND WAY FORWARD

As revealed in the foregoing discussions, the goal of achieving gender equity in development is complex as it is interspersed with various social and cultural bigotry and attitudinal issues both in private and public spheres of the society. Despite the Government's policy initiatives, achieving the goal of gender equality remains a huge challenge at multiple levels. In an era characterized by war of all kinds, poverty and divisiveness across every possible human issue, maintaining the democratic principles and protecting the human rights of every citizen which forms the basis for security, development and peace, is nowhere more complex and challenging than in the areas of gender.

Women in Nagaland are seen to be perhaps more progressive than elsewhere in the country. In the education sector which is fundamental to human development, the number of girls enrolled in schools and colleges is increasing but the gender gap of literacy rate is also increasing. This indicates that more girls than boys are not getting access to education. In recent years women appear to be enjoying more liberty in management of resources but they have no right to own and inherit. Women in the State are also devoid of political powers and their access to decision making bodies in the society is minimal. On these premises and other issues, it is observed that the main gender issues facing the Naga society and the State is with regard to negotiating with the customary laws and the demand for a gender just system of governance and development and ultimately to usher a society devoid of gender based discrimination. Gender justice refers to the attainment of an egalitarian society in which men and women have the same opportunities without any form of inhibition or discrimination based on gender. This kind of concept is not alien to customary laws because it has a unique form of protecting the rights of the people by way of communal rights. To put it differently, the concept of human rights has, as its basis, individual rights while customary laws consider the community as a whole. To this extent, patriarchy as a norm refers to the crucial role played by men and elders in the society in shaping the social, political and economic lives of the people.

It is a power structure in which, mostly men control means of production, political power and economic influence in the society. The society thus fashions itself along the lives of the figure of the male person.

Under this position, it is highly improbable that women would measure up because a divide has been created in which the men are the power brokers in the public eye whilst women are relegated to the domestic sphere. Within the context of customary laws, most women in Naga society are adversely affected by the traditional customary rules and practices thereby entrenching gender inequality. In a society structured along the patriarchal and patrilineal principles as the Naga society, highly skewed gender relations deeply embedded in the family, local communities, the State and its institutions have obstructed the agenda of gender equity at multiple levels. The profile of gender issues in the State on some of the fundamental strategic gender needs which have wide ramification are influenced largely by the customary laws and practices. The issue of gender imbalance in terms of proper representation of women in governmental institutions as indicated by the status of employees in the Government sector is appalling. The biggest challenge of drawing and inducting women to positions of political leadership and powers lie with negotiating with the customary laws that has been blended in not only with the cultural traditions of the people but with the special provisions of Article 371 (A). These are interpreted to the advantage of those unwilling to see women in such positions and power. These are also indicative of the hidden gender issues that are being played out at the individual and at the private level but manifested as public issues. (Table No. 9.6 in Appendix)

Women's experiences with traditional system of authorities have revealed the networks and inequalities of power that exist at the various levels of governance. Consequently, the roles of women in development process do not receive the necessary support. The patriarchal nature of the society also poses a challenge in the inability of men to realize that women are partners in development. Rights over land, inheritance and recognition of women as citizens with equal rights are contentions issues in Nagaland.

To secure practical and strategic gender interests through planning, it is necessary to re-think the way in which women's development is conceived. There is an equation of women's development projects

with income generation and budget for women's development allocated either to income generation projects, or to women's welfare funds, nutrition and education of pre-school children, pregnant and lactating mothers. While recognizing that all these are important and necessary areas of interventions, it is to be realised that is not sufficient to address the various gender issues and problems faced by women. In the case of Nagaland, there is a need to shift the focus towards changing the power equations at every level of the society. With this in view, the following recommendations are suggested.

- The untenable position of women in a highly male-dominated environment calls for introducing measures suited to local situations to combat discrimination on grounds of sex and gender.
- Women's exclusion from decision-making at all levels is a structural cause of gender inequality, and so a separate target on women's political participation or voice should be a component of a gender equality goal, complementing other inclusive governance targets.
- Customary provisions for the protection of women from various forms of crimes and discriminations, resistance of customary practices to adapt and modify to suit changing social and cultural environments are matters of great importance that demands a more serious engagement and amendment at every level of the society.
- The collection of gender-disaggregated data should be made mandatory for every activity and wherever necessary specific funds are to be earmarked for such works.
- There has to be sustained effort to remove unequal power relations, both by efforts to empower women by initiating a dialogue with male members of the various political parties and the tribal organisations about gender relations and making it their responsibility to usher in more equitable relations.

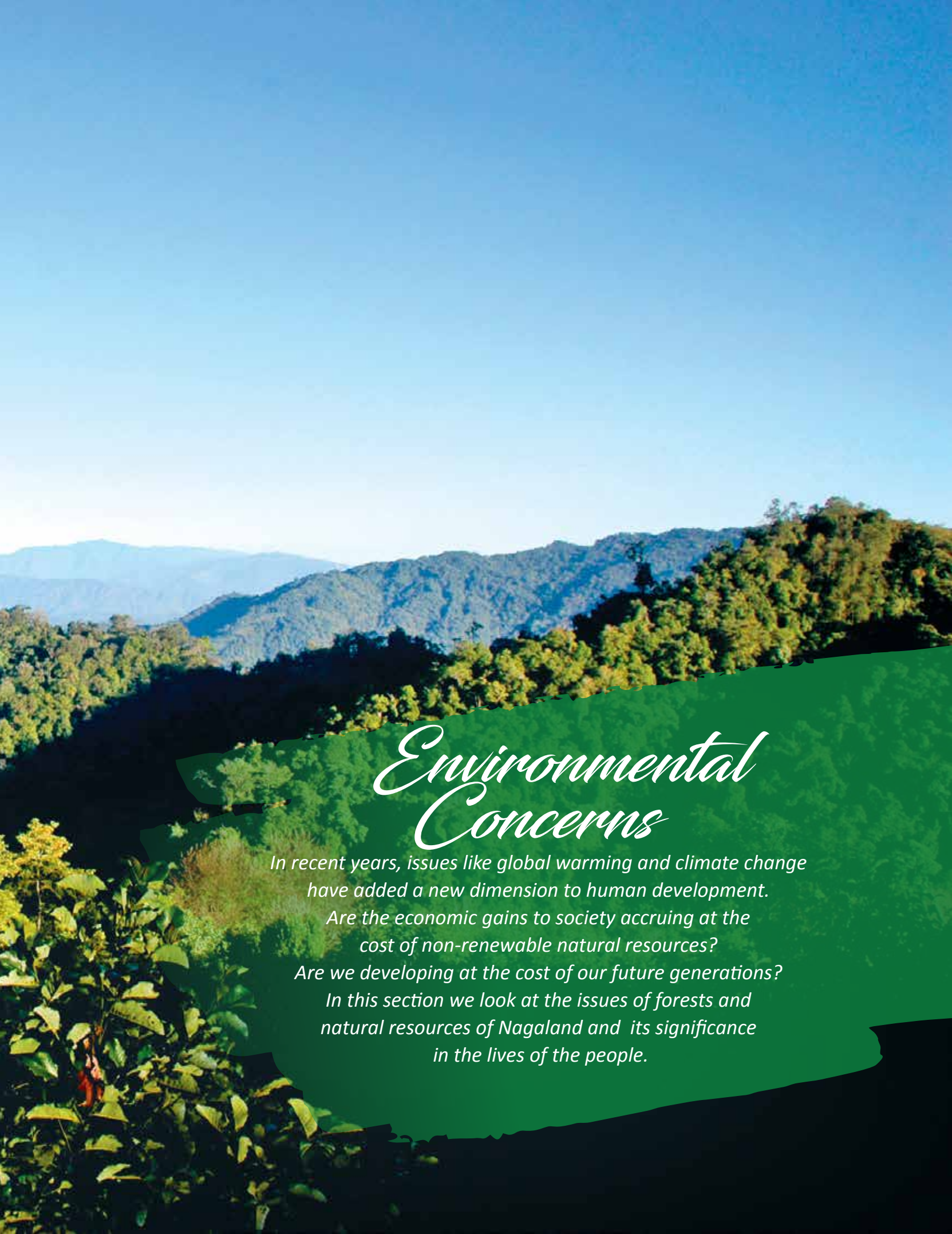
- Women should be encouraged to take pro- active roles in the political processes, not just as electors but also as leaders. This will improve planning to make gender concerns central to the decision making regarding allocation of resources. For this reason, it is crucial to invest in building capacities of women to enable them to facilitate discussions and to carry forward the agenda of gender equity. This should not be a one-time training but an ongoing process, both by the State and the respective political parties.
- The concept and the positive ramifications of gender equality in the society should be imbibed in children at an early age. Hence, this should be included in the syllabus of school books.



SECTION 5

**Chapter 10 : Forest and
Natural Resource Management**





Environmental Concerns

In recent years, issues like global warming and climate change have added a new dimension to human development.

Are the economic gains to society accruing at the cost of non-renewable natural resources?

Are we developing at the cost of our future generations?

In this section we look at the issues of forests and natural resources of Nagaland and its significance in the lives of the people.



FOREST AND NATURAL RESOURCE MANAGEMENT

INTRODUCTION

For human development two factors are essential, income generation and quality of life. In case of the former, it is well known that the country wide ban in 1997 on green felling in the interest of environmental conservation led to issues of income decline and need for alternative occupations for much of the population. This was a serious concern, particularly for states like Nagaland which were predominantly dependent on forest and natural resource for its economy and which had much of its forest area under individual/community ownership and control rather than with the State. This chapter highlights two issues.

One, the significance of natural resource wealth of the region in the preservation of the environment of the whole country yet which does not find any expression in the quantitative calculations of the Human Development Index. Second, the pivotal role of non-timber forests products (NTFPs) in the economic development and well being of the people of Nagaland. This chapter thus recognises the importance of the State's natural resources as an integral part of the environment conservation effort of the country and lays due emphasis on its management and judicious utilization of these resources for sustainable and holistic development of the State

1.2 BIODIVERSITY WEALTH OF NAGALAND: BANKING ON BIODIVERSITY

The North East India (NEI) which is a part of the Eastern Himalaya is known as a 'Mega Biodiversity' centre and a 'Hot Spot' area in the world for its rich biodiversity. The altitude of the region varies between 194m and 3048m. The topography is full of hill ranges which break into chaos of spurs and ridges. The undulating terrain, hilly landscape and low lying areas with temperate climate and perennially moist soil conditions have contributed to the occurrence of diverse flora and fauna.

The State's abundant bio-diversity has investment potentials for leading conservation agencies. For example, World Wide Fund for Nature has identified the entire eastern Himalaya as a priority for Global 2000 eco-region and Conservation International has outline the Eastern Himalaya 'hot spot' into a wider Indo-Burma 'hot spot' which now includes all the eight (8) states of the North East India including Nagaland. The region is also recognised as one of the endemic bird areas by Bird Life International.

In much of the literature about Nagaland, its biodiversity is highlighted as one of its valuable assets and as a resource for development. Yet, there is knowledge gap not only on the natural biodiversity of the State but also on the potential and sustainable uses of much of the flora. Despite, recognition of the State as one of the global biodiversity 'hot spots', biodiversity information is generally restricted to species inventories for specific locations for a specific objective. Important data, such as distributional patterns of population and its dynamics are not available. Documentation and systematic analysis of the State biodiversity is vital to understand the correlation between biodiversity and its distributional patterns, relationship between landscape variables and species composition and impact of habitat fragmentation. Presently, except for the newly reconstituted Nagaland State Biodiversity Board there is no entity focusing on biodiversity assessment and its potential for wealth generation for the State.



10.3 FLORISTIC DIVERSITY

Nagaland has very rich floristic diversity. The State also harbours a large number of plant species which are common in the State and in North Eastern India. The angiospermic flora is represented by 2431 species as indicate in Box 10.1.

Box 10.1: Family, Genera and Angiospermic Species of Nagaland

<i>Name of Group</i>	<i>Family</i>	<i>Genera</i>	<i>Species</i>
Angiosperm	186	963	2431
Dicot	158	724	1627
Monocot	28	339	743
Gymnosperm	5	6	9

Source: A.A. Mao, 2000

Medicinal, Aromatic and Dye Plants

For ages traditional Naga medicinal practitioners have treated ailments with plants and herbs. Even today these practitioners are trusted by many for treatment of their illness. Traditionally, the medicinal knowledge gets transferred from generation to generation through parents to their children. However, with the advent of modern medicine there is sharp decline as well as distortion of these local health traditions. Unfortunately much of these knowledge and practices died along with the practitioner.

Another dying art in Nagaland is the art of 'dyeing'. In the past plant dyes were used to give colour to the traditional costumes and attires. However, with the advent of modern machines and with the availability of varieties of cloth in different hues and shades, the art of dyeing using plants is no longer practiced. Knowledge of the art exists only amongst a handful of people in the rural areas. There is possibility of these dye plants being destroyed by anthropogenic activities in its natural habitat due to ignorance of the people. While for aromatic plants, apart from its traditional use as food extender, vegetable and medicine, no exploration has been made for its extraction for industrial use.





The Nagaland Bio Resource Mission has listed 650 species of plants (NBRM 2009). Out of the 650 plants listed, 10 were not known to have been used for their medicinal property, 5 were used for dyes and 15 were cultivated crops. The rest 630 were uncultivated and were found in the forests of Nagaland. In Nagaland more than 70 percent of the national prioritized medicinal plants can be grown. Although isolated, research on these plants are being undertaken. Yet, sustained efforts are required for their conservation and for commercial exploitation. Nagaland can increase value addition to its forest wealth which will result in employment and income generation if it can propagate high value medicinal and aromatic plants (Sapu, 2013).

Orchids

It is estimated that there are about 26,000 orchid species in the world, out of which more than a thousand are found in India. About 360 species of orchids in Nagaland have been documented. Many of them like *Renanthera* sp, *Vanda* spp are rare and are endangered. Unfortunately very few people are aware of this natural heritage. Wanton destruction of forest, illegal trade and various other activities are increasingly threatening these group of flora (Sapu Changkija et al 1992).

Economic importance attached to orchids has led to wide spread and ruthless exploitation of orchids resulting in their depletion. Large scale deforestation has also brought about destruction of the natural habitat of these species of flora. As a result many orchid species including several rare orchids are endangered. There is therefore an urgent need for taking up serious conservation measures to prevent further losses.

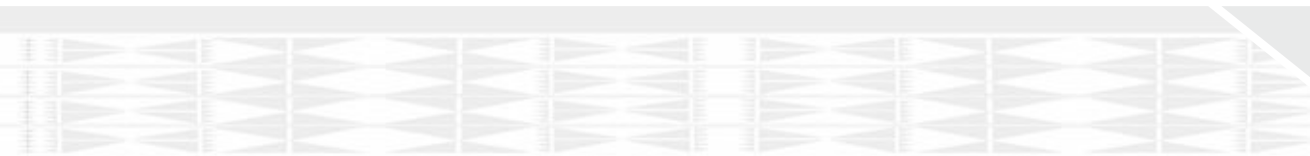


Bamboos

Bamboo has been an integral part in the life of the Nagas. And it continues to play an important role in the life of the people as a resource for shelter, food and livelihood. Bamboo also known as the Green Gold is the most important Non Timber Forest Produce (NTFP) of Nagaland. In view of its huge market potential in the food processing industry, in the pulp and paper industry and for domestic consumption, efforts have been made to expand the bamboo area coverage. Consequently there is an increase in acreage under bamboo from 4902 sq. km in the 2011 assessment to 5050 sq.km in the 2013 assessment of the Forest Survey of India. The expected yield from these existing stocks is estimated at 9.80 lakh metric tonne per annum (NBDA Internal Report, 2015).

In the light of the new thrust given to bamboo for its role in improving the ecology, in the growth of the economy and in the mitigation of climate change, a combined effort was made by the Nagaland Empowerment of People through Economic Development (NEPED) and Nagaland Bamboo Development Agency (NBDA) to identify and document bamboos. 'Bamboos of Nagaland' (Dr. H.B. Naithani et al 2011). In this venture 43 species of bamboo were identified of which 5 species were new to science. The State is endowed with more than 40 species of bamboos constituting about 5 percent of the total bamboo resource of the country.

Development of bamboo in the State can be taken up from two perspectives; development of bamboo as a resource and as an enterprise. The bamboo industry can provide an integrated solution for utilizing the abundant and renewable natural resource that is environmentally protective and which can be processed at community owned enterprises. Development of proper propagation techniques, augmenting of the existing commercially viable bamboo species through scientifically managed plantations and regeneration, manufacturing of high end new generation bamboo products through establishment of secondary line of bamboo processing units, aggressive marketing strategy will create viable sustainable livelihood and entrepreneurial options.



Faunal Diversity

Nagaland's location at the junction of the Indian, Indo-Chinese, and Indo-Malayan bio-geographic regions has contributed to the presence of biotic elements from all these regions in the State. Consequently it makes the State rich floral and faunal resource.

Avifauna

According to Bikram Grewal et al (Birds of Nagaland), the location of the region has made it home of the richest bird species of all eco-regions in the Indo-Pacific region. He estimated that Nagaland's bird list would cross 500 species and most of them can be found even today despite the pressures of hunting and conversion of forests into other uses as Nagaland has the potential habitat for some of the globally threatened species. An annotated checklist prepared by Choudhury (2001) recorded 487 species of birds. His annotated list includes nine threatened species, five near threatened and eight restricted range species of bird. Nagaland is home to the Blyth's Tragopan and the Dar-rumped or Khasi Hills Swift.

Nagaland has 9(nine) Important Bird Area (IBA) identified sites. Many of these areas are yet to be explored because of its inaccessibility. These IBAs sites of Nagaland are also Birding Hotspots. Presently, the sites identified are in the southern districts of the State concentrating in Phek, Dimapur, Kohima, Zunheboto and Kiphire.

Box 10.2: Important Birds Areas in India: Priority Sites for Conservation

<i>IBA Sites Codes</i>	<i>IBA Sites Names</i>	<i>IBA Criteria</i>
IN-NL-01	Fakim Wildlife Sanctuary and Saramati Area	A1, A2
IN-NL-02	Intanki National Park	A1, A2
IN-NL-03	Khonoma Nature Conservation and Tragopan Sanctuary	A1, A2
IN-NL-04	Mount Paona	A1, A2
IN-NL-05	Mount Zanibu	A1, A2
IN-NL-06	Mount Ziphu	A1, A2
IN-NL-07	Pfutsero-Chizami	A1, A2
IN-NL-08	Puliebadze Wildlife Sanctuary	A1, A2
IN-NL-09	Satoi Range	A1, A2

A1= Threatened Species; A2= Restricted Range Species

Source: M. Zafar-ul Islam 2004

Fishes

The northeast region with diversified lotic and lentic water bodies is considered global hotspot for fish biodiversity. Out of 806 fish species inhabiting fresh water bodies of India, the northeast region including Nagaland is reported to have 266 species belonging to 114 genera under 38 families (Sen, 2000). Out of 149 fishes found in the rivers of Nagaland, only 32 are considered non- classified ornamental fishes. The remaining 118 species are ornamental species (OFS) and have demand from aquarists. Many of these fishes are rare, vulnerable and are threatened species needing conservation measures. Several of them are considered to possess medicinal properties by the local communities. Among 149 fish biodiversities of Nagaland as many as 103 species are exposed to various levels of threatened status. Highlighting the fish biodiversity of the State and its potential in the global trade will strengthen and enhance conservation efforts of the communities. (S. Ao et al 2008).

Mammals and Others

The Zoological Survey of India, Kolkata reported 700 species of vertebrates, 704 insects including 490 butterflies (Lepidopterans) and 110 other invertebrates species occurring in the Nagaland. In the five eastern districts of Nagaland, a total of 390 species belonging to 88 families were recorded during the period 2007 to 2010. The result provided in Box 10.3 indicates the current diversity of fauna in the eastern districts of Nagaland.

Nagaland is rich in primate diversity with presents of the Slow Loris, Pigtailed Macaque, Rhesus Macaque, Assamese Macaque, Stumptailed Macaque, Capped Langur and the Hoolock Gibbon. Five species of lesser cats are also found in the State of which three, viz, Marbled cat, Golden cat and the Fishing cat are extremely rare. Among the big cats, the Tiger has not only become extremely

Box 10.3: Species Richness of Selected Faunal Groups in Eastern Nagaland 2007 to 2010

<i>Taxa</i>	<i>Family Species</i>	
Butterflies	5	171
Amphibians	4	7
Reptiles	12	50
Birds	49	120
Mammals	18	42
Total	88	390

rare, its survival is threatened due to poaching and loss of prey base. Other big cats found in Nagaland are the Leopard and the Clouded Leopard. The Elephant is found in small numbers in the foot hills bordering Assam. Although the Sumatran Rhino is officially extinct in India, straying of a few of them to eastern Nagaland from Tamanthi Wildlife Reserve of Myanmar cannot be ruled out. Occurrence of the Pigmy hog in Nagaland has also been reported.

Various reptile species of snakes, turtles and lizards are found in Nagaland. The Monitor lizard and various species of turtles found in the State are endangered due to over-exploitation. Although the State is home to many species, so far only three species of turtles viz the Asian Brown or Brown Hill Tortoise, Malayan Box Turtle and the Assam Roofed Turtle have been recorded from Nagaland. A new species of frog (*Anura ranidae*) has also been documented as occurring in Nagaland by Kiyasetuo and Khare, in 1986. (ENVIS). One of the most recent developments that has put Nagaland and also the Northeast India on the map of potential scientific research is the discovery of a new family of legless amphibians commonly known as Caecilians (one of the three groups of amphibia) by B. Prof. S.D. Biju and Ms Rachunliu G Kamei of University of Delhi. (Sunday Post)



Bees and Hornet

The forest cover of the State is an ideal foraging ground for bees and hornets for production of honey and larvae generating income for the village community. While there is systematic data gap on the number of species of hornets and bees available in the State, Traditional Ecological Knowledge (TEK) exist on apiary. For instance Sakraba village under Phek district has names of 27 bees and hornets. Apart from the immense ecological services, the main contribution of hornets and bees is towards the economy of the village community through production of larvae and honey.

Hornets, also locally known as King Bee, feed mainly on sap of the Oak trees and other insects, primarily flies and other similar species. Hornets are popular as a delicacy, especially for its larvae and pupae which have high protein content. Rearing hornets also have high earning potentials with less labour requirement as 80 percent of the work is done by the hornets themselves. Traditionally, it is reared by the Chakhesangs, Zeliangs and some villages amongst the Sema tribe. Considering the similarity in the geographical and climatic conditions of the different places in Nagaland, hornet rearing can be a lucrative earning option for the alternative farming enthusiast (Pers. Comm Aokumla Imchen, 2015).

The total forest cover of 13345 sq. km with myriad of plant species and perennial flowering plants offer an ideal environment for the bees. Many different species of bees and wasp have established a unique ecological niche for themselves in the temperate and semi-tropical mountainous terrain of Nagaland. In Nagaland, four honey producing bees: Common honey bee (*Apis cerena*), Giant bee or Rock bee (*A. dorsata*) Stingless bee (*A. trigona*) and Little bee (*A. florum*) are reported to have been economically exploited. According to the Nagaland Bee and Honey Mission (NBHM), 3339 beekeepers in 502 villages produced 402 metric tonnes (MT) of honey in 2014 generating a total cash income of Rs.10 crores. By 2025, the NBHM envisages production of 1500 metric tonnes of honey per year generating an annual income of Rs.60 crores.

10.4 FOREST TYPES AND FOREST COVER OF NAGALAND

Despite being a small state with only a geographical area of 16,579 sq km, Nagaland possess six (6) forest types distributed throughout the State. These are; 1. Northern Tropical Wet Evergreen Forests, 2. Northern Tropical Semi Evergreen Forests, 3. Northern Sub-Tropical Broad-Leaf Wet Hill Forests, 4. Northern Sub-Tropical Pine Forests, 5. Northern Montane Wet Temperate Forests, and 6. Temperate Forests. The State's Northern Tropical Wet Evergreen Forests occurring in Mon district are considered to be the northern most limit of true tropical rainforests in the world. The habitat of flora and fauna diversity is associated with the different types of forest. These six types of forests have created numerous ecological niches and habitat types making it possible for different kinds of animal and plants, both wild and domestic to survive in Nagaland.

Forest cover comparison of Nagaland from 2005 to 2013 in Assessment of India State of Forest Report (ISFR) is shown in the Box 10.4. Forest cover includes all lands which have a canopy density of 10 percent and above and have a minimum area of one hectare. The forest cover report of ISFR does not make any distinction between the origins of forest (whether natural or manmade) or tree species and encompasses all types of lands irrespective of their ownership, land use and legal status. Thus all tree species along with bamboos, fruit bearing trees, coconut, palms and areas including forest, private, community or institutional lands meeting the above criteria are considered as forest cover.

From Box 10.4 it can be seen that there has been a decrease of forest cover from 13665 sq km in 2007 to 13044 sq. km during 2013, a decrease by 621 sq. km which is a decline of 4.07 percent. The decrease occurred in Medium Dense Forest (MDF) and Open Forest (OF) areas. In Very Dense Forest (VDF) cover, there was a drastic decrease of 41 sq. km between 2005 and 2007. However, VDF cover increased by 59 sq. km from 2007 to 2013 reflecting a net increase in VDF cover by 18 sq. km during the period 2005 to 2013.

Box 10.4: Comparison of Assessment of Forest Cover from 2005 to 2013 in Nagaland (Km²)

Year of Assessment	VDF	MDF	OF	VDF	Percent of G. A
2005	1280	5072	7313	13665	82.75
2007	1239	4897	7293	13429	81.00
2009	1274	4897	7293	13464	81.21
2011	1293	4931	7094	13318	80.33
2013	1298	4736	7010	13044	78.68
<i>Change Matrix of Forest Cover in Nagaland with 2005 Assessment as Baseline (in Sq Km)</i>					
Year of Assessment	VDF	MDF	OF	Total Area of Change in Forest Cover	
2005					
2007	-41	-175	-20	-236	
2009	35	0	0	35	
2011	19	34	-199	-146	
2013	5	-195	-84	-274	
Total	18	-336	-303	-621	

VDF: Very Dense Forest, **MDF:** Medium Dense Forest **OF:** Open Forest, **G.A :** Geographical area of 16579 Km²
Source: India State of Forest Report (From 2005 to 2013)

The increase in the Very Dense Forest cover can be attributed to the following factors.

- During 11th Five Year Plan under various government programmes viz. National Afforestation Programme, Watershed Development Projects in Shifting Cultivation Areas, Bamboo Mission, Horticulture, Integrated Watershed Management Projects and Rainfed Agriculture the area covered under afforestation activities was 91874 hectares.
- Increase in plantation along with the Jhum cultivation increased the availability of fuel wood and small timber to the rural population reducing the pressure of dependence on forests.

Box 10.5: Status of Jhum Area

Status of Villages	No. of Villages	Percentage
Number of villages with decreased area under Jhum	75	63
Number of villages with increased area under Jhum	12	10
Number of villages with no perceptible change in area under Jhum	32	27
Total	119	100

Source: NEPED, 2009

Jhum cultivation practiced since time immemorial in all the districts of the State is attributed as one of the main reason for the depletion of forest cover (ISFR 2013). While this reasoning may be true in some villages in the eastern districts of Mon, Tuensang, Longleng and Kiphire, it is not the primary factor contributing to the decrease in forest cover in many other districts.

Contrary to the perceived notion that with the increase in population the area under Jhum will proportionately increase, in most villages of Nagaland, area under Jhum is decreasing because of availability of off-farm opportunities. Study in 119 villages across 10 Jhumming districts show that the number of villages with decreased Jhum area was 63, with no change was 27 and increase in Jhum area was 19 (NEPED 2009). Increase in Jhum area occurred in the districts where the literacy rate was below the State's average of 79.55 percent. This indicated that literacy level played a major role in influencing the practice of Jhum cultivation.

**Box 10.6: Gross State Domestic Product at Current Prices
from Forestry and Logging**

Year	2004 - 2005	2005 - 2006	2006 - 2007	2007- 2008	2008 - 2009	2009 - 2010	2010 - 2011	2011 - 2012
Amount (Rs. in lakh)	40402	42992	45150	47918	54572	57455	61532	67805

Source: State Domestic Product 2004-2004 to 2011-2012 (2004-2005 Series),
Department of Economics & Statistics, Government of Nagaland

The decrease in forest cover is attributed mainly to the following three factors.

- The Gross State Domestic Product at Current Prices during 2004-2005 to 2011-2012 under Forestry and Logging increased from Rs.40402 lakh to Rs. 67805 lakhs while during the corresponding period there was a decrease in the total forest cover to the tune of 621 sq. km. The increase in the Gross State Domestic Product under this sub-head can be linked to the extraction of forest products from the decreased area.
- According to 2011 Census, 138 unrecognised villages were established in Nagaland during the last decade. It can therefore be assumed that these villages were established in Medium Dense Forest cover and Open Forest cover areas reducing the total forest cover.

- The total length of roads in Nagaland is 14648 km. Most of these roads constructed by various Departments are in Medium Dense Forest and Open Forest cover areas leading to substantial forest degradation and decline in forest cover.

The goal of the National Forest Policy, 1988 is “To attain one third of the geographical area under forest by 2012, 33 percent in the plain areas and 66 percent in the hills”. Considering this goal, Nagaland with its 80.92 percent forest coverage has a higher percentage than that of the national goal by almost 15 percent. This does not however, give reason for complacency considering the fact that in eight years forest cover reduced by 621 sq km indicating a decline by 4.07 percent.

10.5 NATURAL RESOURCE MANAGEMENT

Unlike other states of India where Forest Departments functions as the agency for State Forest Management, in Nagaland control of forests is pre dominantly by the community, with much of the forests listed as unclassified forest. Ownership of land is by individuals or clans. Out of the State’s geographical area of 16,579 sq km the recorded forest occupies 8629 sq km which is 52 percent. Out of this, the State Government owns only 11.70 percent of about 1008.23 sq km whereas private/communities own 88.30 percent of about 7621.07 sq km. Thus, the onus of forest management; to sustain, increase, enhance and strengthen forest area largely lies with the communities. However, Government agencies have to play a major facilitation role in the management of the forest area and for increase in forest cover.

Forest Area and Forest Cover

The term ‘Forest Area’ (or recorded forest area) generally refers to all the geographic areas recorded as forest in government records.

‘Forest Cover’ as used in the State Forest Report refers to all lands more than one hectare in area, having a tree canopy density of more than 10 percent.

Thus the term ‘forest area’ denotes the legal status of the land as per the government records, whereas the term ‘forest cover’ indicates presence of trees over any land.

Though the structural framework of the administrative system in Nagaland is largely similar to that of the other states in the country, the difference arises owing to the provisions under Article 371 (A) of the Constitution of India. This provision gives supremacy of the Naga customary laws and procedure, including the ownership of land and its resources, over the national statutes. Each Naga village owns and governs its own resources, plans its developmental activities, maintains law and order, delivers justice and secures defence. In the absence of any major industries along with the subsistence nature of agriculture, forest and natural resources remain the most important economic resource for the communities in the State. This has resulted in strong regulatory institutions at the local level for management of the common resources and for maintenance of order in sharing and usage of the resources in conformity with the existing customary laws. Management of forests and natural resource by the traditional village institutions is still the norm in the State. It is therefore imperative that these institutions are enlightened on the impact of resource management and are strengthened so that their discretion relating to sharing and use of natural resources can be channelized towards conservation and sustainable management practices.

Jhum

Shifting cultivation, popularly known in the region as Jhumming or Jhum cultivation is a purely subsistence level of production characterized by cutting and burning of plots to be cultivated, rotation of fields rather than the crops, use of primitive tools and implements, absence of draught animals and machinery, minimum tillage, low usage of chemical inputs and cultivation of local varieties alternating with a longer fallow period that allows the rejuvenation of the land and recycling of nutrients. In Nagaland, where shifting cultivation is pre-dominantly practiced, forest lands and agricultural lands cannot be categorically differentiated, as forests would comprise of primary forests as well as secondary Jhum re-growths in various stages depending on the Jhum cycle and which would develop into forests in subsequent years. Hence the land use pattern in the region exhibits an alternation between agriculture and forestry with a longer forestry phase interrupted by a shorter agricultural phase of usually one to three years.

Jhum or shifting cultivation is probably one of the most misunderstood, and thus a controversial form of land use. To a Naga Jhumia, the forest cover regenerated during the fallow period is considered forest in agriculture land because the farmer will continue to cultivate on the plot when the Jhum cycle is complete. To government and other agencies when Naga Jhumias cut down the regenerated forest cover for cultivation, it amounts to indiscriminate destruction of forests. However, when the whole Jhum area of a particular village is viewed, it is seen that while one block of forest cover is being cut down, an almost equal area in another block has entered a fallow period with vigorous forest regeneration taking place. The average number of trees regenerated during an average 9 year Jhum cycle is 872 trees per hectare with an average of 52 species (NEPED 2008). Thus the total degenerated forest cover is compensated and remains more or less stable, unless other anthropogenic activities take place in the village's Jhum landscape.

Jhum farmers of Nagaland enhance tree population in the fallow land by preserving tree poles from the previous Jhum cycle, giving selective weeding operation to preserve sprouting seedling, inducing reforestation by planting saplings and direct sowing of seeds, and managing saplings of the coppices from cut stumps. Jhum is therefore an 'organic by default' system of agriculture. Given the impact of Jhum cultivation, there is a paradigm shift in the policies of the Central Government from policies advocating 'eradication of Jhum and weaning away Jhumias from the primitive practice' to that of 'fallow management, improvement and building upon Jhum'. It is therefore imperative to devise mechanisms to convert the 'organic by default' areas into 'organic by design' without compromising on the inherent conservation practice of Jhum cultivation.

Jhum cultivation is strongly based on customary Common Property Regimes. Being tenure regime the main concern is transformation from the present Common Property Regime (CPR) to Private Property Regime (PPR) which will lead to disparity in asset creation and in opportunities for wealth generation, erosion of self-sufficiency, and diminishing of the powers and control of the traditional institutions.

In this context, due attention is required for creation of an enabling environment to address the livelihood needs and ecological concerns arising out of rapid transformations driven by development and other externalities.

Direct Interventions to Improve Shifting Cultivation

Considering alternatives for land use to generate cash income and to improve rather than aiming to simply replacing Jhum cultivation was the focus of a project initiated by the Nagaland Environment Protection and Economic Development (NEPED). This included, among others, tree plantation during the first year's cropping and undertaking of minor land shaping activities. The incorporation of fast growing trees, slow growing but high-value trees and shade loving cash crops like cardamom in the fallow forests not only helped in forest regeneration during the fallow period but also led to increase in income through sale of fuel wood, timber and other forest products (FAO, IWGIA, AIPP 2015). Hence, as long as a minimum cycle of seven to ten years can be maintained (with up to two or three years cultivation and at least five years fallow), shifting cultivation can be a sustainable form of land use.

Firewood Management and Consumption

In the rural areas, the importance of firewood is next only to rice since it is the primary source of energy and is used for cooking and heating. Most of the firewood is harvested from the poles felled in Jhum fields. As stated in the preceding section, 188.3 cu.m/hectare is felled during the slashing of first year Jhum. Besides firewood, poles felled in Jhum fields are used for placing across the slopes for soil conservation and construction of field huts. In many Naga villages, most families maintain a firewood forest nearby the village where they judiciously harvest their firewood needs. In these forests, tree species considered to yield quality firewood of high calorific value are planted. Therefore, unlike Jhum fallow, the tree species are a mixture of Oak, Alder, *Schima* and *Castinopsis*.

Box No.10.7: Consumption of Firewood Per Year

Number of respondent families in 7 districts	659
Total number of individuals living in the house	3879
Total quantity of consumed	389.30 cu.m.
Average quantity consumed per family	22.17 cu.m.
Average quantity consumed per head	3.74 cu.m.

Despite the increasing availability and usage of gas and electricity based energy sources for cooking and heating in the urban areas, there doesn't seem to be a decline in the demand for fuel wood. Taking advantage of the demand, villagers sell firewood at highly remunerative prices, generating the much needed cash income for their families. In 2014, the average price of Oak species wood per *Thak* measuring 6 feet length, 3 feet breadth and 3 feet height was at Rs.8000/-. Given the demand, farmers have increasingly taken up plantation of trees for firewood purposes.

Biodiversity Conservation Efforts

In 2008, an attempt was made to quantify the number of animals and birds killed by habitual hunters in 66 villages. This was done through a semi structured interview conducted by the staff of the project in collaboration with the citizens of the villages. The study was done in order to create awareness among the communities on the gravity of unchecked hunting and on how it adversely impacts agriculture.

Box 10.8: Animals and Birds Killed during 2008 in 66 Villages of Nagaland

Total No. of households in 66 villages	14578
Number of households involved in habitual hunting	928 to 1510
Percent age of habitual hunter	6 to 10
Jungle cats hunted	4936
Medium and large animals hunted	9698
Small animals hunted	47795
Large birds killed	34758
Small birds killed	219029
Total animals and birds killed	326216

Source: NEPED Internal Report 2008

Out of 14578 households in 66 villages, only 900 to 1500 households, about 6 percent were involved in habitual hunting and were responsible for killing 328216 birds and animals. Some individual bird trappers reportedly trapped upto 300 to 400 birds in one day using sticky tree gum of *Loranthus* spp fruits.

In Nagaland, the peak period of hunting is January, December, February and November. Killing was least in the month of June and July. Many hunters hunt to supplement the household income through sale of the game. The elders of these villages opined that many of these hunters are poor because they pursue hunting instead of taking up cultivation and other livelihood activities. This was validated by the 'reformed' habitual hunters themselves. They confirmed that after they abandoned hunting, the income level of their families increased because they now spent more time on productive activities.

The sustainable use and conservation of biodiversity is closely linked to the participation of the communities and to the institutional and policy frame work that govern their relationship with their natural resources. Therefore collaboration between different stake holders is critical.

Government Initiatives to Conserve Wildlife

The Department of Forests, Environment & Wildlife manages four protected areas, namely Intangki National Park, Fakim Wildlife Sanctuary, Singphan Wildlife Sanctuary and Puliebadze Wildlife Sanctuary. The State has declared three Community Conserved Areas (CCAs) with three more areas in the process of being added. The total area of protected areas is 24,121 hectares which is about 1.35 percent of the geographical area of the State.

The Nagaland Zoological Park at Rangapahar which is an ex-situ conservation initiative has more than 135 types of wildlife including unique species of birds and animals such as the endangered Hoolock Gibbon, Slow Loris, Forest Eagle Owl, Fish Owl and four species of Hornbill.





Box 10.9: The Amur Falcon Story

Part 1: Flight into the Killing Fields of Nagaland: Thousands of Amur Falcons heading to Southern Africa were being killed on a daily basis in north eastern India. The birds were caught while they head to roost in the evenings and were sold as meat. At the height of the migration period about 15 000 birds were killed daily. “The peak of the migration lasts for about 10 to 15 days,” Sreenivasan explains. It could mean that a quarter of a million birds were slaughtered over this two-week period. Once the birds are caught, he says, hunters break the birds’ wings and keep them alive in pens made from mosquito nets. To a small group of bird enthusiasts she is known simply as 95778, an Amur Falcon that has a small matchbox-sized satellite transmitter strapped to her back. She has made this transcontinental crossing before, but this time the fear is that she will fall victim to a catastrophe that threatens to destroy her species. For nearly three years this GPS transmitter has given science a glimpse into the 14 500 km migratory route this pigeon-sized bird of prey makes between South Africa and Mongolia. 95778 is on a return trip to South Africa, but she has stopped over at a killing field. Her last recorded position was in the remote north-east Indian state of Nagaland. (Shaun Smillie- 2012)

Part 2: Nagaland, the Falcon Capital of the World : The ‘Conservation of Amur Falcons 2013’ was launched by the Nagaland Forest Department involving the villagers and stakeholder NGOs. It resulted in not a single instance of killing of Amur Falcons during their stay in Nagaland from September to November 2014. Amur Falcons congregate in millions in the Doyang catchment area of Wokha district. Villagers from ten surrounding villages now welcome the congregation of these birds ceremoniously. The arrival of ‘Pangti’ and ‘Naga’ satellite tagged birds are celebrated by cutting cakes and holding of singing competitions. The erstwhile bird hunters of these villages, have now turned conservationists.

In Yaongyimchem forests of Longleng district another roosting area of the Amur Falcon, the community has conserved the area as the Yaongyimchem Community Biodiversity Conservation Area through the initiative of Phom Baptist People Organisation, an organisation under the leadership of Rev. Nuklu Phom.

As early as 2002, large congregation of Amur Falcons were reported to be roosting in Longjang village of Mokokchung district which then moved to Changtonya in the same district in 2010. The congregation of Amur Falcons were then reported to have moved to Pangti of Wokha district. In 2014 roosting population of Amur falcon reportedly increased in Yaongyimchem and Intangki of Dimapur district. The rise in population of the birds could be an indication of shifting of the roosting site and/or increase in population due to factors not yet studied. The reduced hunting of the bird may have also played an important role for the increase in roosting population. Consequently, the State has earned the international tag as the “The Falcon Capital of the World”

Birds may shift their roosting site irrespective of the best efforts undertaken for their conservation. Forming a network of conservation areas with special attention to the roosting site of that particular period is essential for effective conservation. *Forest Department Annual Report 2014 – 2015)*

Photo - Natural Nagas



Biodiversity Conservation Efforts in Nagaland

In the 1990s the combined effects of degrading forests and excessive hunting, compounded by the drying up of water resources, declining availability of wood and wild vegetables resulted in a self evolved change in the resource use paradigm in many villages. A number of communities imposed restrictions on hunting, restriction on extraction of Timber and Non Timber Forest Products (NTFP) which resulted in significant improvements in the biological diversity.

Community conservation of forests has by and large been initiated by the Village Councils (VC) with violators being penalized. The Community Conserved Areas range from completely inviolate zones to multiple use zones. Resolutions of the Village Councils include (i) ban on hunting during the breeding season, (ii) ban on fishing with explosives, (iii) ban on indiscriminate burning of forests, (iv) ban or restrictions in the collection of timber and NTFP, (v) formation of sanctuaries like the Khonoma Nature Conservation and Tragopan Sanctuary.

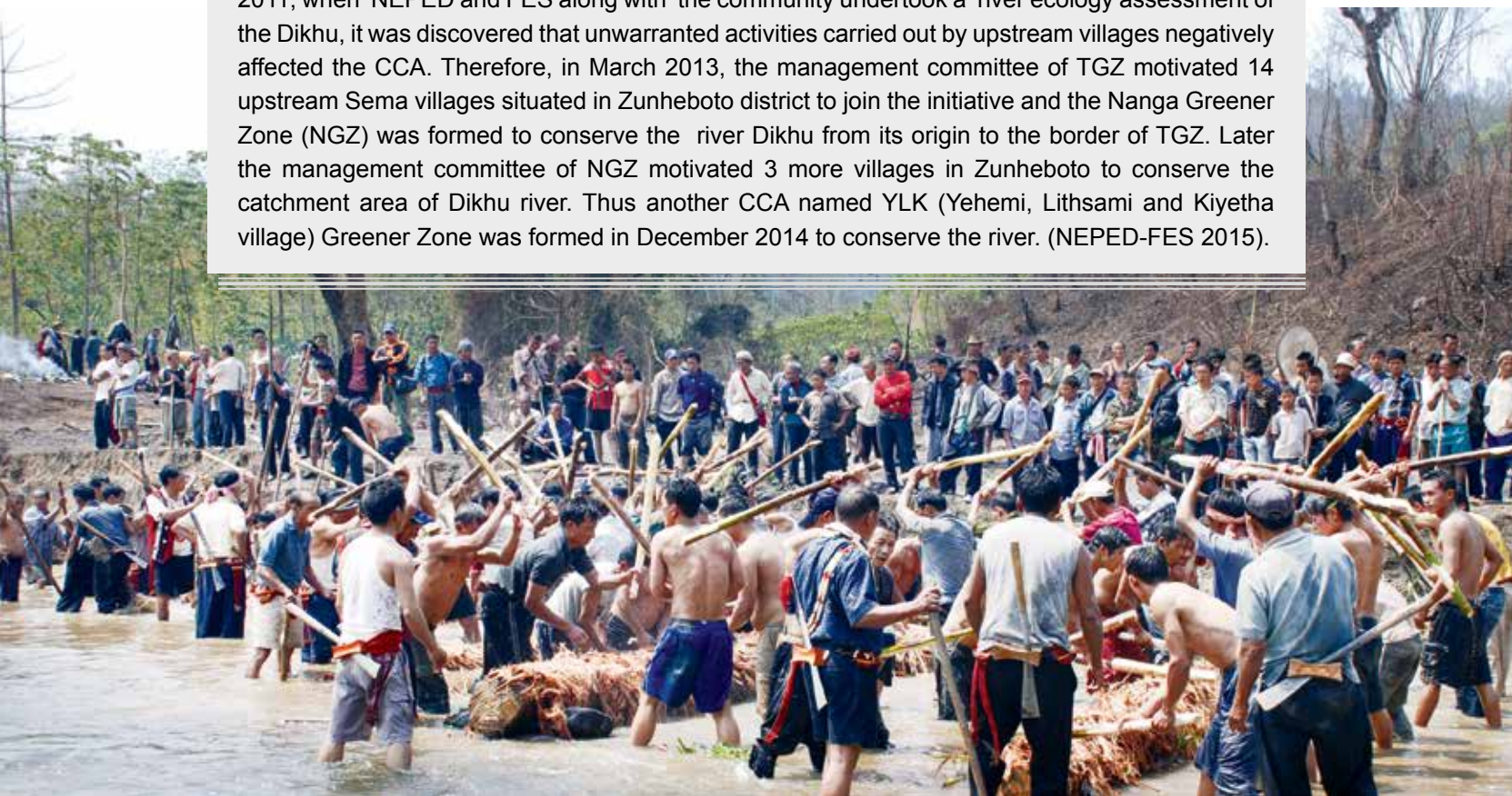
The efficacy of realising the objectives of self imposed restrictions vary from village to village. The ownership of land under self created wildlife and forest reserves include (i) Individually owned Jhum land bought from the individuals by the Village Council as in the case of Kikruma village in Phek district (ii) Community owned Jhum lands where individual members of the community were persuaded by the Village Council to donate one Jhum cycle for wildlife preservation, as in the case of Ghosu Bird Sanctuary in Zunheboto district (iii) Use of clan owned forests as buffer and village owned forests as core wildlife preserve, as in Khonoma village in Kohima district (iv) Forests with disputed claims between more than one village were declared as no-use zones, as in the case of the Zanibu forests where seven neighbouring villages in Phek district have claims. (v) Declaring Jhum fallows located far away from the villages as conserved areas allowing the area to naturally regenerate. Once the Village Council designates such areas as 'reserved,' strict laws regulating or preventing hunting, fishing and logging are enforced.

Joint Community Conservation Area (CCA) Declaration

Initially, most Community Conservation Area(CCA) were small in size (usually < 2 sq km) and were isolated forest patches. Realising that conserving small patches was not sustainable in the long run, the concept of Joint Community Conservation areas among neighbouring villages having CCAs was introduced by Nagaland Environment Protection and Economic Development. In this arrangement an Apex Committee was formed with representation from all participating villages and a joint resolution was passed for conservation of the area to be monitored by the Apex Committee. (NEPED-SACON 2012). In this way 7 Joint CCAs were formed involving 54 villages with a total area of 245 sq km in 5 eastern districts of Mon, Longleng, Tuensang, Kiphire and Phek. In 2014 formation of 21 Joint CCAs across 10 districts covering 410 sq km was reported. (NEPED-2014).

Box 10.10: Community Initiative to Conserve Dikhu River

When the people of Ungma and Longsa villages in Mokokchung district went for community fishing in the river Dikhu in 2009 which till some time ago was abundant with fishes, they hardly found any. This event made them to realise that use of chemicals, explosives, battery shocks were responsible for decline in the fish population. A joint meeting of the two Village Councils was therefore convened in April 2010 where it was resolved that fishing, hunting and logging in an area stretching 1 km on both sides of the river would be banned. This led to the formation of Tzula (Dikhu) Green Zone (TGZ) project and both the Village Councils authorised the Community Conserved Area (CCA) Management Committee to manage the demarcated area. In September 2011, when NEPED and FES along with the community undertook a river ecology assessment of the Dikhu, it was discovered that unwarranted activities carried out by upstream villages negatively affected the CCA. Therefore, in March 2013, the management committee of TGZ motivated 14 upstream Sema villages situated in Zunheboto district to join the initiative and the Nanga Greener Zone (NGZ) was formed to conserve the river Dikhu from its origin to the border of TGZ. Later the management committee of NGZ motivated 3 more villages in Zunheboto to conserve the catchment area of Dikhu river. Thus another CCA named YLK (Yehemi, Lithsami and Kiyetha village) Greener Zone was formed in December 2014 to conserve the river. (NEPED-FES 2015).



Biodiversity Conservation Efforts in Nagaland -A Peoples Movement

- Several efforts have been made by both the State Government and the community to conserve the biodiversity of the State.
- A notification was issued by the State Government directing all Government employees not to receive gifts of wildlife.
- Nagaland Baptist Church Council (NBCC) the apex body of Baptist churches in Nagaland with 519,964 baptized members in 1553 member churches passed several resolutions to conserve biodiversity. One Sunday is set aside as 'Biodiversity Sunday'.
- Almost all tribal apex organisations support the efforts for biodiversity conservation and have entrusted its respective tribal youth organisations for implementation of resolutions for conservation.
- Almost all villages have demarcated one or more patches of forest for biodiversity conservation area. NEPED-SACON has recorded 770 such areas in 258 villages of five eastern districts of Mon, Longleng, Tuensang, Kiphire and Phek (NEPED-SACON, 2012).
- While biodiversity conservation efforts by the communities has positively impacted conservation of natural resources, in order to strengthen and improve the systematic natural resources management plan, the NEPED-Foundation of Ecological Security has prepared 18 natural resources management plans. The State Department of Forest, Environment and Ecology has also initiated preparation of such management plans for the entire State.



10.5 CLIMATE CHANGE

Climate change has emerged as one of the most serious environmental and socio-economic concerns in recent times. It is a global phenomenon which is likely to alter the distribution and quality of natural resources and adversely affect the livelihood of the people, especially the poor and the marginalized communities. The State's economy is closely linked to its natural resource base and on climate-sensitive sectors such as agriculture and forestry. Hence, it faces an increased risk of the negative impacts of climate change. A State Action Plan on Climate Change (SAPCC) is in place with its vision towards adopting a climate friendly development trajectory. The focus is on acceleration of inclusive economic growth, promotion of sustainable development, securing and diversifying livelihoods and safeguarding ecosystem services, address climate change through suitable mitigation and adaptation measures, mainstreaming low carbon development strategy, strengthening capacities for environmental protection and increasing the carbon sink availability.



Nagaland Forest Management Project

Nagaland Forest Management Project' an externally aided project sanctioned under Overseas Development Assistance (ODA) loan from the Japan International Cooperation Agency (JICA), Government of Japan will be implemented by the Department of Forest and Environment, Government of Nagaland. With a total project cost of Rs. 533 Crores, the time line for implementation of the project is ten (10) years commencing from 2017-2018. The main component of the project comprises of 'Forestry Interventions and Biodiversity Conservation', 'Livelihood Improvement and Community Development' and 'Institutional Strengthening'. The project target area is 79096 hectares in 185 villages spread across 22 forest ranges in the State. Five models will be applied for the plantation activities: Jhum Agro-Forestry (JAF), Jhum Fallow Forestry (JFF), Jhum Conversion to Forestry (JCF), Jhum Conversion to Community Conservation Area (CCA) (JCC) and Protection and Expansion of CCA (PEC).

The project will be implemented in society mode with a three tiered implementation structure; Project Management Unit (PMU) at the State level, District Management Unit (DMU) at the district/ division level and Field Management Unit (FMU) at the range level. On completion of the project, the State is expected to gain by substantial area expansion under total forest cover and tree cover.



10.6 WAY FORWARD

Forest is a key livelihood sector for the people of Nagaland. Therefore forest management is crucial. Even today, the recommendations of the Shukla Commission Report 1997 continues to be relevant for Nagaland - "The Northeast requires a massive development thrust to make up for the lost time and put it on a fast track. It has vast natural resources in its bio-diversity and water wealth. These should be suitably exploited to raise living standards and quality of life of all the people, with equity and safeguards to prevent degradation of the natural and socio-cultural environment".

- With its rich biodiversity wealth, the State can bank on the long term global benefits of biodiversity conservation and on the opportunities of external funding for its efforts.
- Through appropriate management, the forest cover can be increased by taking advantage of the reduction in area under shifting cultivation. With the resultant increase under secondary forest where carbon is sequestered and maintenance of forest cover acts as carbon sinks, the possibility of carbon trading opportunities exists and need to be explored.
- Maintenance of both flora and fauna has potential for income generating activities; from medicinal and aromatic plants and through ecotourism. These potentials need to be capitalised.
- Incentivising the community to enhance ecological services provided by the forests under their control and management and provision of technical support will go a long way in conservation of the biodiversity of the State.
- Integration of the Community Conservation Areas (CCA) into the climate change domain will enable communities to reap the benefits under the REDD+ regime. Therefore adoption of climate smart production systems across all agriculture and allied sectors is crucial.
- Technological innovations in the State have remained mostly supply driven with scant attention to demand. This resulted in low adoption amongst the farming community. Application of traditional wisdom in the development of technologies is lacking besides there is inadequate research-extension-farmers linkages. Giving due attention to such issues will enable the State to optimise the proven age old practices in conservation practices and will enhance productivity.
- Strong convergence and linkages need to be forged with research institutes both within and outside the State working in agriculture and allied sectors. Besides, use of media e.g. DD/ TV channel/ FM Radio will ensure effective transfer of information and technologies to end users



SECTION 6

Chapter 11 : Human Development Indices

Chapter 12 : Voices of the People

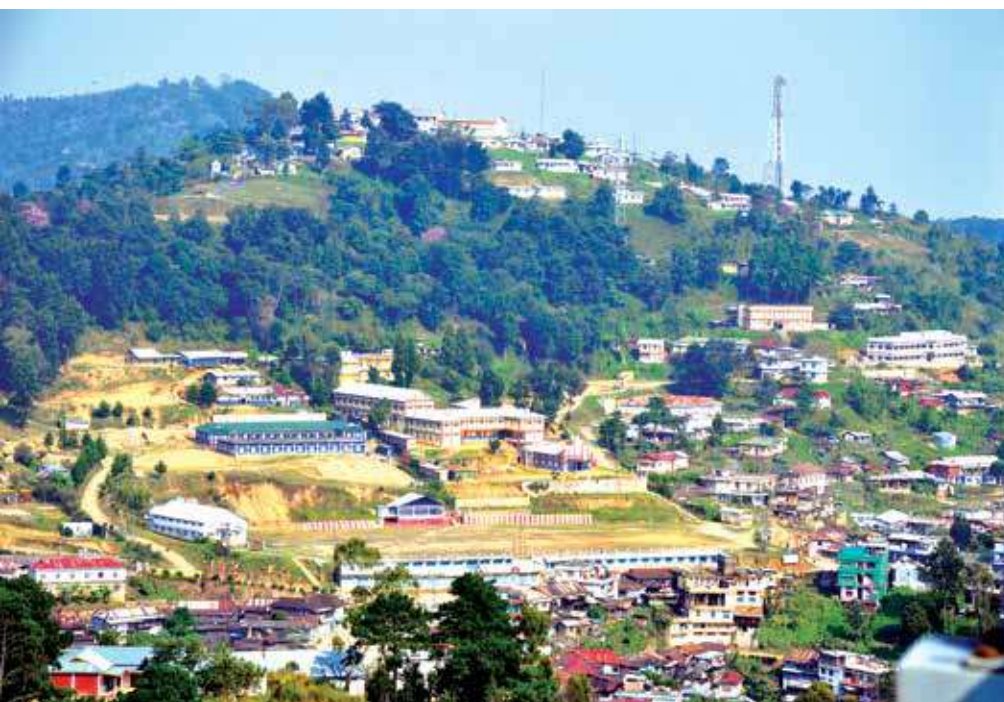
Chapter 13 : The Way Forward





In Conclusion

*In the concluding section two things have been done.
One, based on own estimates, published and generated data,
we estimate and carry forward from
Nagaland's Human Development Report, 2004
to see how the various indices have changed for the State.
Second, on the basis of the outcome of the research and
consultations, a forward looking path has been outlined for the State.
This might serve as a useful policy document for administrators
and policy makers in future planning.*





HUMAN DEVELOPMENT INDICES

In line with the National Human Development Report the following three indices have been constructed for Nagaland:

- Human Development Index (HDI)
- Gender-related Development Index (GDI)
- Human Poverty Index (HPI)

In computing the indices for Nagaland the Report departed substantially from the procedure followed in the State Human Development Report (SHDR) for 2004. The details of the components and the process of computing these indices are given in the technical note that follows this section. Here only some salient features of the changes are noted. First, the major change since 2004 is the emergence of three new districts Kiphire, Longleng and Peren. While the first two were carved out of the former eastern district of Tuensang, the third, Peren, was carved out of Kohima. This makes comparison with SHDR, 2004 difficult. Further, it now turns out that the population figures of Census 2001 were gross overestimates which created problems for all population deflated indicators. For this Report, thus the population figures were recalculated using the figures for the 1991 and 2011 Census using simple method to apportion the population to each of the districts. Some numbers like worker participation rate, enrolment rates etc were calculated by projecting backwards the Census figures of 2011 using the corrected population growth rates. However, this also necessitated re-doing the figures for almost all the indicators for the 2001 period which were used in the SHDR, 2004. Third, in calculating the indices for 2001 the Census figures on basic

amenities and some life indicators were not available. This further required recalculation of the numbers for 2001 for purposes of comparison. Fourth, some changes needed to be made to the health indicators like Infant Mortality Rate and Life Expectancy as the numbers used for the 2001 indices seemed exceptionally high. Finally, sample surveys were conducted in each of the 11 districts between 2008 and 2011 and were used to fill in gaps in data availability.

The human development indices developed for the State of Nagaland are given in Box 11.1. and 11.2. As already noted these were recalculated for 2001 since at the time of writing the Human Development Report for 2004, the Census figures of 2011 were not available. The recalculated figures are given in Table 11.1 and the new calculated figures for 2011 in are given in Box 11.2.

Box 11.1: Indices for 2001 (Revised)

2001 October 2013	HDI	GDI	HPI
Kohima	0.64(2)	0.54(2)	33.13 (3)
Mon	0.42(8)	0.32(8)	46.27 (7)
Mokokchung	0.64(2)	0.55(1)	24.58 (1)
Wokha	0.58(5)	0.51(4)	33.72 (4)
Dimapur	0.69(1)	0.52(3)	30.50 (2)
Phek	0.61(4)	0.51(4)	41.79 (6)
Tuensang	0.46(7)	0.37(7)	51.33 (8)
Zunheboto	0.52(6)	0.43(6)	35.59 (5)
Total	0.59	0.49	40.02

Box 11.2: Indices for 2011

	HDI	GDI	HPI
Kohima	0.66 (2)	0.59(3)	27.84 (3)
Mon	0.50(11)	0.45(11)	42.09(11)
Mokokchung	0.61 (4)	0.57 (4)	22.56 (2)
Wokha	0.66 (2)	0.61 (2)	32.56 (9)
Dimapur	0.81(1)	0.72 (1)	16.40 (1)
Phek	0.59 (6)	0.53 (7)	30.84 (8)
Tuensang	0.53 (9)	0.49 (9)	36.80(10)
Zunheboto	0.51(10)	0.49 (9)	28.27 (6)
Peren	0.60 (5)	0.54 (6)	27.10 (4)
Kiphire	0.59 (6)	0.55 (5)	36.61 (7)
Longleng	0.54 (8)	0.50 (8)	27.95 (5)
Total	0.63	0.58	28.89

Note: Figures In Parenthesis Represent Rankings

Figure 11.1: Human Development Indices 2001

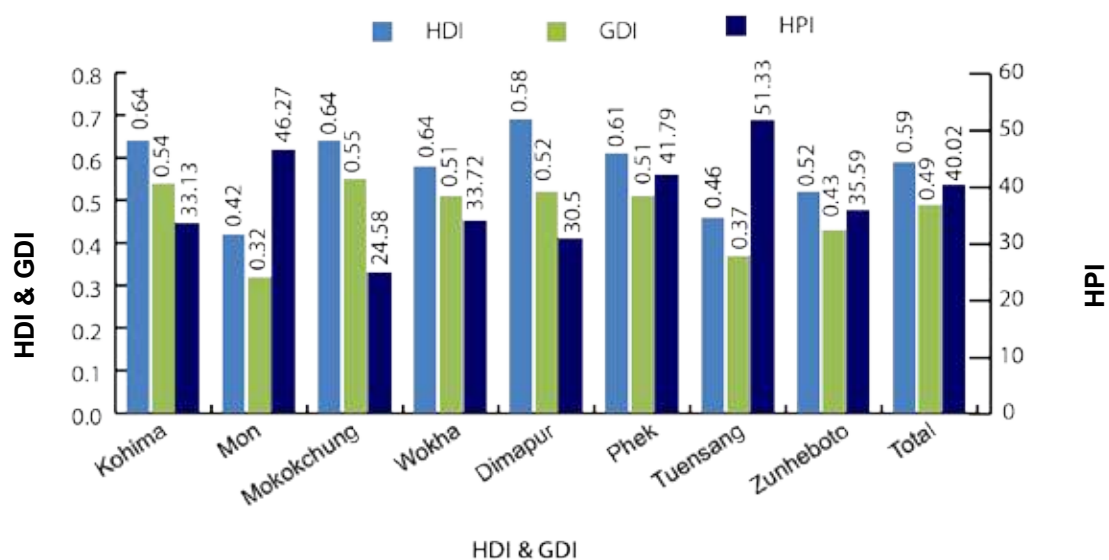
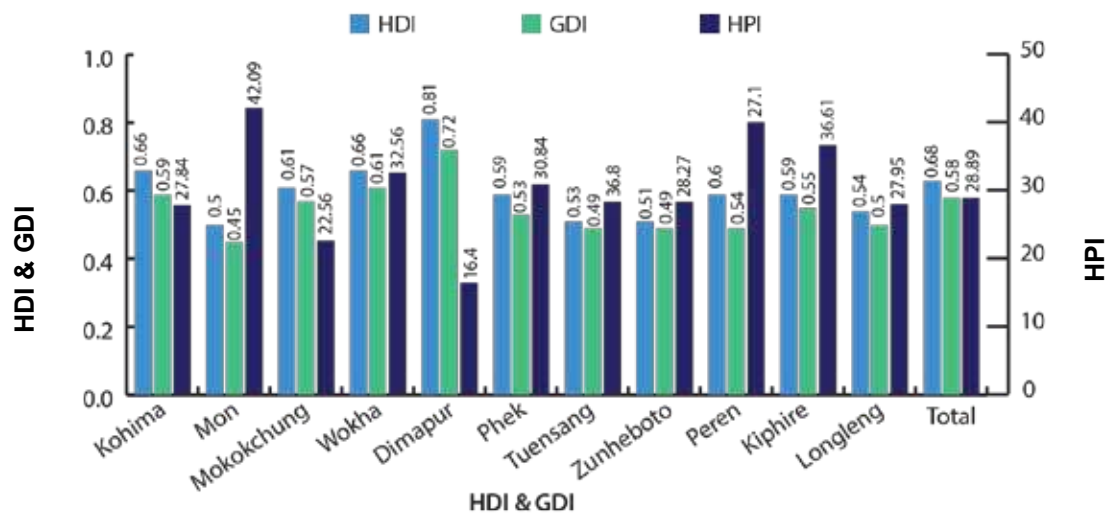


Figure 11.2: Human Development Indices 2011



Human Development Index

HDI of Nagaland was 0.63 in 2011, as compared to 0.61 (2014) for the country as a whole. The overall economic performance has also been as impressive as compared to the National average. Thus, while the real per capita income of Nagaland (at 2004-2005 Prices) in 2001–2002 was about equal to the national average, in 2013-2014 it was about 25 percent higher at approximately Rs. 50,000 compared to the National average of approximately Rs. 40,000. The State literacy rate for 2001 was 67 percent as against the national average of 65.2 percent. By the Census of 2011, the State literacy rate of about 80 percent was well above the National average of about 74 percent. The social framework of Nagaland has placed education as a valued asset since its introduction nearly 130 years ago along with the ushering in of christianity. The unique framework of care and provision of Naga society finds expression in the better performance of the State, as against the National average, in terms of longevity/mortality status, where life expectancy at birth in Nagaland is 73.4 years whereas for all India it is 60.7 years, while IMR and MMR is 42.1 and less than 1 per 1000 live births in Nagaland as compared to the National average of 68 and 4.07 per 1000 live births. (Table 4.1 of SHDR, 2004, page no 92). This is then the paradox: the better educational and health indicators compared to most other states have not translated into catapulting the State to bring it to level of the top 10 performing states of the country.

The overall performance, however, hides the fact that there were large inter-district disparities in performance. Within Nagaland, the HDI was highest in Dimapur with 0.81, followed by Kohima and Wokha with 0.66 respectively and Mokokchung next at .61. On the other hand, Mon district had the lowest HDI with 0.50. This inter district disparity seems to have changed little since 2001 with districts like Tuensang and Mon still at the bottom in 2011 along with districts like Zunheboto and the new district of Longleng. It is interesting that these eastern districts are also the worst performing in terms of indicators like spread of rural roads, worker participation, educational attainments, urbanisation etc. The clear divide in performance matrix between the centrally located districts like Kohima and Dimapur and those on the eastern periphery implies that the fruits of overall development have not reached these districts. One broad explanatory factor here is the lack of urbanisation in these districts probably due to distance from markets and lack of entrepreneurship.

The poor performance matrix are no doubt a consequence of the inadequate development of infrastructure in these districts, in particular, rural roads and other means of communication.

Gender Development Index

The GDI for the State was 0.58 which shows a considerable improvement over the figure of 0.49 in 2001. Here Dimapur had the highest index of about 0.72 followed by Kohima, Wokha and Mokokchung. As compared to 2001, Mokokchung's GDI ranking has fallen from number 1 to number 4. However, the numbers are not too different for the districts of Kohima, Wokha and Phek and one cannot make any strong qualitative statement in the context of the second rung districts. However, Dimapur is a clear leader in this regard. What is, however, worth noting is that the position of all the five districts has improved considerably since about 2001. On the other hand, the districts of Mon, Longleng, Zunheboto and Tuensang are clear laggards with the GDI index lying below 0.50. As in the case of the HDI, the district of Mon continues to be at the bottom.

As is well known, the GDI adjusts the income for differences in literacy and health indicators between males and females. The poor performance of the eastern districts reflects particularly the lower literacy and health indicators in these districts. While income growth in these districts has lagged behind the others, this is also seen in the literacy and health indicators.

Human Poverty Index

The Human Poverty Index (HPI) for the State is at about 29 percent which also shows a clear improvement over the figure of 40 percent in 2001. It may be noted that, a decline in the HPI reflects an improvement in the indicator. Once again, the districts of Dimapur, Mokokchung and Kohima are clear leaders. In addition, here little has changed since 2001. At the top, Mokokchung has lost its first position to Dimapur. More crucial, the eastern districts of Tuensang and Mon continue at the bottom in terms of changes in the HPI index between 2001 and 2011. It is also worth noting that Wokha's higher position in the other two indices does not reflect in the HPI where its ranking has slipped from 4th to 6th as there is very little improvement in the index since 2001.

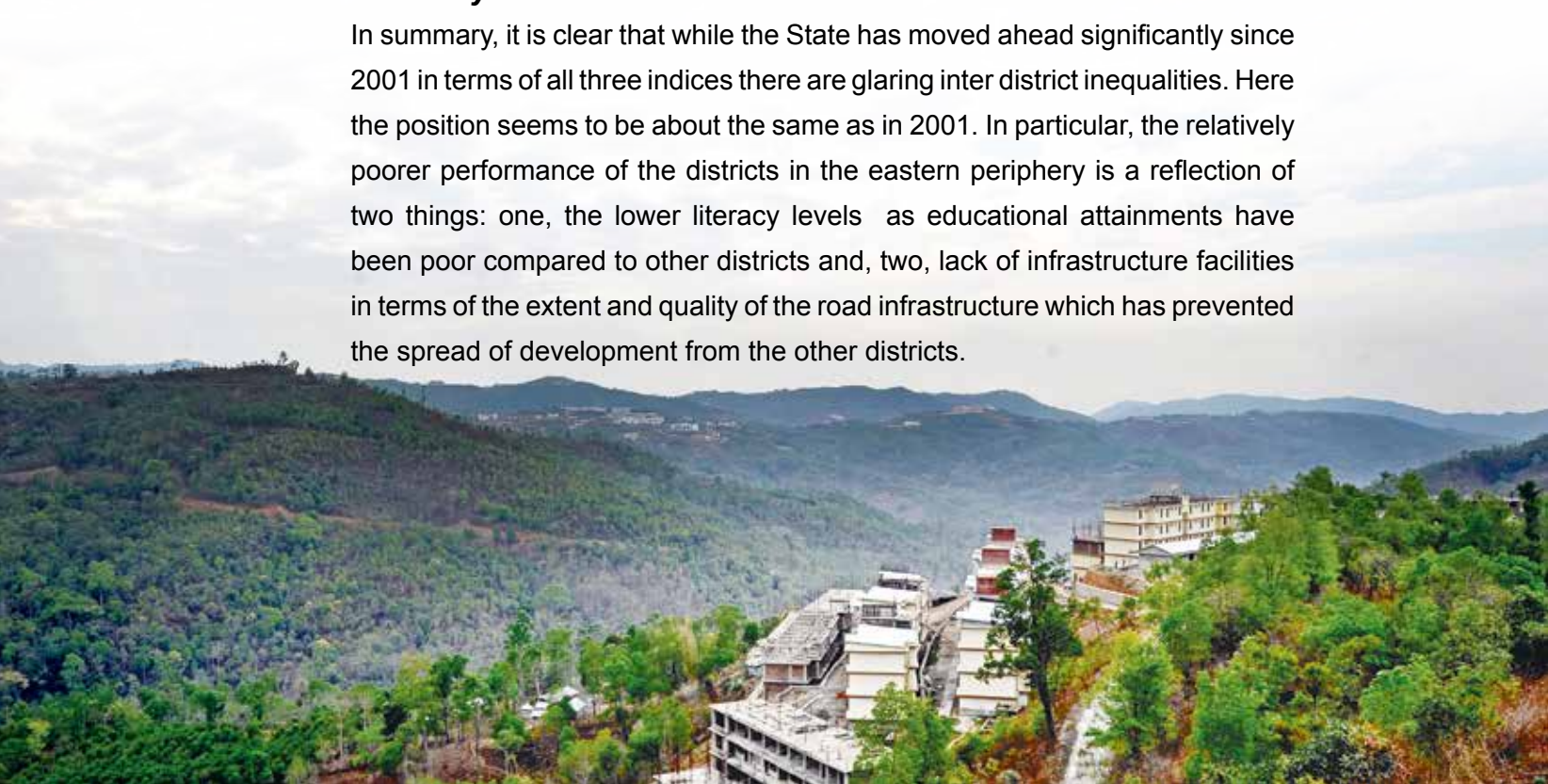
The HPI index combines availability of basic amenities like toilets and pucca houses, immunisation at birth, poverty levels with education facilities and illiteracy levels. It is not then surprising that the broad conclusions are same as in the case of the HDI and the GDI: provision of basic facilities etc. seems to have been more effective in the central districts as compared to the periphery. It is interesting to note that the new district of Peren (carved out of Kohima) has a significantly better index level than the eastern districts.

Inter State Comparisons

In line with the SHDR, 2004, comparison of the indices for Nagaland for 2001 has been made with some of the other states of the North Eastern Region (NER). Unfortunately, at the time of writing none of the other states had recent calculations of these indices and most of the published indices relate to the period 2001-2005. The only available report for recent numbers is found in the Human Development Report of Mizoram (2014) where an HDI of 0.65 and GDI of 0.80 are shown. These numbers indicate that while the HDI for Nagaland of 0.63 shows that overall Nagaland has performed at a comparable level, the lower figure of 0.58 for the GDI of Nagaland shows that the State is far behind in terms of progress in gender equality. Unfortunately, there are no numbers for Mizoram's HPI and no numbers for any of the other north eastern states for any index for recent years. Hence, it is difficult to make any inter-state comparisons for 2011 for the NER states.

Summary

In summary, it is clear that while the State has moved ahead significantly since 2001 in terms of all three indices there are glaring inter district inequalities. Here the position seems to be about the same as in 2001. In particular, the relatively poorer performance of the districts in the eastern periphery is a reflection of two things: one, the lower literacy levels as educational attainments have been poor compared to other districts and, two, lack of infrastructure facilities in terms of the extent and quality of the road infrastructure which has prevented the spread of development from the other districts.



Technical Note

Though many of the indicators needed to be recalculated for 2001, the basic technique of estimating the indices used in the SHDR, 2004 has been maintained.

The Data

The main problem faced in computing the indices was the lack of data at the district level. Since the publication of the SHDR, 2004, the District Human Development Reports (DHDR) for all the 11 districts were prepared during the period 2008 to 2013. For these reports district level surveys were carried out by the Department of Economics and Statistics (DES) to get the data on socio-economic conditions of the districts. A sampling methodology was adopted for the surveys. Given the Provisional Census 2011 figures for total number of villages, households and population, the circle/block under each district was given equal weightage for forming the sample frame. Then, for selection of sample unit, the villages under rural villages and urban wards were specified as one unit each. Next, using linear systematic sampling techniques, 15 percent of the villages under rural villages and urban wards were evenly distributed and selected from all the districts.

Accordingly, 213 villages and 37 urban wards were selected for the survey. About 50 percent of the households were surveyed from both the selected rural and urban units. As per Provisional Census 2011, Kiphire, Longleng and Peren districts do not have urban areas, so only rural areas were surveyed and for the rest of the districts such as Mokokchung, Wokha, Tuensang, Dimapur, Zunheboto, Kohima, Phek and Mon both rural and urban areas were surveyed. The total sample size was about 32358. While the survey for Kohima, Phek and Mon was done in 2008, the remaining districts were covered during the 2012-2013 period.

Secondly, as already noted, the population estimates for 2001 used in the SHDR, 2004 were grossly overestimates. So, using the population figures for the 1991 and 2011 Census, an average growth rate of population to calculate population was worked out figures for 2001. These corrected population numbers for 2001 were used to recalculate variables like enrolment ratios, workers participation, per capita incomes and poverty ratios for 2001.

Actual figures for enrolment and worker participation were obtained from the DES and deflated by the estimated population figures to get the enrolment ratios for both 2001 and 2011.

Third, the figures for Life Expectancy for 2001 seemed exceptionally high given the estimates available at present. Hence, all India figures of life expectancy in 2009 and 2011 were used to calculate an average change in the numbers. These were then extrapolated backwards to correct the figures of 2001.

Fourth, the calculation of the Human Poverty Index (HPI) required data on basic amenities like the number of households without toilets and those with kutchra houses. The numbers for 2001 were again re estimated using figures of the Census 2001 which were not all available at the time of calculations for the SHDR, 2004. These were then deflated by estimated population figures. Similar numbers were generated from the Census 2011. For data on poverty ratios, number of people Below the Poverty Lines generated by the Directorate of Economics & Statistics (DES) has been used to deflate the new population figures for both 2001 and 2011.

Fifth, data on health indicators like immunisation at birth, infant mortality rate etc. are normally available at the State and at the district level from the Central government's surveys based on the Sample Registration System (SRS) of the decennial census. However, the samples for most of the north eastern hill states are so thin that even the national level SRS data does not indicate state/ district level numbers for Nagaland. Therefore estimates generated by the DES from internal samples and other published sources were used.

Finally, the District Domestic Product (DDP) estimates of 2001 was used with the new population figures to generate per capita DDPs. However, for 2011 no survey estimates of district level incomes (DDPs) were obtained as done for the SHDR, 2004. However, the figures on value of district level agricultural production were reliable. The district share of total agricultural labour force from Census 2011 was then used. Multiplying the inverse of this share by the district level agricultural production gave the estimates of the DDP.

The assumption here is that the agricultural sector is as productive as the secondary and tertiary sectors. Given the dominance of the agricultural sector in Nagaland and the lack of a highly productive organised industry, this assumption may not be entirely unjustified. It does however give a downward bias to DDP figures for less agricultural districts like Kohima and Dimapur.

Finally, while some numbers for the three new districts in 2011 were available from the Census 2011, for poverty ratios the figures provided by the Department of Rural Development, Government of Nagaland were used. For other numbers like life expectancy and health variables, the figures for the parent district were used.

To obtain some comparability between figures for 2001 and 2011 the numbers given in the SHDR, 2004 were re-estimated using fresh Census information and some extrapolation. Thus these re-estimated figures have been used for comparison between 2001 and 2011.

Human Development Index

The HDI is a summary measure of the income, education and health achievements of the State/district. In calculating the HDI, the non-availability of data, as mentioned above, was a major problem. Ideally, the District Domestic Product (DDP) would be calculated, like the GSDP or the country's GDP, by using a combination of methods. For instance, in some sectors, the income approach would be suitable while for others (agriculture in particular) the production method would be considered appropriate. A third way is the expenditure approach but this is generally considered unsuitable for underdeveloped economies because consumers and small producers alike usually do not keep records of transactions.

Nagaland's economy is largely an agriculture-based subsistence economy, with the agricultural sector accounting for about 30 percent to GSDP and employing nearly 70 percent of the population. In addition, the dominant sector in industry is the construction sector, and in services, public administration. Unfortunately, even for these three sectors, no data was available at the district level. Hence, own approximation for 2011 as already noted earlier has been used.

Once the DDPs, Y_D , were calculated, they were converted to indices, X_i , for use in constructing the HDI. In some other state reports (for example, HDR in Karnataka, 1999) Atkinson's method of discounting incomes above a certain level was used along with estimates of purchasing power parity to relate the incomes to global incomes. This was not suitable for imperfectly integrated agrarian economies like Nagaland. Similarly, no data was available to calculate the inflation adjusted, consumption inequality index suggested by the Planning Commission. Therefore, simple method of indexation has been used by defining

$$X_{1i} = (\log Y_{Di} - \log Y_{\min}) / (\log Y_{\max} - \log Y_{\min}) ,$$

where $i = 1$ to 11, for the eleven districts of Nagaland and $Y_{\min}$ is taken as the minimum per capita income level to define the poverty line. The per capita poverty consumption level for Assam was taken from the National Human development Report (NHDR), 2001, Planning Commission, and converted to per capita poverty level of income assuming an average propensity of consumption to be 0.8 (Rs 4,200/-). Finally, the $Y_{\max}$ was taken to be the per capita income of Delhi. For $Y_{\min}$ for 2011 used the per capita income of Bihar has been used. The use of logs in defining X_{1i} eliminates the need to use price indices to convert nominal to real variables. In this, the approach used in the Rajasthan Human Development Report, 2002 has been followed.

In calculating the HDI the usual procedure is to use inflation and inequality adjusted monthly per capita consumption expenditure instead of the District Domestic Income (DDIs) which has been used. The adjustment for inequality is done using the Gini measure of inequality. This implies that greater weightage is given to per capita incomes of states (districts) with more equally distributed consumption expenditure. The adjustment for inflation is based on the state-specific poverty lines. However, in the National Human Development Reports (NHDRs) the poverty lines used for Nagaland are calculated assuming the poverty ratios for Assam.

In district level analysis, these adjustments could not be used. The calculation of the Gini coefficient required the National Sample Survey (NSS) district level data on individual per capita consumption. This was not available. In addition, the Assam poverty level data used in the NHDR is an overestimate for Nagaland. Hence, the NHDR calculations of the HDI for Nagaland would tend to have a downward bias. To put it another way, since the district incomes were not adjusted to reflect income inequalities, the index would give excessive weight to districts with high per capita incomes.

The educational achievements are summarised by the literacy rate LE and the intensity of formal education, FE. For FE the school enrolment ratio for population in the age group 6–18 was used on the basis of data supplied by the DES, Nagaland.

The indices for literacy and enrolment are defined as

$$L_{ii} = L_{Ei}/100 \text{ and } F_{ii} = F_{Ei}/100$$

where i is indexation for the 11 districts of Nagaland. The educational index is then defined as

$$X2i = 0.35*L_{ii} + 0.65*F_{ii} \text{ and } i = 1...11.$$

Finally, the health achievements were summarised using the indicator life expectancy at age one, EH and the IMR, MH. District level figures were unavailable for these indicators. To calculate aggregate IMR, the male IMR and female IMR figures were weighted by their share in total population.

In converting the Es and the M_is to indices, the minimum and maximum levels were used as suggested by the NHDR, 2001, Planning Commission.

Hence we have

$$E_{ii} = (E_{Hi} - 50)/(80-50) \text{ and} \\ M_{ii} = (M_{Hi} - 20)/(100-20)$$

and i indexes the districts.

However, in calculating the composite index X_3 one cannot use M_{li} as the index must be inversely proportional to the level of M_{hi} , the IMR. Hence we have, $X_3 = 0.65 * E_{li} + 0.35 * (1 - M_{li})$ for each of the i districts.

Then we have ,

$$HDI_i = 1/3 * (X_{1i} + X_{2i} + X_{3i}) \text{ for each district } i.$$

Gender-related Development Index

In calculating the Gender-related Development Index (GDI), the same procedure laid down in the SHDR, 2004 was followed. The objective was to convert the HDI into an index which adjusted for differences between males and females in the various indicators. For each of the income, education, and health indices this adjustment was done to derive the GDI.

Adjustment for Income Index

It is usual in indices calculated by the UNDP to use the relative wages of male and female workers (agricultural, non-agricultural or overall) to make corrections to HDI. Let the wages of male and female workers be W_M and W_F . Then the average wage, W , can be defined as

$W = P_F^E * W_F + P_M^E * W_M$, where the P 's represent the proportion of females (P_F^E) and males (P_M^E) in the economically active work force.

Then it follows that

$$W_F / W_M * P_F^E + P_M^E = W / W_M$$

$$\text{Also } W_F / W = (W_F / W_M) / (W / W_M)$$

So if the proportion of males and females in the economically active population and the relative wage rates are known, the share of males and females in average wage can be estimated. Given this, the share of females and males in the total earned income is given by

$$I_F = W_F / W * P_F^E \text{ and } I_M = W_M / W * P_M^E$$

To obtain the correction Factor I_Y to the DDPs we use the distribution function given below.

$$I_Y = [P_F * I_F^{(1-e)} + P_M * I_M^{(1-e)}]^{(1-e)} \dots\dots\dots(A)$$

Where P_F and P_M are the population shares of females and males respectively. The distribution parameter, e , is taken to be 2 as in other studies. It is clear, in the above function, that if $W_F = W_M$ and the P 's are the same for the two populations, then $I_F = I_M$, there is no gender discrimination and $I_Y = 1$. Hence, the gender corrected incomes are calculated by applying I_Y to the DDPs calculated for the HDI.

In the calculations, estimates of the relative wage rates have not been obtained. However, economic studies generally show a close relation between the literacy levels and the income levels. Hence, the relative literacy rates of females and males available by districts have been used as a proxy for relative wages.

Similarly, the other indicators of health and education were calculated separately for males and females as done in the aggregate for the HDI. Once again, these separately calculated indices were combined using the distribution function (A). In calculating the health indices for men and women, separate numbers for the minimum and maximum levels of life expectancy for men and women were used. Following the UNDP guidelines given in SHDR, 2004, the maximum and minimum values used for males was 87.5 and 27.5 years and for women, was 82.5 and 22.5.

Human Poverty Index

Here the procedure laid down in the UN Global Human Development Report has been followed. This index aggregates the deprivation in health, education and economic dimensions of the people. The index is calculated as

$$HPIi = [1/n * (P_1^a + P_2^a + P_3^a + \dots P_n^a)]^{1/a}$$

In general the measure is defined for three indicators of deprivation of health, education and economic well being. In the above formula the various Ps are used in percentage form. As is clear from the definition above, if there is no deprivation so that $P_i = 100$ for all i , then HPI equals 100. Hence high values of the HPI indicate greater levels of deprivation. The range of the index is 0 to 100. Here the exponent a measures the weightage given to the largest deprivation factor. If $a=1$ then the HPI becomes a simple average of the deprivation factors, P_1, P_2 , etc. As a tends to infinity, the value of the index tends towards the value of the largest deprivation factor. Following the Planning Commission's Human Development Report and suggestions of the UNDP's Global Human Development Report, $a=3$ is used in the calculations. This gives some but not undue weightage to the largest deprivation factor.

In the calculations, P_1 measures the health deprivation, P_2 the educational deprivation and P_3 the economic deprivation/ population Below Poverty Line. The UNDP and the Planning Commission have suggested that P_1 be approximated by the proportion of persons not expected to survive to 40 years. Since no data on P_1 was available this factor was ignored in the calculation. P_2 , the composite indicator on educational deprivation, is defined as

$$P_2 = .35*(1-L_i) + .65*(1-F_E)$$

Where L_i and F_E have already been defined earlier. Hence, P_2 is a composite measure of the degree of illiteracy and the non-enrolment of children in schools. Finally, P_3 , the indicator for economic deprivation, is defined as the simple average of the proportion of population below poverty line, P_{31} , the proportion of children denied basic medical facilities at birth, P_{32} , the proportion of population living in kutcha houses, P_{33} , and the proportion of population not having basic amenities, P_{34} . Figures for P_{31} and P_{32} were provided by the DES. It should be clarified that figures on P_{31} reflect the proportion of BPL population. Except for the poverty ratios, the other data has been sourced from Census, 2011. The district-wise estimates for HDI, GDI and HPI have been provided in the previous section. The recalculated 2001 figures and the new numbers for 2011 have been used as basis for comparison.

Further Suggestions

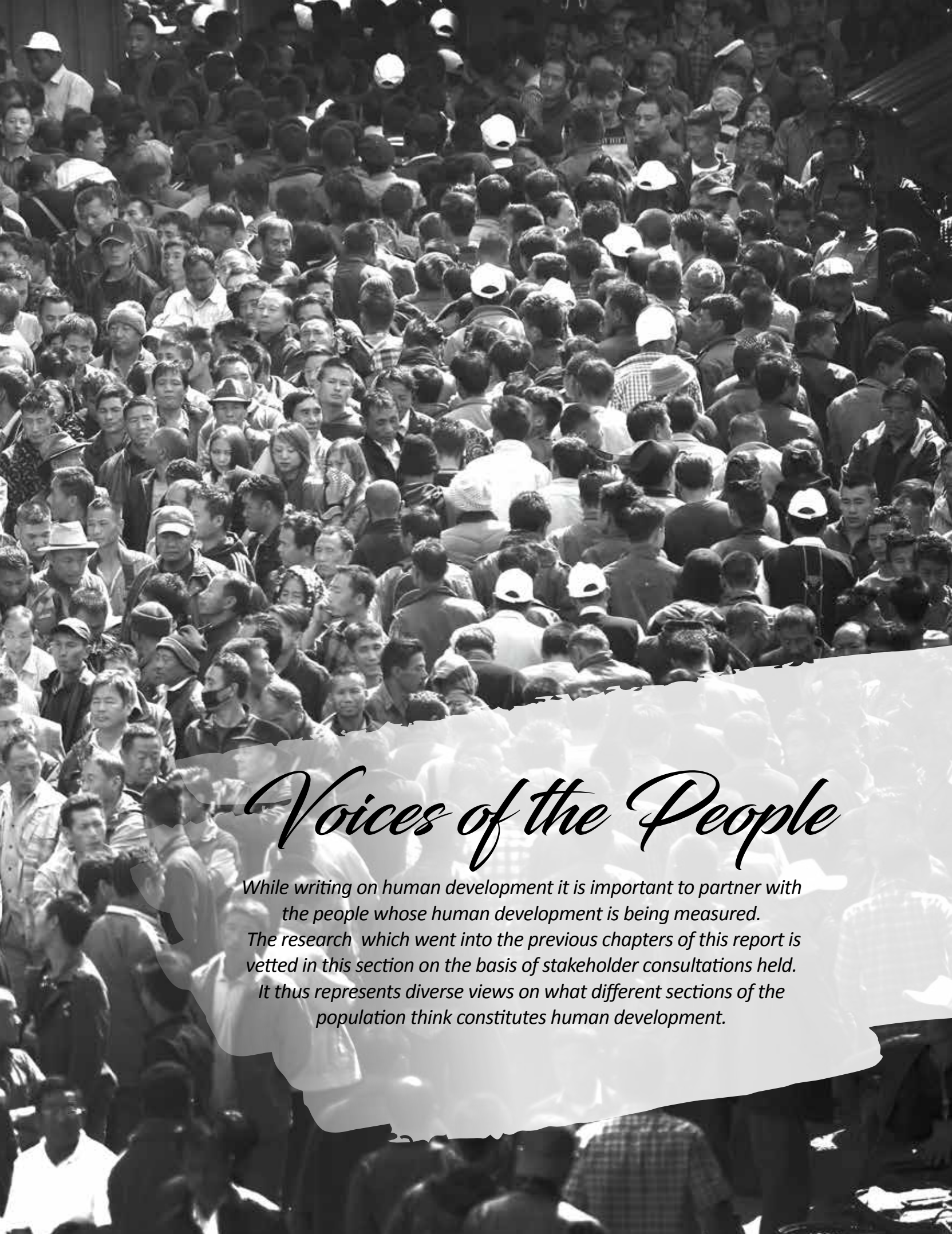
The main constraint to calculating the indices for Nagaland has been the paucity of statistics available at the district level. For example, the NSSO estimates are particularly a problem for small states like Nagaland, where the State sample size is too small to generate statistically reliable information. Thus, except for Census figures, data on DDPs and demographic indicators were not available on a comparable time series basis and own approximations had to be used.

The principal problem seems to be the somewhat secondary status given to data collecting agencies at the State level. This problem existed at the time of writing the SHDR, 2004 but the problem has persisted. It is therefore reiterated that it is crucial to upgrade the status of the Directorate of Economics & Statistics so that such statistics may be made available on a continuing basis. This is particularly crucial for estimation of District Domestic Product, where there is still very little information available. At the very least, periodic surveys must be conducted on this crucial economic indicator.

The need to upgrade the status of the DES is particularly urgent as many of the statistical staff has, over the years, achieved some reasonable expertise in computer training and all the hardware is in place.







Voices of the People

While writing on human development it is important to partner with the people whose human development is being measured.

The research which went into the previous chapters of this report is vetted in this section on the basis of stakeholder consultations held.

It thus represents diverse views on what different sections of the population think constitutes human development.



VOICES OF THE PEOPLE

INTRODUCTION

For any development to take place, it is critical for policymakers to listen to the voices of the people for incorporation in the decision making process. Responding to local needs which differ from society to society is essential, if inclusiveness is to be achieved.

This chapter is an extract of peoples' voices from the District Human Development Reports as expressed by the people during the workshops and consultation held in the respective districts.

CONFLICT AND PEACE

Dr. Abraham Lotha writes, In Nagaland, a society characterized by political conflicts since the early 1950s, the past decade and half has witnessed a turn for the better in various aspects of human development. The Indo-Naga conflict arose due to contesting claims of political determination for the Naga people. The Nagas claimed they were always independent people, only partially colonized by the British, and were never part of India at any point in their history. India, on the other hand, claimed that Nagas are a colonial legacy from the British Empire and has asserted domination over the Naga people.

From India's perspective, Naga nationalism is a separatist movement led by misguided leaders and has treated the Naga issue as a law and order problem. Through the years, the Indo-Naga relationship has been punctuated by alternating chapters of conflict and peace. The first ceasefire between the Nagas and the Indian Government in 1964 was short-lived after which the Shillong Accord in 1975 only came into being. The ceasefire agreement beginning August 1, 1997 between the Indian Government and the NSCN (IM)

has held on for the last twenty years. Even though it has been interrupted by factional violence, this ceasefire has, by and large, provided an atmosphere of peace for the Nagas. There is an increasing participation in democratic concerns including Naga nationalism, and the quality of life is characterized by less fear.

The resultant peace due to the ceasefire between the Government of India and the NSCN (IM) and other underground political groups ushered in an era of economic progress in the Naga society. While much leaves to be desired the standard of living of the people has improved and people are beginning to live lives without fear. In many ways, more needs to be done in Nagaland to achieve the standard of human development as aspired by the United Nations and peace is the best leverage for human development.

AGRICULTURE

L. Tongang, *General Secretary, Konyak Union* said, Food processing plant with a processing capacity of at least ten tonnes (10,000 kgs) per day needs to be set up in the district of Mon to ensure optimum utilization of the agricultural products. Post harvest management training should be imparted to the farmers of the district. Grading of all farm products should be done. Cultivation of orange, Naga King Chilli, tea and other potential cash crops should be encouraged.

Angshai Phom, *Progressive Farmer from Yongam village*, who was awarded National Award at Global Agri-summit, Gujarat in September, 2013 expressed the following views.

- Our soil is losing its fertility due to soil erosion. Soil testing before undertaking any plantation is very important. However for poor farmers this becomes a difficult task, thus, Government must extend assistance for soil testing.
- Government should provide water pumps to farmers for spraying water in the farms from nearby streams or water sources during winter.
- Run off soil from the villages during heavy rains are highly fertile. Such soil collected from the village drains could be conserved to use as manure.
- During supply of imported seeds to farmers by the Government agencies, bad seeds are also distributed. To prevent such occurrences, nurseries should be set up in the districts so that climatically suitable seeds or saplings are supplied to farmers.

- Government should launch agricultural schemes on the basis of the suitability of the climate and soil condition of the district. Prior to the launch of such schemes the unemployed youth should be sufficiently trained.
- In Nagaland because of its topography, farmers practice mixed cropping. Large scale production of a single crop is not practiced. The Government should therefore assist farmers to set up mini-factories to process these farm products and to market them.

H.R. Epao, Phek, Agricultural education needs to be incorporated in the school curriculum as a main subject with practical sessions at all levels to motivate the educated youth to take up farming as a business or profession. This would reduce the problem of educated unemployment to a large extent.

Yansathung Jami, Ex-Chairman, Kyong Hoho, points out that there is a huge gap between the funds allocated and funds disbursed and utilised. He expressed the need for creating a platform to check the lapses. He also stated that the emotional attachment of the farming community to their small holdings was detrimental for mass production for profitable economic returns. The best way to break this psyche of the farmers is to encourage them to cultivate organic cash crops which can fetch higher returns.

Hovito, a Farmer asserted that the challenge confronting the farmers is lack of marketing know-how. Almost all the farmers in the district are ignorant of marketing aspects. Therefore, building linkages for marketing agri products would increase production and improve livelihood opportunities.

Pangerloba, President, Naga Council, Dimapur, expressed the opinion that unless the exact number of the various schemes, number of trainings and the number of farmers assisted by the Government as well as the different projects being undertaken in the districts are listed, reflected and studied properly, mapping of human development attainments will not be accurate.

ECONOMIC LIVELIHOOD

Lungso Yimchunger, *Member, Yimchungrü Tribal Committee*, The Government should provide more agricultural loans to the farmers through banks without putting restrictions, since 90 percent of the people are dependent on agriculture for their livelihood. Through easy access to agricultural credit, investment in agriculture will increase resulting in higher productivity.

Chaupong Leinak, *President, Phom Students' Conference*, Youth of the district should be given training on entrepreneurship along with provision of financial assistance to enable them to set up enterprises.

Hokiye Yeputhomi, *Ex-Managing Director, Nagaland Handloom and Handicraft Development Corporation*, suggested that in order to improve the economic livelihood of the people, the Government must encourage cultivation of cash crops like banana, lime, lemon and other citrus fruits. These crops are grown everywhere in Dimapur district with low cost of cultivation. The quality is also high and there is high demand for these fruits. Introduction of support price for these crops would enable farmers to continue production without fear of loss. Buy back arrangements should be made or marketing linkages should be established. The Government should also set-up food processing industries in the district. This will not only add value to the products and create markets for the products but also generate employment and enhance the economic livelihood of the people.

Akok Walling, *a Participant* opined that to boost agricultural development, marketing linkage should be created by the Government and training needs of farmers should be addressed.

S. James, *Head Goan Bura, Khelma village* said that the villages in Khelma area produce surplus rice every year. He however said that, the villagers cannot market the surplus produce due to lack of road connectivity. At times the surplus food grains find its way to markets in Assam. Therefore attention should be given to developing roads in the area.

Elizabeth Ezung says that even in business as in other profession, one should be sincere, hardworking, honest and humble in their dealings. She is disappointed with the Government for its tendency to neglect genuine business entrepreneurs. When the business people do well, the economy will improve and benefit the people.

FORESTS, NATURAL RESOURCES & MINERAL WEALTH

Khehoshe Shohe, *Evaluation Inspector*, avers that the aesthetic value of forests and natural resources should be maintained and enhanced by planting different species of trees especially indigenous varieties. He also suggested that bamboo and other local products ought to be promoted, which could contribute to the revenue of the State, while creating employment opportunities. Located in the commercial hub of Dimapur, he mentioned that Nagaland Zoological Park ought to be a place, which the people of Nagaland should be proud of. Hence, the habitat of its flora and fauna should be improved. He opined that stakeholders from different villages should be included in decision making. He also added that maintenance of proper land demarcation would prevent land disputes and that all citizens of the State ought to inculcate a sense of duty towards reducing pollution. Limiting the number of auto rickshaws in Dimapur would reduce traffic congestion and air pollution to a certain extent.

Alen Longkumer, *a Participant* feels that the linkages between jhum cultivation and forest degradation requires in-depth study.

Lithsaba, *Chairman, Bazaar Ward, Kiphire Town* stated that the local people were aware of the availability of minerals and natural resources in Kiphire district but due to lack of technical knowhow the resources have been left untapped. Therefore, Government should initiate action to capitalise the resources. The public too should facilitate development in the area and claim only reasonable land compensation. Industries will then be established in the district which will create employment opportunities. Prevention of anti-social elements should be a joint effort of all stakeholders.

Rampaukai, *Forest Range Officer* stated that since 80-90 percent of forest areas is owned by villagers and only about 10 percent is owned by the Department, the cooperation of the villagers is imperative for ban on hunting to be successful. Moreover he asserts that a strong commitment on the part of the Village Council is necessary to control rampant burning of forests and to preserve them.

Y. Alepla Chang, *Ex-President, Eastern Nagaland Women Organization Tuensang District*, stated that since Tuensang has many places of interest, these could be developed and promoted for tourism to boost the village economy in the district.

N. K. Kithan, *Landowner, Changpang* is optimistic that modalities which are being worked out between the State Government, the oil companies and the landowners will be amiable and anticipates drilling to start once the MOU is signed. He says that a tripartite agreement will be beneficial for the Nagas in general. He states that deposit of oil in the State is a real source of wealth, as it would enhance the economy of the people and the State as a whole. Co-operation from every section of the society is therefore necessary if mineral resources are to be tapped and optimised.

EDUCATION

Tsala Sangtam, *Citizen*, opined that one reason for low performance of children in schools is due to non supervision by parents and non maintenance of study hours.

Tokheli Kikon, *Chairperson, Naharbari Village Council*, who was also the former Chairperson of the Village Education Committee of Naharabari GMS says that involvement of the community is important as it can help in improving the functioning of the school. She further highlights the contribution of the Naharbari community of Rs 20 lakhs towards the construction of 6 additional class rooms which was more than the funds received under SSA. She opines the need to scrap the non-detention policy.

Thunjano Tsanglao, *Ex-President, Kyong Eloeh Hoho* believes that it is the responsibility of teachers care, counsel and to nurture the young, growing minds of children right from school to college level. With teacher's guidance, students will be able to make the right career choices.

B. Mane, *Social Worker & Literature Secretary, Phom Baptist Christian Association, Longleng*, says that going by the present trend, a big gap will emerge in the field of education. Most people do not send their children to Government schools where education is imparted free of cost but opt for private schools where the standard is higher although more expensive. As a result, three types of schools: high, middle and low class schools have emerged in Nagaland which could ultimately result in social classification of the society.

Imchatsung, Dobashi stated that in rural areas, the practice of proxy teacher is affecting the quality of education. The Village Education Committees should look into this problem and ensure that appointed teachers attend their duties.

Representative from Konyak Students' Union said, The teaching staff strength in Government schools in Mon district is very low. Government should therefore increase appointment of more teachers. In-service training should also be conducted for all teachers and mid-year transfer of teachers should be avoided to prevent adverse effects on the teaching-learning process. Practice of transfer along with post, attachment of teachers to non teaching offices should be done away with. Infrastructure of schools should be improved and grant-in-aid should be given to private schools which have high performance level.

Ruokuohe-ü Miachio, President, Angamimiapfü Mechü Krotho stated that Nagaland should set up technical colleges and institutions in different fields eg, engineering colleges, medical colleges and other technical or vocational training institutes to address the issue of inadequate seats in technical institutions outside the State.

Luikiegong, Chairman of Old Tesen Village Council expressed the need and importance of introducing culture oriented courses in schools to make students aware of their culture and traditions. School curriculum should be designed in such a way so as to tap the inherent talent of each child.

S. Chubasangla Chang, Principal, Sao Chang College, highlighted the importance of parent-teacher relationship. She stated that when parents actively participate in their childrens' education and interact with teachers, students are motivated to achieve. Instead of complaining about what we do not have, one should optimize what is available.

Toniho Yeptho, Ex-Secretary, Sumi Hoho stated that the RTE which legitimizes Free and Compulsory Education has its merits yet the non-detention policy is premature for a state like Nagaland. Average students who do not want to study make no effort to study yet they are guaranteed clearance for the next class. This is not education.

HEALTH

Izietelung, *Executive Secretary, Zeme Baptist Churches Council (ZBCC)* expressed annoyance with the practice followed by most doctors in Peren district in availing leave, turn by turn which creates the possibility of patients receiving wrong treatment in the absence of doctors.

Collective Voice, *Dimapur*, emphasized on the urgent need for setting up a medical college in Dimapur district and urged the civil societies to press towards materialisation of the desire. If Assam can have 15-20 medical colleges, it's not impossible to have at least a medical college in the State.

Khumtsi Yim, *Citizen*, expressed that most of the Village Health Committee members are concerned about the financial aspects of the health centre but are not aware of their roles and responsibilities. Ultimately the objective of communitisation is defeated. Therefore sensitisation and awareness generation on the roles and responsibilities of committee members should be organised regularly.

Petekhrievo Dzüvichü, *President, Kohima Village Youth Organisation (KVYO)* was of the view that people were indifferent to the health care services provided in the Government health centres although they were good. He therefore expressed the need for the Department of Health and Family Welfare to publicise the available health care services in the health centres.

H. Leisha Phom, *President, Phom People's Council* stated that due to poor medical facilities in Longleng district, patients go to other district hospitals for treatment even for minor cases. The district hospital therefore requires to be strengthened with the requisite logistics.

Temsukala, *Housewife* expressed satisfaction with health care facilities in Mokokchung district although not sufficient. Mother and child health care services and immunization are satisfactory many sick patients go outside the State for treatment due to lack of adequate facilities indicating the need for improvement in medical facilities. Awareness programmes also need to be made more intensive.

The Sudent Community of Zunheboto sought the long term plans of the government to combat high blood pressure, cardiac problems and cancer especially stomach and lifestyle diseases, diabetes, dengue fever and Japanese encephalitis diseases.

Members of Konyak Nyupuh Sheko Khong (KNSK), expressed the view that level of commitment of doctors, nurses and medical staff posted to Mon was low. The situation in the interior areas was worse. Appointment of qualified medical staff from within the district would ameliorate the situation since the local people would be in a better position to understand the local problems.

K. Hoshi, a Citizen of Phek said that paramedical and clinical help was the priority requirement for the people. He highlighted the shortage of manpower in the Medical Department in Phek district and need for an ambulance for transportation of patients from the nearby villages to the district hospital. Politicians and bureaucrats should not be given the assignment of handling financial resources for the health sector as they do not fully understand the sector as much as the medical practitioner and decision in the Medical Department should be decentralised.

T. Pangjung Sangtam, Deputy CMO, Tuensang, said that through the communitization programme the delivery of health services has improved. There has been considerable reduction in HIV prevalence in the district. He informed that to combat the menace of Malaria, Indoor Residual spray (IRs) was carried out in two rounds in the Tuensang district. But despite the efforts, the problem of Malaria still persists in the district due to the climatic conditions, improper water storage, ignorance and lack of initiative of people for prevention, delayed and incomplete treatment.

Thungdemo Kyong, Social Worker is of the view that Government agencies and professionals must create awareness on importance of health care. Central schemes such as the JSY must be propagated, as it has visibly reduced the mortality rate of infants. He says that proper medical infrastructure can not be set up or expanded, unless landowners are willing to part with their land for the benefit of the public hence they should be properly sensitised on the future implications of land acquisition.

BASIC SERVICES

Shri Lumpise, *Ward Representative* stated that water is a scarce resource and advised people to use it judiciously.

Kekuolhouthie Dzüvichü and Member, Kohima Village stated that the Kohima Village has been provided with piped tapped water services but with erratic water supply. Therefore villagers buy water from private commercial tankers or fetch water from ponds or other sources. He opined that the indifferent attitude of the people and their ignorance about their rights to basic amenities was the cause for irregularities in the delivery of public services.

N. Joseph Chemdok, *M.A (Political Science)*, the public distribution system and the implementation of mid day meal scheme under Longleng district needs proper screening and monitoring to ensure that it reaches the targeted beneficiaries.

S. Khoiwang Wangsa, *Ex-President, Konyak Union*, expressed the need for computer training centres for the people in Mon district. Many eligible candidates are willing to undergo such training programmes but are impeded due to financial constraints. Hence setting up of computer training centres in Mon district will facilitate such candidates to acquire skills in computers at a lesser cost than undergoing training outside the district.

Holuvi opined that sanitization campaigns should be carried out at regular intervals both in rural and urban areas. Campaigns conducted only once or twice were unlikely to impact old habits.

Akwetbe Ngaubui, *a self-employed youth from Jalukie* observed that even urban areas like Jalukie is no better than the remote villages when it comes to availability of regular water supply. The old GI pipes are not only rusted posing health hazards but water seldom flows through them.

Pat Keyhie, *Urban Development Officer, Department of Urban Development, Phek*, stated that the shortage of drinking water during the dry seasons was due to the small size of the main pipes used for supply of water.

B. Longkumer of *Duncan Basti* expressed the need to improve power supply. With a growing population, supply of safe drinking water and sanitation should be given priority. More pragmatic methods of garbage collection have to be devised especially in the urban areas and the system of pay-and-use toilets should be encouraged.

INFRASTRUCTURE & CONNECTIVITY

Village Representatives of Zunheboto pointed out the prevalence of the practice of random preparation and collection of electric bills by the employees of the Power Department without reading the electric meter. GBs of the town stated that electricity bills prepared by the Power Department were made by estimation method rather than by reading the meters.

Vineizo, *Executive Engineer, PHED, Phek* informed that under the rationalisation policy of the Department, most of the work charged employees had availed Voluntary Retirement Scheme. Therefore there was only a small number of employees attending to their duties incapacitating the Departmental from efficiently addressing complaints.

Sentila, *a Citizen* opines that since water supply by PHE Department for Mokokchung town is insufficient, construction of rain water harvesting facility for the community and water treatment plant must be given attention by the Government. The waste management system in urban areas by the Mokokchung Municipal Council must be extended to all the wards and should not be confined to collecting trash from designated points. The MMC public parking plaza must be made functional.

Khoiawang, *President, Konyak Union*, expressed the need for road connectivity between the local trade centres to promote trade and improve livelihood.

Yanglizi Sangtam, *Representative United Sangtam Likhum Pumji*, stated that 90 percent of the people in Tuensang district were cultivators, emphasise should be placed on construction of Agri-Link roads in all the villages to facilitate easy access to the markets for sale of agricultural products. Drainage in the towns should be properly constructed and maintained. However, it is the collective responsibility of the people for ensuring proper sanitation in the town.

Petekhriezo Dzüvichü, *Ex President, Kohima Village Youth Organisation (KVYO)* was of the view that bad road conditions in Kohima was because of the improper drainage system. For development of roads, the concerned Departments should first take steps to improve the drainage system. He suggested that road development and maintenance should also be communitised.

H. Leisha Phom, *Phom, President, Phom People's Council (PPC)*, stated that since Longleng is a newly upgraded district, it needs more intra-district connectivity roads. Except Longleng-Changtongya road, there is no proper road facility within the district.

Mopen, *former President, Konyak Union* stated that to travel from Mon to Namtola necessitated crossing through Assam which poses many challenges such as bandhs etc. He therefore highlighted the need to maintain the Tuli to Naginimora road as an alternative route for emergencies.

Rangnim, *Head Goan Bura of Ikiesingram village* informed that there are about 30 odd villages beyond Ahthibung town which are agriculturally very productive but remains cut-off from the rest of the district during monsoon season due to poor road connectivity. Roads, transport facilities, telecommunication, water, power supply, health care and other public utility services are still far-fetched dreams in these areas and people suffer untold hardships. Besides with lack of road connectivity, the bumper paddy harvested remains dumped in the villages.

T. Maong Longchar, *Chairman Ao Khel, Notun Basti* suggested the need for properly planned roads and drainage in the State. With scientific approach in implementation. He advocated communitisation of the power sector in the urban areas as is done in rural areas which he opined will benefit consumers as well as the Department. Phase wise the communitisation process can be introduced in selected colonies with the support of the community.

GENDER ISSUES

Ramtsula, *Yimchungru Woman Organisation*, expressed the need for more credit facilities for women SHGs and earmarking of 1 (one) day by the banks for transaction of business with women SHGs alone. Women are not treated as equal partners within the household and social mobility is restricted. Women do not have decision making power in all areas. There is therefore an urgent need to change such mindset and attitude.

Akokla Phom, *Former President, Phomla Hoichem*, affirmed that unlike in the past, Phom men have realised the importance of educating women and the importance of their involvement in decision making. Phom women have made great strides in education and in entrepreneurship. Women now manage their own business and Self Help Groups.

Loyibeni Kithan, *a Social Worker* observes that not much has changed in the status of women in Wokha district. She says there can be changes, if educated women give back to the society, more than what they are contributing at the moment. She is of the view that the proposed 33 percent reservation ought to be thoroughly studied by the Government before implementation to arrive at an acceptable solution.

Watsu L. Obangla Ao, *Former President, Watsu Mungdang* stated that customary laws should evolve to keep up with the changing times. Gender friendly laws should be formulated for marriage and divorce. She further pointed out that since major decisions of a village / community are conceptualised during 'Senso Mungdang' (Citizen's Conference), women should be given the right to attend such citizen's meetings. When half of the population's rights are denied, overall development or progress of a society is threatened.

Rokokhono and Neilhousienuo, *Representatives from Angami Women Organization (AWO)* informed that women were getting 25 percent of the funds under the Village Development Board in their respective villages. However, better participatory planning with bottom-up approach is required to address womens' needs and interests.

Chenithung stressed on the importance of inculcating the attribute of integrity to change the society.

C. Yomah suggested grant of scholarships to every girl child to incentivise and encourage parents and guardians to send their daughters to school. This will prevent parents from keeping girl children at home to help in household chores.

Adai Reunim, *President of the Zeliangrong Mipui Organisation, Nagaland* opines that in the contemporary world, Naga women should share equal opportunity with men in decision making. Earlier, gender inequality existed even in the education sector depriving girl children but this has changed in recent years. She also indicated that even during meetings where women participants are called, they were assigned to prepare tea or to cook.

T. Lisukyü, *Representative, ENPO* said that under the customary practices of his village, if the husband dies whatever property acquired by the couple after marriage would be given to the widow but not ancestral property. The case is similar if a couple gets divorced. In his opinion, while ancestral property and fields should not be passed on to the daughter, there should be no problem in giving her a house or a plot of land to build a house. He further expressed the need for various NGOs and tribal bodies to have exchange views and ideas on each other's customary practices to formulate mutually acceptable laws.

Mayamon Yeptho *representing the Women Organization, Sumi Totimi Hoho (STH)* dwelt on the prevalent unequal treatment of women in the political sphere. She indicated that absence of women in the State Legislature as a pointer to the discrimination against women. She stated that she was fortunate to have inherited property from her parents, but generally, majority of the women do not inherit property, thereby sowing the seed of inferiority complex. On issue of wage disparity, she cited the example of Sukhalu Village where wages are equally paid irrespective of gender. Such practices need to be encouraged and emulated.

W. Krome, *Former SP, Phek* pointed out that in other societies, rapists are awarded rigorous imprisonment entailing physical labour. But in Nagaland, prisoners are provided free food and exempted from doing manual labour. He opined that the Criminal India Penal Code is not suitable in the Naga context and stringent action should be taken to the extent of even severing parts of body of rapists if they repeatedly commit such crimes.

CONCLUSION

As intended, the platform was utilized by the stakeholders and many diverse views and opinions came to light on the issue of improving governmental policies for effective implementation throughout the State. Although, services are in place, the question of availing quality and continuous delivery of services with proper infrastructure facilities pose real challenge that is again found more prevalent in rural areas. The crux of the problem lies in targeting the vulnerable groups in policymaking and new schemes should be put in place customised to local conditions and requirements.

On the education front, issues on absenteeism of teachers, existence of 'proxy system' and 'non detention policy' were the most highlighted. Another issue expressed was the persistent unemployment of the youth and how tackling this issue should be the foremost priority of the Government. On gender issues, women cited incidences of their deprived state like having no right over land inheritance, 33 percent reservation debate and the customary practices favoring men. Moreover, another pointer was the lack of road connectivity to most villages and towns that becomes the core of hardships faced by many affecting the social and economic activities.

Basically, people's aspiration is merely on the level of accessibility of quality services with a hope of a level playing field in an otherwise unequal society. Thus, a more effective and more efficient public service delivery system has to be in place, for which policymakers need to take cognizance of the aspirations and voices of the people and then find ways to deliver services that meet their needs. This will improve their living standards. Recent developments in the signing of the Framework Agreement between the NSCN(IM) and the Government of India leads to hope of a final solution for development of the State.









THE WAY FORWARD

The first Nagaland State Human Development Report (SHDR) was brought out in 2004 during a period when there was excitement and hope in the air. India's liberalization process was bearing fruits and the country's economy was growing by leaps and bounds and with it, the flow of development funds to the states was also increasing substantially. The most exciting aspect for Nagaland was however, the peace process that was underway since 1997 and which provided hope for a lasting peace in the State. Accordingly, the SHDR of 2004 was very optimistic and envisaged Nagaland of becoming a 'Developed State' by 2020. However many of the expectations could not be materialized due to certain factors. The first being the global economic downturn since 2007 and the second being the much longed for Naga political settlement which could not move forward for quite some time. The present State Human Development Report (SHDR) is however, once again being written with much hope and excitement amidst the 'Framework Agreement' that was signed in August 2015. The SHDR, 2004 had rightly stated "Throughout the State's existence, insurgency has been a part of life in Nagaland" (SHDR, 2004, pp.192). The importance of peace stems from the fact that much of the efforts of the Government are often stymied and the systems very badly affected in an atmosphere of uncertainty and violence. Similarly, no private development efforts are likely to be forthcoming. It is with the expectancy that the Framework Agreement will soon be implemented that efforts can now be turned towards accelerating the development process.

The second important development is the release of the North East Region Vision 2020 Document by the Prime Minister in 2010. The importance of this Document lies in the commitment it indicates to integrate the North Eastern Region (NER) into one important economic region. This commitment is seen in the listing of power, road and other infrastructure projects which aim to link

the NER not only to the rest of the country but to the neighbouring countries of South and South East Asias as well. Therefore developments in Nagaland must also be viewed in this light.

A third change since 2004 has been the much better availability of data over the last decade or so. At the time of writing the SHDR, 2004 there was almost no availability of data at the district level, in particular. Even at the State level, compilation was done using a combination of state, central and private agency sources. This had the obvious problem of comparability of data. In particular, the non-availability of Census 2001 data at the time of writing SHDR, 2004 made compilation particularly difficult. In this volume, an attempt has been made as far as possible to re-calibrate past data. Hence, in many cases, straightforward comparison with numbers for 2004 has not been easy. In addition, since 2004, three new districts of Peren, Longleng and Kiphire have been created: the first out of Kohima and the other two out of the eastern district of Tuensang. This makes straight forward statistical comparisons with SHDR 2004 somewhat problematic. However, the broad trends are clearly indicated.

Structure of the Economy

At the aggregate level, the State has made substantial progress since 2001 with all the three indices, the Human Development Index (HDI), the Gender Development Index (GDI) and the Human Poverty Index (HPI) showing significant improvement over the decade 2001 to 2011. The HDI improved from 0.59 to 0.63, the GDI from 0.49 to 0.58 and the HPI from 40.02 to 28.89 (the HPI measure is an inverse measure. Hence decrease in the index reflects an improvement in poverty indicators).

As indicated in Chapter 12, these improvements can be seen even at the district level. In addition, Nagaland's Human Development Indices compare favourably with the National averages and are one of the highest in the country. In order to carry forward such developments at faster rates, it is necessary to bring about developmental change in the structure of the economy.

One of the most important feature of a developing economy is the shift in structure from an agricultural based economy to one based on growth of the secondary (manufacturing) and tertiary (services) sector. This is also seen in

the changing occupational structure of the economy. This change, suggested by Colin Clark, implies that overtime there is a shift in the percentage of population dependent on (primary) agricultural occupations to one dependent on the secondary and tertiary sectors. It is here that one sees, at the State level, that Nagaland does not seem to have followed the traditional growth path. For one, the primary sector continues to dominate accounting for about 35 percent of the Gross State Value Added (GSVA) in 2013-2014, the secondary sector accounting for about 10 percent and the tertiary for 55 percent. In addition, the manufacturing sector has seen almost no growth while growth in the tertiary sector growth has been mainly in public administration. Second, growth in the Gross State Value Added (GSVA) has slowed down from around 10-12 percent during 2010 to around 7 percent now. Third, the GSVA seems to be driven mainly by growth of the agricultural sector which itself is slowing down as crop cultivation reaches its limit of extension.

Table 13.1: Annual Growth Rate of Gross State Value Added at Constant Prices (2011-2012 Price)

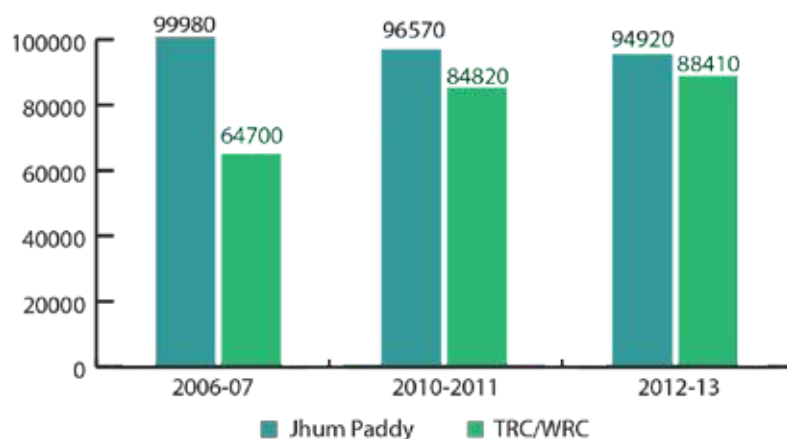
Year	Growth Rate
2012-2013	5.73%
2013-2014	8.81%
2014-2015	7.20%

Source: Nagaland Economic Survey 2015-2016, Department of Economics & Statistics

Agriculture

As already noted, the economy is overly dependent on agriculture. Moreover, much of the production is dominated by paddy, maize, barley and millets mainly for self consumption. In this scenario it is not surprising that, as the share of crop agriculture in GDP declines and the population dependent on it remains about the same, the per capita income of farmers falls over time. The positive features have been the decline in the share of Jhum cultivation over time in major crops like paddy in favour of wet rice cultivation as shown in Figure 13.1

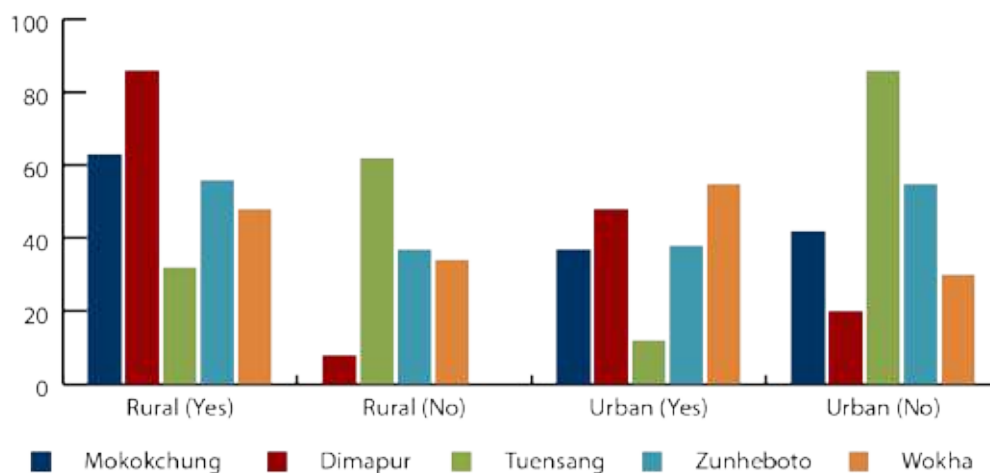
Figure 13.1: Area (in Hectares) Under Paddy (Jhum and WRC)



Source: Statistical Handbook 2013, Government of Nagaland

Over the last decade or so, the limits of productivity seem to have been reached in the context of the present agricultural practices. It is thus clear that further income increase in agricultural activities will have to come by shifting to commercial scale cash crop agriculture and other non-crop agricultural activities like poultry and dairy farming and movement to production of commercial processing of fruits and vegetables and to other areas of agriculture such as MAP (Medicinal & Aromatic Plants), Bamboo, Honey, etc.

Figure 13.2: Comparison of the Pattern of Area Usage for Selected Crops (Area in Hectares)



Source: Statistical Handbook 2013, Government of Nagaland

While the various Agriculture Missions have led to some movement towards commercial farming, it is unlikely that farmers will do so in a big way till the issues of post harvest activities such as marketing, storage, transportation and processing including crop insurance are attended to urgently. The State will have to play a big role as an enabler of commercial production by building up the private players in this realm.

Given this high dependence of the population on agricultural income, the way forward must begin from the agricultural sector. It must be remembered that with around 28 percent of land under cultivation, the limit to expansion of production has more or less been achieved given that about 52 percent of land is under forests and cannot be used for cultivation. Hence, increase in agricultural incomes must come through increased production of commercial crops with a focus on crops whose commercial viability is higher. Second, there is a need to look at extension of commercial production of crops to some of the eastern districts where it is almost non-existent. This also implies the use of technology to increase value added commercial production via food processing. Finally, the role of the State in crop insurance, establishing connectivity to markets and enabling private enterprise seems to be the way ahead to lift agriculture from the vicious circle of low productivity, production for subsistence and low incomes.

Non-Agricultural Economic Livelihood

Apart from agriculture and forestry, livelihood comes from the manufacturing and services sector. In hill states, large scale industry is in general disadvantaged. However, even the Medium and Small Manufacturing Enterprises (MSME) sector has seen little development. The registration of MSMEs peaked in 2008 but has since then gone down dramatically making it likely that the registrations had little to do with actual production plans but were probably encouraged by the subsidies such units could avail.

Non-agricultural livelihood in Nagaland thus seems to have been largely dependent on the informal sector. These workers, comprising about 36 percent of the population, are largely involved in retail trade, construction, small manufacturing and the Government sector. Of these, the most rapid growth has been in small manufacturing and services like retail trade and the

Government. In this aspect, little seems to have changed since the beginning of the decade. What is alarming is that almost 10 percent of the non agricultural work force is employed in the Government. This is clearly not sustainable as the State Government has to rationalize its manpower planning in the long run. The SHDR for 2004 had noted the need for an agro-based industrial sector. This does not seem to have happened. It was also noted in 2004 that new areas like IT sectors and telecommunications would be growth drivers in the service sector. This too has not happened and the Economic Census for 2005 and 2013 in fact show that employment in these sectors has fallen over the last decade or so. Clearly, employment growth is the real challenge in looking ahead. On December 31st, 2014, almost 20,000 graduates were registered in the employment exchanges compared to about 3169 in 2000. In addition, the number of educated unemployed (those with Class 10 degree and above) are increasing by 10,000 every year. The stock of registered educated unemployed is up from about 22119 in 2000 to about 65,000 today. Thus, gainful employment of the educated is imperative if general urban discontentment is not to get out of hand. This is so especially as the Government seeks to downsize and rationalize over time.

The way ahead seems two fold. One, as also noted in the SHDR 2004, by seriously focusing on creating skills for entrepreneurship among the Naga youth. It is necessary to increase employment opportunities in organized sectors like food processing, information technology and non-crop agro industries like poultry and dairy farming.

Second, while large scale industry in general may be unviable, some iconic sectors could be developed in the plain areas to exploit resources like coal, oil and other minerals available in the State. Even an abundant resource like bamboo has not been fully utilized for development of the handicraft sector or in paper production. Clearly, the need for technology upgradation is necessary. In any case, a “business as usual” approach will have to be given up in favour of a focused sectoral development plan if the problem of educated unemployment is to be solved.

Social Issues: Education, Health, Gender Disparity

As is now well known, while economic livelihood is critical to any development, it is also important to see how social indices have improved as this impacts, in particular, the two indices of poverty Human Poverty Index (HPI) and gender disparity Gender Development Index (GDI). In addition, the Human Development Index (HDI) has two important components apart from income: education and gender. Education determines the progress in the quality of human resources and thus the ability of people to be a part of the development process. On the other hand, increasing gender inequality indicates that the State is not efficiently utilizing its human resources.

On this front, the State has made important progress since 2001. For one, the literacy rate in the 2011 Census at 79.6 percent is a 12 percent improvement over the figure for 2001. Similarly, broad indicators like the Gross Enrolment Ratio, Enrolment Rate etc. also show fairly dramatic change over the last decade or so.

Table 13.2: Gross Enrolment Ratio of Primary and Secondary Schools of Nagaland

Type of Institution	2005-2006	2013-2014
Primary Schools	108.27%	123.82%
Middle Schools	66.44%	85.15%

Source: Census 2011, Projected Child Population by NUEPA & UDISE Enrolment

Even more important, the communitisation process has led to fairly dramatic improvement in decentralization of schools with the State and the communities sharing the burden of hiring teachers, maintenance of schools and monitoring teacher performance. Similarly, at the primary and secondary education levels there does not seem to be any major discrimination in enrolment of male and female students.

However, there remain three areas of concern. For one, the retention rate of students in all schools in 2013-2014 fell from around 80 percent for Classes I to 5 to around 50 percent for Classes 6-8. Second, while the growth in the physical infrastructure has been impressive, what still seems to be a problem is the quality of teaching. Thus the overall pass percentage in Government

Schools in 2015 at around 65 percent is about the same as it was in 2003. In addition, the pass percentage is well below the rate in private schools indicating that Government Schools are not providing suitable alternative to the more expensive private schools.

The third area of concern is the enormous regional disparity. To take one example, in eastern districts like Kiphire, Longleng and Mon the pass percentage at around 20 percent has shown little change. This is also reflected in the wide disparity in literacy rates which are as high as 91 percent for developed districts like Dimapur in 2011 and as low as 57 percent for Mon. Clearly, in terms of both access to schools and quality of teaching there is a sharp inequality between the developed districts like Dimapur and Kohima and the eastern districts of Longleng, Mon, Kiphire and Tuensang. The way forward must involve removing these disparities.

This regional disparity and poor quality of services also extends to issues of health and gender inequality. While in the State, the health sector has shown impressive improvement in the number of Primary Health Centres (PHCs) and doctors over the last decade or so.

Table 13.3: Primary Health Centres (PHC)

Year	No. of PHC
2003-2004	68
2013-2014	112

Source: Statistical Handbook 2013, Government of Nagaland.

Yet immunization figures for children remain low as compared to the National average in contrast to other indicators like education where performance of the State is well above the National average. Here too, as in education, one sees considerable regional disparity as poor quality of roads particularly in the eastern districts makes access to PHCs difficult. Hence one sees over utilized PHCs in the developed districts and underutilized PHCs in the backward districts. In general, as in education, while the progress in the physical infrastructure and communitisation of the health sector has been commendable, the issues of quality and regional disparity need to be addressed.

Finally, the State has also made overall remarkable progress in reducing gender disparity. Calculations show that GDI index for 2011 at 0.58 has considerably improved over the recalculated figure of 0.49 for 2001. One explanation is that the female literacy rate increased from 61.92 percent in 2001 to about 70 percent in 2011. A principal factor ensuring gender equality is education and here it is seen that the enrolment rates for male and female in 2011 were not too dissimilar which is certainly an achievement.

In other areas, too, the State has moved ahead in trying to improve the status of women. Important legislative measures like reservation for women in local bodies which administer many schemes via the communitisation of services are now being discussed. The issue here seems to be the need to move towards actual implementation of these legislations. In other words, women are still not getting a share in decision making at the Village or State level. Similarly, attitudes towards economic empowerment of women through sharing of assets and grant of equal pay for equal work in the unorganized sector are still slow to change. It is not surprising then that the gender gap in literacy, for example, has also increased from 9.85 percent to 12.74 percent over the period 2001 to 2011.

A closer look at disaggregated data indicates that even in gender parity there are considerable regional disparities. Thus the GDI for a developed district like Dimapur is around 0.72 but as low as 0.45 for a backward eastern district like Mon. Clearly, overall economic development seems to drive gender equality and mere enabling legislation for equality in political power is not translating to equality in economic equality.

No development, either economic or societal, is possible without providing people basic amenities like water, housing, toilets, etc. This principally determines the changes in the Human Poverty Index (HPI). The other factors are issues like the immunization of children and school enrollment. As already noted, the State has shown significant improvement with the decadal HPI improving from 40.02 to 28.89 and improvement in enrollment in schools and increased PHCs. In addition, the provision of housing and basic amenities has seen an all round improvement since about 2001. It is worth noting that this improvement is seen in every district. As in the case of other indices,

two problem areas remain: one, increasing regional disparity so that the far flung districts like Mon and Tuensang have not seen the same improvements as districts like Kohima and Dimapur and, two, the quality of basic amenities needs some improvement.

Infrastructure

Economic development is impossible without provision of critical inputs. Among others, the two most important are power and roads. Without power, modern technology is inaccessible to both producers and consumers. Similarly, lack of proper roads prevents intra-district market linkages. Roads again are critical to make basic health and educational facilities accessible to the population.

Here the State has made considerable progress since 2001. The total power generation has improved from about 25 MW in 2001 to around 75 MW today. Similarly, the total length of surfaced roads has almost doubled from around 4096 kms in 1998-1999 to around 7600 today. In recent years, the Centre too has put renewed emphasis on inter district connectivity by converting roads connecting district to National Highways. In addition, there is also a focus on establishing some kind of State level grid of Highways with the Eastern Highway (the foothill road) connecting Dimapur to Mon, a similar Highway on the Eastern side and a Highway connecting these two main Expressways in an H pattern. While the Eastern highway is approved, the Dimapur-Kohima four lane highway is now in the construction phase and extension of this to Moreh in Myanmar is part of the plan to link the NER to South East Asia as part of the Centre's Act East Policy. As far as road connectivity is concerned, one can expect considerable improvement over the next decade or so.

However, the problem seems to be the quality of these roads and, in particular, the quality of district roads. The latter are actually the lifeline for the ordinary citizens of the State in terms of access to health, education and means of livelihood. Greater attention here seems to be the way ahead. In power, the establishment of the National power grid and power purchase agreements now allow States to import power in peak load times. Yet Nagaland remains a power deficit State. While communitisation of power has successfully decentralized distribution, it is unfortunate that even the power billed is not realized. In the power sector it seems necessary for the State to urgently ensure recovery of

power dues. It may even be argued that this recovery of dues is probably even more important than the efforts to generate additional power. In any case, additional generation can only happen in the future while the current power deficit needs urgent administrative action.

Apart from power and road connectivity, it was noted in the SHDR 2004 that the State need to develop urgently its digital connectivity to promote communications and the information technology sector. It has been argued in the Vision 2020 document of DONER that the NER in general and Nagaland in particular are climatically well suited to plug into India's growing IT commerce. Yet, a comparison of the 5th and 6th Economic Census indicates that the number of persons in the IT sector has fallen between 2005 and 2013. Clearly, the current tele-density of 69 percent must go to 100 percent if any progress is to be made on the IT front.

There are already elaborate plans on establishing air and rail links in Nagaland. In rail, the capital Kohima is to be connected via a broad gauge line to the National rail grid. There is also a proposal for a rail link along the foothill road. In air travel, the need seems to establish small airports and low cost airlines to make air link to remote areas accessible to all.

Industry and Minerals

While large scale industries are generally not workable in hill districts, there are some notable exceptions particularly in the context of Nagaland. The construction of the foothill road along the plains from Dimapur to Tizit opens some possibilities. Here the focus would be on what are often termed as Medium and Small Scale Industries. The possibilities for these "iconic" industries lies in the resource base of the State and ties in with the issue of environmental change and forests. For one, the State has an almost unlimited natural resource in bamboo. As bamboo is classified as a grass it does not come under the National restriction on cutting down of forests. Bamboo can be the basis for two sets of industries: handicrafts and paper. The bamboo handicraft industry is still in an unorganized state and is largely dominated by State sponsorship. With the emergence of better connectivity, the growth of a vibrant private sector handicraft industry could be a major source of employment.

Apart from bamboo, it should be possible to rejuvenate the Tuli paper mill in Mokokchung district with bamboo as the main raw material. This has so far not been successful, probably due to poor connectivity to the railheads at Dimapur and Tinsukia (Assam). The Tuli paper mill could also help kick start industrialization of the eastern districts of Mon and Longleng and provide the much needed gainful employment. Better connectivity and the emergence of private enterprise should facilitate the development of both the handicraft and paper industry into modern organized sectors.

Finally, the SHDR 2004 noted the need to develop the mineral based sectors. The State has an abundance of natural resources like coal, oil and bauxite. Technological issues are critical to these sectors as also connectivity to major roads/railheads. As connectivity improves, exploitation of these resources should be feasible. Coal mining, for example, could be a lead industrial sector in a backward district like Mon. The Economic Census for 2005 and 2013 also indicate that mining has been an important source of employment for people in the area.

Environment and Forests

In a distinct departure from the SHDR 2004, in this report, an important section on environment has been added. This was also done in the District Human Development Reports for the 11 districts prepared during the period 2009-2011. While the Human Development Indices do not yet incorporate quantitative indicators for environmental degradation, it is now commonly accepted that sustainable development must involve environmental protection. In fact, prior to the National ban on green felling in the late 1990s, forestry and logging was the main and lucrative occupation for many of the residents. However, despite adjusting to this ban, the Economic Census indicates that forestry and logging remain important sources of employment.

It is thus crucial to foster development in non-timber forest activities. The most important activities lie in the areas of medicinal and aromatic plants used in various medical and lifestyle industries. Yet, this has never been explored to develop an organized pharmaceutical industry in the State. Exploiting forest bio-diversity seems the obvious way ahead to support sustainable development in this crucial sector.

CONCLUSION

In terms of human development the State has moved ahead significantly as reflected in its various human development indicators. This progress has also been all round extending to issues like gender disparity, educational improvements, provision of basic amenities. Yet, in a number of directions, there is scope for substantial improvements.

For one, while economic and social progress has been substantial it has not equally benefitted all sections of the society. Thus, the regional disparities in economic development between the eastern districts and the rest have been increasing in areas like income generation, employment, education opportunities and modernisation of agriculture. This regional disparity was also noted in the SHDR 2004 and is probably due to the poor connectivity and access to these districts as also the insurgency in the State. With improving connectivity, removal of this disparity must remain a principal objective.

Second, while in many ways Nagaland has come of age in providing equality of economic opportunity to women, much more progress is necessary in this regard. In particular, equality of political opportunity in the legislature and in local bodies must be seriously implemented.

Finally, and possibly most crucial, the structure of the Nagaland economy has changed very slowly and subsistence agriculture, dominance of government employment and lack of a vibrant private sector are still the dominant themes. In a modern society, this is not sustainable. Change in the structure of the economy seems to be the way ahead.

Appendices





APPENDICES

Urban Haat, Dimapur



Table 1.1: Developmental Statistics of Nagaland at a Glance

Sl. No	Parameters	1980-1981	1990-1991	2000-2001	2010-2011
1	Total Area of State (in sq km)	16579	16579	16579	16579
2	Total No. of Districts	7	7	8	11
3	Total No. of Blocks	21	28	52	74
4	Total No. of Administrative Circles	17	32	37	106
5	Total No. of Census Towns	7	9	9	19
6	Total No. of Villages (Recognised)	1119	1225	1317	1428
7	Total Population of State	774930	1209546	1990036	1978502
8	Decadal Growth Rate of Population (in %)	50.05	56.08	64.53	-0.58
9	Male Population \$	415910	641282	1047141	1024649
10	Female Population \$	359020	568264	942895	953853
11	Rural Population \$	654696	1005478	1635815	1407536
12	Urban Population \$	120234	210095	352821	570966
13	Density of Population \$	47	73	120	119
14	Sex Ratio \$	863	886	900	931
15	Literacy Rate (%)\$	50.28	61.65	66.59	79.55
16	Male Literacy Rate (%) \$	58.58	67.62	71.16	82.75
17	Female Literacy Rate (%)\$	40.39	54.75	61.64	76.11
18	Gross State Domestic Product at Current Prices (Rs in Crore)	118.97**	655.07**	3551.81^^	11759.37*\$
19	Gross State Domestic Product at Constant Prices (Rs in Crore)	118.97**	269.58 **	3317.49^^	9253.99*\$
20	Net State Domestic Product at Current Prices (Rs in Crore)	105.47 **	578.95**	3286.02^^	10849.62*\$
21	Net State Domestic Product at Constant Prices (Rs in Crore)	105.47 **	237.98**	3061.02^^	8587.19*\$
22	Per Capita Income NSDP at Current Prices (In Rs)	1361	4990	16253	55582
23	Decadal CAGR of GSDP at Constant Prices(%)	N.A	8.00	28.95	10.97

* - Statistics of 1981-82 , # - Indoor/Outdoor Patients, ## Statistics of 2013 PWD,

^ Sample Registration System 2013, ^ \$ SRS 2012, \$- Census ,

** - 1980-1981 Prices, ^^ 1999-2000 Prices , *\$- 2004-2005 Prices, ^+ State Human Development Report 2004,

^* State Human Development Report 2016, @ Pertains to 2013-2014

Sl. No	Parameters	1980-1981	1990-1991	2000-2001	2010-2011
24	No. of Schools (Government + Private)	1545	1777	2295	3415 (2013-14)
25	No. of Primary School (Government + Private)	1144	1287	1491	1806 (2013-14)
26	No. of High Schools (Government + Private)	98	149	315	564 (2013-14)
27	No. of Higher Secondary Schools (Government + Pvt)	N.A	N.A	20	143 (2013-14)
28	No. of Colleges (Government + Private)	11	25	53	77
29	Enrolment in School (Government + Private)	190980	284987	609853	592638 @
30	Enrolment in Primary (Government + Private)	114239	134565	403076	386559 @
31	Enrolment in High Schools (Government + Private)	39312	82166	72959	55962 @
32	Enrolment in Colleges (Government + Private)	3152	10190	20907	20060
33	Total No. of Teachers in Schools	10001	12952	18438	29116 (2013-14)
34	Total No. of Lecturers / Professors in Colleges	181	405	965	1408
35	Pupil Teacher Ratio in School	19:1	22:1	33:1	20:1
36	Total No. of Hospitals (Government + Private)	30	31	10	11
37	Total No. of Hospital Beds (Government + Private)	1204	1554	2095	2738
38	Total No. of SCs/PHCs/CHCs	93	294	439	544
39	Total No. of Doctors	73*	252	366	452
40	Total No. of Nurses/ Compounders	254*	1346	1608	2203
41	Total No. of Patients Treated.	15611/ 537808#	40017/ 589551#	67318/ 412455#	182908/ 349167#

* - Statistics of 1981-82, # - Indoor/Outdoor Patients, ## Statistics of 2013 PWD,

^ Sample Registration System 2013, ^ \$ SRS 2012, \$- Census,

** - 1980-1981 Prices, ^^ 1999-2000 Prices, *\$- 2004-2005 Prices, ^+ State Human Development Report 2004,

^^ State Human Development Report 2016, @ Pertains to 2013-2014

Sl. No	Parameters	1980-1981	1990-1991	2000-2001	2010-2011
42	Infant Mortality Rate (Per 1000 live birth)	N.A	N.A	N.A	18 [^]
43	Maternal Mortality Rate (Per 100,000 live birth)	N.A	N.A	N.A	160 [^] \$
44	Total No. of Government Employees (Regular)	44446	57949	73291	91308
45	Total No. of Male Government Employees	39688	50045	59869	71666
46	Total No. of Female Government Employees	4758	7904	13422	19642
47	Total No. of Workers	373754	516237	849982	974122
48	Total No. of Main Workers	368321	511497	708455	741179
49	Total No of Marginal Workers	5433	4740	141527	232943
50	Total No. of People Employed in Agriculture	269220	378830	578284	442950
51	Total Forest Cover (in hectare)	862532 (83-84)	862532	862930	862930
52	Total Area Under Agriculture (in hectare)	147586	189852	240226	362231
53	Total Area Under Jhum (in hectare)	N.A	N.A	86200	96570
54	Total Length of Roads (Per 100 sq km)	26.40	47.78	59.47 (2000)	86.72##
55	Total No. of Surfaced Roads (Per 100 sq km)	3.47	14.16	24.83	45.75 (2013 PWD)
56	Total No. of Electrified Villages	367	1105	1196	1227
57	Total No of Banks	40	70	71 (1999)	111
58	Human Development Index	N.A	N.A	0.62 [^] +	0.63 [^] *

* - Statistics of 1981-82, # - Indoor/Outdoor Patients, ## Statistics of 2013 PWD,

[^] Sample Registration System 2013, [^] \$ SRS 2012, \$- Census, **- 1980-1981 Prices, ^{^^} 1999-2000 Prices,

*\$- 2004-2005 Prices, ^{^+} State Human Development Report 2004,

^{^*} State Human Development Report 2016, @ Pertains to 2013-2014

Table 2.1: Gross State Domestic Product of Nagaland at Current Price by Industry of Origin from 2004-05 to 2014-2015
(Rs in Lakh)

Industry	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013 (Provisional)	2013-2014 (Quick Estimates)	2014-2015 (Advance Estimates)	Decadal Growth Rate (2004-2005 to 2014-2015) (in %)
1	2	3	4	5	6	7	8	9	10	11	12	13
Agriculture	160164	166054	167695	168060	197853	218725	239873	280201	322901	369720	423329	10.76
Forestry & Logging	40402	42992	45150	47918	54572	57455	61532	67805	78718	89517	101799	9.55
Fishing	2346	2647	2877	2995	4619	5107	5424	5993	6613	7297	8052	13.85
Agri and Allied	202912	211693	215722	218973	257044	281287	306829	353999	408232	466534	533180	10.56
Mining & Quarrying	712	789	920	1038	1185	1361	1422	1475	1555	1650	1751	9.43
a. Sub Total of Primary Sector	203624	212482	216642	220011	258229	282648	308251	355474	409787	468184	534931	10.56
Manufacturing	9841	12222	14298	16589	16654	27809	21811	25881	27640	30417	33656	12.48
(i) Manu-Registered	2118	3642	3866	3925	3556	14245	6556	8702	8885	9550	10314	16.15
(ii) Manu-Unregistered	7723	8580	10432	12664	13098	13564	15255	17179	18755	20867	23342	11.13
Construction	56724	69097	81908	89888	126870	128387	107585	147240	164173	183053	204653	12.77
Electricity, Gas and Water Supply	7953	8603	9866	12214	16789	19053	24845	25797	29409	34232	39846	18.58
b. Sub Total of Secondary Sector	74518	89922	106072	118691	160313	175249	154241	198918	221222	247702	278155	13.41
Industry												
Transport, Storage & Communication	57734	63320	72758	85659	76844	82676	91187	107641	118513	130584	144335	9.09

(Rs in Lakh)

Industry	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013 (Provisional)	2013-2014 (Quick Estimates)	2014-2015 (Advance Estimates)	Decadal Growth Rate (2004-2005 to 2014-2015) (in %)
1	2	3	4	5	6	7	8	9	10	11	12	13
(i) Railways	327	341	464	617	564	805	876	817	930	1058	1205	13.72
(ii) Transport by other means	47956	50540	55707	60747	61433	63821	73160	88596	97456	107301	118568	9.66
(iii) Storage	81	85	103	123	148	179	291	358	415	481	557	23.90
(iv) Communication	9370	12354	16484	24172	14699	17871	16860	17870	19712	21744	24005	6.60
Trade, Hotels and Restaurants	19627	22093	23633	29825	36913	40143	48672	54250	61427	69898	79614	15.60
Banking and Insurance	8371	9383	12436	14689	15122	17988	23851	28406	38774	47251	57580	21.36
Real Estate, Ownership of Dwellings and Business Services	105139	130410	149180	179853	190949	209838	247858	282594	319331	362844	411828	13.95
Public Administration	68980	77483	83516	89207	124595	157966	192327	231403	252944	276527	302299	17.93
Other Services	45891	53675	61428	69560	80642	86169	109550	127248	145640	171942	201172	15.81
c. Sub Total of Tertiary	305742	356364	402951	468793	525065	594780	713445	831542	936629	1059046	1196828	14.78
State Domestic Product	583884	658768	725665	807495	943607	1052677	1175937	1385934	1567638	1774932	2009914	13.32
Population '000'	1781	1810	1840	1870	1901	1932	1952	2005	2055	2106	2159	1.90
State Per Capita Income (in Rs)	32784	36396	39438	43182	49637	54486	60243	69124	76284	84280	93095	11.21

Source: Directorate of Economics and Statistics, Government of Nagaland

Table 2.2: Gross State Domestic Product of Nagaland at Constant Price (2004-2005 Prices) by Industry of Origin from 2004-05 to 2014-15
(Rs in Lakh)

Industry	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013 (Provisional)	2013-2014 (Quick Estimates)	2014-2015 (Advance Estimates)	Decadal Growth Rate (2004-2005 to 2014-2015) (in %)
1	2	3	4	5	6	7	8	9	10	11	12	13
Agriculture	160164	162992	163672	164020	173787	179919	196516	207471	215770	224803	234222	4.28
Forestry & Logging	40402	42460	43686	44546	49776	49924	52743	55271	57295	59171	61124	4.37
Fishing	2346	2640	2754	2837	3752	4035	4279	4301	4483	4671	4867	7.89
Agri and Allied	202912	208092	210112	211403	227315	233878	253538	267043	277548	288645	300213	4.35
Mining & Quarrying	712	773	895	997	1060	1196	1241	1251	1270	1300	1338	6.47
a. Sub Total of Primary Sector	203624	208865	211007	212400	228375	235074	254779	268294	278818	289945	301551	4.35
Manufacturing	9841	11855	13461	15261	13236	21105	16293	17814	18539	19358	20271	6.62
(i) Manu-Registered	2118	3533	3603	3611	2826	10510	4835	5856	5973	6112	6283	10.17
(ii) Manu-Unregistered	7723	8322	9858	11650	10410	10595	11458	11958	12566	13246	13988	5.32
Construction	56724	67024	77403	83697	100835	101891	81759	95271	104881	114184	124312	6.58
Electricity, Gas and Water Supply	7953	8344	9322	11236	13344	13937	18161	18294	19209	20169	21177	11.40
b. Sub Total of Secondary Sector	74518	87223	100186	110194	127415	136933	116213	131379	142629	153711	165760	7.14
Industry												
Transport, Storage & Communication	57734	62187	71231	83731	74342	90633	105944	112780	118638	124909	131774	8.92

(Rs in Lakh)

Industry	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013 (Provisional)	2013-2014 (Quick Estimates)	2014-2015 (Advance Estimates)	Decadal Growth Rate (2004-2005 to 2014-2015) (in %)
1	2	3	4	5	6	7	8	9	10	11	12	13
(i) Railways	327	330	423	525	448	623	730	664	673	689	708	8.68
(ii) Transport by other means	47956	49023	52643	54672	55282	56462	64705	65680	68030	70343	72911	4.49
(iii) Storage	81	82	94	105	118	134	214	230	244	258	273	15.32
(iv) Communication	9370	12752	18071	28429	18494	33414	40295	46206	49691	53619	57882	19.54
Trade, Hotels and Restaurants	19627	21450	22369	27438	29338	31894	34557	37329	39399	41975	44766	8.81
Banking and Insurance	8371	10102	13689	16311	16089	19193	23630	27087	34897	42340	51485	18.88
Real Estate, Ownership of Dwellings and Business Services	105139	126450	140381	153292	153359	157378	178252	183686	192599	204636	218551	6.61
Public Administration	68980	75158	78922	82070	99027	110176	129923	156093	169245	182686	197301	12.19
Other Services	45891	52136	56000	59101	63742	64977	82101	85737	90881	96504	102777	8.47
c. Sub Total of Tertiary	305742	347483	382592	421943	435897	474251	554407	602712	645659	693050	746654	9.27
State Domestic Product	583884	643571	693785	744537	791687	846258	925399	1002385	1067106	1136706	1213965	7.52
Population '000'	1781	1810	1840	1870	1901	1932	1952	2005	2055	2106	2159	1.90
State Per Capita Income (in Rs)	32784	35556	37706	39815	41646	43802	47408	49994	51927	53975	56228	5.52

Source: Directorate of Economics and Statistics, Government of Nagaland

Table 4.1: Gross State Domestic Product from Agriculture and Allied Sector at Constant (2004-2005) Prices

(In Lakh Rupees)

	GSDP/GDP from Agriculture & Allied			% Share of Agriculture in GSDP/GDP			% Growth in GSDP/GDP (Agri & Allied) over previous year	
	2010-2011	2011-2012	2012-2013	2010-2011	2011-2012	2012-2013	2011-2012	2012-2013
Nagaland	298965	316402	335647	26.42	25.78	25.2	5.83	6.08
All India	1306942	1466753	1644834	14.5	14.1	13.7	12.23	12.14

Source: All India Agricultural Census, 2013, Ministry of Agriculture, New Delhi

Table 4.2: Employment in the Agricultural Sector (Percentage Share to the Respective Total)

District/ State	Year	Cultivator			Agricultural Labourer			Total Agriculture Work Force		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
*Nagaland	2001	64.05	55.58	75.32	3.98	3.72	4.34	68.03	59.4	79.66
	2011	55.2	47.4	65.2	6.46	5.82	7.29	61.66	53.22	72.49
**All India	2011	24.64	24.92	24.01	29.96	24.93	41.09	54.60	49.85	65.10

Source: *Census of India 2011, Directorate of Census Operations, Nagaland. ** Registrar General of India (2011) GOI.

Note: (i) Male % is in Total Male Main Workers

(ii) Female % is in Total Female Main Workers

Table 4.3: Gender Wise Proportion of Workers in Total Agricultural Work Force, 2011

	Cultivators			Agricultural labourers			Total Workers in Agriculture		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
**All India	24.64	69.68	30.32	29.96	57.33	42.67	54.60	62.90	37.10
*Nagaland	55.20	48.25	51.75	6.46	50.60	49.40	61.66	48.50	51.50

Source: *Census of India 2011, Directorate of Census Operations, Nagaland.

** Registrar General of India (2011)

Table 4.4: Land Use in Nagaland (Area in Hectare)

Sl. No.	Particulars	2009-2010	2012-2013	Percentage Change
1	Geographical Area	1657900	1657900	-
2	Reporting Area	1612042	1651793	2.47
3	Forest Area	862930	862930	-
4	Not Available for Cultivation	228507	259121	13.40
5	Fallow Land	160293	149520	-6.72
6	Gross Cropped Area	481316	488522	1.50
7	Net Area Sown (NAS)	360316	380222	5.52
8	Area Sown More than Once	121000	108300	-10.50
9	Percentage of Area Sown More Than Once in Total Cropped Area	25.14	22.17	
10	Intensity of Agricultural Land Use	134	128	-4.48
11	Percentage of Gross Irrigated Area in Total Cropped Area	16.13	18.92	

Source: Statistical Hand Book, 2013, Government of Nagaland

Table 4.5: Agricultural Land Use in India and Nagaland, 2010-2011 (% of Total Reporting Area)

Land Use Particulars	All India	Nagaland
Gross Cropped Area	46	28
Forest	23	53
Not Available for Cultivation	23	9
Fallow Land	8	10

Source: (i) Pocket Book on Agricultural Statistics, India, 2013, Ministry of Agriculture, New Delhi
(ii) Statistical Hand Book, 2013, Government of Nagaland

Table 4.6: Area, Production and Yield of Crops-
(Area in Hectare, Production and Yield in Metric Tonne)

Sl. No	Crops	Area/ Production/ Yield	Nagaland			
			2001-2002	2010-2011	2012-2013	% Change 2001-2002 to 2012-2013
A	Cereals					
1	Jhum Paddy	A	90000	96570	94920	5.47
		P	119800	173830	180820	50.93
		Y	1.33	1.8	1.905	43.23
	TRC/WRC Paddy	A	66500	84820	88410	32.95
		P	116550	207530	224360	92.50
		Y	1.75	2.45	2.538	45.01
	Total Paddy	A	156500	181390	183330	17.14
		P	236350	381360	405180	71.43
		Y	1.510	2.102	2.210	46.34
2	Other Cereals	A	66000	83010	83720	26.85
		P	87270	150500	153330	75.70
		Y	1.32	1.81	1.831	38.75
B	Pulses	A	35000	34430	36200	3.43
		P	29650	36460	40450	36.42
		Y	0.85	1.06	1.117	31.46
C	Oilseeds	A	50500	65840	66820	32.32
		P	53650	67530	68900	28.42
		Y	1.06	1.02	1.031	-2.72
D	Commercial Crops	A	7650	29400	34900	356.21
		P	111220	392170	443750	298.98
		Y	14.54	13.34	12.71	-12.55
	Total	A	315650	394070	404970	28.30
		P	518140	1028020	1111610	114.54
		Y	1.64	2.61	2.745	67.37

Source: Statistical Hand Book, 2005 and 2013, Government of Nagaland

Table 4.7: Irrigation

State/Country	Particulars	2009-2010	2010-2011	2011-2012	2012-2013
Nagaland (Area in Hectare)	Net Irrigated Area	72670		92040	92450
	Gross Irrigated Area	77670		92040	92450
	% of Irrigated to GCA	16.13		19.4	18.92
All India (Area in Million Hectares)	Net Irrigated Area	61.94	63.6	-	-
	Gross Irrigated Area	85.09	89.36	-	-
	% of Irrigated to GCA	45.02	44.91	-	-

Source: (i) Pocket Book on Agricultural Statistics, India, 2013, Ministry of Agriculture, New Delhi
(ii) Statistical Hand Book 2013, Government of Nagaland.

Table 4.8: Irrigation Potential and Utilization in Nagaland (in Hectares)

Districts	1987-1988		1993-1994		2000-2001		2006-2007		
	Potential Created	% Utilized	Potential Created	% Utilized	Potential Created	% Utilized	Potential Created	% Utilized	% Share of Potential Created
Dimapur					34104.85	23.97	28,362.2	50.93	27.48
Kohima	19483.7	92.48	19484	75.84	17693.84	56.71	13,393.45	52.69	12.98
Mokokchung	4513	100.00	5029.8	89.73	9593.65	41.90	10,941.55	51.20	10.60
Mon	2149.1	100.00	2149.1	67.10	2980.33	68.13	3,197.63	72.94	3.10
Phek	13380.7	100.00	13381	70.18	12069.12	7.30	14,125.4	66.84	13.69
Tuensang	5321	99.86	5321	75.13	10920.08	58.68	7,940.2	81.57	7.69
Wokha	2705.3	100.00	2775.9	78.29	3440.74	59.71	4,023.89	56.39	3.90
Zunheboto	4612.9	100.00	2049.4	70.78	9722.4	64.33	10,187.7	60.08	9.87
Kiphire							2,374.25	63.20	2.30
Longleng							2,314	57.78	2.24
Peren							6,357.58	68.93	6.16
Nagaland	52165.7	97.1775	50190	75.20	100525	47.61	1,03,217.85	59.06	100

Source: Statistical Hand Book 2009, Government of Nagaland

Table 4.9: Yield of Major Crops (Kg/Hectare)

Crop Groups		2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013*
Total Food Grains	Nagaland	1561	1577	1615	1482	1567	1811	1256	1902	1920	2243
	All India	1727	1652	1715	1756	1860	1909	1798	1930	2078	2125
Rice	Nagaland	1600	1698	1682	1600	1685	1994	1426	2102	2106	2210
	All India	2078	1984	2102	2131	2202	2178	2125	2239	2393	2462
Wheat	Nagaland	2000	1585	1583	867	1067	1500	1200	1712	1711	1801
	All India	2713	2602	2619	2708	2802	2907	2839	2989	3177	3119
Bajra	Nagaland	1667	1481	1000	NA	NA	NA	NA	857	862	1014
	All India	1141	859	802	886	1042	1015	731	1079	1171	1214
Maize	Nagaland	1780	1800	1800	1674	1788	1800	1075	1958	1960	1960
	All India	2041	1907	1938	1912	2335	2414	2024	2540	2478	2553
Total Pulses	Nagaland	1000	797	1281	1200	1189	1203	1036	1058	1091	1000
	All India	635	577	598	612	625	659	630	691	699	786
Total Oilseeds	Nagaland	1148	1165	926	901	896	1142	835	1040	1043	1031
	All India	1064	885	1004	916	1115	1006	958	1193	1133	1169

Source: Department of Agriculture and Cooperation, Ministry of Agriculture, GOI

*Statistical Handbook, 2013, Government of Nagaland

Table 4.10: Crop Yield (in %)

	State/country	2003-04 to 2005-06	2010-11 to 2012-13	2003-04 to 2012-13
Total Food Grains	Nagaland	3.46	17.93	43.69
	All India	-0.69	10.10	23.05
Rice	Nagaland	5.13	-32.16	-10.88
	All India	1.15	-5.09	2.26
Wheat	Nagaland	-20.85	-29.91	-40.00
	All India	-3.46	-5.02	4.64
Bajra	Nagaland	-40.01	0.00	0.00
	All India	-29.71	-32.25	-35.93
Maize	Nagaland	1.12	-45.10	-39.61
	All India	-5.05	-20.31	-0.83
Total Pulses	Nagaland	28.10	-5.48	0.00
	All India	-5.83	13.75	23.78
Total Oilseeds	Nagaland	-19.34	-0.87	-10.19
	All India	-5.64	-2.01	9.87

Source: Directorate of Economics and Statistics 2013, Department of Agriculture and Co-operation, Ministry of Agriculture, GOI

*Statistical Handbook, 2013, Government of Nagaland

Table 4.11: Zone-Wise Consumption of Fertilisers ('000 Tonnes)

Sl. No.	State/Zone/country		2009-10	2010-11	2011-12
1	South Zone	Total	6613.06	7150.24	7266.62
		Per hectare	188.47	212.01	215.46
2	West Zone	Total	8147.47	9152.32	8607.24
		Per hectare	97.63	110.73	104.13
3	North Zone	Total	7805.38	7918.7	7872.37
		Per hectare	182.94	187.29	186.19
4	East Zone	Total	3641.11	3588.57	3683.41
		Per hectare	125.26	130.37	133.81
5	North East Zone	Total	279.42	312.38	310.36
		Per hectare	50.48	52.01	51.67
6	All India	Total	26486.44	28122.21	27740
		Per hectare	135.27	146.32	144.33
7	Nagaland	Total	0.948	1.426	1.504
		Per hectare*	0.196	3.15	3.17

Source: (1). Department of Agriculture and Cooperation, in Pocket book on Agricultural Statistics 2013, Ministry of Agriculture, GOI
(2). Statistical Hand Book, 2013, Nagaland.

*Note: For Nagaland per hectare is calculated in Kg/hectare

Table 4.12: Horticulture Crops in Nagaland (Area in Hectare, Production in Metric Tonne and Yield in Metric tonne/Hectare)

	Area		Production		Yield	
	2010-11	2012-13	2010-11	2012-13	2010-11	2012-13
Fruits	33276	37479	209528	284220	6.3	1.36
Vegetables	36905	44355	284216	430385	7.7	9.7
Plantation	3280	3750	7765	12120	2.37	3.23
Spices	4040	4016	4032	9676	1	2.41
Total	77501	89600	505541	736401	6.52	8.22

Source: Statistical Handbook 2013, Government of Nagaland

Table 4.13: Area and Production of Flowers

	Area (in 000'Hectare)			Production (Loose) in 000'Metric Tonne			Production (Cut) in lakh Nos.		
	2008-2009	2009-2010	2010-2011	2008-2009	2009-2010	2010-2011	2008-2009	2009-2010	2010-2011
Nagaland	0.0	0.0	0.0	0.0	0.0	0.0	17	17	17
All India	166.52	182.9	190.9	987.4	1020.6	1031.3	47942	66671.4	69027.4

Source: Indian Horticulture Database-2011, Ministry of Agriculture, GOI

Table 4.14: Fruits in Nagaland, (Area in Hectare, Production in Metric Tonne and Yield Metric Tonne/Hectare)

Fruits	Area		Production		Yield	
	2010-2011	2012-2013	2010-2011	2012-2013	2010-2011	2012-2013
Apple	60	100	70	300	1.17	3
Pear	180	250	387	2000	2.15	8
Plum	270	350	525	3500	1.94	10
Peach	230	300	505	1500	2.20	5
Orange	4620	5500	45500	50000	9.85	9.09
Lemon	1015	1510	8120	10000	8.00	6.62
Pomelo	545	600	2020	2500	3.71	4.17
Pomegranate	90	990	330	360	3.67	4
Papaya	880	1200	6180	7500	7.02	6.25
Banana	6650	7000	40200	80000	6.05	11.43
Guava	300	400	1490	2000	4.97	5
Mango	290	420	610	300	2.10	0.71
Litchi	400	300	430	3000	1.08	10
Jackfruit	130	140	435	500	3.35	3.57
Pineapple	8140	9000	81400	85000	10.00	9.44
Grapes	180	190	110	2000	0.61	10.53
Mausambi	180	250	490	2000	2.72	8
Passion fruit	7570	7800	15240	17940	2.01	2.3
Kiwi	26	74	6	420	0.23	5.68
Wild apple	160	200	160	2000	1.00	10
Gooseberry	180	285	2780	2280	15.44	8
Others	1180	1520	2540	9120	2.15	6
Total	33276	37479	209528	284220	6.30	1.36

Source: Statistical Hand Book 2013, Government of Nagaland

Table 4.15: Vegetables in Nagaland (Area in Hectare, Production in Metric Tonne and Yield in Metric Tonne/Hectare)

Vegetables	Area		Production		Productivity	
	2010-2011	2012-2013	2010-2011	2012-2013	2010-2011	2012-2013
Sweet potato	1200	1500	13400	15000	11.17	10.00
Cabbage	1380	2000	11500	20000	8.33	10.00
Cauliflower	485	550	995	2650	2.05	4.82
Brinjal	270	300	2095	3000	7.76	10.00
Chilly	3400	4000	23700	30000	6.97	7.50
Peas	1280	1400	10500	13000	8.20	9.29
Beans	1400	2000	8550	50100	6.11	25.05
Bhendi	335	335	1220	1200	3.64	3.58
Tomato	810	1430	4600	6000	5.68	4.20
Ginger	2300	2700	33000	40000	14.35	14.81
Garlic	100	120	200	255	2.00	2.13
Radish	410	460	2220	2500	5.41	5.43
Colocassia	2000	3400	39500	40000	19.75	11.76
Tapioca	5600	6000	45000	50000	8.04	8.33
Chow chow	2490	3000	20700	36000	8.31	12.00
Xanthophyllum	580	700	3440	3460	5.93	4.94
Onion	615	650	4326	6000	7.03	9.23
Cucumber	350	500	2170	4000	6.20	8.00
Leafy Vegetables	5000	5000	9700	36000	1.94	7.20
Others	6900	8310	47400	71220	6.87	8.57
Total	36905	44355	284216	430385	7.70	9.70

Source: Statistical Hand Book 2013, Government of Nagaland

Table 4.16: Plantation Crops in Nagaland (Area in Hectare, Production in Metric Tonne and Yield Metric Tonne/Hectare)

Plantation Crops	Area		Production		Yield	
	2010-2011	2012-2013	2010-2011	2012-2013	2010-2011	2012-2013
Coffee	1500	1250	105	120	0.07	0.10
Cashew Nut	600	1000	195	300	0.33	0.30
Areca Nut	195	200	105	1300	0.54	6.50
Coconut	985	1300	7360	10400	7.47	8.00
Total	3280	3750	7765	12120	2.37	3.23

Source: Statistical Hand Book 2013, Government of Nagaland

Table 4.17: Spices in Nagaland, (Area in Hectare, Production in Metric Tonnes and Productivity/Yield Metric Tonne/Hectare)

Spices	Area		Production		Productivity/Yield	
	2010-2011	2012-2013	2010-2011	2012-2013	2010-2011	2012-2013
Cardamom	3180	2550	1477	1200	0.46	0.47
Black Pepper	230	140	20	20	0.09	0.14
Turmeric	130	500	535	5000	4.12	10.00
Naga Chilly	500	600	2000	2500	4.00	4.17
Betel Vine		100		200	0.00	2.00
Aromatic & Medicinal		126		756	0.00	6.00
Total	4040	4016	4032	9676	1.00	2.41

Source: Statistical Hand Book 2013, Government of Nagaland

Table 5.1: Status of Livestock and Poultry in Nagaland

Sl. No.	Species	17 th Livestock Census, 2003	18 th Livestock Census, 2007	19 th Livestock Census, 2011-2012
1.	Cattle	451017	469818	227293
2.	Buffalo	33757	33920	31451
3.	Mithun	40425	33355	30980
4.	Sheep	4187	3649	3600
5.	Goat	174929	178072	93122
6.	Dog	141373	161617	110155
7.	Rabbit	38408	41922	46587
8.	Pigs	644214	697790	491087
9.	Horse & Pony	893	799	390
10.	Ducks	116576	120131	34070
11.	Poultry Birds	2672556	3282196	2055056
Total		4318360	5023269	3123791

Source: Nagaland Economic Survey, Department of Economics and Statistics, Government of Nagaland

Table 5.2: Fish Production and Fishery Status in Nagaland during 2011-2015

Sl.No.	Particulars	Units/Nos
1.	Fish Production	7835 Metric Tonnes
2.	Fish Seed Production	477 lakhs
3.	Demonstration Fish Farm	6
4.	Government Carp Hatchery	2
5.	Prawn Hatchery	1
6.	Training Centres	5

Source: Nagaland Economic Survey, Department of Economics and Statistics, Government of Nagaland

Table 6.1: Immunization Status

Antigens	April 2013 – March 2014		April 2014 – March 2015	
	Coverage	(%)	Coverage	(%)
TT (P.W) 1	20331	54.90 %	20706	55.90 %
TT (P.W) 2	16667	45.00 %	16126	43.60 %
BCG	28059	86.00 %	27202	83.40 %
DPT 1	26246	80.50 %	25301	77.60 %
DPT 2	24263	74.40 %	23131	70.90 %
DPT 3	22493	69.00 %	21613	66.30 %
OPV 0	19752	60.60 %	18891	57.90 %
OPV 1	26162	80.20 %	24960	76.50 %
OPV 2	24180	74.20 %	22756	69.80 %
OPV 3	22400	68.70 %	21240	65.10 %
Hep B0	9844	30.20 %	11378	34.90 %
Hep B1	25172	77.20 %	24776	76.00 %
Hep B2	23020	70.60 %	22676	69.50 %
Hep B3	21164	64.90 %	20964	64.30 %
Measles 1st dose	20820	63.80 %	20533	63.00 %†
Measles 2nd dose	12366	37.90 %	14205	43.60 %
J.E. 1st Dose (9-12 months) (T=12170) DMR (6253), MKK (3180) & Wokha (2737)	361	11.40 %	7024	57.70 %
Fully Immunized Infant (9-11 months)	19655	60.30 %	19241	59.00 %
DPT BD	16107	49.40 %	16465	50.50 %
OPV BD	16279	49.40 %	16310	50.00 %
DPT 5yrs	8774	27.30 %	8554	26.00 %
TT 10 yrs	17158	55.40 %	17928	57.80 %
TT 16 yrs	13522	45.70 %	15705	53.10 %
J.E 16 Months (Total=12170) where introduced				
DMR(6253), MKK(3180) and WKA (2737)	6275	19.20 %	7959	65.40 %
Vit A 1	15076	46.20 %	12178	37.30 %
Vit A 5	3498	10.70 %	2495	7.70 %
Vit A 9	4035	12.40 %	2027	6.20 %

Source: Department of Health & Family Welfare, Government of Nagaland

Table 6.2: Prevalence and Treatment of Acute Respiratory Infection and Fever during 2014-2015

Age in Months	No of Children	With Symptoms of ARI	With Symptoms of Fever
<6	188	6	16
6-11	236	12	34
12-23	465	23	67
24-35	457	14	63
36-47	432	22	46
48-59	400	15	40

Source: Department of Health & Family Welfare, Government of Nagaland

Table 6.3: Manpower in the Government Health Sector

Particulars	Required	In Position	Shortfall
Health worker (Female)/ANM at Sub Centers & PHCs	522	867	*
Health Worker (Male) at Sub Centers	396	234	162
Health Assistant (Female)/LHV at PHCs	126	37	89
Health Assistant (Male) at PHCs	126	0	1226
Doctor at PHCs	126	99	27
Obstetricians & Gynaecologists at CHCs	21	2	19
Paediatricians at CHCs	21	4	17
Total specialists at CHCs	84	9	75
Radiographers at CHCs	21	0	21
Pharmacist at PHCs & CHCs	147	60	87
Laboratory Technicians at PHCs & CHCs	147	70	77
Nursing Staff at PHCs & CHCs	273	382	*

Source: Department of Health & Family Welfare, Government of Nagaland

Table 6.4: HIV/AIDS Scenario in Nagaland during 2014-2015

Adult HIV Prevalence Rate: *	0.73 %
General Population Prevalence Rate:**	0.88 %
Tested for HIV (Nos.)	802054
HIV Positive(Nos.)	18952
Total Registered on ART (Nos.)	13097
No. of Patients Started on ART(Nos.)	7569
No. of Patient Died(Nos.)	973
Alive and on ART(Nos.)	5179

Source: Department of Health & Family Welfare, Government of Nagaland

Table 6.5: Manpower Under NHM & NSACS

Program	Category	Man Power Requirement	Existing Strength	Gap
National Health Mission	Medical Officer		135	
	Paramedics		678	
	Non-Technical Staff		359	
Nagaland State AIDS Control Society	Medical Officer	36	17	19
	Paramedics	138	134	4
	Non-Technical Staff	-	271	-

Source: Department of Health & Family Welfare, Government of Nagaland

Table 6.6: Service Delivery National Health Mission

(in Numbers)

Indicators	2008-2009	2014-2015
ANC Registration	21721	44588
Full ANC	5282	14951
Institutional Delivery	1182	17232
Full Immunization (9-11months)	22982	19254
Female Sterilisation	437	1426
Male Sterilisation	3	9
IUD Insertion	673	3907
Number of OPD Patients	226957	1004629
No of In-Patients	18500	77442
AYUSH	216	28352
Dental Procedures	528	4055
Adolescent Counselling Service	0	7002
Major Operations	658	13656
Minor Operations	1124	41861

Source: Department of Health and Family Welfare, Government of Nagaland

Table 6.7: Infrastructure Development under NHM, Nagaland during 2013-2014

Name of Work	Completed	Ongoing
Sub-Centre	135	13
Primary Health Centre	19	14
Community Health Centre	8	12
District Hospital New	0	4
District Hospital Upgradation	11	0
Primary Health Centre: Quarter	30	14
Community Health Centre: Quarter	19	12
Drugware House	9	5
Nursing School: New	2	5
SIHFW	1	0

Source: Department of Health and Family Welfare, Government of Nagaland

Table 6.8: Budget Allocation for Drugs in Nagaland

(Rs. In lakhs)

	2013-2014	2014-2015	2015-2016
Plan	200.00	200.00	250.00
Non Plan	3.00	3.00	0.00
NHM	159.90	375.04	287.44
Total	362.90	578.04	537.44
Total Population		1978502	
Per Capita Allocation on Drugs (Rs)	18.34	29.22	27.16

Source: Department of Health and Family Welfare, Government of Nagaland

Table 7.1: Enrolment Ratio at Elementary Level in Nagaland during 2013-2014

Gross Enrolment Ration (GER)	113.01%
Net Enrolment Ration (NER)	97.04%
GER of Boys	102.38%
GER of Girls	106.26%
NER of Boys	81.49%
NER of Girls	83.79%
Out of School Children	9606
Number of Teachers in Government Schools	16424

Source: UDISE

Table 7.2: Class-Wise Enrolment - All Schools during 2013-2014

Classes									
Year	I	II	III	IV	V	VI	VII	VIII	Total
2013-14	59262	60549	58372	56211	50904	44526	42698	39173	411695

Source : UDISE

Table 7.3: District-Wise Gender Parity Index (GPI) during 2013-2014

Sl.No	District	% of Girls Enrolment to Total Enrolment		Gender Parity Index (GPI)	
		Primary	Upper Primary	Primary	Upper Primary
1	Dimapur	48.59	51.95	0.95	1.08
2	Kiphire	51.18	50.83	1.05	1.03
3	Kohima	52.24	56.36	1.09	1.29
4	Longleng	50.45	51.94	1.02	1.08
5	Mokokchung	48.19	49.63	0.93	0.99
6	Mon	53.67	57.44	1.16	1.35
7	Peren	51.65	52.75	1.07	1.12
8	Phek	49.37	52.19	0.98	1.09
9	Tuensang	51.83	53.98	1.08	1.17
10	Wokha	53.37	53.64	1.14	1.16
11	Zunheboto	49.63	51.2	0.99	1.05
State		50.74	52.69	1.03	1.11

Source : UDISE

Table 7.4: Dropout and Retention Rate during 2013-2014

	Dropout Rate			Retention Rate			Retention Rate		
	Boys	Girls	Total	Class I-V			Classes VI-VIII		
Primary School	5.19	5.14	5.17	Boys	Girls	Total	Boys	Girls	Total
Upper Primary School	7.85	8.13	7.99						
				78.85	79.94	79.20	49.08	50.02	49.54

Source : UDISE

Table 7.5: District-Wise Institutions Offering Secondary and Higher Secondary Education during 2014

Sl. No	District	Govt. Higher Secondary School	Govt. High School	Private Higher Secondary School	Recognised Private High School	Permitted Private High School	Total	Colleges (Govt. & Private)
1	Kohima	7	24	22	25	22	100	9
2	Mokokchung	5	37	11	10	11	74	1
3	Tuensang	5	27	1	6	12	51	2
4	Mon	4	17	2	3	21	47	-
5	Phek	4	35	4	9	10	62	2
6	Wokha	3	21	2	7	12	45	2
7	Zunheboto	3	22	3	14	15	57	-
8	Dimapur	4	23	38	18	75	158	9
9	Kiphire	2	16	1	1	9	29	1
10	Longleng	1	14	-	2	5	22	1
11	Peren	2	16	2	5	8	33	1
	Total	40	252	86	100	200	678	28

Source: NBSE

Table 7.6: District-Wise Performance of Government Schools

District	Pass Percentage				
	2015	2014	2013	2012	2011
Dimapur	23.1	24.43	21.36	19.59	21.3
Kohima	46.39	47.8	51.13	45.35	38.2
Kiphire	1.94	11.58	5.83	5.26	2.93
Longleng	11.59	13.96	4.47	2.88	2.58
Mokokchung	42.32	39.67	41.96	36.72	40.72
Mon	9.4	13.35	9.01	12.17	29.72
Peren	50.9	49.11	55.51	54.55	52
Phek	41.63	43.34	48.1	49.21	50.39
Tuensang	22.9	19.97	16.97	12.97	11.34
Wokha	27.73	25	18.39	23.95	15.52
Zunheboto	16.19	22.79	21	23.19	17.14

Source : NBSE Results Gazettes

Table 7.7: Children in Different Types of Schools in Nagaland (in %)

Age Group	Government		Private		Other		Not in School	
	2013	2014	2013	2014	2013	2014	2013	2014
6-14 All	59.3	58.4	39.4	38.9	0.1	0.1	1.2	2.6
7-16 All	59.0	56.1	38.7	38.9	0.1	0.1	2.3	5.0
7-10 All	59.6	59.9	39.5	38.5	0.0	0.1	0.9	1.5
7-10 Boys	57.7	58.8	41.4	39.6	0.0	0.1	0.9	1.5
7-10 Girls	61.3	60.9	37.8	37.3	0.0	0.2	0.9	1.7
11-14 All	60.0	55.3	38.0	40.0	0.2	0.0	1.9	4.7
11-14 Boys	58.0	53.3	39.5	41.1	0.1	0.0	2.5	5.6
11-14 Girls	61.0	58.2	37.4	37.8	0.3	0.0	1.3	4.1
15-16 All	53.4	44.5	37.4	37.6	0.0	0.0	9.1	18.0
15-16 Boys	49.4	41.7	39.8	36.8	0.0	0.0	10.8	21.6
15-16 Girls	58.0	47.6	34.6	38.5	0.0	0.0	7.4	14.0

Source: Annual Status of Education Report, 2013 and 2014

Table 7.8: Type and Number of Teacher Education Programs Available in Nagaland

Course Title	Duration	Examining Body	No.of Institutions		Total
			Govt.	Pvt.	
M.Ed	1	Nagaland University	1	0	1
B.Ed	1	Nagaland University	2	6	8
D.El.Ed (ISTE)	2	SCERT/ SBTE	9	0	9
D.El.Ed. (PSTE)	2	SCERT/SBTE	8	2	10
DECCE	1	SCERT/SBTE	1	0	1
D.El.Ed. (DE)	2	National Institute of Open School (NIOS)	9	0	9
B.Ed (DE)	2	IGNOU	1	0	1

M.Ed = Master of Education, B.Ed= Bachelor of Education, D.El.Ed = Diploma in Elementary Education, PSTE= Pre-Service Teacher Education for Primary School Teachers, ISTE= In-Service Teacher Education, DECCE= Diploma in Early Childhood Care and Education, DE= Distance Education, SCERT= State Council of Educational Research and Training, SBTE= State Board of Teacher Education, IGNOU= Indira Gandhi National Open University

Table 8.1: Road Length in Nagaland during 2008-2009

Total Road Length (in km)	Area (sq.km)	Population 2011	Road Length per 100 sq km	Road Length per '000 persons	Total Road Length of NH (in km)	National Highway per 100 sq km	National Highway per '000 persons
15708	16579	1978502	94.8	7.9	830	5.0	0.4

Source: Statistical Handbook 2013, Government of Nagaland

Table 8.2: Physical Target and Achievements under PWD (R&B) Nagaland

Sl. No.	Name of scheme	Road Category	2015-2016		2016-2017	
			Physical Targets (in Km)	Achievements (in Km)	Physical Targets (in Km)	Achievements (in Km)
1	State Plan	SH	-	-	-	-
		MDR	8.0	8.00	-	-
		ODR	100.41	100.40	-	-
		Bridges		-	-	-
2	TFC	Maintenance of State Road	-	-	-	-
3	NEC	MDR	259.25	232.38	22.85	195.98
4	NLCPR	MDR/ODR	420.00	351.00	373.00	304.00
5	ISC	MDR	78.60	51.87	86.22	54.51
6	E&I	ODR	49.00	46.87	49.00	46.87
7	CRF	ODR/MDR	56.00	32.00	97.50	41.00
8	SIDF	ODR	-	-	-	-
9	PMGSY	VR	407.00	278.00	150.00	66.50

Source: Nagaland Economic Survey 2016-2017

Table 8.3: Newly Declared National Highways in Nagaland

Sl. No	Description/Details of road stretch	Approx. Length in Km
1	NH29*	270.00
2	Showuba-Guzunyu-Pughoboto-Zunheboto-Aghunato-Shamator-Noklak-Pangsha	200.00
3	Trans Eastern Highway from Mon-Longwa-Pangsha-Kiphire-Avangkhu	280.00
4	Gandhi Ashram Chuchuyimlang NH-2 to Pangsha (International Trade Centre)	167.00
5	Maibung in Tening in Nagaland to Tamenlong via Tamai in Manipur	75.00
6	Raman Ali Singulari-Bihubar in Assam to Mon in the state of Nagaland	71.00
	Total	795.70

*NH-29 – Daboka (Assam)-Dimapur-Kohima-Pfutsero-Jessami(Manipur)

Source: Nagaland Economic Survey 2016-2017

Table 8.4: Types and Road Length under PWD in Nagaland (in km)

Year	National Highway	State Highway	Major District Road	Other District Road	Rural Road	Feeder Road	Total
2007-08	829.66	404.25	2781.55	4301.99	2465.66	138	10921.11
2008-09	829.66	474.62	2233.9	5126.77	2585.5	138	11388.45
2012-13	828.13	1001.24	1819.4	6539.92	1706.3	138	12032.99
CAGR	-0.04	19.89	-8.14	8.74	-7.10	0	1.96

Source: Statistical Handbook 2013, Government of Nagaland

Table 8.5: District-Wise Length of Roads under Various Department During 2007-2008 (in km)

Sl. No	Districts	Department of Under Developed Areas		Forest Department		Agri-Link Road		Rural Development Department	
		Surfaced	Unsurfaced	Surfaced	Unsurfaced	Surfaced	Unsurfaced	Surfaced	Unsurfaced
1	Kohima	-	-	69.30	6.50	-	27.00	-	148.50
2	Mokokchung	-	-	8.80	46.00	-	46.50	-	48.53
3	Tuensang	-	41.00	-	37.50	-	25.00	-	213.50
4	Phek	-	28.00	12.87	-	-	35.00	-	203.00
5	Mon	-	45.00	-	36.90	-	41.00	-	55.87
6	Wokha	-	-	6.00	10.00	-	39.60	-	16.66
7	Zunheboto	-	20.00	-	3.00	-	93.90	-	652.88
8	Dimapur	-	-	2.00	2.50	-	71.00	-	350.78
9	Peren	-	-	9.00	40.00	-	16.00	-	147.80
10	Longleng	-	-	-	-	-	-	-	146.60
11	Kiphire	-	-	-	-	-	10.00	-	38.13
		0.00	134.00	107.97	182.40	0.00	405.00	0	2022.25

Source: Statistical Handbook 2013, Government of Nagaland

Table 8.6: Total Road Length in Nagaland under PWD (R&B) During 2012-2013 (in km)

Sl. No	Districts	National Highway		State Highway		Major District Road		Other District Road		Rural Road		Feeder Road		Total
		Surfaced	Unsurfaced	Surfaced	Unsurfaced	Surfaced	Unsurfaced	Surfaced	Unsurfaced	Surfaced	Unsurfaced	Surfaced	Unsurfaced	
1	Kohima	165.00	11.00	6.00	44.00	148.80	140.60	241.85	616.00	156.00	145.00	-	-	1674.25
2	M o k o k - chung	68.13	-	37.50	-	94.10	52.90	323.37	274.00	50.00	80.00	-	-	980.00
3	Tuensang	139.00	-	137.00	11.00	102.50	196.00	352.00	430.50	84.00	95.00	5.00	133.00	1685.00
4	Mon	112.00	-	98.00	-	-	261.00	31.00	530.00	20.00	141.00	-	-	1193.00
5	Phek	-	-	30.00	70.00	74.00	100.00	42.50	649.70	2.00	101.60	-	-	1069.80
6	Wokha	155.00	-	-	93.00	33.00	207.00	97.30	360.00	25.00	175.00	-	-	1145.30
7	Zunheboto	53.00	-	61.50	-	-	60.00	186.50	510.50	3.00	73.00	-	-	947.50
8	Dimapur	-	-	214.24	-	6.00	-	154.90	746.50	37.50	128.50	-	-	1287.64
9	Peren	-	-	120.00	20.00	32.00	40.50	120.50	270.00	20.00	118.00	-	-	741.00
10	Longleng	-	-	23.00	-	38.00	117.00	40.50	142.00	30.00	50.00	-	-	440.50
11	Kiphire	125.00	-	24.00	12.00	44.00	72.00	48.00	372.30	3.70	168.00	-	-	869.00
	Total	817.13	11.00	751.24	250.00	572.40	1247.00	1638.42	4901.50	431.20	1275.10	5.00	133.00	12032.99

Source: Statistical Handbook 2013, Government of Nagaland

Table 8.7: State Highways by Type of Surface in Nagaland (in km)

Year	Surfaced		Total
	W.B.M	B.T/C.C	
2009	131	410	541
2010	193	490	683
2011	333	430	763

Source: Public Works Department, Government of Nagaland

Table 8.8: Road Length of North Eastern States during March 2011

State/ Region/ Country	Total Road Length (km)	Area (sq km)	Population 2011 ('000'nos)	Road Length in kms		National Highways in km	NH in km	
				Per 100 sq km	Per one lakh population		Per 100 sq km	Per one lakh population
Arunachal Pradesh	21555	83743	1383	25.74	1558.98	1992	2.38	144.08
Assam	241789	78438	31169	308.26	775.73	2836	3.62	9.10
Manipur	19133	22327	2722	85.70	702.98	959	4.30	35.23
Meghalaya	11984	22429	2964	53.43	404.32	810	3.61	27.33
Mizoram	9810	21081	1091	46.53	899.13	927	4.40	84.97
Nagaland	34146	16579	1978	205.96	1725.85	494	2.98	24.97
Sikkim	4630	7096	608	65.25	761.92	62	0.87	10.20
Tripura	33772	10486	3671	322.07	919.96	400	3.81	10.90
NER	376819	262179	45589	139.12	968.38	8480	3.25	43.34
*INDIA	4690342	3287240	1210193	142.68	387.57	70934	2.16	5.86

Source: Basic Road Statistics of India 2008-2009, 2009-2010 & 2010-2011,
Transport Research Wing, Ministry of Road Transport and Highways, Government of India, New Delhi.
*Including roads under Jawahar Rozgar Yojana

Table 8.9: Index Values of Road Infrastructure of North East States

Sl. No.	States	2006	2010
1	Arunachal Pradesh	21	31
2	Sikkim	43	49
3	Tripura	69	75
4	Assam	55	64
5	Nagaland	68	71
6	Manipur	66	70
7	Meghalaya	58	60
8	Mizoram	54	56

Source: www.idfc.com/images/news_release/Infra-Index-131210-pres-sent-to-int.pdf

Table 8.10: Installed Capacity and Generation of Electricity

Particulars		Unit	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
Installed Capacity	Diesel	MW	1.00	1.00	0.10	0.10	0.50
	Hydro	MW	26.54	26.54	27.59	27.59	25.34
	Bio Mass Gasifier	MW	0.16	0.16	0.16	0.16	-
	Total	MW	27.70	27.70	27.85	27.85	25.84
Generation	Diesel	MKWH	-	-	-	-	-
	Hydro	MKWH	97.02	80.02	74.94	87.98	96.51
	Bio Mass Gasifier	MKWH	-	-	-	-	-
	Energy Purchased	MKWH	526.13	475.50	443.03	437.21	457.47
	Total	MKWH	623.15	555.52	517.97	525.19	553.98

Source: Department of Power, Government of Nagaland

Table 8.11: Sources of Lighting (in %)

Region/State		Electricity	Kerosene	Solar	Other Oil	Any Other	No Lighting
Nagaland	Total	81.61	15.63	0.31	0.22	1.11	1.12
	Rural	75.22	21.10	0.41	0.27	1.51	1.49
	Urban	97.42	2.07	0.08	0.09	0.12	0.22
NER	Total	47.62	50.23	0.98	0.18	0.38	0.61
	Rural	37.57	60.07	1.15	0.19	0.33	0.69
	Urban	87.98	10.71	0.33	0.12	0.56	0.28
India	Total	67.25	31.44	0.44	0.20	0.20	0.47
	Rural	55.30	43.16	0.55	0.24	0.21	0.54
	Urban	92.67	6.48	0.22	0.12	0.17	0.34

Source: Census of India 2011

Table 8.12: Source of Lighting in North Eastern Region (in %)

State		Electricity	Kerosene	Solar	Other Oil	Any Other	No Lighting
Arunachal Pradesh	Total	65.68	18.46	2.90	0.32	2.10	10.54
	Rural	55.46	23.59	3.86	0.39	2.74	13.96
	Urban	96.02	3.23	0.07	0.11	0.22	0.36
Assam	Total	37.05	61.77	0.77	0.13	0.07	0.21
	Rural	28.36	70.38	0.87	0.14	0.06	0.19
	Urban	84.08	15.18	0.27	0.10	0.08	0.29
Manipur	Total	68.35	25.13	1.92	0.40	3.59	0.61
	Rural	61.19	32.22	2.69	0.46	2.77	0.68
	Urban	82.38	11.24	0.41	0.31	5.20	0.46
Meghalaya	Total	60.92	36.98	0.80	0.29	0.24	0.77
	Rural	51.57	45.94	1.00	0.33	0.26	0.89
	Urban	94.93	4.39	0.07	0.12	0.16	0.33
Mizoram	Total	84.20	13.53	1.33	0.34	0.32	0.28
	Rural	68.79	26.85	2.74	0.61	0.53	0.48
	Urban	98.12	1.50	0.06	0.09	0.12	0.11
Nagaland	Total	81.61	15.63	0.31	0.22	1.11	1.12
	Rural	75.22	21.10	0.41	0.27	1.51	1.49
	Urban	97.42	2.07	0.08	0.09	0.12	0.22
Sikkim	Total	92.54	6.55	0.24	0.10	0.06	0.51
	Rural	90.16	8.74	0.32	0.13	0.09	0.57
	Urban	98.71	0.88	0.03	0.03	0.00	0.34
Tripura	Total	68.44	29.12	1.88	0.21	0.04	0.31
	Rural	59.49	37.67	2.20	0.24	0.04	0.35
	Urban	91.58	6.99	1.06	0.14	0.03	0.20
NER	Total	47.62	50.23	0.98	0.18	0.38	0.61
	Rural	37.57	60.07	1.15	0.19	0.33	0.69
	Urban	87.98	10.71	0.33	0.12	0.56	0.28
India	Total	67.25	31.44	0.44	0.20	0.20	0.47
	Rural	55.30	43.16	0.55	0.24	0.21	0.54
	Urban	92.67	6.48	0.22	0.12	0.17	0.34

Source: Census of India 2011

Table 8.13: Source Wise Installed Capacity of Electricity and Total Allocation (in MW)

Year	Source	Installed Capacity in MW	Demand in Peak in MW	Shortfall
2015-2016	A) State own Generation (Hydro)– Likimro (24MW), Lang(1MW), Tehok(1MW), Duilomroi-I(0.54MW) and Duilomroi-II(0.20MW)	26.74	156	13.33
	b) Central Generating Station (CGS)	-		
	i) Hydro (NEEPCO & NHPC)	57.5		
	ii) Coal (NPC)	24.00		
	iii) Gas (NEEPCO)	34.43		
	Total	142.67 MW		

Source: Department of Power, Government of Nagaland

Table 8.14: Power Transmission in Nagaland during 2015-2016

EHV Infrastructure	Unit	Existing	Future Plan Under Ongoing State Plan Initiatives and NERPSIP (WB Funded)	Total
220/132 KV	-	-	100	100
132/66 KV	MVA	180	-	180
132/33 KV	MVA	46.5	424	470.5
66/33 KV	MVA	170	1	170
66/11 KV	MVA	60	-	60
220 KV line	Km	Nil	161	161
132 KV line	Km	383.89	260.5	643.588
66 KV line	Km	473.72	52.5	526.22

Source: Department of Power, Government of Nagaland

Table 8.15: Consumption of Electricity Under Different Classification (M.U)

Activities	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	CAGR
Domestic	126.20	128.71	117.68	127.63	175.84	8.6461
Commercial	21.11	21.31	21.22	23.37	22.71	1.8432
Industrial	27.17	27.44	31.85	34.30	11.86	-18.7172
Public Lighting	0.26	0.44	2.90	1.94	1.83	62.8806
Public Water Works	2.98	3.01	4.29	4.37	1.27	-19.2027
Agriculture	0	0	0	0	0.04	-
Total	177.72	180.91	177.94	191.61	213.55	4.6985

Source: Department of Power, Government of Nagaland

Table 8.16: District-Wise Electricity Consumption (in M.U)

Districts	2010-2011	2012-2013
Kohima	48.79	60.17
Dimapur	147.93	190.37
Peren	-	-
Phek	9.64	13.90
Mokokchung	34.50	38.70
Wokha	8.22	10.88
Zunheboto	9.40	8.68
Tuensang	18.15	21.07
Kiphire	-	-
Longleng	-	-
Mon	8.33	8.71
Nagaland	284.96	352.48

Source: Statistical Handbook 2013, Government of Nagaland

Table 8.17: Number of Electrified and Unelectrified Villages

District/State	2009-2010		2010-2011		2011-2012		2012-2013	
	EV*	UEV*	EV	UEV	EV	UEV	EV	UEV
Kohima	94	0	94	0	94	0	94	0
Dimapur	207	9	214	2	215	1	215	1
Peren	71	15	79	7	86	0	86	0
Phek	104	0	104	0	104	0	104	0
Mokokchung	102	0	102	0	102	0	102	0
Wokha	106	22	113	15	119	9	124	4
Zunheboto	175	12	175	12	178	9	178	9
Tuensang	122	0	122	0	122	0	122	0
Kiphire	88	3	91	0	91	0	91	0
Longleng	30	5	34	1	34	1	35	0
Mon	97	13	99	11	105	5	107	3
Nagaland	1196	79	1227	48	1250	25	1258	17

Source: Department of Power, Government of Nagaland

* EV: Electrified Villages; *UEV: Un-electrified Villages

Table 8.18: Percentage of Villages Electrified and Per Capita Consumption of Power in North East States

State/ Region	Villages Electrified 2012 (in percentage)	Per Capita Consumption of Power 2011-12
Sikkim	100	886
All India	93.8	884
Arunachal Pradesh	75.5	683
Meghalaya	76.5	658
Mizoram	92.9	507
NER	83.9	470
Assam	96.1	280
Nagaland	70.1	257
Tripura	71.2	254
Manipur	86.3	236

Source: Annual Report 2013-2014, the working of State Power Utilities and Electricity Departments (Power & Energy Division)
Planning Commission, Government of India

Table 8.19: Index Values of Power for North East States

Sl. No.	States	2006	2010
1	Arunachal Pradesh	57	68
2	Sikkim	70	71
3	Tripura	58	58
4	Assam	55	58
5	Nagaland	57	56
6	Manipur	54	53
7	Meghalaya	58	65
8	Mizoram	59	52

Source: www.idfc.com/images/news_release/Infra-Index-131210-pres-sent-to-mint.pdf

Table 8.20: Mobile and Land Line Users 2011

	Households	Phone Users	Landline	Mobile	Both
Nagaland	399965	212381(53.1)	5200 (1.3)	194383 (48.6)	12799 (3.2)
NER	9266314	4571614(49.34)	199918 (2.16)	4125506(44.52)	246188(2.66)
India	246692667	155909766 (63.2)	9867707(4.0)	131240499(53.2)	14801560(6.0)

Source: Census of India 2011. Figures in parenthesis indicate Percentage to Households

Table 8.21: Teledensity during 2009

State/Region	Teledensity
Nagaland	27.64
NER	30.77

Source: TRAI

Table 8.22: Telecom Index Values

States	2006	2010
NER	32	148
Assam	47	133

Source: www.idfc.com/images/news_release/Infra-Index-131210-pres-sent-to-int.pdf

Table 8.23: Number of Banks in Nagaland during 2013

No. of Banks	Area Under One Bank (sq km)	Population Served by One Bank
146	113.55	13551.38

Source: Statistical Handbook 2013, Government of Nagaland

Table 8.24: Growth of Bank Offices in Nagaland

Year	State Bank of India	Commercial Bank	Regional Rural Bank	Nagaland State Co-operative Bank	Total
2005	44(51.76)	18(21.18)	6(7.06)	17(20)	85
2006	44(47.83)	20(21.74)	8(8.69)	20(21.74)	92
2010	50(45.87)	28(25.69)	10(9.17)	21(19.27)	109
2011	51(45.95)	31(27.93)	8(7.21)	21(18.92)	111
2013	61(41.78)	54(36.99)	10(6.85)	21(14.38)	146
CAGR	4.17	14.72	6.59	2.68	6.99

Source: Statistical Handbook 2013, Government of Nagaland
 *Figures in Parenthesis indicate Proportion to Total

Table 8.25: District-Wise Number of Banks

District	2006	2007	2008	2010	2011	2013
Kohima	18	19	20	21	23	32
Dimapur	24	29	30	33	35	47
Peren	3	3	3	3	3	4
Phek	8	9	9	9	8	8
Mokokchung	12	12	13	14	14	19
Wokha	8	8	8	8	8	11
Zunheboto	6	7	7	8	7	7
Tuensang	5	5	5	5	5	8
Kiphire	2	2	2	2	2	3
Longleng	1	1	1	1	1	1
Mon	4	4	4	5	5	6
	90	100	102	109	111	146

Source: Statistical Handbook 2013, Government of Nagaland

Table 8.26: Credit and Deposit (Rs. in Crore)

Year	No. of offices	Deposit	Credit	C. D Ratio (in %)
Scheduled Commercial Banks				
2004	72	5027	950	18.89
2005	72	5604	1376	24.55
2011	76	17174	5336	31.07
Regional Rural Banks				
2004	8	50	26	52
2005	8	51	56	109.80
2011	8	177	49	27.68

Source: Statistical Handbook 2009, 2013, Government of Nagaland

Table 8.27: Credit Deposit during 2011 (Rs. in Crore)

State/Region/ Country	Deposit	Credit	C.D. Ratio(in %)
Nagaland	5188	1475	28.43
NER	12007.63	4256.75	35.45
India	5810546	4387179	75.50

Source: Quarterly Publications of Reserve Bank of India

Table 8.28: District-Wise Number of Post Offices 2012-2013

District/ Region/ Country	Total	Population under One Post Office	Area under One Post Office (in sq.km)
Kohima	52	5154	28.13
Dimapur	53	5951	103.19
Peren	16	7147	17.49
Phek	34	4806	59.59
Mokokchung	55	3539	29.36
Wokha	22	6398	57.05
Zunheboto	19	8755	85.68
Tuensang	27	7281	93.93
Kiphire	13	5693	86.92
Longleng	7	7212	80.29
Mon	30	8342	59.53
Nagaland	328	6032	50.55
NER	2912	4710	60.25

Source: Statistical Handbook, 2013 Government of Nagaland

Table 8.29: State Wise Combined Index Values

Sl. No.	States	2006	2010
1	Tripura	63	111
2	Sikkim	64	109
3	Nagaland	62	109
4	Meghalaya	59	108
5	Manipur	60	107
6	Assam	62	101
7	Mizoram	57	101
8	Arunachal Pradesh	43	98

Source: www.idfc.com/images/news_release/Infra-Index-131210-pres-sent-to-mint.pdf

Table 9.1: Comparative Literacy Rate 2001 and 2011

Census	Total Literacy Rate	Male Literacy	Female Literacy	Gender Gap in Literacy Rate
2001	67.11	71.77	61.92	9.85
2011	79.55	82.75	70.01	12.74

Source: Census of India 2001 and 2011

Table 9.2: Enrolment and Progression of Male and Female Students in School Education (Private and Government Institutions)

Year	High School (Class 10)				Higher Secondary Level (Class 12)			
	Enrolled		Passed		Enrolled		Passed	
	Male	Female	Male	Female	Male	Female	Male	Female
2010-2011	9163	9051	5445	5139	6269	6073	3586	3916
2011-2012	9568	9254	5773	5252	5824	5403	3520	3746
2012-2013	10114	9961	6244	6018	6146	5851	3724	4187
2013-2014	10451	10625	6469	6307	6304	5869	4290	4519
2014-2015	11122	11286	-	--	6457	6259	-	-

Source: Nagaland Board of School Education

Table 9.3: Enrolment of Male and Female Students at Degree Level (Private and Government Institutions)

Year	Government College		Private College		Total	
	Girls	Boys	Girls	Boys	Girls	Boys
2010-2011	4089	4726	10084	102723	14,173	15,449
2011-2012	4123	4581	10136	10761	14,259	15,342
2012-2013	3795	4278	10343	10700	14,138	14,978
2013-2014	3877	3990	10343	10700	14,220	14,698
2014-2015	3355	3186	8868	8139	12,223	11,325

Source: Department of Higher Education, Research Cell, Government of Nagaland

Table 9.4: Opinion on Equal Right to Acquired Property (in %)

District	Rural		Urban		Total	
	Yes	No	Yes	No	Yes	No
Dimapur	37.46	50.89	8.46	18.63	-	-
Kiphire	-	-	-	-	9.43	88.53
Longleng	-	-	-	-	50.0	49.0
Mokokchung	43.41	40.3	59.28	12.53	-	-
Tuensang	18.60	70.92	0.91	68.90	-	-

Source: District Human Development Report(s) 2014

Table 9.5: Existence of Wage Disparity Between Men and Women (in %)

District	Rural		Urban		Total	
	Yes	No	Yes	No	Yes	No
Mokokchung	63.83	-	37.35	42.89	-	-
Dimapur	87.96	7.2	47.75	19.89	-	-
Tuensang	32.87	62.28	11.89	88.11	-	-
Longleng	-	-	-	-	59.0	28.0
Zunheboto	57.45	36.93	37.8	55.45	55.21	39.03
Wokha	47.91	34.27	56.66	30.02	49.22	33.22

Source: District Human Development Report(s) 2014

Table 9.6: Status of Employment in the Government Sector as on 31.3.2012

Category	Male	Female	Total
Class-I	2976	842	3818
Class-II	2050	507	2557
Class-III	46107	13792	59899
Class-IV	20659	4438	25097
Total	71792	19579	91371

Source: Home Department, Government of Nagaland

Table 9.7: Reproductive Health Care (in Nos.)

Indicators	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015 (April-Dec)
ANC Registered	34544	40941	51969	47090	32304
PNC within 48 hours Since Delivery	5606	11847	15692	17405	12739
PNC within 48 hours & 14 days	3841	4964	4838	5910	5386
Male Sterilization	7	6	13	14	6
Female Sterilization	1639	1932	1661	1497	871

Source: Department of Health & Family Welfare, Government of Nagaland

Table 9.8: Gender Based Crimes/Violence under IPC during 2013

Nature of Crimes/Violence	Nagaland Police Records*	India**
Rape	71	33,707
Kidnapping and Abduction	24	51,881
Dowry Death	1	8,083
Cruelty by Husband and His Relatives	3	1,18,866
Assault on Women with intent to outrage modesty	41	70,739
Insult to the modesty of women	7	12,589
Importation of girls from foreign country	2	31
Crimes under special AND local laws	Nil	Nil
Immoral Traffic Prevention Act	4	2,579
Indecent Representation of Women Act	Nil	362
Dowry Prohibition Act	Nil	10,709

Source: *Office Records, Nagaland Police Headquarters, Kohima; **NCRB, 2013

Table 9.9: Cases of Violence Against Women Reported to the Nagaland State Women Commission

Year	No of Cases Reported	Government of Nagaland	Cases Disposed
2013	2 cases	3	2
2014	2 cases		
2015	1 case		

Source: Nagaland State Women Commission, Kohima, Nagaland

Table 10.1: Important Bird Areas in Nagaland: Priority Sites for Conservation

IBA Sites Codes	IBA Sites Names	IBA Criteria
IN-NL-01	Fakim Wildlife Sanctuary and Saramati Area	A1, A2
IN-NL-02	Intanki National Park	A1, A2
IN-NL-03	Khonoma Nature Conservation and Tragopan Sanctuary	A1, A2
IN-NL-04	Mount Paona	A1, A2
IN-NL-05	Mount Zanibu	A1, A2
IN-NL-06	Mount Ziphu	A1, A2
IN-NL-07	Pfutsero-Chizami	A1, A2
IN-NL-08	Puliebadze Wildlife Sanctuary	A1, A2
IN-NL-09	Satoi Range	A1, A2
A1= Threatened Species; A2= Restricted Range Species		

Source: Department of Forest and Environment Conservation, Government of Nagaland

Table 10.2: Comparison of Assessment of Forest Cover from 2005 to 2013 (sq. km)

Year of Assessment	VDF	MDF	OF	VDF	Percent of G. A.
2005	1280	5072	7313	13665	82.75
2007	1239	4897	7293	13429	81
2009	1274	4897	7293	13464	81.21
2011	1293	4931	7094	13318	80.33
2013	1298	4736	7010	13044	78.68
Change Matrix of Forest Cover in Nagaland with 2005 Assessment as Baseline (in Sq. Km)					
Year of Assessment	VDF	MDF	OF	Area of Change in Forest Cover	
2005					
2007	-41	-175	-20	-236	
2009	35	0	0	35	
2011	19	34	-199	-146	
2013	5	-195	-84	-274	
Total	18	-336	-303	-621	

Source: India State of Forest Report (From 2005 to 2013)

VDF : Very Dense Forest,

MDF: Medium Dense Forest

OF: Open Forest,

G.A : Geographical Area of 16579 sq. Km

Table 10.3: Status of Jhum Cultivation in Nagaland during 2009

Villages Surveyed	No. of Villages	%
Number of Villages With Decreased Area Under Jhum	75	63
Number of Villages With Increased Area Under Jhum	12	10
Number of Villages With No Perceptible Change in Area Under Jhum	32	27
Total	119	100

Source: NEPED, 2009

Table 10.4: Gross State Domestic Product from Forestry and Logging at Current Prices

Year	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Amount (Rs. in lakh)	40402	42992	45150	47918	54572	57455	61532	67805

Source: State Domestic Product 2004-2004 to 2011-2012 (2004-2005 Series),
Department of Economics & Statistics, Government of Nagaland

Table 10.5: Animals and Birds Killed during 2008 in 66 Villages of Nagaland

Number of House Holds in 66 Villages Surveyed	14578
Number of House Holds Involved in Habitual Hunting	928 to 1510
Percentage of Habitual Hunter	6 to 10
Jungle Cat (Nos.)	14936
Medium and Large Animals(Nos.)	9698
Small Animals(Nos.)	47795
Large Birds(Nos.)	34758
Small Birds(Nos.)	219029
Total Animals and Birds Killed(Nos.)	326216

Source: NEPED Internal Report 2008

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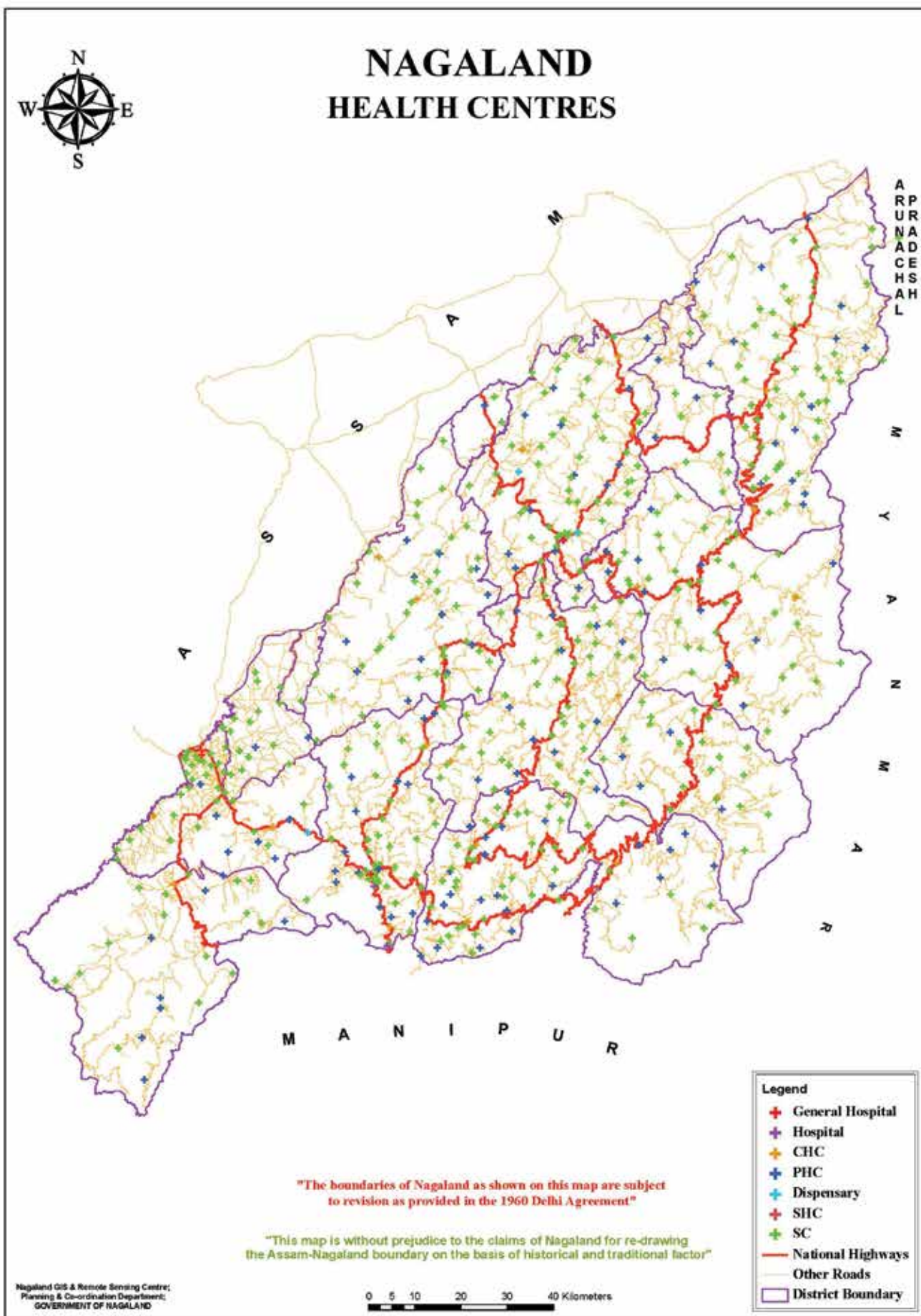
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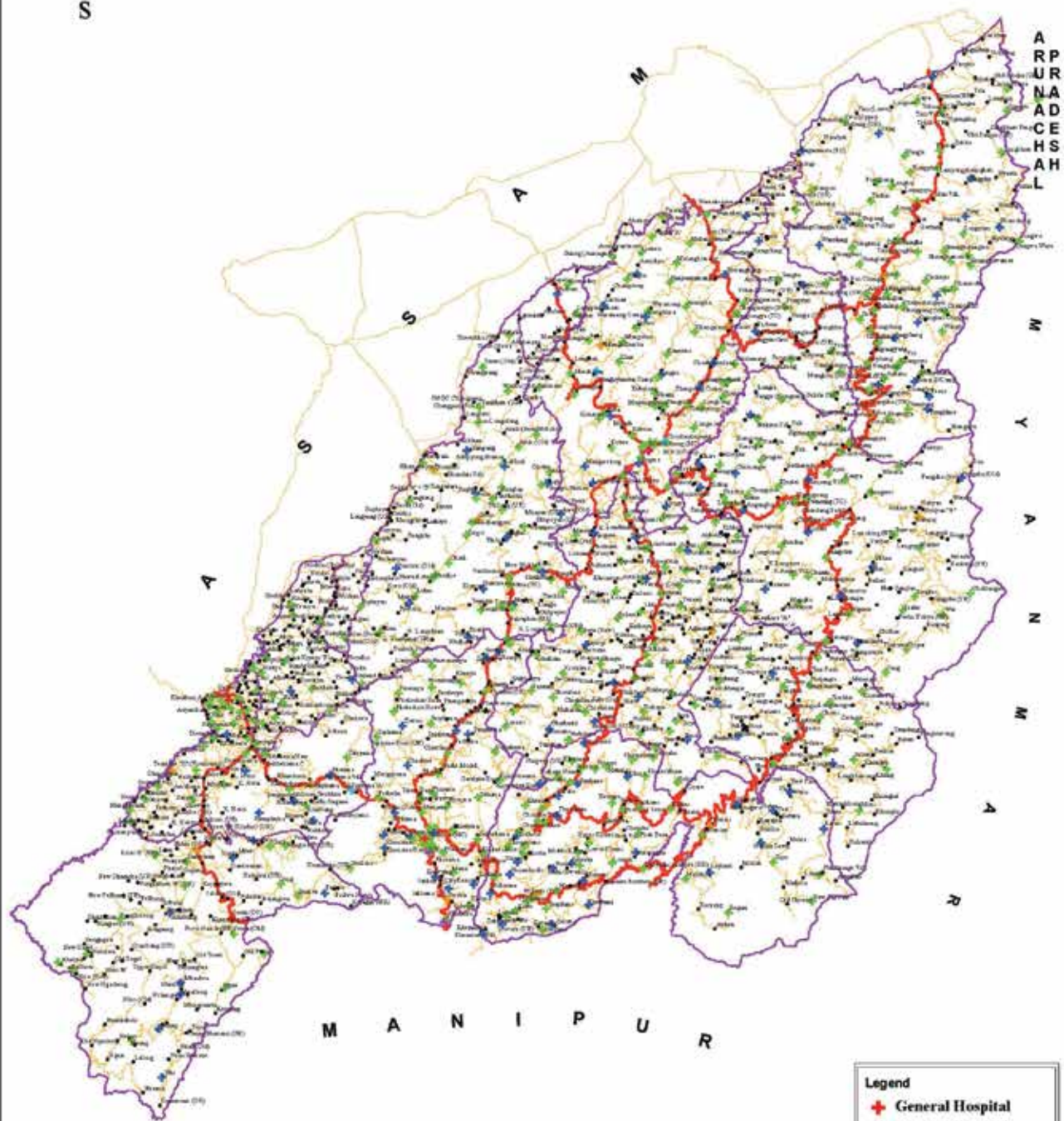
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NAGALAND HEALTH CENTRES



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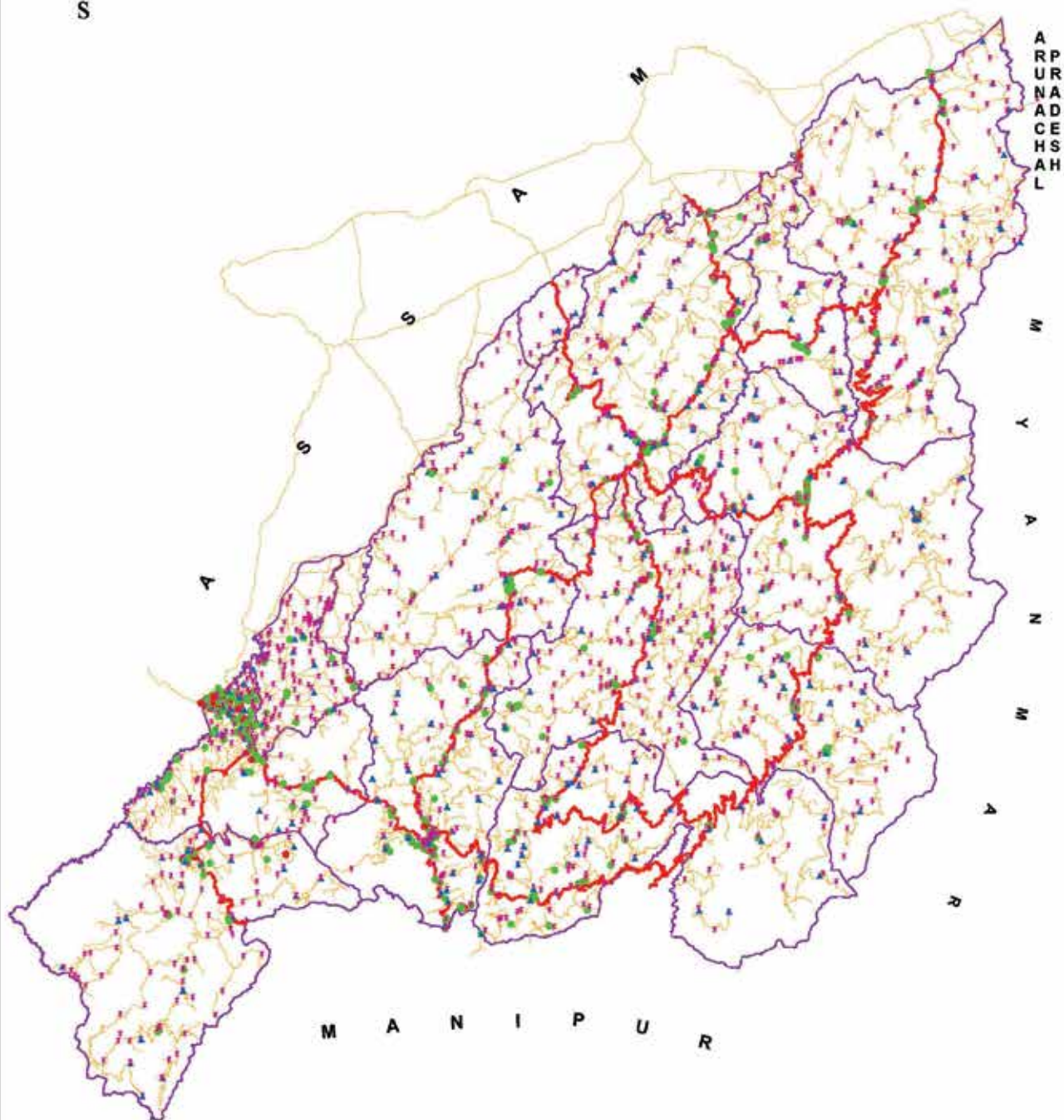
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Legend

- + General Hospital
- + Hospital
- + CHC
- + PHC
- + Dispensary
- + SHC
- + SC
- Village/Town Location
- National Highways
- Other Roads
- District Boundary



NAGALAND SCHOOLS



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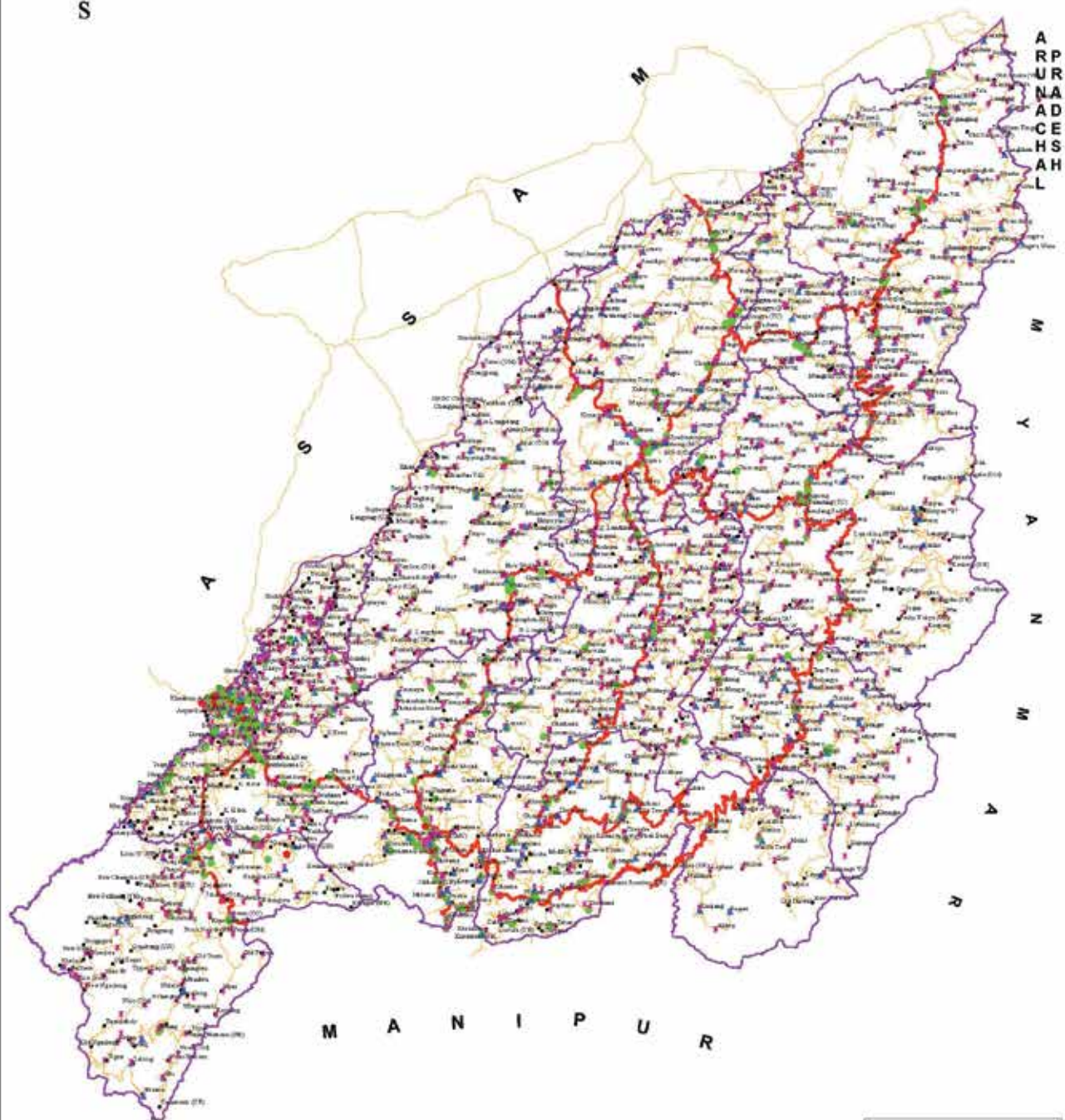
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- Legend
- Schools
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 - High School
 - Middle School
 - Primary School
- National Highways
- Other Roads
- District Boundary



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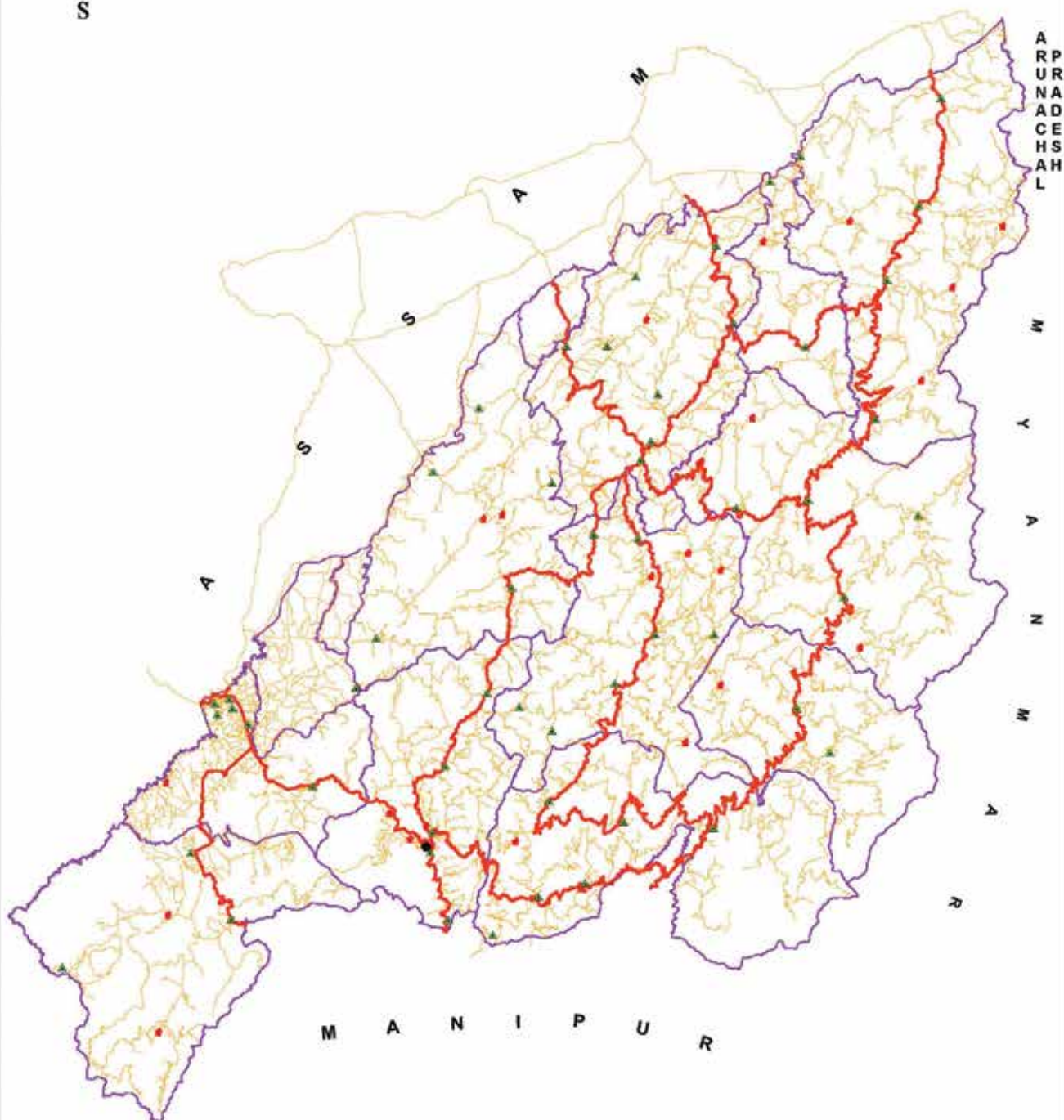
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- Legend**
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NAGALAND POLICE STATIONS



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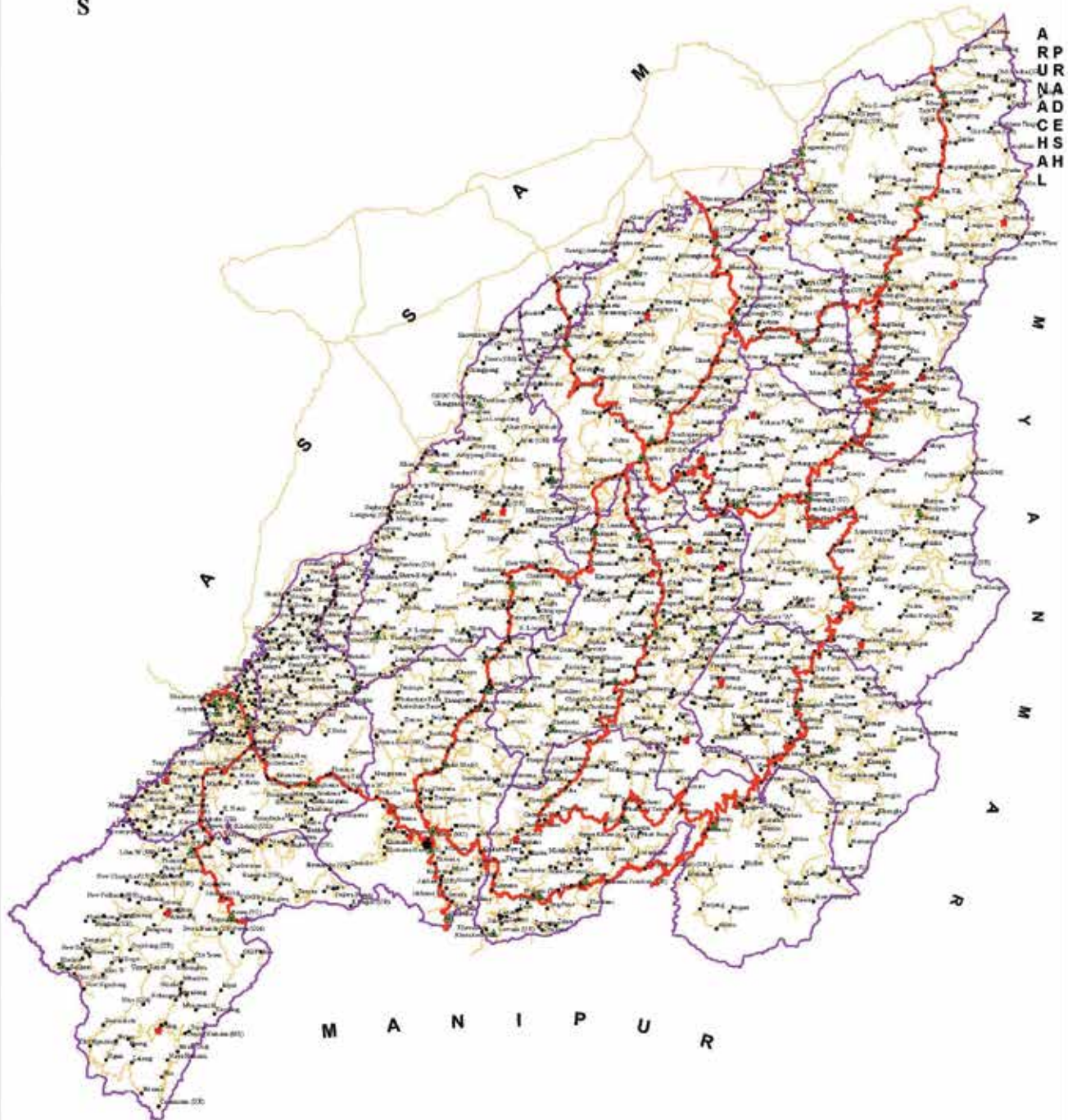
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Legend

- PHQ
- Police Stations
- Police Out Post
- National Highways
- Other Roads
- District Boundary



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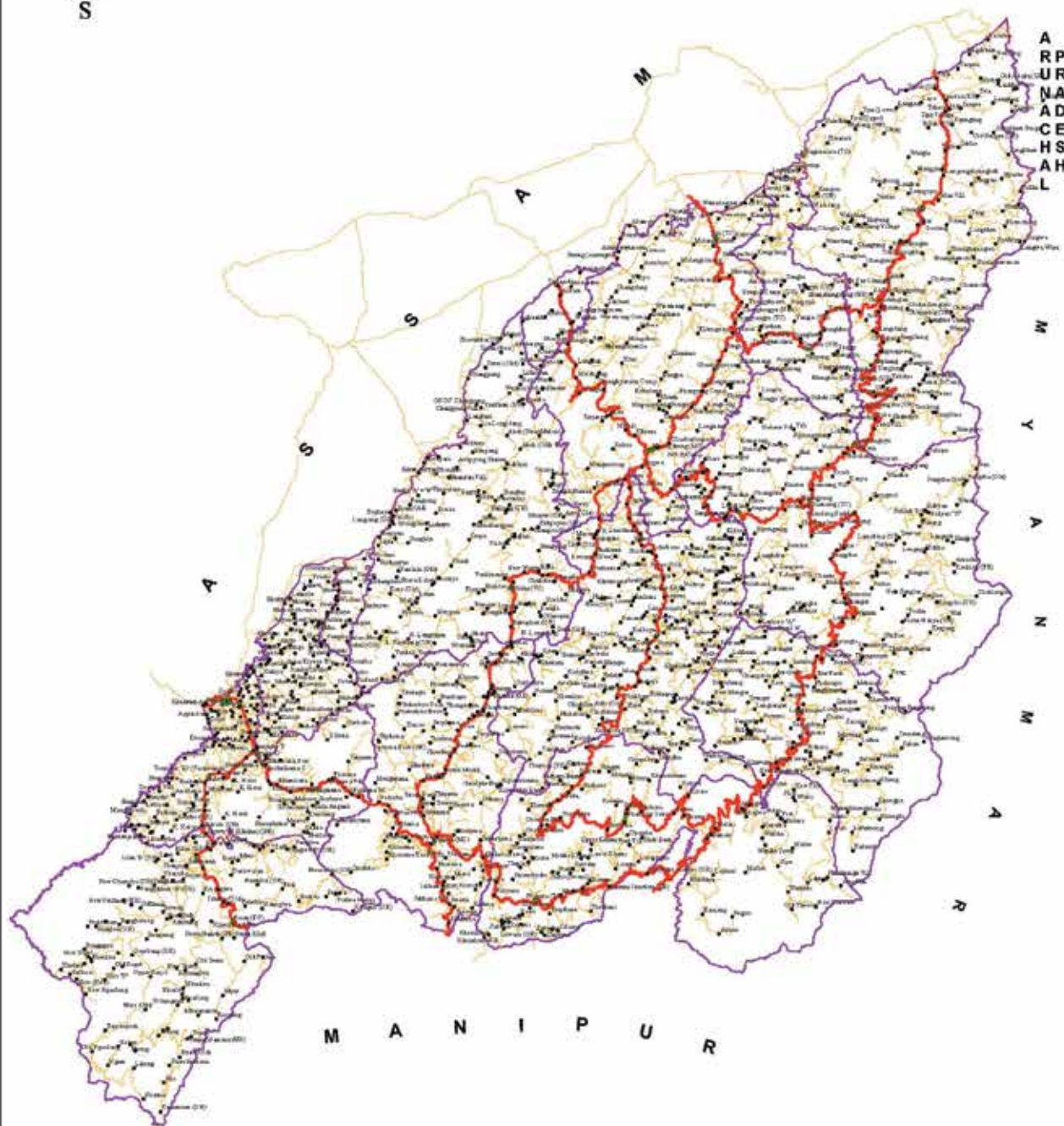
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Legend

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- Village/Town Location
- National Highways
- Other Roads
- District Boundary



NAGALAND BANKS



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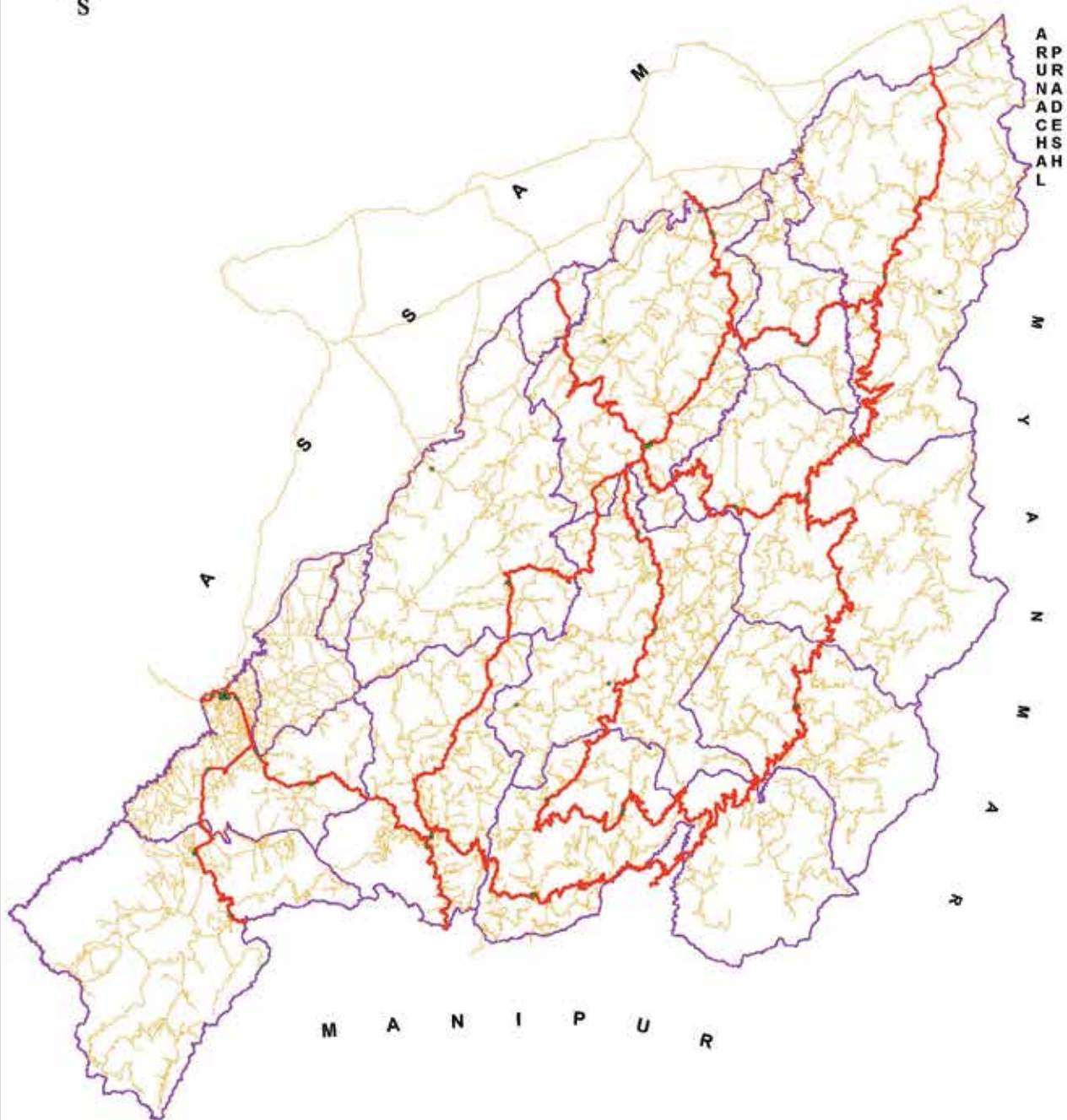
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Legend

- Banks
- Village/Town Location
- National Highways
- Other Roads
- District Boundary



NAGALAND BANKS



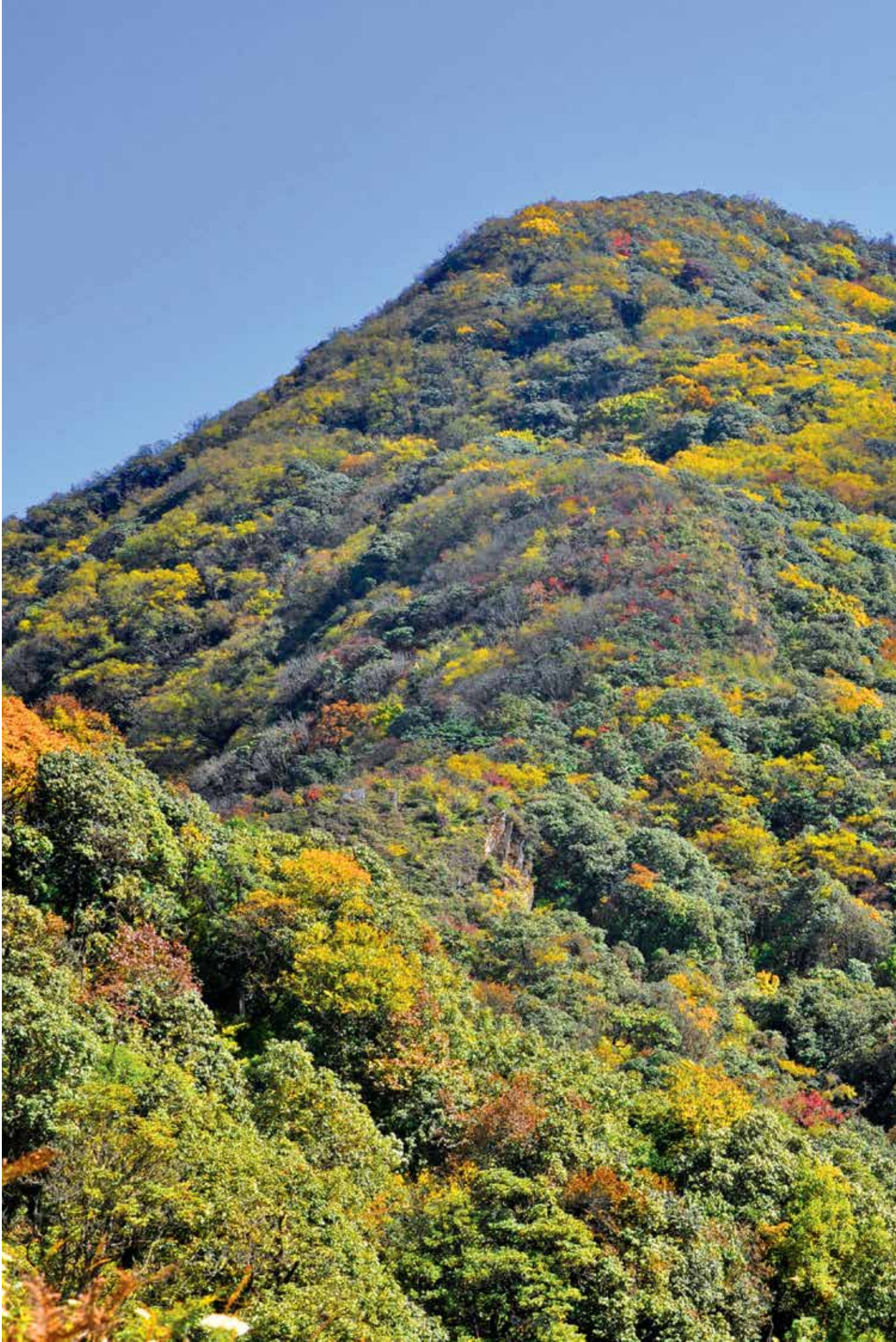
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