Government of Sikkim

Sikkim Human Development Report 2014

Expanding Opportunities, Promoting Sustainability

ROUTLEDGE

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Expanding Opportunities, Promoting Sustainability

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Foreword

Sikkim's first human development report (HDR) was released in 2001. In that report, for which I had also written the foreword, I had acknowledged the need to take cognisance of our weaknesses and identify areas where we needed to work harder. The mood at that time was more sombre since we were on a steep learning curve. We needed to know more about our situation and understand the many gaps that existed. More than a decade has elapsed between then and now. It is time to construct a new balance sheet of human development in Sikkim. The human development lens allows us to take stock of the developmental achievements and identify the challenges that lie ahead.

An Advisory Council, chaired by me, was constituted to oversee the process of preparing Sikkim's second HDR. The HDR project team was set up within the Chief Minister's Office. Dr A. K. Shiva Kumar, noted developmental economist and a Member of the National Advisory Council (NAC), readily agreed to guide this process in an honorary capacity. This is indeed a stellar contribution to our state and I would like to acknowledge this at the outset. The report has been prepared by a totally local team guided by Dr A. K. Shiva Kumar. This has led to immense learning about the scope and the manner in which HDRs are prepared—a process that has now been internalised within the people of Sikkim.

I have been Chief Minister of the state since 1994. It is heartening to note the tremendous improvement in all the areas of Sikkim's human development. This is something which I find most satisfying personally. My colleagues and I have led from the front. We have had our share of trials and tribulations. However, it is encouraging to note that there is light at the end of the tunnel. The people of Sikkim have seen remarkable

progress—their progress. Our government has facilitated this process of transformation. We have tried many innovative ways of taking the government and decision-making to the grass roots. One of these has been my village-to-village tour of the state. Many gaps in implementation were addressed and new work was sanctioned during this tour. Many officers accompanying us were delighted with the outcomes of the tour and were sensitised by the whole experience.

There have been many upheavals in the course of preparing this report. Chief among them was the 18 September 2011 earthquake which put our plans on hold for a considerable period of time. However, we have had the benefit of many other studies in the meantime, including the study of the state's public policy history for the period 1994 to the present time.

This report reflects the great transformation in human development that the people of Sikkim have experienced over the last two decades, more particularly over the last twelve years. It presents many positive findings as well as many other developments that do not inspire us. We find a visible drop in poverty numbers. Extreme poverty is virtually absent in the state. Almost all children are in school. These are all good signs. We have also captured first-hand the voices of young people. We have listened to their various concerns, aspirations and expectations. These are reflected in the report quite comprehensively. On the other hand, we continue to face challenges in the areas of connectivity, delivery of public services, delays in infrastructure projects and making gram sabhas the central pillar of planning.

There are miles to go and this is acknowledged and discussed in the report in the last chapter on the way forward. I can assure everyone that we as a government will take measures to ensure that we fulfil the aspirations of the people of Sikkim. Their dreams are our dreams and we need to find the means to achieve them.

Finally, we must acknowledge with gratitude all those who have been part of this process. I would like to again express my thanks to Dr A. K. Shiva Kumar and his associates for making the experience of preparing this report truly memorable. Many background papers were prepared by different authors. The Advisory Council that met several times in the course of making this report provided valuable inputs. Our officers and researchers from Sikkim have imbibed the work and culture of making such a report. I am sure they will be able to do this independently in the future.

It has truly been an exercise well worth it. I am immensely pleased to dedicate this report to the people of Sikkim.

Pawan Chamling
Chief Minister of Sikkim
February 2014

Message from UNDP

HUMAN DEVELOPMENT REPORTS GO BEYOND the conventional measures of economic prosperity, bringing new research and evidence-based policies that put people at the centre of development. The Sikkim Human Development Report 2014 highlights remarkable progress made in one of the smallest and the least populated states in India, and underlines the challenges ahead in sustaining and accelerating progress.

Soon after the first Sikkim HDR was published in 2001, the government consciously stepped up social spending from 27 per cent in 2001 to 37 per cent in 2012–13. Sikkim's average annual increases on its budget allocations over this period were 12 per cent for education, and for the health sector 18 per cent. This undoubtedly led to improvements in peoples' lives, as documented in this report. Sikkim now has the third lowest levels of malnutrition in the country, following Arunachal Pradesh and Nagaland. The state has achieved universal sanitation coverage for all households. It has the best gender parity performance among the north-eastern states, with female labour force participation at 40 per cent, significantly higher than the national average of 26 per cent. Between 2004 and 2011 there was a 70 per cent reduction in the numbers of the poor, and in 2011, Sikkim reported the lowest percentage of the population below the national poverty line, at 8 per cent. Primary and upper primary enrolment is near universal; over 85 percent of children below 2 years were fully immunized in 2009; and institutional delivery stood at 81 per cent in 2011.

Looking ahead, there are new challenges to be met and ongoing progress to be sustained. As the 2014 report outlines, a coherent human development approach requires a threefold emphasis on expanding opportunities, enhancing security and promoting sustainability. While one can look back with pride on Sikkim's achievements, we also

need to look ahead to the opportunities and challenges the future may hold. The 2014 report rightly highlights the importance of addressing youth concerns, specifically long-term employment generation, expanding infrastructure and connectivity, and building a knowledge society. Despite Sikkim's overall improved records, eliminating drug abuse amongst the youth, with serious social and health problems, remains a challenge. Expanding people's participation, particularly of the youth, will enable them to contribute to public life, thereby improving local governance. Ensuring sustainable development in this mountainous state, rich with biodiversity, will require managing urbanization, expanding ecotourism and sustainable livelihoods like organic farming—many of which are discussed in the report. All these require deliberate public action, to place the interests of people and a human development approach at the centre of public policy. The 2014 Sikkim HDR is a clear articulation of such a forward-looking vision.

HDRs across the globe—whether national, sub-national or municipal—all take inspiration from Mahbub ul Haq's pioneering efforts with the UNDP's HDRs back in 1990, building on a people-centred, human development approach. As the Director of UNDP Human Development Report Office now, it is with a sense of pride in our collective accomplishment that I send my warm wishes and support for the commendable effort undertaken in the 2014 Sikkim HDR.

Khalid Malik
Director, Human Development Report Office
United Nations Development Programme, New York

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Abbreviations

AIDS	Acquired Immunodeficiency Syndrome
ASHI	Association of Social Health in India
ATS	Apprentice Training Scheme
CA	Compensatory Afforestation
CAG	Comptroller and Auditor General
CATCH	Comprehensive Annual and Total Checkup for Healthy Sikkim
CBO	Community-Based Organization
CBTC	Cane and Bamboo Technology Centre
CDG	Community Development Group
CES	Coverage Evaluation Survey
CFR	Community Forest Rights
CMB	Conditional Maternity Benefit
CMIE	Centre for Monitoring Indian Economy
CMRHM	Chief Minister's Rural Housing Mission
CTS	Craftsman Training Scheme
DETDC	Darap Ecotourism Development Committee
DGET	Directorate General of Employment and Training
DHH	Directorate of Handlooms and Handicrafts
DIC	District Industries Centre
DISE	District Information of School Education
EDC	Eco-development Committee
EDP	Entrepreneurship Development Programme
EHR	Electronic Health Record
EMRS	Eklavya Model Residential School
FCC	Family Counselling Centre
FRA	Forest Rights Act

GDP	Gross Domestic Product
GER	Gross Enrolment Ratio
GIZ	German Technical Cooperation
GLOF	Glacial Lake Outburst Flood
GPI	Gender Parity Index
GPU	Gram Panchayat Unit
GSDP	Gross State Domestic Product
GSTC	Global Sustainable Tourism Criteria
HDI	Human Development Index
HDR	Human Development Report
HEP	Hydro-electric Power
HIV	Human Immunodeficiency Virus
HRDD	Human Resource Development Department
HWC	Human–Wildlife Conflict
IAS	Indian Administrative Service
ICDS	Integrated Child Development Services
IFMR	Institute of Financial Management and Research
IFS	Indian Foreign Service
IGMSY	Indira Gandhi Matritva Sahyog Yojana
IMR	Infant Mortality Rate
IPP	Independent Power Producer
IPR	Information and Public Relations
IPS	Indian Police Service
ITI	Industrial Training Institute
JFMC	Joint Forest Management Committee
JICA	Japan International Cooperation Agency
KBR	Khangchendzonga Biosphere Reserve
KVIB	Khadi and Village Industries Board
LB	Live Birth
LFPR	Labour Force Participation Rate
MBC	Most Backward Class
MDG	Millennium Development Goal
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MMR	Maternal Mortality Rate
MoU	Memorandum of Understanding
MPI	Multidimensional Poverty Index
MSME	Micro, Small and Medium Enterprise
NACO	National AIDS Control Organisation
NCRB	National Crime Records Bureau
NEIIP	North-East Industrial and Investment Promotion Policy
NER	Net Enrolment Rate
NERLP	North-East Rural Livelihoods Project
NFHS	National Family Health Survey
NGO	Non-governmental Organization
NHRM	National Rural Health Mission

NRLM	National Rural Livelihood Mission
NSDC	National Skill Development Corporation
NSDP	Net State Domestic Product
NSSO	National Sample Survey Office
NTFP	Non-timber Forest Product
PMEGP	Prime Minister's Employment Generation Programme
PNDT	Pre-natal Diagnostic Technique
PRI	Panchayati Raj Institution
REDD+	Reducing Emissions from Deforestation and Forest Degradation
RMDD	Rural Management & Development Department
RNTCP	Revised National Tuberculosis Control Programme
SABCO	Sikkim Scheduled Tribes and All Other Backward Classes Financial Development Corporation
SAPCC	State Action Plan on Climate Change
SBFP	Sikkim Biodiversity Conservation & Forest Management Project
SC	Scheduled Caste
SCS	Special Category States
SCS	State Civil Service
SCW	State Commission for Women
SDPC	Sikkim Power Development Corporation
SGSY	Swarnajayanti Gram Swarozgar Yojana
SHG	Self-help Group
SHRA	Sikkim Hotels and Restaurants Association
SIDICO	Sikkim Industrial Development & Investment Corporation
SISCO	Sikkim State Co-operative Bank
SJSRY	Swarna Jayanti Shahari Rozgar Yojana
SRDA	Sikkim Rural Development Agency
SRS	Sample Registration System
SSEC	State Socio-economic Census
SSWB	State Social Welfare Board
ST	Scheduled Tribe
STEP-UP	Skill Training for Employment Promotion among Urban Poor
TAAS	Travel Agents Association of Sikkim
TSC	Total Sanitation Campaign
UCDN	Urban Community Development Network
UHC	Universal Health Coverage
ULB	Urban Local Body
UNDP	United Nations Development Programme
UNICEF	United Nations International Emergency Children's Fund
UNIDO	United Nations Industrial Development Organization
USEP	Urban Self-employment Programme
UT	Union Territory
UWEP	Urban Wage Employment Programme
UWSP	Urban Women Self-help Programme
WPR	Work Participation Rate

Overview

The purpose of development is to put people and what they value most—their security, their aspirations, their needs, their rights—at centre stage of development. And this is the way human development is defined—as a process of expanding choices, enhancing people's capabilities, fulfilling rights and expanding freedoms. Inherent to human development is a focus on people and what they cherish and value in life. People are both, the beneficiaries of such development as well as the agents of the progress and change that bring it about. And human poverty stems from multiple deprivations—a denial of basic entitlements to education, health, nutrition, and other constituents of decent living.

The practice of human development calls for a three-pronged strategy:

Expand opportunities In the human development framework, an equitable expansion of opportunities—economic, social, political and cultural—is regarded as being essential for ending human poverty. A focus on expanding opportunities for people can ensure that progress can combine growth with inclusion, and social justice with equity. Human poverty can be fundamentally traced to inadequacies and inequalities in the distribution of opportunities, between women and men, across regions, between rural and urban areas, and within communities.

Enhance security Human security is more than the absence of violent conflict. For most people, a feeling of insecurity arises from worries about everyday life. For them, security symbolizes protection from the threat of disease, hunger, unemployment, crime, social conflict, political repression and environmental hazards. Human security complements human development by addressing 'downside risks' that threaten survival, healthy life, livelihoods and the dignity of human beings. Promoting human security

calls for (i) protection against downside risks—shielding people from acute threats and (ii) empowerment of people to take charge of their own lives.

Promote sustainability Sustainability is a matter of distributional equity—of sharing development opportunities between present and future generations. The strongest argument for protecting the environment today is the ethical need to guarantee to future generations opportunities similar to the ones previous generations have enjoyed. This demands guaranteeing both intra-generational and inter-generational equity. The purpose of sustainable development, therefore, is to create an environment in which all people can expand their capabilities, and opportunities can be enlarged for both present and future generations.

While assessing Sikkim's human development, it is important to recognize certain unique features of the state.

In tracing Sikkim's human development over the years, it is important to note five unique features of the state.

First, Sikkim is India's least populous state. Located in the north-east, Sikkim reported a population of 6,10,577 in 2011. Sikkim is also the second-smallest state in India after Goa in terms of land area. The state is spread over 7,096 square kilometres. Under certain conditions and circumstances, governance of such a small population of an equally small geographical area might seem a relative advantage. But in reality this is not so. Population is unevenly distributed across the state. For instance, North Sikkim reports a population density of only 10 persons per square kilometre, as its population of 43,709 people is spread over 4,226 square kilometres. On the other hand, East Sikkim reports a population density of 297 as 46 per cent of the state's population resides in this district which is spread over 954 square kilometres.

Second, Sikkim is a mountainous, landlocked state. Being part of the eastern Himalayas, almost the entire state is mountainous. The state has 10 mountain peaks that rise above 7,000 metres, 84 glaciers and 315 glacial lakes (including the Tsomgo, Gurudongmar and Khecheopalri). Mount Khangchendzonga (8,586 meters), the world's third-highest mountain peak and revered as a guardian deity, is situated on the border between Sikkim and Nepal. For the most part, it is difficult to come across vast areas of flat land. Rocky and precipitous slopes make agriculture, transportation, and communication difficult.

Third, Sikkim is rich in biodiversity. The state located in the eastern Himalayas is listed as one of the 34 global biodiversity hotspots. The state is endowed with rich natural resources, characterized by its huge floral and faunal biodiversity, abundant water resources, streams, rivers and glaciers, and abundant forest cover. Sikkim has over 47 per cent of area under tree cover, which is one of the highest in India, both in terms of proportion to the geographical area of the state and per capita forest cover. Out of approximately 1,200 orchid species found in India, Sikkim is a repository for over 527 species, and is one of the richest hotspots for orchid diversity in the Indian Himalayas. Sikkim is home to 4,458 of the 15,000 flowering plants found in India, and 40 per cent

of India's pteridophytes. It boasts over 700 medicinal plant species, and is home to 38 of the 90 rhododendron species found in the country. Sikkim's diverse fauna includes 125 species of mammals, 574 species of birds and 689 species of butterflies, in addition to many reptiles, amphibians, and insects. Some of the *Red Data Book* mammal species found in Sikkim are red panda, snow leopard, clouded leopard, musk deer, Tibetan wolf, red fox, Indian wild dog, hog badger, Tibetan sheep or *argali*, Tibetan gazelle, serow, goral, and Tibetan wild ass.

Fourth, Sikkim exhibits unusually diverse climatic conditions. It is the only bio-geographic zone in India, and perhaps among the few in the world, which exhibits such a wide a range of ecological conditions—from tropical moist to temperate and alpine zones—in such a small geographical area. The mountainous terrains of Sikkim with their varying altitudes as well as variety in elevation create innumerable pockets of unique micro-climatic conditions, ecology and eco-tones, which nurture wide-ranging physical and climatic scenarios.

Fifth, Sikkim enjoys a geo-political and strategic locational advantage, sharing boundaries with Bhutan, China and Nepal. This gives the state advantage in terms of the potential for trade and pursuing India's Act East Policy. However, being a border state also means a large presence of defence and paramilitary forces and some restrictions on the free movement of goods and civilians across the state and internationally.

The mountainous terrain poses special challenges for human development in Sikkim.

The biggest challenges for public administration are posed by the state's geo-physical characteristics. Sikkim's physiographic structure makes the lives of people extremely vulnerable to earthquakes and landslides. The region has experienced relatively moderate seismicity, with 18 earthquakes of magnitude 5 or greater over the past 35 years. The seismic activities cause frequent landslides and rock falls, especially in the epicentre. The earthquake of 18th September 2011, with a magnitude of 6.8 and the epicentre located near the India–Nepal border, caused the worst damage and destruction in recent years. Three aftershocks of magnitude 5.7, 5.1 and 4.6 followed within 30 minutes. The tremors were felt across a wide region including India, Nepal, China, Bhutan and Bangladesh. Close to a hundred people were reported dead with more than 60 in Sikkim alone. The earthquake, the aftershocks and the heavy seasonal rains triggered more than 300 landslides which caused serious fatalities and also damage to infrastructure. Roads were the worst affected by the landslides. Many of them were either severely breached or suffered total washout. This disrupted communication and relief supplies and delayed reaching disaster victims in time.

Being a small mountainous state compounds the problems of ensuring universal access to essential goods and services.

A mountainous region brings with it other disadvantages as well. Land is a highly scarce resource in Sikkim. Only 11 per cent of the total geographical area, at an altitude of a little less than 2,000 metres, is available for cultivation. Furthermore, the mountainous terrain and the highly dispersed population

greatly add to the costs of providing social services and infrastructure. Again, because of its small size, the state enjoys practically no economies of scale. Almost all types of construction material need to be brought in from outside the state. Transportation is not only difficult and hazardous, but also adds substantially to costs of production of goods and services. Similarly, establishing systems of support, supervision and performance monitoring become complicated and expensive as people need additional resources and time to travel for many days to visit remote areas. It is also difficult to attract qualified people to serve in these remote and hostile areas.

However, being a 'small' landlocked mountainous state has not proved to be a disadvantage. On the contrary, the state has capitalized on its strengths and recorded significant gains in human development over the past two decades. This report tracks the state's development journey especially since 2001 (when the first Sikkim Human Development Report was published) and draws attention to the next generation challenges of human development that ought to become the priority over the coming decade.

The 2001 Sikkim Human Development Report was the first comprehensive stocktaking exercise—25 years after Sikkim became the 22nd state of India. Sikkim's balance sheet of human development at that time revealed significant gains in human development since the merger with India, notably in child survival, school education and the provisioning of basic services. However, the report also pointed out:

By simultaneously promoting economic growth and expanding social opportunities, Sikkim has addressed many of the human development shortcomings identified by the first Sikkim Human Development Report of 2001.

- the growth of Sikkim's gross domestic product as well as expansion of per capita incomes were slow due to the slowing down in both agricultural production and manufacturing;
- improvements in the delivery of health care were poor, reflected in the strikingly low rates of immunization coverage and institutional births; and
- the benefits of growth and human development were not equitably distributed, resulting in the persistence of high poverty levels.

Interventions by the state government have addressed many of these shortcomings. Sikkim has made steady progress in various aspects of human development over the last decade and is well on its way towards achieving the Millennium Development Goals (MDGs) by 2015. Some of its key achievements with regard to the MDGs are as follows:

- Sikkim is ranked third, after Arunachal Pradesh and Nagaland, with the lowest incidence of malnutrition in the country.
- Among the north-eastern states, Sikkim had the best gender parity index (GPI) for Classes VI–VIII in 2007–08 and ranked third on the GPI for Classes I–V.
- The female work participation rate, 40 per cent, is much higher than the national average of 26 per cent.

- Women's participation in employment under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) increased significantly from 38 per cent in 2008–09 to 59 per cent in 2011–12—and is much higher than the 33 per cent participation mandated under the programme.
- Sikkim is the first and only 'Nirmal Rajya' in the country—a state that has universalized sanitation thereby achieving a 100 per cent open defecation-free status.

Sikkim was among the top five states that recorded the maximum acceleration in the Human Development Index (HDI), which went up from 0.582 in 1996 to 0.665 in 2006.

Sikkim has recorded an impressive acceleration in human development over the past decade.

An impressive growth in incomes in Sikkim over the past decade has contributed to the increase in HDI. Through most of the 1990s, the net state domestic product (NSDP) grew, on average, by 5.75 per cent per annum (between 1993 and 2000). However, between 2001 and 2012, Sikkim's NSDP grew, on average, by 17 per cent every year—the highest among all Indian states—surpassing significantly the national average of 10 per cent. Much of the growth has been generated by impressive expansion in the industry and manufacturing sectors, backed by the services sector. The contribution of agriculture to Sikkim's growth has been minimal. As a result of high growth, real per capita incomes in Sikkim witnessed more than a fourfold increase from Rs 15,953 in 2001–02 to Rs 69,202 in 2011–12. Sikkim's per capita income today is the highest among north-eastern states and ranks fifth in India (after Delhi, Goa, Chandigarh and Puducherry).

Between 2001 and 2012, the government consciously stepped up investments in the social sectors particularly in health and education. In 2012–13, the Government of Sikkim allocated 37 per cent of its total expenditure to the social sector—up from 27 per cent in 2001. This resulted in nearly a sevenfold increase in nominal per capita social sector spending—from Rs 4,810 in 2001 to Rs 28,661 by 2012. Between 2001 and 2013, there was, on average, an annual increase in budget allocations by 12 per cent and 18 per cent respectively for education and health.

Benefits accrued as a result of interventions by the state.

Several benefits including significant improvements in health have accrued as a result of deliberate interventions by the state. The state has been able to capitalise on its unique natural resource base and environmental wealth for the promotion of rural livelihoods—by creatively investing in ecotourism, organic farming, and a host of other potentially high-income generating activities. Improvements in health and education are also visible. Acceleration towards universal elementary education has reduced drop-out rates and increased retention at the primary level of education.

Noteworthy, for instance, are the following achievements:

- By 2009, over 85 per cent of children below two were fully immunized—the highest proportion across Indian states.

- Institutional delivery rose to 81 per cent by 2011.
- In 2005–06, Sikkim reported the lowest proportion of under-weight children (20 per cent). Only 3 per cent of children under three were severely under-weight—as against the national average of 19.5 per cent in 2005–06.
- By 2011, Sikkim reported amongst the lowest percentage of population below the poverty line—8 per cent—across Indian states. In 2004–05, close to 170,000 people lived below the poverty line. By 2011, this number had come down to 51,000—a 70 per cent reduction in the number of poor.

The benefits of growth and human development in Sikkim are more equitably distributed today than they were a decade ago.

- Enrolment in primary and upper primary schooling is near universal, with net enrolment ratios being the highest in India.
- Close to 93 per cent of households have electricity and 100 per cent have a latrine facility within the premises.

More balanced investments have also resulted in the narrowing of gaps. For instance:

- The sex ratio (number of females per 1,000 males) has improved from 875 in 2001 to 889 in 2011. The child sex ratio (0–6 years) for 2011 is higher at 944, which is also higher than the national average of 914.
- Inequalities in the distribution of income and consumption have improved between 2004 and 2010. Sikkim registered the lowest Gini coefficient of urban consumption (0.186) across all Indian states in 2009–10.
- The gap between male and female literacy rates in 2011 was 10 percentage points—16 points less than in 2001. Sikkim ranks highest among the north-eastern states on its per capita health expenditure, Rs 1,507, which is higher than the all-India figure of Rs 1,201.
- Sikkim is ranked fourth among all states of India on the Composite Educational Development Index for 2012–13—a significant jump from the 12th position in 2011–12.

On UNDP's Multidimensional Poverty Index, Sikkim is among the top eight—surpassing states like Andhra Pradesh, Gujarat, Karnataka and Maharashtra.

The Multidimensional Poverty Index (MPI) identifies overlapping deprivations at the household level across the three dimensions of the HDI (living standards, health and education) and shows the average number of poor people and deprivations with which poor households contend. The MPI for Indian states varies from a low of 0.051 in Kerala to a high of 0.479 in Bihar. Sikkim ranked eighth with an MPI value of 0.150. The biggest contribution to this low MPI value has been improvements in health and nutrition. Sikkim features as the 'best' in terms of the lowest levels of deprivation attributable to health and nutrition. Equally significant is the progress that Sikkim has made in providing improved sanitation.

Sikkim has witnessed significant changes in the attitude of society towards women.

Women in Sikkim have benefitted from educational and livelihood opportunities provided by the state government.

They have a relatively better position as compared to their national counterparts, with problems like female infanticide and foeticide as well as dowry-related deaths virtually absent in the state.

Female literacy rates have gone up from 22 per cent in 1981 to 76 per cent in 2011—surpassing the national female literacy rate of 66 per cent. Girls' enrolment in government schools has grown to more than 50 per cent in the period between 2001 and 2012. Women's participation in the workforce is more than 50 per cent. The emergence of developmental projects and the expansion of the private sector have opened up new employment avenues, with women benefiting from these opportunities. Women are also actively undertaking entrepreneurial roles. The provision of 30 per cent reservation for women in posts and services in the state government and public sector undertakings has benefitted the educated women of Sikkim. The percentage of women in panchayats, which increased from 36 per cent in 2005 to 42 per cent in 2010–11, has gone up to 52 per cent after the 2012 elections.

However, as Sikkim strives for gender equality, there are certain areas of concern:

- Despite occupational diversification, 59 per cent of women workers are engaged in agriculture-related work where earnings are typically low and uncertain.
- Women continue to be under-represented in the highest levels of bureaucracy. For instance, in 2011, women comprised only 12 per cent of the total departmental heads belonging to the IAS cadre in the state.
- The political representation of women members in the Sikkim Legislative Assembly has remained more of less static at around 3 per cent over the years.
- Domestic violence even though small in magnitude is reported to be common in Sikkimese society.

Good governance has contributed significantly to the establishment of a peaceful and harmonious society.

Sikkim has been recognized on several fronts for its innovations in public administration. The government has won several national awards for good performance. These include:

- Prime Minister's Award for Excellence in Public Administration 2013 for Excellence in Rural Management and Development
- Best State—Campaign Clean India Award 2011
- Best State—Comprehensive Development of Tourism Award 2011
- JRD Tata Memorial Award 2009 for outstanding performance in population, reproductive health and family planning programmes
- Nirmal Rajya Award 2008 for achieving 100 per cent sanitation and being the first and only state in the country to do this

Sikkim's becoming the 22nd state of the Indian Union in 1975 is still fresh in people's memory, and finds reflection in the popular imagination of a section of the elite, evoking strong emotions at times. Certain political actors have tried to take advantage of this

situation. However, Chief Minister Pawan Chamling, who has been in power for two decades, has dealt with these issues by relying on his immense capacity to take people along with his vision. He has repeatedly proposed the emotional integration of the Sikkimese people with the national mainstream. His positive attitude has created an image of being a strong nationalist.

Harmony and peace are central to the lives of Sikkimese people. Culture and spirituality are important ways by which Sikkimese society finds orderliness and the meaning of life. It is, therefore, not surprising that Sikkim has remained peaceful despite so many provocations in the region. The iconic 135-feet high statue of Guru Padmasambhava, the Char Dham, and now the Buddha Park, also known as Tathagata Tsal in Rabongla are but ways to give special cultural and spiritual meaning to peace.

Staying connected with people has been a central principle guiding governance in Sikkim.

An important factor in Sikkim's human development has been the special efforts made by the government to stay connected with people. This is particularly important for a small state like Sikkim that wants to address the 'last mile' challenges. In a given year, across Sikkim:

- around 11,000 babies are born (given the birth rate of 17.6),
- around 3,400 persons die (given the death rate of 5.6),
- around 280 babies die as infants (given the IMR of 26),
- around 20–25 mothers die due to pregnancy-related causes, and
- around 175 persons commit suicide (given the suicide rate of 29).

The top political leadership in Sikkim has found innovative ways of staying in touch with people. On 17 May 2011, for instance, the Chief Minister embarked upon a unique democratic experiment in the form of a village-to-village tour of the entire state, with the idea of 'institutionalising a system in which the people are supreme and the government is generally subservient to the people'. Putting the idea 'government is the servant of people' to practice, he took along with him elected representatives and senior bureaucrats to the doorsteps of people in order to understand their issues first-hand and evolve measures to solve their problems more responsively and sensitively. This direct civic engagement has helped the government to better understand the diverse regional issues, capture the grass-roots voices, and empower people from all walks of life.

The 42-day marathon village trip was carried out in four phases. That people are reasonably satisfied with the public delivery of basic amenities is evident from an analysis of the petitions received by the chief minister during the 42-day walking tour of rural Sikkim. Around 7,000 petitions were received during the tour, which were documented and acted upon. A small number of petitions pertained to basic amenities such as food, shelter, drinking water, electrification and sanitation. On the other hand, a majority of the requests were for construction of community halls and playgrounds, development of eco-friendly tourism by encouraging home-stays and creating new trekking routes,

and improvement of internet and road connectivity. The chief minister expressed his dissatisfaction over the non-completion of certain schemes and projects of the government, which had been sanctioned and tendered long ago. He directed the administration to look into the matter and take appropriate action against the defaulters and complete the work immediately. Requests from the field have been incorporated into the Twelfth Five Year Plan. Moreover, financial resources have been earmarked for immediately responding to the needs of communities.

Enabling Sikkim's youth to satisfy their aspirations and fulfil their dreams is critical for future progress.

Addressing the concerns of young people has to become a priority. As society moves into the era of Facebook and Twitter, the signs of change are palpable. With prospects of finding worthwhile and decent livelihoods becoming increasingly challenging, young people are becoming restive. The days of garnering an easy job with the government are gone. The writing on the wall is clear. At the same time, the new generation in Sikkim is not able to compete in the globalized world. Protests and other forms of making frustrations public are occurring more frequently. Adding to the tensions is the issue of jobs being created only to be lapped up by people who come from outside the state. The growing frustration of unfulfilled aspirations combined with easy availability of banned substances is causing many of the young to become drug addicts. Sikkim also has a higher rate of suicides. Over the past decade, the rate has remained consistently higher than the national average. Though the overall suicide rate (number of suicides per 1 lakh persons) came down to 29 in 2012, a disturbing feature is that the rate is higher among the youth than any other age group. Between 2001 and 2011, 677 out of 1,743 victims of suicide were from the age group of 15–29 years. Appropriate policies and interventions are urgently needed to prevent the young from taking their own lives.

The government recognizes that long-term strategies for employment generation are critical for addressing many of the issues faced by the youth in Sikkim today.

The Government of Sikkim has recognized the need to identify and provide appropriate livelihood skills to its youth. Sikkim is the first state to introduce capacity building programmes and livelihood schools. In 2010, the State Institute of Capacity Building was established at Karfectaar, South Sikkim, as an umbrella organization for livelihood schools in the state to make the educated and uneducated youth skilled and employable, both inside and outside the state. With a vast array of training options, these schools have trained over 4,000 unemployed youths in various courses including foreign languages, computer software and hardware, construction, trade, animal husbandry and tourism.

In addition, the state government has identified certain potential sectors for growth and livelihood creation:

Tourism: Sikkim has a comparative advantage in tourism with its beautiful landscape, diverse flora and fauna, culture and traditions, and warm hospitable people. It attracted a record 7.2 lakh tourists in 2010—which was declared as 'the year of tourism'. Recently,

Sikkim has been named the best region to visit in 2014 by *Lonely Planet*, a leading global travel guide.

Sikkim's Tourism Mission 2015 seeks to make tourism the main livelihood of the people of Sikkim, and each and every household and individual, a skilled force for the tourism industry. The mission also seeks to give importance to domestic tourism—focusing on pilgrimage, culture, tradition, heritage, adventure, ecotourism and wellness. The tourism sector is expected to provide employment to 75,000 people, with a trained manpower of about 17,000.

Pharmaceuticals: Sikkim has attracted considerable investments from pharmaceutical companies over the last five years. Key pharmaceutical companies, including Sun Pharma, Cipla and Zydus Cadila have set up bases in Sikkim. Tax incentives provided under the North-East Industrial and Investment Promotion Policy 2007 and additional incentives provided by the state government have played an important role in attracting these investments. During 2007–10, the state attracted around 14 companies with a total investment of Rs 25,000 million. Agreements have been signed up with a few companies for 100 per cent local employment and awarding of contract and supply works to locals.

Hydropower: The state government has set up the Sikkim Power Development Corporation (SDPC) to tap into the state's hydropower potential, which is estimated to be around 8,000 MW. Independent power producers (IPPs) have approved 29 hydroelectric power (HEP) plants for development. These projects are at various stages of construction and would have an installed capacity of close to 5,350 MW when complete. The State Power Policy lays down that the IPPs will have to provide employment to the local skilled, semi-skilled and unskilled manpower as well as create local business and contract opportunities.

Several challenges remain as Sikkim gears itself for the second generation of human development reforms.

Interactions with young people, civil society organizations, elected representatives, scholars and officials have revealed many areas where the state has fallen behind targets. The first has to do with the quality of education. Even though school enrolment is high, the educational attainment levels remain poor. Among the many factors that account for this are the poor quality of teacher training and the lack of passion to make Sikkim's school system the best in the country. The second has to do with transport and communication. The condition of roads remains bad despite several attempts to improve the quality of construction. With a large portion getting washed out during the monsoons, net addition to roads remains low. Connectivity has also been hampered by the absence of telecommunication services, especially in remote hilly areas. The inability to get mobile phone and internet connectivity has been a limiting factor placing many of the communities at a disadvantage.

The third area of neglect has been local planning. The absence of well-designed district plans has meant that the needs of communities have not been fully integrated into public

decision-making. As a result, priority requirements of different blocks have remained neglected. The fourth area has been inadequate attention paid to the farm sector. Even though efforts are being made to promote organic farming, progress has been slow. As a consequence, enough livelihood opportunities have not been generated to satisfy the increasing demand for decent work. A fifth area of deficiency has to do with the implementation of centrally sponsored schemes. While the state has been recognized for its meritorious performance in some areas such as the Mahatma Gandhi National Rural Employment Guarantee Scheme, it has not been able to meet the additional resource burdens for ensuring effective implementation of such centrally sponsored schemes. Inadequacy of staff with requisite capacity at the district and local levels is a major constraint. Finally, there is a mismatch between the high economic growth that the state is witnessing and the creation of jobs. This mismatch is reflected in the gaps that exist between the nature of work being generated and the aspirations of young people. Most of the jobs being generated are for unskilled labourers which the young do not desire. On the other hand, the inadequacy of opportunities for skilled jobs within the state is forcing many young people to go out in search of jobs. While this does offer economic security, the young have to face many forms of social and cultural insecurities outside the state. xxxi

Adopting a Seven-Point Action Agenda can pave the way for accelerating human development in Sikkim.

Sikkim has done well over the past two decades to address the many dimensions of human poverty and deprivations. The next generation of human development challenges requires a strategic focus on seven priority areas to sustain the momentum as well as address some of the pressing challenges of the times.

Expand livelihoods Unemployment and under-employment are a major concern and cause of insecurity among the youth in Sikkim. Special attention needs to be paid to promoting opportunities for women in all spheres of activity. The situation could get worse as the state transitions from an agrarian to a modern economy, with greater reliance on the tertiary sector. New forms of vocational education will need to be introduced. The manufacturing sector will always be small due to the topography. Employment opportunities need to expand keeping in mind the need to conserve the natural resources and cultural heritage of the state. The real potential for Sikkim lies in promoting organic farming and eco-tourism. Agriculture will have to move to the industry mode, with a focus on high-value organic produce. Organic farming can give a new meaning to farming in the mountain slopes, with the adoption of new technologies such as 'vertical farms'. Floriculture and fruits have the potential to become viable activities for young people to operate in an industry mode. Fruit and food processing has immense potential as well. Sikkim is yet to fully tap the potential of micro, small and medium enterprises (MSMEs).

Improve connectivity Improving connectivity is a clear demand of young people. If fulfilled, it will go a long way in ensuring equality of opportunity. Road construction has to be prioritized. Vast improvements are needed in state highways as well as in district

and sub-divisional roads. Many ongoing projects are expected to be completed in the coming years. This includes Sikkim's only airport and the railway link from Sevoke in north Bengal to Rangpo at Sikkim's border. Apart from considering double-lane carpeting and intermediate lanes, several new road networks are also planned connecting Melli–Jorethang, Jorethang–Namchi, Manpur–Namchi, Legship–Nayabazar, Legship–Pelling, Namchi–Mamring and Namchi–Wok. While the replacement of premix carpeting with semi-dense bituminous concrete has helped, much more needs to be done to improve the quality of road construction. The real challenge before the state is to make every village accessible by an all-weather road. Equally important will be to ensure better telecommunications and internet connectivity. Developing a common information technology platform can yield substantial benefits to the state.

Manage urbanization Greater attention will need to be given to issues of urbanization in the coming years. The adverse effects of commercial activity on the environment (air, water and land pollution) will have to be minimized. Public transportation has to be given high priority. More efforts are needed to regulate the number of vehicles in Gangtok and other urban centres to minimize the problems of parking, traffic congestion and pollution. Proper planning of *jhora*s (streams), drains and culverts of the roads is required in order to check landslides, road blocks and unwanted flow of excess water onto roads—all of which cause serious public health and related problems. It is critical to develop a legal regulatory framework to guide urban development including construction activities. It is equally important to plan for services like water supply, sewerage and solid waste management. Fundamental to planning for better urbanization is capacity building and acquiring specialized skills for managing urban development. Steps should also be taken to empower the newly formed urban local bodies (ULBs) to generate adequate municipal finances.

Establish a knowledge society Sikkim should aspire to become a knowledge society that is characterized by three important attributes, namely, creative capacity, innovative talent, and ability to bring about sustainable development. A knowledge society is not merely a literate society, or a computer literate society, or even just an educated society. A knowledge society requires knowledge workers who are not just skilled workers but also have the capacity to analyze, innovate and bring about transformational changes in society. For bringing about tangible improvements in people's lives, knowledge and information should become major sources of creating value. This will require promoting opportunities for knowledge-intensive businesses, enhancing the ability to absorb new technologies, continuously upgrading the skills of workers, and effective networking to tap into new thinking and new ways of organizing businesses.

Establishing a knowledge society is particularly important if the state has to generate decent work and employment opportunities for young people, especially as many move out of traditional agriculture and traditional businesses. Production has to be organized in innovative ways if the potential of organic farming, horticulture and fruits, floriculture, and other sectors have to be tapped for securing livelihoods for young people.

The state should develop a blueprint to overhaul the education system—starting with schools and moving to colleges and other institutions of higher learning—in order to ensure effective learning, critical thinking and analytical reasoning. The Science, Spirituality and Education Conference organized in Gangtok in December 2010 by the Namgyal Institute of Tibetology showed an innovative way of making education more holistic by proposing the introduction of spirituality into the school curriculum and by combining ethics and morals of religious philosophies along with scientific understanding of the brain and mind. Such a combination could help deliver an education that prepares the new generation to face the challenges of the times.

Revamping teacher training should become a priority. The school infrastructure should be appropriately upgraded. Efforts should be made to seek the support and involve the general public in the functioning of the schools in their neighbourhood. At the same time, efforts should be made to overhaul the higher education system including vocational education. New programmes relevant to the local context of Sikkim should be introduced so that young people get better equipped with the right knowledge to set up new businesses.

Promote universal health coverage Universal Health Coverage (UHC) implies that all residents obtain access to the quality health services they need, without suffering financial hardships when paying for them. Many of the pre-conditions for achieving UHC already exist in Sikkim:

- A dominant public sector in health, catering to almost 80 per cent of urban and 90 per cent of rural populations
- A strong, efficient, well-run primary health care system with near universal reach
- A reasonable capacity of well-trained, motivated health workers
- A massive database on health, generated recently by the Comprehensive Annual and Total Check-up for Healthy Sikkim (CATCH) programme
- A committed political leadership that has prioritized health for all

Sikkim can rapidly establish a UHC system that offers cashless health care (preventive, primary, secondary, and tertiary) to all residents. Specific actions needed would include consideration of the following:

- Primary care: Expand the reach of telemedicine, offer additional incentives to health care providers in underserved areas, establish a sound transport and evacuation system, establish a crisis line, launch a campaign and counselling service to address suicide, addiction and mental health concerns, and explore use of army resources, especially in the north district.
- Secondary care: Consider rebuilding district hospitals so that they become state-of-the-art health centres—which may be more economical in the long run (instead of adding to existing structures).
- CATCH and IT: Plan to convert the CATCH data into a permanent Electronic Health Record (EHR) for every individual.

A practical way of extending existing health provision in Sikkim into a UHC plan will require simultaneous actions to create adequate capacities to deliver care, assure quality, ensure evidence-based medicine, manage expectations of the population, introduce a comprehensive health IT system and pilot UHC.

Eliminate alcohol and drug abuse The growing alcohol and drug abuse among children is not confined only to urban centres. It has unfortunately penetrated into villages too, some remote. The social and health consequences are serious. Preventive, curative and rehabilitative measures are needed to deal with this problem. Apart from promoting greater awareness about the consequences of drug abuse, promotion of sports in schools and among the youth is an important preventive intervention. The state should develop a sports policy that offers an opportunity to children across the state to participate in sports. This will require creation of adequate sports infrastructure, recruitment of coaches, setting up training camps and so on. Resources available with Sports Authority of India should be tapped to make this a priority. Professional counselling centres should be set up and school teachers too should be trained in counselling. At the same time, resources should be deployed to set up sufficient de-addiction centres so that young people can get a second chance to shape their lives.

Deepen democracy Increased participation in local governance and forging a strong national identity will be crucial for making life more secure and adequate for the people of Sikkim.

Exclusion is an important constituent of human deprivation. Social and other forms of inclusive growth have been achieved in a unique way in Sikkim. The Sikkimese society has removed all forms of untouchability. That today the scheduled castes are finding their place in society without any difficulty is reason to be proud of.

The state has been making special efforts to promote democracy and effective people's participation in governance. Indeed many of the recent gains in human development are the outcome of people becoming more active in defining and articulating their priorities. But more needs to be done if we want to sustain the achievements.

Establishing an effective system of participation and local governance is a challenge for Sikkim. People's participation is constrained by geophysical limitations, by the relative isolation of mountain-based communities, limited access to information, and restricted transport and interconnections between districts.

A significant feature of Sikkim has been the existence of community organizations and youth clubs that have traditionally played a major role in promoting development activities in the state. More recently, NGOs have also become active, particularly in the field of health, education and environment. But deprivation manifests itself in the form of extreme isolation in many remote mountainous areas. For days on end, communities are cut off from regular communication. Such a situation is aggravated when men migrate

for long periods in search of employment outside their villages and even the state. The forced separation of family members, including children who often need to go out of the state for secondary schooling, creates its own social dynamics—the consequences of which are not yet clear.

Sikkim's progress in the future will depend upon how effectively it promotes sustainable human development. New policy initiatives will need to balance the need for environmental conservation and protection with the demands of economic expansion and employment generation. At the same time, the state will need to address vulnerabilities and enable people to build resilience to future shocks. This requires further investments in embracing the principles of equity and universalism, in putting people first, and in strengthening collective voice and action. Programmes of social protection need to be strengthened. Institutions will need to become more responsive as they endeavour to promote even more social cohesion. Building community-level resilience should be a priority especially when it comes enhancing capacities for disaster preparedness and recovery. Only by ensuring that every member of society benefits from investments in human development can human progress be equitable and sustainable.

Sikkim's vision of an egalitarian society should be rooted in a tradition of peace and overall connectedness. This is essential for promoting human development and human security across the state.

Mountain communities and their environments are exceptionally vulnerable to growing demands for water and other natural resources, expanding tourism, greater rates of out-migration, and the pressures of industry, mining and agriculture in an increasingly globalized world. As the source of most of the Earth's freshwater, repositories for rich biological diversity, popular destinations for recreation and tourism, and areas of important cultural diversity, knowledge and heritage—mountains are fragile ecosystems of global importance. Development policies need to ensure the balance between ecological health and the economic and social improvement of mountain areas for the sake of its inhabitants as well as people living in lowland areas.

The spiritual and cultural foundations of society have contributed to a strong family and community life in Sikkim. Deeply enshrined in Sikkim's heritage are notions of equity and social justice. Drawing upon and strengthening these values should become fundamental to good governance. This is essential for motivating people to take pride and participate in building a modern Sikkim.

HDR IEC Process

The preparation of the Second Sikkim Human Development Report (HDR) was designed to be a completely participatory initiative and an Information Education Communication (IEC) wing was formed to make people aware of as well as sensitise them to development concepts. In the process, public engagement and participation were promoted and active responses from people were sought. Outreach activities were framed to disseminate information to the public and also create forums for two-way communication through dialogues, consultations and participatory events at all stages of the process.

Information dissemination For the public to have access to information and also to keep them updated on the development of the report a website— http://www.hdrsikkim.org —was designed in early 2012. The website allowed for people to engage in the process by uploading their viewpoints and sharing their knowledge pool. The basic idea behind the HDR along with necessary FAQs and thematic studies under the report were outlined. The website served as the tool to reach the Sikkimese people, both inside and outside the state. Through the website a lot of people from various fields of expertise have shown their participation and provided valuable inputs.

A short movie clipping and a radio spot were designed, which have been broadcasted through the local television network and radio, guiding people to the website and asking them for their involvement.

Establishing dialogues To make the report totally participatory and get people from all walks of life to be involved, a bilingual brochure was designed and disseminated, inviting participation from a wide section of society, including citizens, NGOs, panchayats and

gram sabhas, tribal councils, women's organizations, students and teachers, farmers, academicians and business persons.

Early in February 2012, a workshop was held in the East district with the Nehru Yuva Kendra, a youth organization, followed by another workshop in the South district a week later. The workshop witnessed active participation of around 150 young people from different walks of life. It was designed to discuss the challenges the youth of Sikkim were facing and what opportunities they could tap in the near future. The discussions led to the sharing of views on what the government should include as priorities in its developmental plans. The IEC team also went to various schools and colleges to discuss the HDR and ask the youth for their participation and viewpoints.

Another series of district-level interactive workshops were organized on youth, livelihood and sustainable issues. These workshops were held on 3 August 2013 for the South district, on 30 August 2013 for the North and East districts and on 3 September 2013 for the West district. The primary objective of these workshops was to orient the youth towards the concept of human development, and to capture their aspirations and the voices as well as engage them in the process. The workshops were designed to be totally participatory, with brainstorming sessions, open-house discussions and group activities. These workshops witnessed a huge attendance and the involvement of the youth was phenomenal.

Consultation To empower people and their organizations, allowing them to take a leading role in articulating their views and providing active response, several consultation workshops were conducted.

A consultation workshop was held by Dr Sandeep Kakoty, who was preparing the background note on tourism, livelihood and education, in December 2012 at Janta Bhawan. Various stakeholders comprising representatives from the tourism department, forest department, education department, schools, TAAS and SHRA were present. The workshop was held to take stock of and analyze the state of the education system and the tourism scenario in the state. Dr Sandhya Thapa and Ms Nancy Choden held similar workshops on drug abuse, suicides and other social issues.

In the month of April 2013, a consultation workshop, chaired by Dr A. K. Shiva Kumar, was held at Chintan Bhawan on issues relating to health, education and social issues. Stakeholders from the education sector, health sector, NGOs and civil society were involved, and presentations were made by experts from various disciplines. A consultation workshop chaired by Mr P. D. Rai was held with state-level bureaucrats on their recent training visit to Singapore, and ideas were shared regarding the changes that can be brought in for improving the state administration.

A consultation workshop with all the ministers of the various departments, the Chief Secretary and the Development Commissioner was also held in April 2013 to take stock

of the viewpoints and concerns regarding their ministries. Individual interviews were also carried out with all the ministers to understand their vision for their respective ministry and what challenges they could foresee in the long run.

Documentation In order to understand and measure the growth in the respective themes, several success stories were documented from all over the state. These success stories—ranging from CMRHM and mid-day meals, to the CATCH programme and MGNREGA—all have been properly studied, documented and celebrated.

Advisory Council Members

1. Chairman, Hon'ble Chief Minister of Sikkim: **Mr Pawan Chamling**
2. Members: All Cabinet Ministers

• Mr Pawan Chamling	Chief Minister, Home Department, Finance and Expenditure Development Planning, Economic Reforms and North-East Council Affairs Department and departments not specially allotted to any other minister
• Mr Ran Bahadur Subba	Roads and Bridges and Labour Department
• Mr Thinlay Tsh. Bhutia	Water Security and Public Health Engineering and Transport Department
• Mr Dawa Norbu Thakarpa	Health Care, Human Services and Family Welfare, Animal Husbandry, Livestock, Fisheries and Vetenary Services and Parliamentary Affairs Departments
• Mr Narendra Kr. Pradhan	Human Resource and Development Department, Sports and Youth Affairs and Information Technology Department
• Mr Dil Bahadur Thapa	Urban Development and Housing, Food, Civil (Manger) Supplies and Consumer Affairs Departments
• Mr Sonam Gytaso Lepcha	Energy and Power and Cultural Affairs and Heritage Departments

- Mr Chandra Bdr. Karki — Rural Management and Development and Cooperation Department
- Mr Dawcho Lepcha — Food Security and Agriculture Development, Horticulture and Cash Crops Development and Irrigation and Flood Control Departments
- Mr Bhim Dhungel — Tourism, Forest, Environment and Wildlife Management, Mines, Minerals and Geology and Science and Technology Departments
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3. Member, Deputy Chairman of the Sikkim State Planning Commission: Mr S. M. Limboo
4. Executive Member, MP (LS): Mr P. D. Rai
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7. Member, Pr. Secretary to HCM: Mr R. S. Basnet, IAS
8. Member Secretary, Secretary Planning: Mrs Nim Yethenpa, IAS

1

The State of Human Development

The purpose of development is to put people and what they value most—their security, aspirations, needs and rights—at the centre stage. And this is the way human development is defined—as a process of widening choices, enhancing people's capabilities, fulfilling rights and expanding freedoms. Inherent to human development is a focus on people and what they cherish and value in life. People are both, the beneficiaries of such development and the agents of the progress and change that bring it about. The practice of human development calls for a three-pronged strategy:

Expand opportunities An equitable expansion of opportunities—economic, social, political and cultural—is regarded as being essential for ending human poverty. Human poverty, in the human development framework, is traced to inadequacies and inequalities in the distribution of opportunities, between women and men, across regions, between rural and urban areas, and within communities. Such a focus on expanding opportunities for people has the potential to ensure that progress can combine growth with inclusion, and equity with social justice.

Enhance security In the human development framework, human security goes much beyond the absence of violent conflict. For most people, a sense of insecurity arises from worries about everyday life. For them, security symbolizes protection from the threat of disease, hunger, unemployment, crime, social conflict, political repression and environmental hazards. Human security complements human development by addressing 'downside risks' that threaten survival, healthy life, livelihoods, and the dignity of human beings. Promoting human security therefore requires (i) protection against downside risks—shielding people from acute threats and (ii) empowerment of people to take charge of their own lives.

Promote sustainability The purpose of sustainable development is to create an environment in which all people can expand their capabilities, and opportunities can be enlarged for both present and future generations. Sustainability is a matter of distributional equity—of sharing development opportunities between present and future generations. The strongest argument for protecting the environment today is the ethical need to guarantee future generations the opportunities similar to the ones previous generations have enjoyed. This demands guaranteeing both intra-generational and inter-generational equity.

Sikkim, especially over the past two decades, has consciously adopted human development policies that have expanded opportunities, enhanced security, and promoted sustainability.

Located in the north-east of India, the landlocked state of Sikkim is wedged between the Tibet Autonomous Region of China to the north and east, Bhutan to the south-east, Nepal towards the west and the Indian state of West Bengal to the south. In 1975, Sikkim became the 22nd state of India when monarchy ended and democracy was established. Since then, the state has witnessed significant improvements in the levels of human development.

In tracing Sikkim's human development, it is necessary to recognize certain unique features of the state.

One, Sikkim, India's least populous state, reported a population of 610,577 in 2011. It is also the second smallest state in India in terms of land area—after Goa. Population is unevenly distributed across the state over 7,096 square kilometres. As a result, population density varies enormously across the state. For instance, North Sikkim reports a population density of only 10 persons per square kilometre, as its population of 43,709 people is spread over 4,226 square kilometres. On the other hand, East Sikkim reports a population density of 297, as 46 per cent of the state's population resides in this district which is spread over 954 square kilometres. Seventy five per cent of the state's population resides in rural areas, with the rural proportion being as high as 96 per cent in Sikkim's West District (Table 1.1).

Table 1.1 Demographic Features of Sikkim's Districts, 2011

	Population	% urban	Population density (persons per sq km)
East	286,583	43	295
South	146,850	14	196
West	136,435	4	117
North	43,709	11	10
Sikkim	610,577	25	86

Source Census of India 2011.

Two, Sikkim is a mountainous, landlocked state. Being part of the eastern Himalayas, makes almost the entire state hilly and mountainous. The state has 10 mountain peaks that rise above 7,000 metres, 84 glaciers and 315 glacial lakes (including the Tsomgo, Gurudongmar and Khecheopalri). Mount Khangchendzonga (8,586 meters), the world's third-highest mountain peak and revered as a guardian deity, is situated on the border between Sikkim and Nepal. For the most part, it is difficult to come across vast areas of flat land. Rocky and precipitous slopes make agriculture, transportation and communication difficult.

Three, Sikkim displays exceptional biodiversity—the result of its unique bio-geographic location, with Tibet in the north and the Bay of Bengal in the south. While the former influences the cold desert climate of the north, the latter contributes to the moist deciduous features of the south. Sikkim is listed as one of the 34 global biodiversity hotspots. This small state is endowed with rich natural resources, represented in its huge floral and faunal biodiversity, abundant water resources, streams, rivers and glaciers, and abundant forest cover (Table 1.2). Sikkim has 47 per cent of area under forests, which is one of the highest in India both in terms of per capita forest cover as well as the proportion of geographical area of the state. Out of approximately 1,200 orchid species found in India, Sikkim is a repository for over 527 species, making it one of the richest hotspots for orchid diversity in the Indian Himalayas. Sikkim is home to 4,458 of the 15,000 flowering plants found in India, and 40 per cent of India's pteridophytes. The state boasts of over 700 medicinal plant species, and is home to 38 of the 90 rhododendron species found in the

Table 1.2 Sikkim's Biodiversity at a Glance

Taxa	Numbers
Flowering plants	4,458
Orchids	527
Rhododendrons	38
Conifers	16
Bamboos	11
Ferns and fern allies	480
Tree ferns	9
Primulas	58
Oaks	11
Medicinal plants	700
Mammals	125
Birds	574
Reptiles	88
Amphibians	50
Butterflies	689
Fishes	48

Source http://sikkimforest.gov.in/Biodiversity-of-Sikkim.htm; Arrawatia and Tambe (2011).

country. Sikkim's diverse faunal base includes more than 125 species of mammals, 574 species of birds and 689 species of butterflies, in addition to many reptiles, amphibians and insects. Among the *Red Data Book* mammal species found in Sikkim are red panda, snow leopard, clouded leopard, musk deer, Tibetan wolf, red fox, Indian wild dog, hog badger, Tibetan sheep or argali, Tibetan gazelle, serow, goral and Tibetan wild ass. The diversity of bio-resources is not just restricted to the wild flora and fauna, but also extends to the large variety of agricultural crops that are grown in Sikkim. Over 175 cultivars of 69 crop species are grown in Sikkim, with rice having the highest number of cultivars (43) followed by maize (26).

Four, Sikkim exhibits unusually diverse climatic conditions. It is the only state in India, and perhaps among the few in the world, that has such a wide a range of ecological conditions—from tropical moist to temperate and alpine zones—spread over such a small geographical area. The mountainous terrain with varying elevation (300 m to 8586 m) creates innumerable pockets of unique micro-climatic conditions, ecological niches and eco-tones, which nurture wide-ranging physical and climatic scenarios for unmatched biodiversity and endemism. Sikkim's climate is highly varied on account of the wide range of elevation as well as the diverse configuration of surrounding high mountains, valleys and water bodies. The average temperature ranges from sub-zero during winter to 28°C during summers, and the annual rainfall varies from 1,500 mm to 3,200 mm.

Five, Sikkim enjoys a strategic geo-political advantage, sharing boundaries with Bhutan, China, and Nepal. This gives the state an advantage in terms of the potential for trade and pursuing India's 'Act East' policy. However, being a border state also means a large presence of defence and paramilitary forces, and certain restrictions on the movement of goods and civilians across the state as well as internationally.

Six, Sikkim enjoys special status under Article 371F of the Constitution of India, which recognises and provides safeguards to protect and preserve the State's unique ethnic character and traditional laws. The article guarantees several privileges to Sikkim including local autonomy in governance, laws restricting people of non-Sikkimese origin to settle in and conduct business in the state, and special provisions related to central taxation.

Seven, originally the land of Lepchas, Sikkimese society bears a strong influence of Tibetan Lamaic traditions and Hinduism as well. The benevolent rule of the early Lepcha rulers and the later Buddhist influence has shaped the social and political evolution of the state into a peace-loving society that has retained strong bonds with nature and environment. The state today is a beacon of peace in the largely volatile and restive north-eastern region of India. Harmony and peace are central to the lives of the Sikkimese people and are well ingrained in their psyche. Culture and spirituality are important ways by which Sikkimese society finds orderliness and the meaning of life. It is, therefore, not surprising that Sikkim has remained peaceful despite so many provocations in the neighbourhood.

The iconic 135-feet high statue of Guru Padmasambhava, the Char Dham and now the Buddha Park, also known as TathagataTsal, in Rabongla are but ways to give special cultural and spiritual meaning to peace.

Governance of such a small population spread over an equally small geographical area might seem a relative advantage. But in reality this is not so. Sikkim's geo-physical characteristics pose special challenges for public administration and human development. One, the state's physiographic set-up makes the lives of people extremely vulnerable to earthquakes and landslides. The region has experienced relatively moderate seismicity, with 18 earthquakes of magnitude 5 or greater over the past 35 years. The seismic shaking often induces instability in the hill slopes, which causes frequent landslides and rock falls. The earthquake of September 18, 2011, with a magnitude of 6.8 with the epicentre located near the India–Nepal border, caused the worst damage in recent years. Three aftershocks of magnitude 5.7, 5.1, and 4.6 followed within 30 minutes. The tremors were felt across a wide region including India, Nepal, China, Bhutan and Bangladesh. Close to 100 people were reported dead with more than 60 in Sikkim. The earthquake, the aftershocks and the heavy seasonal rains triggered more than 300 landslides which caused serious fatalities and damage to infrastructure. Roads were the worst affected by the earthquake inducing landslides. Many of them were either breached or suffered total washout. This disrupted communication and relief supplies, thereby compounding the challenges of reaching disaster victims in time.

Being a small mountainous state compounds the problems of ensuring universal access to essential goods and services. Meeting the 'last mile' challenges becomes quite serious. In a given year, across Sikkim:

- 11,000 babies are born (given the birth rate of 17.6),
- 3,400 persons die (given the death rate of 5.6),
- 280 babies die as infants (given the IMR of 26),
- 20–25 mothers die due to pregnancy-related causes, and
- 175 persons commit suicide (given the suicide rate of 29).

For instance, preventing unnecessary deaths from among 280 babies born every year requires that health services reach even the remotest parts of the state. The mountainous terrain and the highly dispersed population greatly add to the costs of providing social services and infrastructure. Because of its small size, the state enjoys practically no economies of scale. Almost all types of construction material need to be brought in from outside the state. Transportation is not only difficult and hazardous, but also adds substantially to costs of production of goods and services. Establishing systems of support, supervision and performance monitoring become complicated and expensive as people need additional resources and time to travel for many days to visit remote areas. At the same time, it is difficult to attract qualified people to serve in remote, mountainous, and sparsely populated regions with poor infrastructure and facilities.

Dimensions of human development The sections that follow track the progress made by Sikkim along key dimensions of human development. Interventions by the state government since then have addressed many of these shortcomings.

The 2001 Sikkim Human Development Report was the first comprehensive stocktaking exercise. Sikkim's balance sheet of human development at that time revealed significant gains in human development notably in child survival, school education, and the provision of basic services. However, the Report also pointed out that:

- the growth of Sikkim's gross domestic product as well as an expansion of per capita income were slow due to the slowing down in both agricultural production and manufacturing;
- improvements in the delivery of health care were poor, reflected in the low rates of immunization coverage and institutional births; and
- the benefits of growth and human development were not equitably distributed, resulting in persistent high poverty levels.

Income In 2012–13, Sikkim reported a per capita income (net state domestic product) of Rs 142,625—the highest among the northeastern states, higher than all states and Union Territories with the exception of Chandigarh and Delhi, and more than double the all-India average of Rs 68,757. Between 2004–05 and 2011–12, Sikkim's real per capita income more than doubled—from Rs 26,690 to Rs 70,477. In 2004–05, Sikkim ranked 15th; by 2011–12, Sikkim ranked among the top five states in terms of per capita income. Table 1.3 shows the growth performance of Indian states. Between 2004–05 and 2011–12, Sikkim's real per capita income grew at an annual average rate of around 15 per cent—the highest among Indian states and more than twice the national average of 6.7 per cent per annum.

Seventy five per cent of Sikkim's population lives in rural areas. Over 60 per cent of the population is directly or indirectly dependent on agriculture and allied sectors, while the rest depends on the manufacturing and service sectors for a living. Rice, maize and buck wheat are the main crops grown through terrace cultivation and channel irrigation is the main source of water. The average productivity is much below the national average due to the lack of modern techniques, constraints of the mountainous terrain and poor infrastructure related to irrigation, input supply and market support. As a result, Sikkim is food deficient and has to depend on imports from the rest of the country to feed its population. Among cash crops, Sikkim is the largest producer of large cardamom (4,500 MT), producing more than 88 per cent of India's total production and half of the global production. Recent years have, however, witnessed a decline in large cardamom productivity, owing to a large-scale pathogen attack on cardamom crops across the state. Animal husbandry is another major sector of rural livelihood, with milk procurement in particular registering an increase every year since 2007.

There has been a gradual shift in the contribution of different sectors to Sikkim's gross domestic product. Between 2004 and 2012, the increase in the share of industry from

Table 1.3 Growth Performance of Indian States, 2004–05 to 2011–12

		Per capita Net State Domestic Product at constant (2004–05) prices		
		2004–05	2011–12	Annual average growth rate (%)
1	Sikkim	26,690	70,477	14.9
2	Uttarakhand	24,726	50,303	10.7
3	Tamil Nadu	30,062	57,131	9.6
4	Gujarat	32,021	57,508	8.7
5	Delhi	63,877	112,626	8.4
6	Maharashtra	36,077	62,457	8.2
7	Kerala	31,871	53,877	7.8
8	Bihar	7,914	13,226	7.6
9	Andaman and Nicobar Islands	40,921	68,356	7.6
10	Puducherry	48,302	80,558	7.6
11	Andhra Pradesh	25,321	42,119	7.5
12	Haryana	37,972	62,078	7.3
13	Tripura	24,394	39,542	7.1
14	Mizoram	24,662	39,546	7.0
15	Madhya Pradesh	15,442	24,395	6.8
	All India	**24,143**	**38,037**	**6.7**
16	Karnataka	26,882	41,959	6.6
17	Rajasthan	18,565	28,851	6.5
18	Meghalaya	24,086	36,937	6.3
19	Himachal Pradesh	33,348	48,923	5.6
20	Goa	76,968	112,602	5.6
21	West Bengal	22,649	33,117	5.6
22	Chhattisgarh	18,559	26,979	5.5
23	Nagaland	30,441	43,267	5.2
24	Uttar Pradesh	12,950	18,217	5.0
25	Punjab	33,103	46,364	4.9
26	Arunachal Pradesh	26,610	36,877	4.8
27	Jharkhand	18,510	25,634	4.8
28	Odisha	17,650	24,134	4.6
29	Assam	16,782	22,910	4.5
30	Jammu & Kashmir	21,734	28,999	4.2
31	Manipur	18,640	23,953	3.6
32	Chandigarh	74,173	89,351	2.7

Source Planning Commission database, 2012.

29 to 55 per cent has contributed to the decline in the share of agriculture from 18 to 8 per cent, and in services from 53 to 38 per cent (Table 1.4).

Table 1.4 Contribution of Different Sectors to Sikkim's GDP, 2004–12

%	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12
Agriculture	19	18	17	16	14	9	8	8
Industry	29	29	30	30	35	55	55	59
Services	52	53	53	54	51	36	37	33
	100	100	100	100	100	100	100	100

Source CMIE and Government of Sikkim (for 2011–12).

However, the movement of labour from agriculture to industry and services has been relatively slow. In 2011–12, close to 62 per cent of the Sikkimese workers were employed in agriculture, forestry and fishing compared to the national average of 48.9 per cent. Only 13 per cent were employed in the secondary sector (mining, manufacturing, electricity, gas, water supply and construction), with more than half of them being employed in construction. The remaining 25 per cent of the workers are employed—almost similar to the national average of 27 per cent. When further broken down, six per cent were employed in wholesale and retail trade as well as in the repair of automobiles and motorcycles.

Table 1.5 shows the sectoral growth performance in Sikkim.

Table 1.5 Sectoral Real Growth Rate of Gross State Domestic Product in Sikkim

(%)

	2007–08	2008–09	2009–10	2010–11	2011–12
Agriculture and allied sectors	3.9	4.3	4.2	2.8	4.5
Industry	9.9	34.8	172.7	7.4	7.2
Services	7.5	9.6	24.5	10.5	10.5
Overall	7.6	16.4	73.6	8.1	8.2

Source Central Statistics Office (CSO) GSDP (2004–05 series).

The impressive growth in Sikkim's Gross State Domestic Product is attributed to commissioning of power projects over the Eleventh Plan period, 2007–2012. The agriculture sector, particularly floriculture and horticulture has also performed relatively well during this Plan period.

Sikkim has attracted considerable investments from pharmaceutical companies over the last five years. Key pharmaceutical companies, including Sun Pharma, Cipla and Zydus Cadila have set up bases in Sikkim. Tax incentives provided under the North-East Industrial and Investment Promotion Policy 2007 and additional incentives provided by the state government have played an important role in attracting these investments.

During 2007–10, the state attracted around 14 companies with a total investment of Rs 25,000 million. Agreements have been signed up with a few companies for 100 per cent local employment and awarding of contract and supply works to locals.

Employment and jobs Of the total workers, 62 per cent continue to be engaged in agriculture, forestry and fishing. Another 13 per cent of the workers are employed in the secondary sector (mining, manufacturing, electricity, water supply and construction), with more than half of them being employed in construction. The tertiary sector constitutes 26 per cent of the workers (Table 1.6).

Table 1.6 Sectoral Distribution of Workers (%)

	Rural			Urban			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Primary	62	86	73	1	3	1	50	77	62
Secondary	16	5	11	25	10	20	18	6	13
Tertiary	22	9	16	74	88	78	32	18	26

Note Figures are rounded off.
Source 68th NSS Round (2011–12).

According to the Census 2011, the number of total workers increased from 263,043 in 2001 to 308,138 in 2011—an increase of 17 per cent. A majority (55 per cent) of this increase was in the category of marginal workers. The work participation rate has increased by almost 2 percentage points in the decade 2001–11. Also, among the marginal workers, about 30 per cent were found to be employed for almost three months (Table 1.7).

Table 1.7 Working Population in Sikkim

	1981	1991	2001	2011
Population	316,385	406,457	540,851	610,577
Total Workers	152,814	168,721	263,043	308,138
Main Workers	147,436	164,392	212,904	230,397
Cultivators	88,610	97,834	101,200	82,707
Agricultural Labourers	4,887	13,793	9,081	11,582
Worker in Household Industry	1,586	1,309	3,168	2,888
Other Workers	52,353	55,785	99,455	133,220
Marginal Workers	5,378	4,329	50,139	77,741
Non Workers	163,571	237,736	277,808	302,439
% of Total Workers to Population	48	42	49	50
% of Main Workers to Population	47	40	39	38

Note Figures are rounded off.
Source Census 1981, 1991, 2001 and 2011.

The number of cultivators in the state has decreased by more than 10 per cent between 2001–2011. However, there has been more than 50 per cent increase in the agricultural labourers and over 44 per cent increase in 'Other' workers (Table 1.8). With the young population moving away from agriculture, increasing tracts of land are lying fallow. At the same time, the aging of farmers is emerging as a serious concern. Increasing urbanization has also led to the sky-rocketing of land prices. While this makes land quite unaffordable to the majority, the state also prohibits Sikkimese from selling their land to non-Sikkimese.

Protecting Land Rights

The ruling Sikkim Democratic Front has taken all safeguards to protect the land rights of the Bhutia and Lepcha communities. Although the Central Land Transfer Act has been enacted in Sikkim, the old laws barring purchase of lands belonging to the Bhutia-Lepcha community by others are still in place. The old law is reproduced below:

Revenue Order No. 1

With reference to the Order dated 2nd January 1897, it is hereby again notified to all Kazis, Thikadars and Mandals in Sikkim that no Bhutias and Lepchas are to be allowed to sell, mortgage or sub-let any of their land to any person other than a Bhutia or a Lepcha without the express sanction of the Darbar or Officers empowered by the Darbar on their behalf, whose order will be obtained by the landlord concerned. If anyone disobeys he will be severely punished. In this order the term 'mortgage' means mortgaging the whole or part of holding on the Biyaz or Masikata system and the term sub-let means sub-letting the whole or part of holding on the Pakhuria system.

Definition:

(i) 'Biyaz' means mortgaging land to another person who enjoys the produce of the land as interest so long at the principal loan remains unpaid.
(ii) 'Masikata' means mortgaging the fields to a creditor who enjoys the produce of the field as an annual instalment towards the loan.
(iii) 'Pakhuria' means sub-letting, where a rayot allows another new rayot to settle upon a portion of his own holding, generally receiving from him some rent in cash and some assistance in cultivating his own fields.

Gangtok
17th May 1917

C. A. Bell
Superintendent, Sikkim State

Government is the largest employer in the formal sector. Job aspirants in the state continue to look forward to employment opportunities in the government. Educated youth, especially in urban areas, are keen to be employed in the public sector, because of limited employment opportunities in the private jobs in secondary and tertiary sector. But new openings in government are very few.

According to the State Socio-Economic Survey 2006, 18.5 per cent of the main workforce was employed by the government (with 73 per cent of them on the regular payroll) and

Table 1.8 Distribution of Workers 2001–11

		Census 2001	Census 2011	% change
Total Cultivators	Persons	131,258	117,401	–11%
	Males	70,107	63,327	
	Females	61,151	54,074	
Total Agricultural Labourers	Persons	17,000	25,986	53%
	Males	8,762	12,883	
	Females	8,238	13,103	
Total Household industry	Persons	4,219	5,143	22%
	Males	2,849	2,947	
	Females	1,370	2,196	
Total Others	Persons	110,566	159,608	44%
	Males	83,998	1,15,201	
	Females	26,568	44,407	

Note Percentage figures are rounded off.
Source Primary Census Abstract, 2011.

around three per cent in Central Government and Public Sector Undertakings. Salaried employees in the private sector accounted for only 5.4 per cent of the workforce.

It is therefore not surprising that Sikkim has a high proportion of self-employed workers. The proportion of self-employed in Sikkim is higher than the average for the Northeastern states and also for the country. Only Nagaland and Arunachal Pradesh have more people self-employed than Sikkim in the north east. Another positive factor is that Sikkim has only a small proportion of casual workers (Table 1.9).

Table 1.9 Distribution by Employment Status

	Sikkim	Northeastern Region	All India
Self-Employed	731	658	522
Regular Wage	222	175	179
Casual Labour	47	167	299

Source 68th NSSO Survey.

According to the State Socio-Economic Survey 2006, only 36.3 per cent of the population was found to be working in various enterprises like government-owned, private, household or otherwise. A further 33 per cent of the population were students enrolled at different levels. The absolute number of unemployed was estimated at 26,811, of which there were 17,620 in the age group 15–34 years (Table 1.10). Almost 88 per cent of the unemployed youth were from rural areas and East district accounted for almost 50 per cent of the total unemployed. More than 75 per cent of these unemployed youth had secondary school or lower levels of education. Recent estimates by Government place the number of unemployed youth at 21,000.

Table 1.10 Distribution of Population by Working Status

District	Workers	Non-Workers			Total
		Student	Unemployed	Other Non-workers	
North	15,575	13,728	1,203	7,846	38,352
East	100,242	87,622	14,024	66,387	268,275
South	56,501	47,151	4,909	33,128	141,689
West	38,893	43,860	6,675	43,802	133,230
Sikkim	211,211	192,361	26,811	151,163	581,546

Source SSEC 2006, DESME.

According to the National Skill Development Corporation, Sikkim has about 19,000 units operating in the informal sector providing employment to 68,000 persons. However, the contribution of unregistered or small manufacturing facilities has dropped from two per cent to one per cent during 2004–05 to 2009–10.

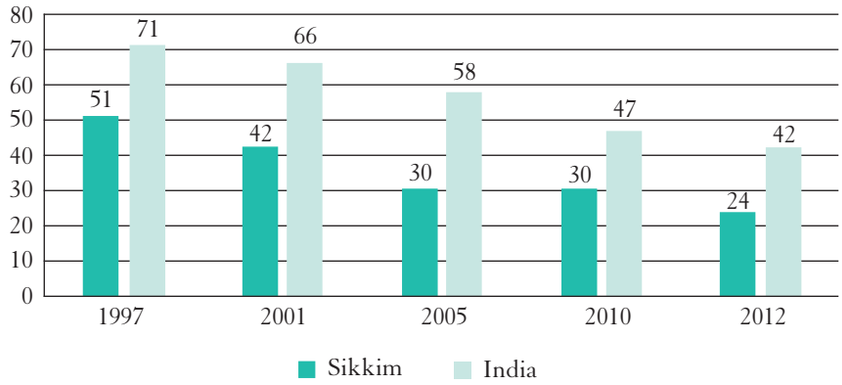
The state government has set up the Sikkim Power Development Corporation (SDPC) to tap the state's hydropower potential, which is estimated to be around 8,000 MW. Independent power producers (IPPs) have approved 29 hydroelectric power (HEP) plants for development. These projects are at various stages of construction and would have an installed capacity of close to 5,350 MW when complete. The State Power Policy lays down that the IPPs will have to provide employment to the local skilled, semi-skilled and unskilled manpower as well as create local business and contract opportunities.

The sharp decline in poverty levels as well as improved access to higher education have meant that the State has to create more white-collared jobs for young people who are no longer interested either in traditional agriculture or manual jobs. Keeping this in mind, the state has drawn up plans for generating jobs (discussed in Chapter 4, this volume).

Health Sikkim reported an infant mortality rate of 24 per 1,000 live births in 2012—considerably lower than the national average of 42 (Figure 1.1).

Health care in Sikkim is provided almost entirely by the public sector. The state has established a well-functioning primary health care system through a network of two Community Health Centres, 24 Primary Healthcare Centres and 146 sub-centres. Health care is provided, among others, by 273 doctors and nine AYUSH practitioners. This gives an adequate ratio of approximately one doctor per 2,500 population. Except for the Sikkim-Manipal Central Referral Hospital, which provides secondary and tertiary care, there are very few private medical institutions. The state had four district hospitals and 1,560 hospital beds in 2012 or 2.6 beds for 1,000 people. Fourteen PHCs out of 24 were without a medical officer in June 2012; most vacancies were in north and west districts.

Figure 1.1 Trends in Infant Mortality Rates: Sikkim and India



Source SRS Bulletins.

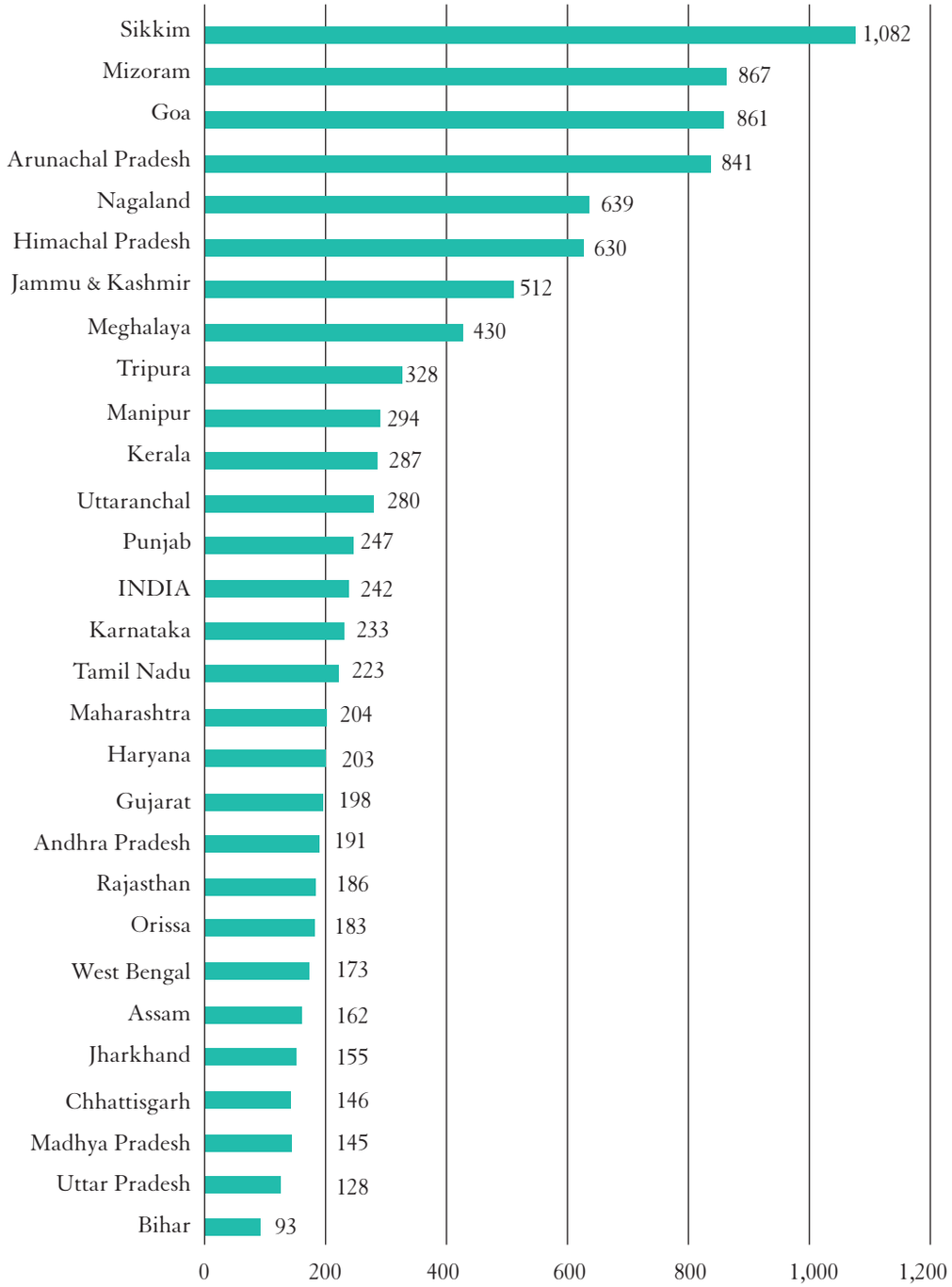
The state government supports the travel and medical treatment costs of around 1,500 persons every year who are referred out of the state for tertiary care. The Government of Sikkim is also constructing its own state-of-the-art tertiary care hospital, with over 575 beds which will be expanded to 1,000 beds later. The hospital compound also houses a nursing college, AYUSH hospital, cancer care and rehabilitation centre within the premises.

In 2010, the state started an ambitious and progressive programme of conducting an annual health check-up of all its citizens under Chief Minister's Annual & Total Health Check-up for Healthy Sikkim (CATCH). Medical teams visited villages, homes, schools, temples, and other common gathering places. They have recorded medical history, examined patients, and conducted common blood tests. Though the programme is in its infancy, yet initial results in disease detection and prevention are encouraging. Non communicable diseases constitute 80 per cent of the burden. Significant among them are hypertension, anaemia, malnutrition, asthma and diabetes. Obesity, alcoholism, tobacco use and drug addiction are high. Tuberculosis including multi drug-resistant tuberculosis is a significant public health threat.

In 2004–05, per capita public spending on health was the highest in Sikkim (see Figure 1.2)—which reflects the high priority accorded by the state to the public provision of health. The Government of Sikkim spent Rs 1,082 per person every year on health as against the national average of Rs 242. A direct consequence of this has been the relatively lower burden of private out-of-pocket expenditures—28 per cent—as against almost 8 per cent for the average Indian in 2004–5 (Figure 1.3).

Nutrition In 2005–06, close to 20 per cent of Sikkim's children below 5 years were classified as being underweight—the lowest in the country—against a national figure of around 43 per cent. Madhya Pradesh reported the highest proportion of under-weight children—60 per cent.

Figure 1.2 Per Capita Public Expenditure on Health (Rupees in 2004–05)

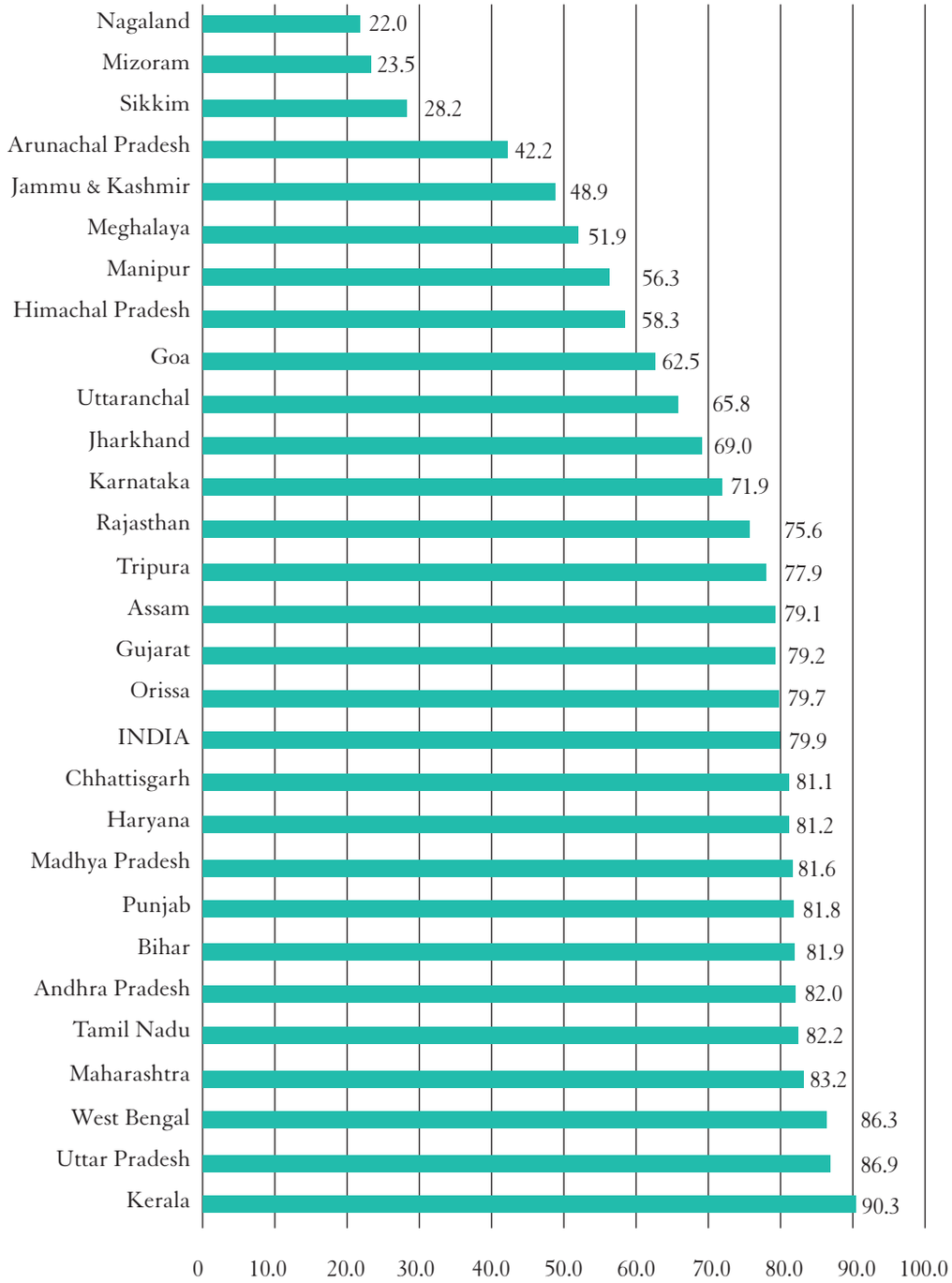


Source National Health Accounts 2004–05.

According to a recent report by the Comptroller and Auditor General of India, based on 2010–11 data, Sikkim ranked third after Arunachal Pradesh and Nagaland as the state with the lowest incidence of malnutrition in the country (Table 1.11).

Several factors explain the low proportion of under-weight children in Sikkim and the high proportion in Madhya Pradesh. The first clue can be found in the proportion of

Figure 1.3 Private Out-of-pocket Expenditures on Health, 2004–05



Source National Health Accounts 2004–05.

low birth weight babies born in the two states. Birth weights of less than 2,500 grams are known to be very closely associated with poor growth not just in infancy but throughout childhood. According to the National Family Health Survey-3 (NFHS-3), only 10 per cent of children born in Sikkim were of low birth weight. The corresponding proportion was 23 per cent in Madhya Pradesh. Second, women in Sikkim enjoy relatively better nutritional status than in Madhya Pradesh. In 2005–06, only 8 per cent of women suffered

Box 1.1
Sir Thutob Namgyal Memorial Hospital

Sikkim's oldest public hospital, the Sir Thutob Namgyal Memorial Hospital (STNM) was established in 1917. Popularly known as the STNM hospital, it is located in the heart of the capital city of Gangtok. It has evolved over the years to become the most important public hospital with 330 beds catering to patients from all over the state. Today, STNM accounts for almost 45 per cent of all the doctors and specialists in Sikkim who handle every year close to 400,000 out-patient and 45,000 in-patient cases, supervise one in four births, and diagnose more than 75 per cent of the cases under the National Vector Borne Disease Control Programme. The STNM hospital plays a major role in supporting tourism in Sikkim as it provides the first response to complaints of illness by tourists. It has also played a major role in giving medical care during times of emergency such as the devastating earthquake in September 2011. With the development of the Kailash Mansarovar Pilgrimage route over the next two years, the STNM hospital will begin to play an even more important role as pilgrims start travelling to the Tibetan Plateau via the Nathula border pass which is at an altitude of 14,350 feet.

The functioning of Sikkim's iconic hospital however needs to be revamped. Apart from patients themselves knocking on the doors, district hospitals refer most of their cases to STNM. The net result has been an overloading especially of the emergency ward and the labour room. Underfunded and overstretched, the public perception of what this hospital can and is doing is remarkably discounted. More patients can be cured and more outreach done if the infrastructure and processes are streamlined. Improved infrastructure and facilities can also greatly enhance the productivity, efficiency and effectiveness of doctors and manpower available the hospital. The Rogi Kalyan Samiti (RKS), a mechanism promoted under the National Health Mission, to manage the STNM hospital, is expected to give greater autonomy and flexibility in decision making. At the same time, the State Government will have to invest more resources to transform STNM into a super-specialty hospital which caters to the needs of the common man.

Table 1.11 Incidence of Malnutrition, 2005–11

(in per cent)

Year	2005–06		31 March 2007		31 March 2011	
	Malnourished	Severely Malnourished	Malnourished	Severely Malnourished	Malnourished	Severely Malnourished
Sikkim	20	5	27	0.08	11	0.86
India	43	53	50	0.55	42	3

Note Figures have been rounded off.
Source CAG Report (2013).

from 'chronic energy deficiency' or a body mass index (BMI) of less than 18.5 kg/m^2. The proportion was significantly higher—42 per cent in Madhya Pradesh. Better access to food and healthy dietary habits is a reason why women in Sikkim are better nourished than in Madhya Pradesh. Whereas women in both Sikkim and Madhya Pradesh (90–93 per cent of them, age 15–49 years) consume reasonably high levels of pulses and beans as well as dark green and leafy vegetables (88–94 per cent) at least once a week, there are stark differences in the consumption of milk or curd, fruits, and fish, chicken and

meat among women in the two states. According to NFHS-3, four out of five women in Sikkim consume milk or curds at least once a week. Less than half (48 per cent) of women in Madhya Pradesh do so. Almost half (48 per cent) of women in Sikkim consume fruits at least once a week as against 30 per cent of women in Madhya Pradesh. And whereas only 20 per cent of women in Madhya Pradesh consume fish, chicken or meat at least once a week, 45 per cent of women in Sikkim do so.

The third factor in explaining Sikkim's relatively low levels of child under-nutrition can be traced to better infant and young feeding practices. Experts recommend immediate initiation of breastfeeding after childbirth, preferably within one hour for a number of reasons. Beyond six months, WHO recommends the introduction of solid or semi-solid food to infants because by that age breast milk by itself is no longer sufficient to maintain a child's optimal growth. It is recommended that breastfeeding children between 6–23 months should be fed from three or more different food groups. Moreover, infants between 6–8 months should be fed at least twice a day and children between 9–23 months should be fed at least three times a day. As against 43 per cent of women in Sikkim who begin breastfeeding their baby within one hour of birth, as is recommended, the proportion is only 16 per cent in Madhya Pradesh. Mothers in Sikkim seem to follow better young feeding practices. And among breastfeeding and non-breastfeeding children 6–23 months, only 18 per cent were fed appropriately according to all three recommended Infant and Young Child Feeding (IYCF) practices in Madhya Pradesh as against nearly half (49 per cent) of all children in Sikkim.

The fourth factor has to do with mothers' education. It is well known that chronic energy deficiency drops significantly with improvements in the levels of mothers' education, and that higher the levels of chronic energy deficiency, the higher the levels of child malnutrition will be. Women's educational attainments in Sikkim are much better than in Madhya Pradesh. Sikkim in 2011 reported a female literacy rate of 76 per cent, Madhya Pradesh of 60 per cent. In 2005–06, 50 per cent of women between 15–49 years, in Madhya Pradesh had not had any education; in Sikkim, the proportion was 26 per cent. The median years of schooling among females aged six and above was 0.1 years in Madhya Pradesh and 2.6 years in Sikkim.

The fifth factor positively influencing child nutrition in Sikkim is the far greater freedom and autonomy that women enjoy in Sikkim. More than half (51 per cent) of women in Sikkim were allowed to go to the market, to the health facility, and to places outside the village or community alone; the proportion was almost half (26 per cent) in Madhya Pradesh. In Sikkim, 26 per cent of women were not exposed regularly to any media (newspaper, magazine, radio, television or theatre); in Madhya Pradesh, the proportion was 47 per cent. Women in Sikkim also enjoy greater gender equality and are treated with more respect than in Madhya Pradesh. For instance, spousal violence is much less in Sikkim than in Madhya Pradesh. The prevalence of physical or sexual violence was 16 per cent in Sikkim and 46 per cent in Madhya Pradesh.

Finally, the relatively better standards of living in Sikkim also partly explain the low levels of child under-nutrition. In 2011–12, Sikkim reported a per capita income of Rs 121,440—almost three times higher than that of Madhya Pradesh (Rs 37,994). Only 8 per cent of Sikkim's population was classified as being poor in 2011–12. The proportion of poor was 32 per cent in Madhya Pradesh. Only 29 per cent of households have a latrine facility within their premises in Madhya Pradesh as against 100 per cent in Sikkim. Two-thirds (67 per cent) of households in Madhya Pradesh have electricity as against 93 per cent in Sikkim.

Literacy and education In 1951, Sikkim had an overall literacy rate of less than 7 per cent, with barely 11 per cent of men and 1 per cent of women who could read and write. By 2011, the literacy rate had increased to 82 per cent in 2011—with 87 per cent of men and 76 per cent of women who could read and write. (Table 1.12). The most developed East district came on top with 85 per cent, followed by South district (82 per cent), West district (79 per cent) and North district (77 per cent).

Table 1.12 Literacy Rate of Sikkim, 1981–2011

Year	% of population aged 7 and above	
	Males	Females
1981	44	22
1991	66	47
2001	76	60
2011	87	76

Note Figures have been rounded off.
Source Census of India.

Sikkim has a strong network of 781 government schools, 421 private schools, 71 monastic schools, 25 local body schools, 11 Sanskrit schools and three Islamic schools. The state is also experimenting with alternative and innovative models of education (see Box 4.1). Sikkim became the second state in India to sign a Memorandum of Understanding (MoU) with the Quality Council of India on 27 March 2011 for developing accreditation standards towards quality government schools.

Enrolment in primary and upper primary schooling is near universal, with net enrolment ratios being the highest in India. The gender parity index for enrolment in primary classes (I to V) in Sikkim is 0.98 compared to the all-India figure of 0.94. The net enrolment rate (NER) in primary education in Sikkim is encouraging. In 2007–08, 90 per cent children aged 6–10 years were enrolled in Class I–V. Only 10 states and Union Territories are ahead of Sikkim in this category.

More girls have been enrolled in primary classes as compared to boys from 2005 onwards. The same trend can be seen in the middle and secondary levels as well. In 2005–06, the ratio of girls to boys suddenly dropped in favour of the latter in Classes

XI and XII only. From 2007 onwards, this slight reversal has changed, with more girls enrolled at every level of school education in comparison to their male counterparts (Table 1.13).

Table 1.13 District and Gender-wise Enrolment of Students in State Government Schools, 2005–12

Year	East		South		North		West		Total		Total
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	
2005	14,246	14,590	9,582	9,815	2,849	2,880	9,939	9,799	36,617	37,085	73,702
2006	13,245	13,558	8,980	9,150	2,545	2,649	8,978	8,990	33,748	34,347	68,095
2007	12,587	12,805	8,558	8,715	2,427	2,614	8,689	8,661	32,261	32,795	65,056
2008	12,087	12,271	8,208	8,474	2,309	2,488	8,337	8,291	30,941	31,524	62,465
2009	11,918	12,027	8,088	8,351	2,247	2,379	8,142	8,133	30,395	30,890	61,285
2010	13,140	13,492	9,404	9,449	2,506	2,662	9,100	9,135	34,150	34,738	68,888
2011	11,800	11,933	8,281	8,185	2,206	2,323	8,165	8,153	30,452	30,594	61,046
2012*	10,519	10,838	7,401	7,276	1,888	1,971	7,271	7,336	2,7079	27,421	54,500

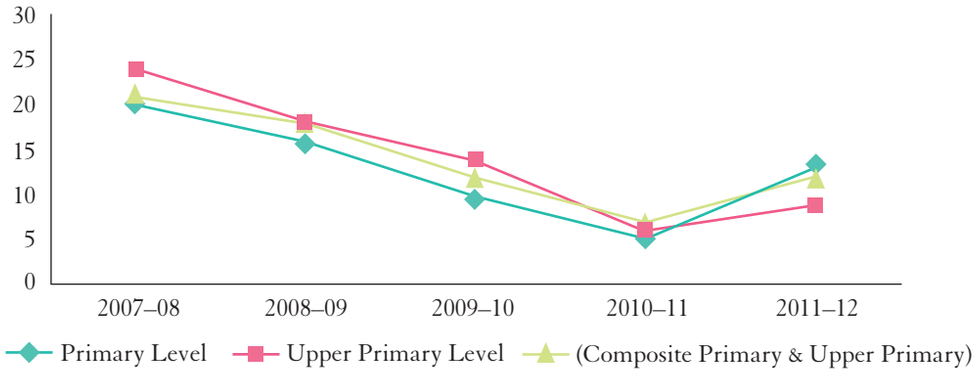
Note * Student enrolment report received till 30 September 2012.
Source Directorate of School Education, Human Resource Development Department (HRDD), Government of Sikkim.

In 2011, close to 118,500 children were enrolled in government schools and around 44,000 in different private schools. There has been a visible shift in the education level of the workforce, in both rural and urban areas, over the last decade. The government supports students in the form of free uniforms and books up to Class V and provides 50 per cent subsidy on text books beyond that. The Chief Minister's Meritorious Scholarship programme offers free education to promising children at Class V level to attend premier public schools within and outside the state.

In 2012–13, Sikkim was ranked fourth among all states of India on the Composite Educational Development Index. This was a significant jump from its 12th position in 2011–12. The annual education index measures the access, infrastructure, and the quality of teachers across various states in the country and is calculated by the National University of Educational Planning and Administration (NUEPA) based on data available with the District Information of School Education (DISE). Lakshadweep took the first position followed by Puducherry, Tamil Nadu, and Sikkim. Figure 1.4 shows Sikkim's performance on the Composite Educational Development Index over the years.

The rank reflects the achievements of the State in the education sector. A number of indicators show improvements in universal elementary education. Sikkim's average drop-out rate at the primary level has come down from 7 per cent in 2009–10 to 2 per cent in 2011–12. It is around 4 per cent at the upper primary level. Similarly, the state saw a marked improvement in the retention rate at the primary level which increased from 79 per cent in 2010–11 to 95 per cent in 2012–13.

Figure 1.4 Composite Educational Development Index



Source Compiled from DISE Flash Statistics.

Box 1.2
Eklavya Model Residential School

The Eklavya Model Residential School (EMRS) at Gangyap is a remarkable example that shows how leadership, innovative thinking, teamwork and community support can sustain an alternative model of education, irrespective of various hurdles. The school was founded in 2007 under a scheme of the Ministry of Tribal Affairs in a remote village in West Sikkim called Gangyap. The school was the first of its kind to make quality education accessible to poor tribal children from Sikkim's remote reaches.

While facing many challenges that exist in running a school with limited infrastructure, the principal Sidharth Yonzone has learnt that the best way to solve these problems is by taking things one at a time and with a smile on his face. Besides taking charge of the administration of the school, he is also involved in teaching English, social sciences, music and basketball. Under his guidance as an English teacher the students are drawn to the subject and are reading Shakespeare, Dickens and classical poetry. Being a talented musician himself, Yonzone encourages his students to listen to artists and bands like Bob Dylan and the Beatles so that they can hear and feel the power of music in every sense. He believes music can instil the yearning for knowledge and help students to think and dream big. Five EMRS students represented the Battle of the Bands—Unplugged, hosted by Namchi Public School, and bagged the second position.

Since the time he joined the school, Yonzone has actively initiated various activities apart from academics. One such initiative was to coach the school's girls' basketball team, even without a basketball court. The team has been winning even national level tournaments, bringing laurels to the school and the state, in a very short span of time. EMRS has an impressive performance not only in academics but also sports and other extra-curricular activities. Debates, quiz competitions, spelling bee, scrabble, Sudoku, essay, art and music competitions are among the numerous activities that have made learning at EMRS a sheer joy for the children.

A unique aspect of this school is that the students along with the community designed and built the classrooms and a hostel on their own. Using the traditional Sikkimese method, the school building is eco-friendly, cost effective and sustainable. The community actively takes part in all the meetings organised by the school and is ever willing with any advice or support. It supplies fresh organic vegetables to the school and cares for the children as their own. EMRS Gangyap is successful model of how the collective effort of teachers and the community can bring about changes in the lives of so many students.

The chief minister, during his village-to-village trip, announced the introduction of a new standard for evaluating teachers' performance across schools. To promote transparency and to ensure that only the best get selected, recruitment and promotion of teachers is done through Sikkim Public Service Commission. At the same time, several teacher-centric interventions have been introduced by the state. For instance, in 2006, the retirement age of teachers was relaxed from 58 years to 60 years and the compensation to teachers made more attractive.

Several scholarships have been instituted to provide quality education to deserving students. The Chief Minister's Free Scholarship Scheme sponsors education of students who secure admission in any discipline at one of the top 20 international universities. The Comprehensive Educational Loan Scheme provides educational loans to all students pursuing higher studies in professional, technical, and postgraduate courses within the country and abroad at a comparatively low rate of interest. Scholarship programmes have been largely used to spur a national and global footprint and encourage Sikkim's youth to explore education options outside the state. In addition to these, a first-of-its-kind initiative by an Indian state, the Sikkim Studies Programme, was launched in Jamia Millia Islamia on 25 April 2011, encouraging research scholars to delve into regional issues from a national perspective.

Poverty Between 2004–05 and 2011–12, Sikkim recorded a sharp fall in the poverty level—next only to Goa. Latest data released by the Planning Commission says that in Sikkim, the proportion of people below the poverty line (BPL) came down from 30.9 per cent in 2004–05 to 8.19 per cent in 2011–12—an average annual rate of decline of over 17 per cent (Table 1.14). The number of people living below poverty line in Sikkim has come down from 1.70 lakh in 2004–05 to 51,000 in 2011–12 and the proportion of the poor in the Himalayan state remains well below the national average.

Sikkim has also done well on the poverty gap ratio—which reflects the extent to which average consumption of the poor falls below the established poverty line, indicating the depth of poverty. In 2011–12, Sikkim reported a rural poverty gap ratio of 0.96—next only to Goa (Figure 1.5).

In 2011–12, Sikkim reported the lowest urban poverty gap ratio—0.45 (Figure 1.6). Between 2004–05 and 2011–12, the poverty gap ratios fell in both rural and urban Sikkim.

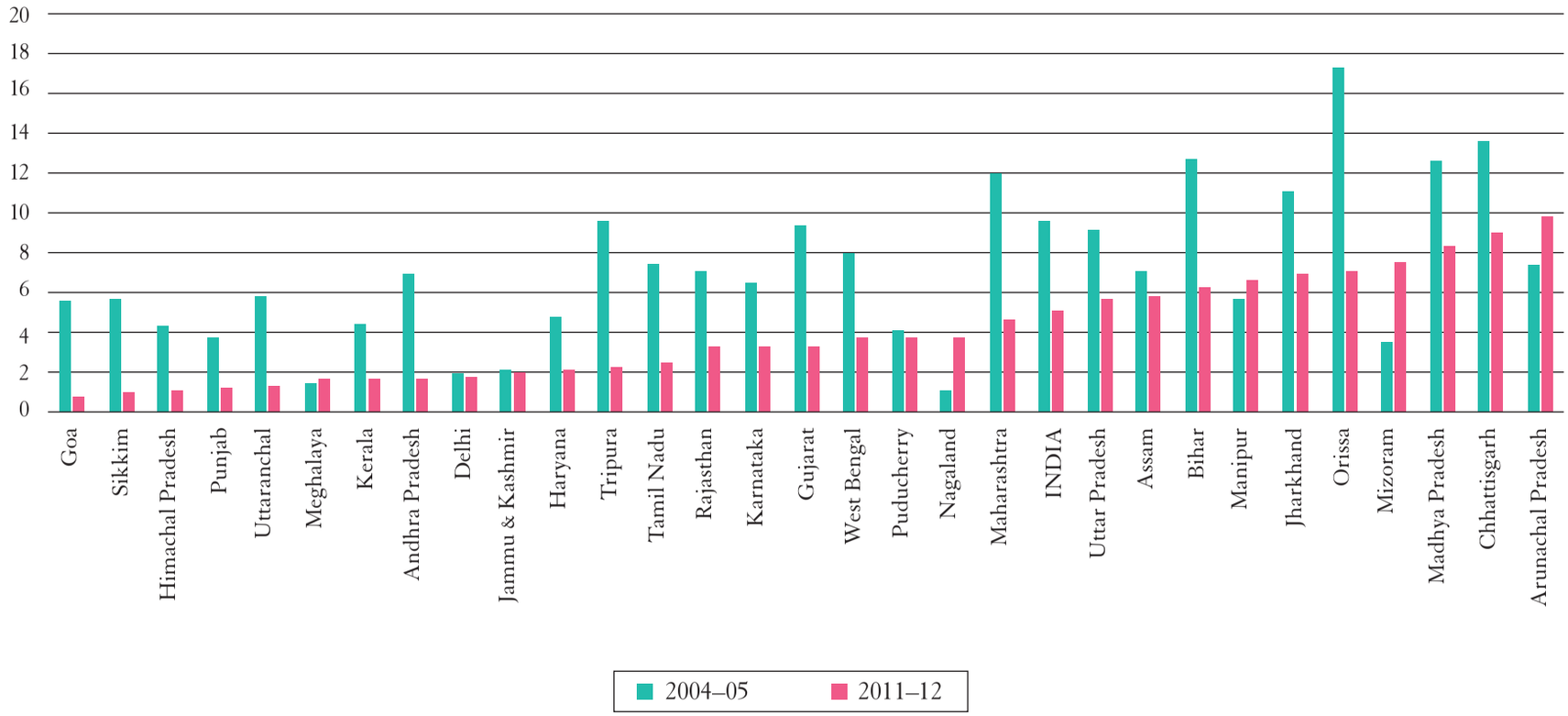
Multidimensional poverty The Multidimensional Poverty Index (MPI) identifies overlapping deprivations at the household level across the three dimensions of the HDI (living standards, health and education) and shows the average number of poor people and deprivations with which poor households contend. The MPI for Indian states varies from a low of 0.051 in Kerala to a high of 0.479 in Bihar. Sikkim ranked eighth with an MPI value of 0.150 (Table 1.15). The biggest contribution to this low MPI value has been improvements in health and nutrition. Sikkim features as the 'best' in terms of the lowest levels of deprivation attributable to health and nutrition (Table 1.16).

Table 1.14 Trends in Poverty Reduction across Indian States

	2004–05	2011–12	Annual rate of reduction in poverty (%)
Goa	25.0	5.1	20.3
Sikkim	31.1	8.2	17.4
Andhra Pradesh	29.9	9.2	15.5
Uttaranchal	32.7	11.3	14.1
Tripura	40.6	14.1	14.1
Himachal Pradesh	22.9	8.1	13.9
Kerala	19.7	7.1	13.7
Tamil Nadu	28.9	11.3	12.6
Punjab	20.9	8.3	12.4
Rajasthan	34.4	14.7	11.4
Maharashtra	38.1	17.4	10.6
Haryana	24.1	11.2	10.4
Gujarat	31.8	16.6	8.8
Orissa	57.2	32.6	7.7
West Bengal	34.3	20.0	7.4
INDIA	**37.2**	**21.9**	**7.3**
Bihar	54.4	33.7	6.6
Karnataka	33.4	20.9	6.5
Madhya Pradesh	48.6	31.7	5.9
Puducherry	14.1	9.7	5.2
Uttar Pradesh	40.9	29.4	4.6
Meghalaya	16.1	11.9	4.3
Delhi	13.1	9.9	3.9
Jammu & Kashmir	13.2	10.4	3.4
Chhattisgarh	49.4	39.9	3.0
Jharkhand	45.3	37.0	2.9
Assam	34.4	32.0	1.0
Manipur	38.0	36.9	0.4
Arunachal Pradesh	31.1	34.7	(1.6)
Mizoram	15.3	20.4	(4.2)
Nagaland	9.0	18.9	(11.2)

Source Government of India (2014), 'Millennium Development Goals: India Country Report 2014', Social Statistics Division, Ministry of Statistics and Programme Implementation accessed at http://www.indiaenvironmentportal.org.in/files/file/mdg_2014%20India%20country%20report.pdf.

Figure 1.5 Trends in Poverty Gap Ratio–Rural



Source Planning Commission

Figure 1.6 Trends in Poverty Gap Ratio–Urban

Source Planning Commission

Table 1.15 Multidimensional Poverty across Indian States, 2005–06

		Multi dimensional Poverty Index (MPI = HxA)	Incidence of poverty or Headcount Ratio (H)	Intensity of deprivation among the poor (A)	Percentage of population vulnerable to poverty	Percentage of population in severe poverty
1	Kerala	0.051	12.7	40.2	22.3	2.1
2	Delhi	0.054	12.4	43.5	13.6	3.4
3	Goa	0.085	20.0	42.8	16.5	4.8
4	Mizoram	0.094	21.0	44.7	16.0	7.0
5	Punjab	0.112	24.6	45.5	19.4	9.0
6	Himachal Pradesh	0.125	29.9	41.6	25.7	7.0
7	Tamil Nadu	0.130	30.5	42.7	20.2	8.7
8	Sikkim	0.150	31.8	47.0	16.5	12.1
9	Maharashtra	0.180	37.9	47.6	19.9	14.7
10	Uttarakhand	0.185	39.5	46.7	20.2	15.8
11	Haryana	0.186	39.3	47.4	21.2	16.0
12	Manipur	0.191	40.8	46.7	22.8	15.4
13	Jammu & Kashmir	0.194	41.0	47.2	20.7	16.7
14	Gujarat	0.201	41.0	48.9	16.9	18.5
15	Karnataka	0.206	43.2	47.7	18.7	18.7
16	Andhra Pradesh	0.209	44.5	46.9	18.0	18.5
17	Nagaland	0.264	51.7	51.1	19.5	26.2
18	Tripura	0.269	54.6	49.3	18.7	25.5
19	Arunachal Pradesh	0.274	53.0	51.7	15.3	28.9
20	INDIA	0.283	53.7	52.7	16.4	28.6
21	West Bengal	0.304	57.4	53.1	16.0	30.06
22	Meghalaya	0.307	56.6	54.3	15.4	33.9
23	Assam	0.316	60.1	52.6	18.4	32.5
24	Rajasthan	0.338	62.8	53.8	14.6	35.6
25	Orissa	0.339	63.2	53.6	15.7	34.3
26	Chhattisgarh	0.367	69.7	52.6	13.3	37.6
27	Uttar Pradesh	0.369	68.1	54.2	14.8	39.3
28	Madhya Pradesh	0.374	68.1	54.9	14.2	40.5
29	Jharkhand	0.441	74.8	58.9	11.9	51.0
30	Bihar	0.479	79.3	60.3	10.2	53.5

Source Oxford Poverty and Human Development Initiative, 2005–06.

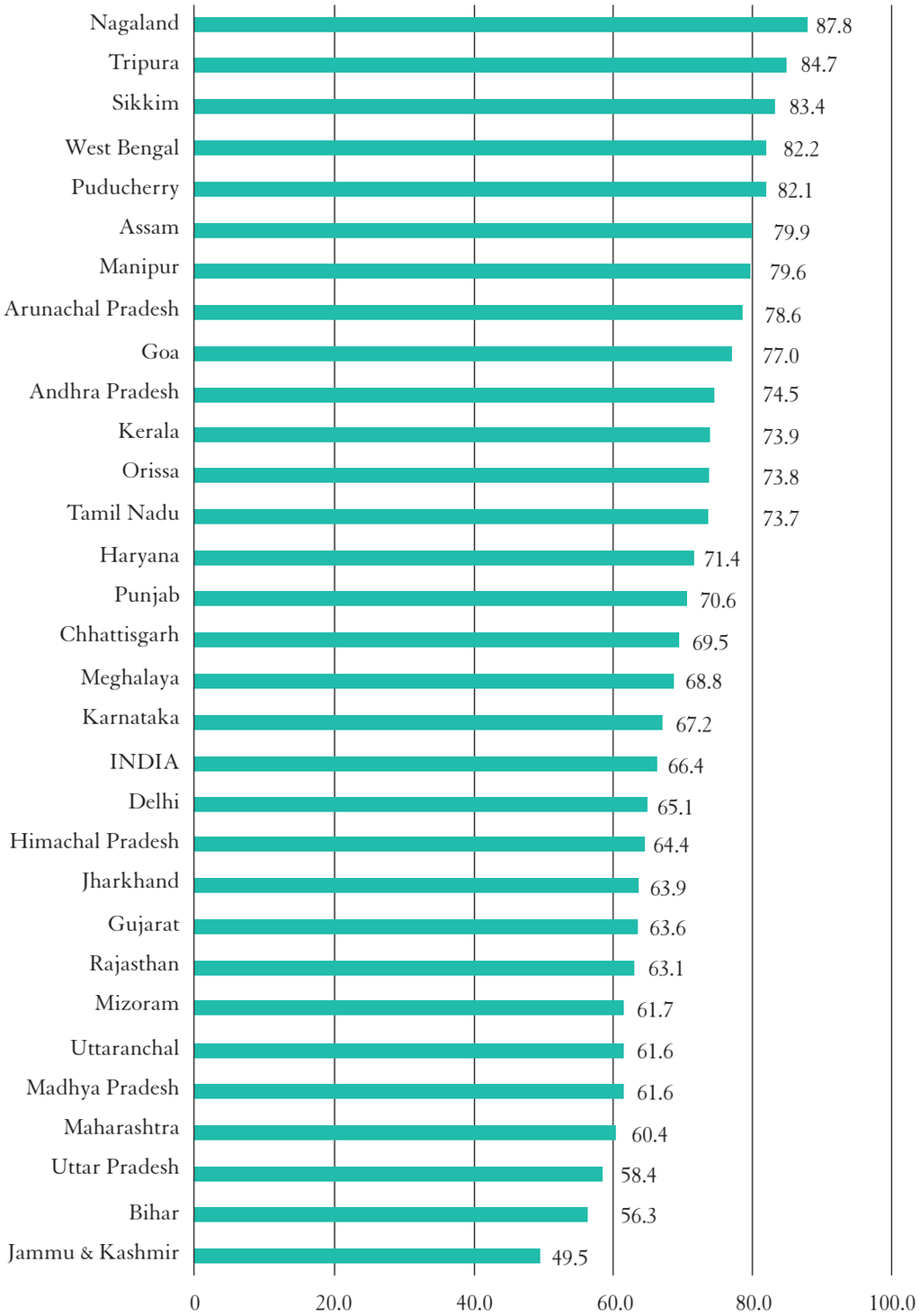
Table 1.16 Multidimensional Poverty Index (MPI): Percentage Contribution to Deprivations

		Multidimensional Poverty Index (MPI)	Percentage contribution of deprivation of each dimension to overall poverty		
			Education	Health	Living standards
			% Contribution	% Contribution	% Contribution
1	Sikkim	0.150	35.9	22.7	41.5
2	Meghalaya	0.307	34.6	25.0	40.4
3	Nagaland	0.264	30.4	25.7	43.9
4	Arunachal Pradesh	0.274	32.3	30.1	37.6
5	Manipur	0.191	21.8	31.2	47.0
6	Assam	0.316	18.7	32.1	49.2
7	Jharkhand	0.441	22.7	32.2	45.1
8	West Bengal	0.304	23.1	32.9	44.0
9	Bihar	0.479	27.1	33.1	39.9
10	Orissa	0.339	19.1	33.8	47.0
11	Rajasthan	0.338	22.9	35.1	42.0
12	Andhra Pradesh	0.209	24.6	35.1	40.3
13	Madhya Pradesh	0.374	20.6	35.7	43.7
14	Jammu & Kashmir	0.194	21.5	35.7	42.8
15	Mizoram	0.094	26.9	35.8	37.3
16	Tripura	0.269	16.4	37.1	46.5
17	Uttar Pradesh	0.369	21.1	37.1	41.8
18	Punjab	0.112	27.7	37.3	34.9
19	Chhattisgarh	0.367	18.5	37.5	44.0
20	Karnataka	0.206	21.8	38.2	40.0
21	Goa	0.085	19.0	38.2	42.8
22	Maharashtra	0.180	17.2	39.0	43.8
23	Haryana	0.186	21.1	39.0	39.9
24	Tamil Nadu	0.130	15.6	39.4	45.0
25	Uttarakhand	0.185	14.8	40.1	45.1
26	Gujarat	0.201	19.2	41.0	39.8
27	Delhi	0.054	31.6	42.4	26.0
28	Kerala	0.051	12.0	43.8	44.2
29	Himachal Pradesh	0.125	10.9	45.1	44.0

Source Oxford Poverty and Human Development Initiative (OPHI), 2011.

Participation in elections Sikkim reports among the highest rates of voter turnout in elections. In the recently conducted Lok Sabha elections - 2014, for instance, voter turnout was over 83 per cent—and the State ranked next only to Nagaland and Tripura (Figure 1.7).

Figure 1.7 Voter Turnout (%) in Lok Sabha Elections 2014



Source Election Commission of India, 2014.

Human development progress Sikkim was among the top six states that recorded the maximum acceleration in the Human Development Index (HDI), which went up from 0.582 in 1996 to 0.665 in 2006 (see Table 1.17).

Table 1.17 Improvements in HDI, 1996–2006

		HDI Score		% reduction in shortfall
		1996	2006	
1	Uttaranchal	0.487	0.652	32.2
2	Jharkhand	0.434	0.574	24.7
3	Manipur	0.610	0.702	23.6
4	Arunachal Pradesh	0.549	0.647	21.7
5	Tripura	0.579	0.663	20.0
6	Sikkim	0.582	0.665	19.9
7	Goa	0.709	0.764	18.9
8	Himachal Pradesh	0.590	0.667	18.8
9	Tamil Nadu	0.589	0.666	18.7
10	Mizoram	0.618	0.688	18.3
11	Chhattisgarh	0.451	0.549	17.9
12	Haryana	0.570	0.643	17.0
13	Delhi	0.687	0.740	16.9
14	Madhya Pradesh	0.433	0.529	16.9
15	Maharashtra	0.629	0.689	16.2
16	West Bengal	0.573	0.642	16.2
	INDIA	**0.530**	**0.605**	**16.0**
17	Karnataka	0.558	0.622	14.5
18	Orissa	0.461	0.537	14.1
19	Gujarat	0.574	0.634	14.1
20	Andhra Pradesh	0.519	0.585	13.7
21	Nagaland	0.653	0.700	13.5
22	Bihar	0.430	0.507	13.5
23	Rajasthan	0.472	0.541	13.1
24	Uttar Pradesh	0.458	0.528	12.9
25	Punjab	0.621	0.668	12.4
26	Assam	0.543	0.595	11.4
27	Kerala	0.736	0.764	10.6
28	Jammu & Kashmir	0.542	0.590	10.5
29	Meghalaya	0.595	0.629	8.4

Note Excludes Union Territories.

Source Ministry of Women and Child Development (2009), "Gendering Human Development Indices: Recasting the Gender Development Index and Gender Empowerment Measures for India"; accessed at http://wcd.nic.in/publication/GDIGEReport/Part2.pdf.

Between 2001 and 2012, the Government of Sikkim consciously stepped up investments in the social sectors particularly in health and education. This resulted in nearly a

sevenfold increase in nominal per capita social sector spending—from Rs 4,810 in 2001 to Rs 28,661 by 2012. In 2012–13, the Government of Sikkim allocated 37 per cent of its total expenditure in the social sectors—up from 27 per cent in 2001. Between 2001 and 2013, there was, on average, an annual increase in budget allocations for education by 12 per cent and for health by 18 per cent.

Sikkim and the MDGs Sikkim has made rapid progress towards the attainment of the Millennium Development Goals (MDGs) and the progress made is showed in Table 1.18.

Table 1.18 MDGs: India and Sikkim

Target No.	Target Description	India	Sikkim
1.	Halve, between 1990 and 2015, proportion of population below national poverty line	Δ	ΔΔ
2.	Halve, between 1990 and 2015, proportion of people who suffer from hunger	Θ	ΔΔ
3.	Ensure that by 2015 children everywhere, boys and girls alike, will be able to complete a full course of primary education	ΔΔ	ΔΔ
4.	Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	Δ	ΔΔ
5.	Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	ΘΔ	Δ
6.	Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio	ΘΔ	Δ
7.	Have halted by 2015 and begun to reverse the spread of HIV/AIDS	Δ	ΔΔ
8.	Have halted by 2015 and begin to reverse the incidence of malaria and other major diseases	ΘΔ	Δ
9.	Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	ΔΔ	ΔΔ
10.	Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	ΔΘ	ΔΔ
11.	By 2020, to have achieved, a significant improvement in the lives of at least 100 million slum dwellers	Θ	Δ

Note Δ: Moderately/almost nearly on track considering all indicators
Θ Slow/almost off-track considering all indicators
ΔΔ: On-track or fast considering all indicators

Source http://www.undp.org/content/india/en/home/mdgoverview/.

Briefly described here are attainments along the specific MDGs.

MDG 1: Eradicate extreme poverty and hunger Sikkim has achieved its MDG 1 target with a 70 per cent reduction in the number of people living below the poverty line over the last seven years. Sikkim's Poverty Head Count Ratio (PHCR)—percentage below the poverty line—has declined by 23 percentage points from 31 per cent in 2004–05 to 8 per cent in 2011–12. During 2004–05 to 2011–12, the Poverty Gap Ratio (PGR) in rural

areas declined from 5.6 per cent in 2004–05 to 0.96 per cent in 2011–12, while in urban areas the decline was from 3.4 to 0.5 per cent during this period. In 2005–06, Sikkim recorded almost 20 per cent children below 5 years as underweight—the lowest figure in the country—against a national figure of around 43 per cent.

MDG 2: Achieve Universal Primary Education Sikkim has achieved cent percent primary education for children in the primary schooling age of 6–10 years ahead of 2015. The youth literacy rate among urban persons was 89 per cent against 83 per cent for rural persons in 2001. The youth literacy among males was 87 per cent in 2001 as against 80 per cent for females. National Sample Survey (NSS) 2007–08 showed male youth literacy as 98 per cent and female youth literacy as 95 per cent. The rural–urban gap in youth literacy also has significantly reduced.

MDG 3: Promote Gender Equality and Empower Women By 2010–11, the Gender Parity Index (GPI of GER) increased to 0.97 in primary education, to 1.12 in secondary education, and 1.07 in higher education. GPI measures the relative access to education of males and females, is calculated as the ratio of the number of females by the number of males enrolled in a given stage of education. The literacy rate among males (15–24 years old) was 87 per cent in 2001 against 80 per cent for females (15–24 years old) and NSS 2007–08 showed the literacy rates as 98 and 95 respectively. In 2011–12, the 68th Round NSS results had estimated the percentage share of females in wage employment in the non-agricultural sector as 22 per cent with the share in rural and urban areas as 21 per cent and 24 per cent respectively. Sikkim has been performing well in terms of the gender parity index as indicated in Table 1.19.

Table 1.19 Gender Parity Index (GPI) for Enrolment in Primary, Secondary and Tertiary Grades

	GPI for Primary Classes I–V				GPI for Secondary Classes IX–XII				GPI for Higher Education (Tertiary)			
Year	2004–05	2005–06	2006–07	2007–08	2004–05	2005–06	2006–07	2007–08	2004–05	2005–06	2006–07	2007–08
Sikkim	0.99	0.97	1.01	0.98	1.01	1.02	1.03	1.04	0.75	0.82	0.84	0.79
India	0.95	0.94	0.94	0.98	0.79	0.80	0.82	0.85	0.71	0.69	0.69	0.70

Source Selected Education Statistics, Ministry of Human Resource Development, Government of India.

MDG 4: Reduce child mortality Sikkim's Under Five Mortality Rate (U5MR) has declined from an estimated level of 136 per 1,000 live births in 1990 to 40 in 2005. Sikkim is likely to meet the target of 18 by 2015. The Infant Mortality Rate (IMR) fell by more than 50 per cent during 1990–2012—from 51 to 24 per 1,000 live births. The national level coverage of the proportion of one-year old (12–23 months) children immunized against measles has registered an increase from 59 per cent in 1998–99 to 88 per cent in 2009 (UNICEF & GOI-Coverage Evaluation Survey 2009). At this historical rate of increase, Sikkim can expect to cover 100 per cent children in the age group 12–23 months for immunization against measles by 2015.

MDG 5: Improve Maternal Health As per Coverage Evaluation Survey (CES), 2009, delivery attended by skilled personnel has gone up from 35 per cent in 1988–89 to 70 per cent in 2009—and is likely to reach over 90 per cent in 2015. MMR in Sikkim is calculated in absolute numbers since the state does not record 100,000 live births every year (Table 1.20).

Table 1.20 Maternity Deaths in Sikkim

District	2008–09	2009–10	2010–11	2011–12	2012–13
East	6	1	4	–	10
West	3	5	4	–	3
North	3	1	1	–	1
South	0	2	0	–	5
Total	12	9	9	25	19

Source Sample Registration System (SRS), Registrar General of India.

Sikkim is likely to achieve universal coverage of deliveries assisted by trained/professional persons, by 2015.

MDG 6: Combat HIV/AIDS, Malaria and other Diseases The prevalence of HIV among pregnant women aged 15–24 years has declined from 0.24 per cent in 2005 to 0.15 per cent during 2010–11. According to National AIDS Control Organisation (NACO) estimates, the overall prevalence of adult HIV in the 15–49 years age group in Sikkim has been lower than the national average. In 2006, for instance, it was 0.05 (national average 0.36) and in 2010, it was 0.06 as against the national average of 0.31. HIV prevalence among pregnant women aged 15–24 years, between 2004 and 2008, was nil in Sikkim, except in 2005 when the incidence was 0.24 per cent. In terms of estimated *new* HIV infections (in the 15+ age group), the state and all-India figure stood at 97 and 539,619 respectively during 2006–09. Sikkim had 37 people *dying* of AIDS during 2006–09 as against a national figure of 750,670 deaths. With a malaria incidence rate of 0.75 per cent, Sikkim has recorded zero deaths from the disease in 2010. In 2011, the prevalence rate of malaria further reduced to 0.27 per cent per 1,000 persons, with 51 cases being reported. The Revised National Tuberculosis Control Programme (RNTCP), started in the state from 1 March 2002, has recently adopted a new strategy of universal access to quality diagnostic and treatment facilities for all TB patients. There are five TB units in the state where registration of patients are done. By the end of June 2010, there were 1,646 cases of TB reported in the State, out of which 37 had died (mortality rate of 2.24 per cent).

MDG 7: Ensure Environmental Sustainability According to the State of Forest Report 2013, by the Forest Survey of India, Sikkim has a forest cover of 3,358 square kilometres which is 47 per cent of the State's geographical area. Forest and tree cover has grown to as much as 85 per cent of the area below the tree line (4,000 m). Nearly, one-thirds of the land area has been directly conserved by establishing an extensive protected area network of sanctuaries and national parks. This is the highest in the country in percentage terms.

During 2012, in rural Sikkim, 85.2 per cent households had improved source of drinking water while in urban Sikkim 98.8 per cent households had improved source of drinking water. The NSS 2012 revealed that 99 per cent of rural households and 100 per cent of urban households had access to improved sanitation. Sikkim is the first and only *Nirmal Rajya* in the country having achieved 100 per cent sanitation in 2008.

MDG 8: Develop a Global Partnership for Development Sikkim is next only to Mizoram in terms of telephone subscribers exceeding the average national rate. The number of mobile phone users in this small Himalayan state is over 30 per cent of the state's total population, the highest in the country. Around 11 per cent households in Sikkim have a computer in the house but only 3 per cent of total households have internet access.

2

Community and Forests

Forests are integral to the lives and livelihoods of people. They not only provide sustenance and livelihoods to those directly dependent on them but are also crucial for hydrological balance, landslide prevention, climate regulation and food security of the state. Traditionally, Sikkim views all conservation and management of natural resources in the context of sustainable livelihoods and community participation. Communities worship forests and regard them as bearers of local culture. For Sikkim, a forest-rich and traditional society, conservation of biodiversity and cultural diversity are inseparable and both need to be integrated. Traditional communities in Sikkim see nature and its varied expressions through their cultural lens, with religion and folklores providing a rich tapestry of local indigenous knowledge, traditions, and customs that form the basis of a community approach to conservation. For example, traditionally most mountain springs (*dhara*) have been considered sacred and revered as *Devithans,* which has led to their conservation through the ages. The rural areas of Sikkim are replete with stories of goddesses being the guardians of these water sources, and how some disturbance around these sites have led to inauspicious incidents in the villages. Communities value the use of traditional ecological knowledge in development activities and hold that modern technologies should be used to the extent society is willing to accept them.

Policies in Sikkim draw from the principle that the value of forests is derived from the contribution they make to the well-being and happiness of people rather than from the goods and services they provide. In other words, forests are valued not only for the value of all goods and services they provide, but also for the many intangible benefits they offer that typically go unrecognized or remain undervalued. In a state like Sikkim, revenue generation from the forests is very small and does not cover the expenses incurred in managing the environment and forest. However, the forest and biodiversity resources of

Box 2.1
Demazong: The Sacred Landscape of Sikkim

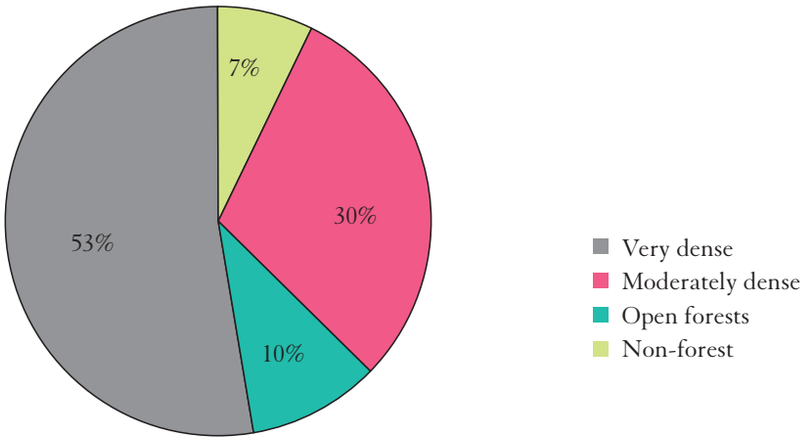
Sikkim, also known as '*Demazong*' by the Sikkimese people, which translates to 'hidden valley full of treasure, fruit and flower', is considered as a sacred land blessed by the Saint Padmasambhava. Sometime in the 7th Century AD Guru Padmasambhava (Great Indian saint) was invited to Tibet by king Trisong Deutsen to introduce Buddhism. It is believed that on his way to Tibet, he went via Sikkim and is said to have hidden many treasures or *Ters* according to the *Neysol*. Therefore Sikkim is regarded as the holiest of all places and it is said that one good deed here equals a hundred thousand good deeds done elsewhere. *Neysol*, the directory of holy places kept in monasteries and referred as a guide book describes that the whole region around Khangchendzonga (*great mountain which contains five treasures*) has hidden treasure or *Ters* which will be revealed in the course of time. In the month of August, during Panglhabsol festival, Buddhist monks and devotees perform rituals and offer prayers in the name of the Khangchendzonga deity and go all the way upto Dzongri 'Dhaplha Gang' offering prayers for good harvest, and well-being for the whole country and the world. There are a total of 109 existing large and small lakes in Sikkim regarded sacred by the people. All the streams and lakes are considered holy and nobody pollutes these. Besides the Khangchendzonga area, there are four holy caves in the four directions of Sikkim viz, Lhari Nying Phu towards in the north, Dechen Phu towards in the west, Khandu Sang Phu towards in the south, and Bas Phu towards in the east. Out of these four holy caves, Lhari Nying Phu and Dechen Phu are in remote corners, amidst forests. These areas are religiously protected. Therefore, it is believed any large-scale disturbance induced by human beings in this area will destroy these hidden treasures and will harm the sentient being through natural calamities. Every landscape of highland, middle land and low land and every river, stream, cave, big tree is believed to have guardian deities (*yullha, Zibda*) of its own and therefore during the morning ritual in every monastery, these deities are worshiped with great devotion.

Sikkim have immense value—environmental, cultural and social—and in many ways perform the core function in ensuring the wellbeing of the people.

Forest cover constitutes 47 per cent of the geographical area of the state. This is significant given that large tracts of the state are covered by glaciers, snow-capped peaks and alpine meadows. The forest and tree cover below the tree line (4,000 m) has grown to as much as 85 per cent of the area. Of the total forest area in the state, over 93 per cent is reserve forest and 6.6 per cent constitute protected forests. The per capita forest and tree cover at 0.63 ha is among the highest in the country. Sikkim has one national park and seven wildlife sanctuaries covering 2,179 sq. km (31 per cent of state geographic area). Once again, this is the highest in the country in percentage terms. The forest cover is, in general, of very good quality, with over 80 per cent forests falling under very dense and moderately dense categories (Figure 2.1).

Most of the wood collection for fuel is carried out in winter, with women and children actively involved in the collection process. Table 2.1 shows the extent of dependence of Sikkimese households on forests. The demand for fuel wood as a critical energy resource is particularly high in mountains and high altitudes. A household, on average, requires around 7,400 kg fuel wood every year. Close to 80 per cent of this demand is met from reserve forests. A small proportion—around 19 per cent—is met by private forests.

Figure 2.1 Forest and Non-forest Cover in Sikkim (%)



Source Forest Survey of India 2013.

Table 2.1 Forest Products Collected by Respondents for Own Consumption (values in percentages)

Site	Fuel wood	Litter/ leaves	Fodder	Wild edibles	Bamboo stems	Medicinal plants/herbs	Bamboo shoots	Others
East	88	73	81	54	81	54	46	0
North	92	79	71	100	38	54	25	40
South	97	97	90	68	81	71	81	30
West	97	89	89	68	76	59	43	0
All	97	86	84	71	70	60	50	20

Source Japan International Cooperation Agency (JICA) (2009).

Research carried out in the villages adjacent to reserve forests indicates that the average fuel wood consumption for a household is over 20 kg per day. Daily household usage peaks in winter at 25 kg. Apart from household demand for fuel wood, commercial tourism including the requirements of guest houses, hotels and tour operators has added to the growing demand for fuel wood. Tourism in the trekking corridors now accounts for 7 per cent of the total fuel wood demand.

Communities also depend upon forests for fodder requirements. Trees outside the forest are an important resource for fodder and fuel wood for the local population, reducing the pressure on the forests. Fodder collection is carried out during the dry season when grass and branches of fodder trees are gathered and stored for use round the year. The estimated average fodder collected per household is 15 kg per day or 5,475 kg per year. The annual household fodder requirements, however, vary across the state from 340 kg in Lachen in North Sikkim to 1,290 kg in Uttaray in West Sikkim. Forest floor litter is extensively collected for use in livestock bedding, mulching, composting and for creating shade for select crops. The estimated annual household use of forest floor litter is 2,920 kg per household.

Box 2.2
Himal Rakshaks: Guardians of High Mountains

About 60 per cent of Sikkim's land area is above 3,000 m which falls under protected areas and reserve forests with sub-alpine and alpine vegetation. This region is called *Himal* (meaning snow-clad area) and is home to a large number of threatened floral and faunal species like snow leopard, musk deer, Tibetan gazelle and a host of medicinal plants. This region is critical for the food and water security of the population in the low and middle altitudes as most rivers and streams are fed from water sources located in this region. The region has a harsh climate and poor infrastructure. Unlike the lower altitude, constituting JFMCs/EDCs and intensive patrolling by the Forest Department is not feasible in this region. To meet this challenge, the Forest Department has enlisted the support of *Himal Rakshak*s (guardians of Himal) from among the local ex-pastoralists and ex-hunters. The Himal Rakshaks patrol the forests, prevent poaching and destruction of wildlife habitat, stop illegal extraction of medicinal plants, check bio-piracy and spread awareness among people on nature conservation. They are provided identity cards and are trained by the Forest Department. Though an innovative initiative, the lack of incentives for the Himal Rakshaks (a purely voluntary venture) is a concern that has to be addressed to ensure the sustainability of this unique venture. Regular capacity building of the members is also required which will help to build their motivation and improve the effectiveness to discharge their functions.

The forest fringe communities and upland farmers are more dependent on non-timber forest products (NTFPs) for their livelihood as compared to lowland farmers since opportunities for agriculture are less developed at higher altitudes. For the local community, NTFPs are important for: (i) earning cash income; (ii) satisfying household needs such as fodder, medicine, shelter, and other household goods; (iii) sourcing traditional agricultural inputs such as leaf litter, wild plants, small tools and water; and (iv) obtaining supplementary foods such as roots, tubers, vegetables, fruits and grains for the family. A survey conducted in the buffer zone of the KBR recorded 94 species of NTFPs. Of these about 8 per cent of the enlisted species were used for construction purposes, 45 per cent as wild edibles, 33 per cent for medicinal purposes, 8 per cent as decorative items and 5 per cent as fibre and incense. Among these, above 50 per cent NTFPs were marketed locally and among them the majority comprised wild edibles and medicinal herbs.

Box 2.3
Bamboo: Usage and Potential

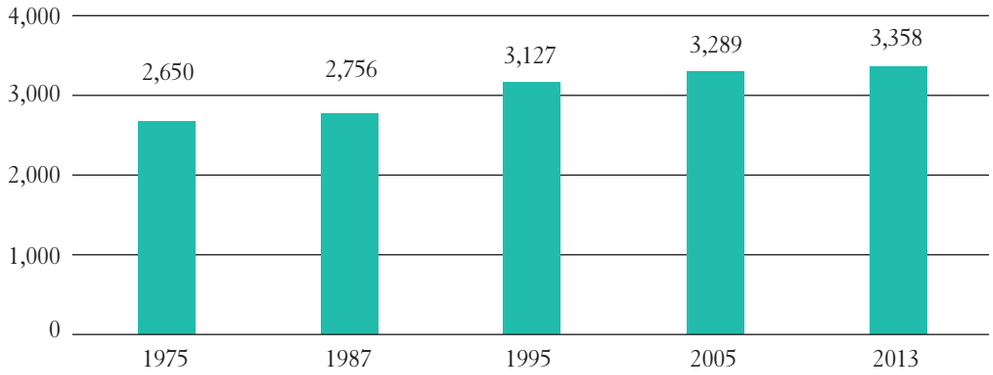
Bamboo is an immensely valuable versatile forest resource in Sikkim as in many parts of India, more especially in the north-east. In Sikkim bamboo is used for multiple purposes such as timber, food, handicrafts and furniture. It has great potential to boost the rural economy of Sikkim, provided the laws and regulations governing cutting, transportation and use of bamboo are more relaxed and friendly to farmers. In a recent policy change, the forest department has withdrawn royalty charged on villagers for bonafide bamboo use but the royalty charge on bamboo export continues. Realising the potential of bamboo for enhancing forest revenue, the Forest Department is now promoting bamboo plantation in private and forest land through the JFMCs and EDCs.

Sikkim is home to six of the top 13 bamboo species identified by Government of India's Bamboo Mission. These bamboo species are of high commercial value as they are used in handicrafts and paper making. The National Bamboo Mission was started in Sikkim in 2006–07 and it has received wide support from the community for its potential to generate livelihoods across the state. Under the Mission, the Horticulture and Cash Crop Development Department (HCCDD) of Sikkim promotes distribution of quality seedlings in villages for plantation in private land, while the Directorate of Handlooms and Handicrafts (DHH) provides skill-development training to artisans for bamboo handicrafts. Recently, the Cane and Bamboo Technology Centre (CBTC) under the United Nations Industrial Development Organisation (UNIDO) has decided to work with the state government to promote large-scale bamboo cultivation in the state through an appropriate policy framework and investments to promote bamboo-based industries in the state.

Forest policy Land has always been a highly scarce resource in Sikkim. The land-use pattern in Sikkim is influenced by its elevation, climate and mountainous terrain. Cultivated land comprises approximately 11 per cent of the total geographical area (approximately 777 sq. km) and is confined to an altitude of less than 2000 m. Around 70 per cent of the cultivated land (542 sq. km) is terraced and semi-terraced, while the remaining is under fallow and scrub land. Planning decisions for varied land uses such as agriculture, forests, horticulture, grasslands, urban development, mining, infrastructure facilities and recreation need to take into account several interests without risking the principles of land capability, sustainability and environmental security. The high population growth rate in the seventies and eighties increased the demand for land for both settlement and agriculture and exerted enormous pressure on Sikkim's forests and natural resources. Widespread poverty also intensified the pressure on forests for fuel wood, fodder and medicinal plants. The led to an unsustainable exploitation of forests for subsistence and commercial activities and began to adversely affect the biodiversity and ecological balance of the region.

The situation is different now. Sikkim has, especially over the past two decades, ushered in major policy reforms for the regeneration and protection of the state's pristine and fragile environment. The state has been able to successfully combine economic growth and environmental sustainability. Latest data from the Forest Survey of India (2013) reveal that Sikkim is the only state in the northeast that has been able to keep its forest cover intact since 2009. Sikkim has recorded zero net loss of forest cover in all its four districts, bucking the regional and national trends. Moreover, the recorded forest area of Sikkim has consistently increased since 1975 (Figure 2.2), with a maximum growth of over 5 percentage points between 1987 and 1995. Sikkim has since 1995 introduced a number of forest management policy measures to promote conservation and enhancement of the forest cover. These measures have also contributed to improving soil conservation, sustaining the hydrological balance, supporting biodiversity conservation and providing effective resilience towards climate change impacts.

Figure 2.2 Forest Cover Trends in Sikkim



Note in square kilometres.
Source Forest Survey of India Reports, 2013.

The forest manual drafted during the British rule and supplemented from time to time had served as a statute book since 1909. According to this manual, people did not enjoy any rights and concessions as far as reserve (government) forests were concerned. As far as private estate forests were concerned, all rights devolve upon the owners, landlords and their tenants. In the case of *Khasmal* forests, people have the right to free supply of timber and firewood but this can be availed only after obtaining formal permission from the Forest Department. In *Goucharan* forests, local people have the right of free grazing and collection of dead wood and fodder. After the Forest Conservation Act of 1980 was implemented in Sikkim, it became mandatory to acquire permission from the government for any activities in the forest area. Legal diversion is now possible for public forests, while for private forestland this permission is not required.

Human-wildlife conflict Human-wildlife conflict (HWC) is on the rise in Sikkim. The increase in population, especially over the past three decades or so, accompanied by increasing forest cover has led to the interspersing of human settlements and agriculture lands between forests. Better protection and conservation measures have contributed to the regeneration of large tracts of degraded forests, improved density, and enhanced forest canopy. With restoration of habitat, many faunal species that had vanished in the past due to habitat loss have reappeared, and the population of existing faunal species has also increased significantly. This has, however, led to an overlap in land uses, leading to increasing HWC in Sikkim. While human-wildlife conflict has always existed, there has been a sharp increase in the spread and frequency of conflicts due to the increasing interface of humans with wildlife. Villages covered as part of a World Wildlife Fund study reported massive damages to agriculture crop, livestock and sometimes to human life on account of increasing raids by predators and herbivores (Box 2.4).

Sikkim lacks a comprehensive policy on managing HWC. While there is a compensatory payment mechanism in place to make up for losses, the meagre amounts of monetary compensation have caused widespread dissatisfaction among the villagers. Moreover, the compensatory scheme only serves a tactical purpose, when what is actually needed is the

adoption of long-term strategic policy measures to mitigate conflicts. Cases involving direct encounters between human beings and animals are less common with only stray incidents of leopard and bear attacks on human beings. This is in contrast to many wildlife areas in India where loss to human life from elephants, tigers and other predators is quite common. Affected villagers, however, report that the compensation provided is often less than the actual cost of damage, though the disbursal from the Forest Department is quite prompt. This may partly explain the subdued public protests against the rising incidence of HWC and the rare incidences of retaliatory killing of wildlife by the community. Like many other aspects, Sikkim can take the lead in framing an inclusive policy on HWC mitigation and management keeping in view the long-term impact of HWC on wildlife, forests and communities. The first step in this direction would be to carry out a participatory baseline assessment of the current situation and trends on HWC in Sikkim. Based on the assessment, the Forest Department should take the lead in identifying critical and high-intensity HWC regions and initiate appropriate mitigation measures by involving the local community. JFMCs and EDCs, being village-based groups, should also be inducted into efforts aimed at reducing HWC.

Forest management in Sikkim is geared towards expanding and improving forest and tree cover through afforestation schemes, rehabilitation of degraded forests through participatory management, reducing human and cattle pressure in forests and promoting nature education. The state's vision is to use the environment as a strategic resource for harnessing sustainable development without compromising on conservation of the environment.

Discussed here are some of the key policy measures adopted by the state.

Ban on green felling in forests (1995) Forest stocks play a vital role in maintaining the hydrological balance, promoting soil moisture retention, preventing landslides and

Box 2.4
HWC in Pangolakha and Fambong Lho Wildlife Sanctuaries

WWF India, in collaboration with the Sikkim Forest Department, carried out a field-based assessment (2009) of HWC in Pangolakha and Fambong Lho wildlife sanctuaries in the densely populated region of East Sikkim. The main occupation of the local people is agriculture (92 per cent), with an average landholding of 3–4 acres. The research survey, carried out among 1,500 respondents, reported large-scale damages to crop and livestock from raiding wildlife. Macaque, porcupine and barking deer are the three main wildlife species causing damage, followed by squirrels, palm civets and black bears. Maize and large cardamom are the two main crops that bear maximum damage from wildlife. Other crops often damaged are paddy, squash, potato, mustard and cabbage. Over 46 per cent respondents reported loss of livestock, mostly poultry (91 per cent) and rest of young goats and other cattle. Jackals and martens are the two main animals responsible for loss of livestock. Over 69 per cent of the respondents reported not using any measures, though they were suffering considerable crop damage. Among those employing any measure, most used scarecrows (though it reportedly had little effect on mammals like macaques, porcupines and barking deer), followed by bamboo fencing and barbed wire fencing.

Figure 2.3 Major Forest and Environment Policy Milestones—Sikkim

1995	• Government announces 1995–96 as Harit Kranti year for greening Sikkim through people's participation. Decade 2000–10 declared as Harit Kranti Dashak. • Ban on green felling in forests and restriction on tree felling in reserved forests. Timber export outside state banned.
1997	• Ban on use of non-biodegradable materials like plastics and poly bags. • KNP extended from 850 sq. km to 1784 sq. km (25 per cent of geographical area).
1998	• Ban on cattle grazing in reserved forests. • Barsey Rhododendron Sanctuary, West Sikkim notified. • Introduction of participatory forest management through constitution of JFMCs and subsequent notification for EDCs.
1999–2000	• Concept of *smriti van*s (memorial forests) launched. People encouranged to plant trees. • KBR with an area of 2619 sq. km declared. • State Forest, Environment and Land-Use Policy 2000 adopted to regulate development activities.
2001–02	• Sacred peaks, caves, rocks, lakes, chhortens and hot springs notified. • State Medicinal Plants Board set up. • Pangolakha Wildlife Sanctuary, East Sikkim, created.
2003–05	• Eleven important bird areas identified by the government. • State Biodiversity Strategy and Action Plan prepared and Sikkim State Biodiversity Board set up.
2006	• e-governance strengthened through launch of the Environmental Information System (ENVIS). • State Green Mission launched for avenue plantation along roads and wasteland. Over 32 lakh saplings planted till 2011. • Wetland Conservation Plan formulated.
2007–10	• State of Environment Report prepared and published. • Ecotourism Directorate created. • State Council on Climate Change constituted. • Ten Minutes to Earth launched to support Global Plantation Campaign by the United Nations Environment Programme (UNEP). • JICA-supported Sikkim Biodiversity Conservation and Forest Management Project launched. • International Rhododendron Festival celebrated.

Source Forest Department 2013.

enhancing carbon sequestration. Sikkim had been experiencing high rates of deforestation until the mid-1990s. First, the state had to meet the increasing demand for land for a growing population for settlement and agriculture. Second, there was increased pressure on forests to meet the needs for cattle grazing and fuel wood collection. Third, forest lands had to be diverted for developmental activities. By 1998, for instance, close to 598 hectares of forest land had been diverted for development purposes—35 per cent to meet the needs of the Army and Border Roads Organisation, 26 per cent to meet the requirements of hydroelectric projects, and another 20 per cent to meet the needs of the construction industry.

Alarmed by the rapid rates of deforestation, The Government of Sikkim in 1995 imposed a total ban on felling of trees in reserve forests (except for dead, diseased and dying trees to be removed for *bona fide* use) and also a ban on export of timber outside the state for commercial purpose. Simultaneously, the Government framed rules for felling trees in private forest lands. Special compensatory requirements were introduced for forest lands that had to be diverted for developmental purposes.

Ban on Cattle Grazing in Reserve Forests (1998) Until the mid-1990s, the increasing demand for dairy products from an expanding local population had resulted in a continuous increase in pressure on forests for grazing and fodder. As a result, reserve forests, especially in the temperate region, were gradually getting degraded and fragmented. Concerned with the threat to the ecosystem balance, the Government of Sikkim, in 1998, banned grazing in all reserve forest areas, water source areas and plantation areas. This major policy decision has resulted in a decline in forest grazing and has led to a restoration of the degraded forest patches. In Barsey Rhododendron Sanctuary, for instance, there has been a reduction in cattle units from 6,324 in 2000 to 463 in 2005. A study by the Institute of Financial Management and Research (IFMR) in 2012 notes that the ban has led to a notable improvement in standing stock, density and canopy cover, enhanced biodiversity composition, better stream recharge and restoration of wildlife habitat. At the same time, however, the ban on grazing has resulted in a loss of traditional livelihoods for a large number of households. The adverse impact on the financial security of households has only been partially offset by government compensation. In sum, while the ban on grazing has contributed to improving forest cover and yielded other ecological benefits, it has had an adverse impact on the socio-economic security of the herders who were dependent on cattle grazing within forests for their livelihoods.

Participatory Forest Management (1998) In keeping with the National Forest Policy 1988, Sikkim has pro-actively started engaging with the local community for protection and management of forests. Formation of Joint Forest Management Committees (JFMCs) and Eco-Development Committees (EDCs) has been the principal modality for promoting community participation. By December 2013, 155 JFMCs and 47 EDCs had been constituted across the state. A JFMC is formed for a village or a cluster of villages situated adjacent to reserve forests and is registered with the Territorial Divisional Forest Office concerned. Similarly, an EDC is formed for a village or a cluster of villages situated adjacent to protected areas, such as national parks or wildlife sanctuaries, and is registered with the respective Wildlife Divisional Forest Office. The JFMCs and EDCs prepare micro-plans for their villages, carry out plantation in forests for regeneration and conduct patrolling to prevent forest offences. This community approach allows people to draw on traditional ecological knowledge and permits only small-scale alterations of the landscape.

State Action Plan for Climate Change (SAPCC) Government of Sikkim, after several rounds of consultations with various stakeholders including civil society, government departments and academic institutions has prepared the State Action Plan on Climate

Change (2012–30) (SAPCC). The action plan seeks to devise strategies to address the concerns of the state pertaining to water; agriculture, horticulture, and livestock; forests, wildlife, and ecotourism; energy efficiency; and urban and rural habitats and communities. It aims at strengthening the policies and programmes of the Sikkim government that have been undertaken in the past two decades to protect ecology and environment for sustainable and inclusive development of the state, and help climate proof communities, especially in terms of their livelihoods that are climate dependent.

The measures put in place by the Sikkim government, though seemingly focused on restoring forest landscapes, are beginning to contribute towards mitigating the effects of climate change. The grazing exclusion policy, which was framed mainly for providing a restoration chance to degraded forest landscapes through undisturbed natural regeneration, was later recognized as a decisive policy measure contributing to mitigating climate change. The impact of this policy in terms of enhancement of the forest carbon stock has been studied and it was observed that the difference between the 'with' and 'without' policy intervention scenarios amounts to about 585,000 tonnes of carbon, which translates to 2,142,000 tonnes of carbon dioxide equivalent. These benefits indicate the active role played by forests in enhancing carbon sink and sequestering carbon, which would not have accrued had Sikkim not banned grazing and introduced other measures to protect and promote forests.

Ground water recharge is another significant climate adaptation strategy that has been adopted in Sikkim. Recognizing that natural ground water recharge in mountain areas is only 10–15 per cent, Sikkim has launched a new initiative for increasing recharge by harnessing the hydrological potential of hill top forests. Most of the rain water just flows away as surface run-off due to the steep terrain causing soil erosion, landslides and floods. This has worsened due to climate change impacts that are occurring throughout the region. Making use of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), the Government of Sikkim has successfully piloted artificial groundwater recharge works in hill-top catchments for reviving the dry season discharge of streams and springs below. These pilot projects have been able to annually recharge 1000 million litres of ground water by interventions in the upper catchments of critical streams like Rolu, Khani, Seti, Manpur, Reshi, Rohtak, etc. and has enhanced the natural ground water recharge in the drought-prone zone of South and West districts.

While conservation of forests and the environment remain a priority, the government of Sikkim has identified eco-tourism as a key sector for economic growth and employment generation.

Ecotourism Sikkim, with its cool salubrious climate, natural beauty, unique culture and atmosphere of peace and tranquillity, continues to be a top tourist destination in India, consistently winning awards and accolades. The vision of Sikkim's tourism policy is to establish it as an ultimate and unique ecotourism destination offering memorable and high quality learning experiences to visitors, and to contribute to poverty alleviation as

well as to promote nature conservation. Sikkim's policy has as its objective, to encourage responsible behaviour and support for conservation efforts as well as providing facilities to local children as well as visitors to enjoy and appreciate nature-based activities. The state's efforts have helped to inculcate pride and appreciation of local nature among the people of Sikkim. And it has ensured that local communities have a role in determining the appropriate presentation of their cultural values.

Box 2.5
Awards and Accolades Won by Sikkim for Eco-tourism

1	1998–99	Best Tourism Performing State in the North East (National)	Ministry of Tourism (MOT) GOI
2	1999–2000	Best Tourism Performing State in the North East	MOT, GOI
3	2000–01	Best Tourism Performing State in the North East	MOT, GOI
4	2001–02	Best Tourism Performing State in the North East	MOT, GOI
5	2002–03	Best Tourism Performing State in the North East	MOT, GOI
6	2005–06	Best Tourism Performing State in the North East	MOT, GOI
7	2006–07	Best State for Tourism Related Programmes along with MP	MOT, GOI
8	2005	Best Eco Tourism Destination	Hospitality India
9	2007	Most Picturesque Destination	Todays Traveller Platinum Award
10	2008	Emerging Tourism State	Todays Traveller Platinum Award
11	2008	Best Adventure Tourism Destination	Safari India National Award
12	2008	Best Adventure Tourist Destination	PATWA
13	2007–08	Best State for Tourism Related Programmes	MOT, GOI
14	2009	Most Responsible Tourism State of 2009	Todays Traveller Diamond Award
15	2010	National Award for Best State/ Union Territory in Tourism Related Programmes & Development of Infrastructure	MOT, GOI
16	2010	Best State for Adventure Tourism	Safari India National Award
17	2010	Best Performing State	Commonwealth International Travel Mart
18	2010	India's Most Progressive Tourism State	Today's Traveller
19	2011	Best State in Tourism Related Programmes & Development of Infrastructure	MOT, GOI
20	2012	Best State for Comprehensive Development of Tourism	MOT, GOI
21	2012	Most Innovative & Unique Tourism Project-Siddheshwar Dham, Solophok	MOT GoI
22	2012	Best State-Campaign Clean India	MOT GOI
23	2012	Best Rural Tourism Project 2012–2013	MOT, GOI

Source http://sikkimtourism.gov.in/Webforms/General/DepartmentStakeholders/DeptAwards.aspx.

Today, tourist arrivals have exceeded the population of the state. Between 2005 and 2010, the number of tourists visiting Sikkim has more than doubled—from 347,650 to 720,768.

Sikkim has been making a conscious effort to promote a variety of ecotourism activities. These include (i) activities in mountains such as trekking, bird and wildlife watching, hiking, photography, mountaineering, etc.; (ii) activities in rivers and lakes such as angling, rafting, etc. and (iii) participating in cultural and traditional events such as agro-tourism, handicraft making, fairs, festivals and Himalayan folkways. Simultaneously, the state has promoted ecotourism assets—natural and cultural features that attract visitors—such as landscapes, endemic or rare flora and fauna, local agricultural products, local culture and festivals, local folktales, history, historical monuments and heritage sights. The state has also promoted products—a combination of activities and services that are sold and managed by qualified eco-tour operators. Ecotourism services include transportation, local cuisine, camping, home stay, providing guide services and interpretation services. These services are offered in such a way that they cause minimum damage to the natural and cultural environment and promote a better understanding of the natural and cultural aspects of a locality.

The Government of Sikkim continues to explore various possibilities of promoting ecotourism to further ensure that the high footfalls do not adversely affect the ecology and biodiversity of the region. As part of the 'Ecotourism Activities under Sikkim Biodiversity Conservation & Forest Management Project (SBFP): 2010–11 to 2019–20', the Government has introduced a number of policies to develop and improve ecotourism for the benefit of local forest communities. The main objectives of Sikkim's ecotourism policy are to bring all stakeholders on a common platform of understanding of ecotourism and promote ecotourism in a sustainable manner based on the Global Sustainable Tourism Criteria (GSTC). The State offers incentives to local communities for nature conservation through alternative income sources and livelihood. It empowers local communities, particularly economically disadvantaged people, to manage ecotourism, regulate the influx of visitors, conserve the existing biodiversity, ecosystems and religious monuments of the state as well as people's culture and traditions.

The Sikkim Biodiversity Conservation and Forest Management project has identified more than 20 villages across the four districts of Sikkim for developing and promoting ecotourism activities. These villages are being provided training on ecotourism services and handicraft design, marketing and sales. The government has developed partnerships with NGOs, local people who run and operate home-stays, guides, producers of local agro-products and handicrafts and tour operators/tour agents to develop ecotourism business in a fair trade manner. The Government has also developed partnerships with community-based organizations (CBOs), EDCs, JFMCs and local communities to manage ecotourism sites. It has established and enhanced networks with key stakeholders including research institutions, universities, private sector associations, public agencies and national and international NGOs; and organized seminars and events to discuss and deliberate on

ecotourism. The state has also disseminated information related to ecotourism to key stakeholders in all the four districts, and held annual meetings of ecotourism stakeholders, policymakers, NGOs and private-sector bodies on a rational basis in each district.

Box 2.6
Darap Eco-tourism Development Committee

Cherry Village Resort in Darap, West Sikkim, has emerged as one of the many success stories that have come to define the enterprising minds of the Darap Eco-Tourism Development Committee (DETDC). The eight-bedded resort with a scenic view of the hills offers a perfect blend of culture and nature. The cosy cabins are fitted with modern amenities that makes stay comfortable, while delectable local cuisines served make the experience one of a kind. Evenings can be spent being a part of lively traditional song and dance around a bonfire or simply singing along at the karaoke bar. One can head out on nature trails, go for longer treks up the hills or even explore village life in Darap and surrounding villages.

DETDC was established in 2005 by a group of 20 educated unemployed youth, with a loan from the Scheduled Tribes and All Other Backward Classes Financial Development Corporation (SABCO). This loan was used to set up six potential home-stays in the village and also to develop poultry, dairy farming, beekeeping, a restaurant and a provisional store through which farm produce was sold directly. The profits were then invested in setting up more home-stays in the village as well as capacity building of the youth. In 2008, the committee organised the first Darap Cultural Village Tourism Festival. The event has since then become an annual feature. In 2010, DETDC was awarded the prestigious State Award of Excellence for the Best Eco-Tourism Development Committee.

Challenges Forests can play an important role in mitigating the impacts of climate change by functioning as a carbon sink, water tower and also in the mitigation of natural disasters. In the years to come, the state will need to focus more on management interventions to enhance the growing role of forests. The major challenges faced in this sector are:

The various vegetation classes in Sikkim are telescoped together due to the steep elevations which make the landscape heterogeneous and fragile. The forest patches in the lower elevation are small and fragmented supporting four forest types namely East Himalayan sal forests (300–900 m), Himalayan chirpine forests (500–900 m), East Himalayan moist deciduous forest (300–900 m), and East Himalayan subtropical wet hill forests (900–1700 m) and are surrounded by agricultural fields. These forests have a limited extent (area less than 145 sq. km) and relatively higher degree of degradation. There is an urgent need to protect and regenerate these small-sized and fragmented forests as they are susceptible to encroachment and degradation. Protection of these forests is critical to prevent the loss of the characteristic biodiversity that they possess.

Scarcity of land is likely to assume significant importance in Sikkim and would require serious debate on long-term land-use planning policy. With the growing population, demand for growth and employment will only increase and land is a critical input for

sustaining economic development. The growth in urban population is increasing demands for urban civic infrastructure and amenities, putting a strain on local resources. To meet long-term challenges of urbanization, Sikkim has to make sensible investment in urban infrastructure and at the same time reduce population pressure on just a few towns. Though a boost to the economy, the upward trends in tourism inflow are going to test the state's capacity to sustain growth, particularly in relation to rising pressure on environment.

Rapid forest degradation took place in the first few decades after Sikkim's merger with India on account of unsustainable practices that were followed. This degradation was caused mainly due to open grazing, forest fires, selective felling of commercially important mature trees from forests and clear felling of temperate forests for meeting the demand for timber, firewood and charcoal. As a result, thickets of secondary, unpalatable shrubs and bamboo have increased substantially in these degraded forests. Over the last two decades the Government of Sikkim has introduced several conservation measures including the implementation of the ban on open grazing in reserve forests and ban on green felling of trees in forests. While impacts of pastoralism on these forests has been substantially reduced, reducing firewood extraction by local communities and road construction labour force and preventing forest fire still need to be prioritized. Unregulated extraction of firewood from the forests of the state still occurs, and rural households are still dependent upon an estimated annual requirement of 6–8 tonnes (dry weight). Greater emphasis is needed for ensuring access to alternate and cheap forms of energy and fuel efficient devices that will help in substantially reducing the pressure on these forests.

There is also an urgent need to take up a long term restoration programme to artificially regenerate slow growing temperate and sub-alpine conifer forests. Unlike in other parts of the country, the long dry winter from December to March is the major fire season in the state. Of late, the incidence of forest fires in temperate forests which are unaccustomed to fires is increasing. There is a pressing need for a greater dissemination of mountain specific fire management technology using participatory approaches.

Human Wildlife Conflict (HWC) is taking larger proportions resulting in more frequent crop depredation and impacting the livelihoods of the forest fringe communities. There is a need for preventing HWC and also improving its human interface by providing more adequate and prompt compensation packages.

The next generation of democratic decentralization needs a fillip by strengthening and reforming the Joint Forest Management (JFM) movement by providing the committees with more autonomy and management authority over forest resources. Their functioning needs to be made more broad based and transparent and made accountable to the gram panchayat and the people.

Conclusions Sikkim stands out as a beacon of hope on conservation and sustainable development in the face of a generally bleak regional scenario marked with destruction and degradation of natural resources and loss of biodiversity. This has been possible

on account of the unique culture and traditions of the people of the state, which value happiness and well-being in relation to nature. Through a consistent political will and policy signals coupled with a strong governance mechanism, the state has been able to chart an enviable future for green development that thrives on its natural capital base while addressing the economic growth and welfare needs of common people. The story of Sikkim holds important lessons in policy-making at the regional and national level. In fact, the Sikkim approach should stimulate policy debate on the growth paradigm that rules government planning and development approaches by illuminating alternative pathways to development.

Box 2.7
Climate Change Trends and Impact

The temperature in Gangtok has been rising at the rate of 0.2–0.3°C per decade. Therefore, since 1957 the increase in temperature has been around 1–1.5°C. Annual rainfall is increasing at the rate of nearly 50 mm per decade, except in winter months, which during the period 2006–10 have been exceptionally dry. Comparison of long-term meteorological data available for Gangtok station (1957 to 2005) with the trend over the last few years (2006–09) shows an acceleration of these patterns, with winters becoming increasingly warmer and drier.

Community perception of an overall decrease in snowfall and changes in timing during the past 10 years in the higher altitudes has been documented for North Sikkim. These changes in snowfall patterns would have an impact on the livelihood of the pastoralist communities and affect the fodder productivity for livestock. A study conducted by the Department of Science and Technology of the East Rathong Glacier in West Sikkim shows that the total recession of the glacier during the last 43 years (1965–2008) is about 1.44 km and the last 9 years (1997–2006) about 320 m, with an average rate of 35.5 m/year. Glacier thinning and retreat results in formation of new glacial lakes and the enlargement of existing ones, increasing the chance of GLOF (glacial lake outburst flood) events.

A change in climate can have far-reaching consequences on diverse species, their distribution and ecology on the whole. A study, has shown that the suitable bioclimatic envelope for rhododendrons, one of the most important floras of the state, would shrink considerably under the climate change scenario. With flowering and fruiting being affected by the changing climate, availability of food inside the forests for wildlife has changed over time. This has a direct correlation to more incidences of wildlife straying into villages, leading to increased human wildlife conflict.

In the subtropical zone (less than 1,000 m), the production of important cash crops like ginger, orange, and fruits has declined due to prolonged droughts and outbreak of pests, diseases and weeds. This zone was earlier a productive area with multiple cropping. Now due to less winter rain, only single cropping during the monsoon is possible. Storage and preservation of seeds is also becoming increasingly difficult due to pests, diseases and dry winters. Communities in the middle and upper hills were found to be less vulnerable, and warmer winters provided new opportunities for vegetables such as tomato, chilli, carrot, cucumber, passion fruit and beetroot, coupled with higher production and early ripening as well. However, due to warming, there is a likelihood of spread of vector-borne diseases spreading towards the upper hills. The government will need to rise to these challenges and make right policy choices in the face of competing strategic options, keeping in mind the long-term interest and commitment towards sustainable environment and the well-being of people.

Sikkim's unique economic-ecological context demands an innovative development strategy that can leverage the states' comparative advantage in sectors like sustainable ecotourism, hydropower and services as engines of future growth. Both the state and central government policies need to act in conjunction to promote balanced growth, while factoring in the natural resource assets of the state and the value of ecosystem services that these provide at the local, regional and national levels. This calls for a fresh perspective on development planning and sectoral allocation of resources to stimulate growth in right direction. Otherwise, the cost of losing the last vestiges of a unique biodiversity and pristine environment would be inexorable and irreplaceable—something both Sikkim and India can ill afford.

3

The Position of Women

Women in Sikkim can be said to enjoy relatively greater freedoms than women in most other parts of the country. Traditionally there has been no discrimination against the girl child in Sikkimese society. Women have historically never faced seclusion in Sikkim. They have also had a visible presence in public life and have played an active role in economic activities especially in agriculture. Female infanticide and foeticide as well as dowry-related deaths are virtually unheard of. On the other hand, the prevalence of customs like the bride price among certain communities reflects the high value attached to women in society. The Sikkim Human Development Report (2001) had observed a slow spread of education among girls in Sikkim. Today, the situation is very different as the gender gaps have been filled at all levels of education, and there is greater gender equality than a decade ago.

Sex Ratio Women constitute nearly 47 per cent of the total population in Sikkim. Figure 3.1 shows the sex ratios in Sikkim since 1901. Sikkim's sex ratio (the number of females per 1,000 males) which had been declining between 1931–81 has begun to show improvement over the past three decades. In 2011, there were 889 women for every 1,000 men in Sikkim (Table 3.1).

Table 3.2 presents the district-wise sex ratios for Sikkim. The district-wise sex ratio of the population by residence indicates that there is marked improvement in the sex ratio in all districts, except in South district where there is a fall in the total sex ratio from 927 in 2001 to 914 in 2011. Table 3.3 shows the population of children 0–6 years across the districts. Interestingly, the child sex ratio (0–6 years) for 2011 at 944 is higher than the overall sex ratio and is also higher than the national average of 914. The child sex ratio in rural areas (952) is higher than in urban areas where it is 917.

Table 3.1 Sex Ratio: Sikkim and All-India, 1971–2011

Year	Sikkim	India
1901	916	972
1911	951	964
1921	970	955
1931	967	950
1941	920	945
1951	907	946
1961	904	941
1971	863	930
1981	835	934
1991	878	927
2001	875	933
2011	889	940

Source Census of India.

Table 3.2 Sex Ratios in Sikkim, 1971–2011

	1971	1981	1991	2001	2011
West District	937	906	915	929	941
South District	909	854	892	927	914
East District	791	797	859	844	872
North District	853	789	828	752	769
Sikkim	863	835	878	875	889

Source Census of India 2011.

Table 3.3 Child Population and Child Sex Ratios in Sikkim

	Population 0–6 years			Child sex ratio
	Total	Male	Female	
West District	14,957	7,669	7,288	950
South District	15,070	7,737	7,333	948
East District	26,571	13,651	12,920	946
North District	4,479	2,361	2,118	897
Sikkim	61,077	31,418	29,659	944

Source Census of India 2011.

There was a marginal fall in the rural sex ratio in the North district from 757 in 2001 to 755 in 2011 and in the South district where it dropped down from 930 in 2001 to 907 in 2011. In urban areas, there was a marked improvement in sex ratio across all districts.

Employment Sikkim's work participation rate is almost 51 per cent. While the figure for males in Sikkim is 60 per cent as against the national figure of 53 per cent, the female

work participation rate at 40 per cent is much higher than the national average of around 26 per cent (Table 3.4).

Table 3.4 Distribution of Workers in Sikkim by Percentage, 1991, 2001, 2011

Persons	Total workers			Main workers			Marginal workers			Non-workers		
	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011
Total	42	49	51	40	39	38	1	9	13	58	51	50
Males	51	58	60	58	51	50	0.43	7	10	49	42	40
Females	30	39	40	29	27	24	2	13	15	70	61	60

Note Figures have been rounded off.
Source Census of India 2011.

Female *main* workers as a proportion of Sikkim's female population has declined from 29 per cent in 1991 to 24 per cent in 2011. However, the proportion of female marginal workers (total female population) has risen from approximately 2 per cent in 1991 to almost 13 per cent in 2001 and further to 15 per cent by 2011. The female non-workers have declined from 70 per cent to 61 per cent during 1991–2001 (Table 3.4). It has further declined to 60 per cent in 2011.

In 2011, women accounted for 37 per cent of the total workforce—the same as it was in 2001 (Table 3.5). Of the total women workers, 61 per cent are main workers, and 39 per cent were classified as marginal workers. Women made up only 30 per cent of the main workers, but 56 per cent of marginal workers.

Table 3.5 Male and Female Workers in Sikkim

	2011	% of total workers	2001	% of total workers
Main workers	230,417	75	212,904	81
Male	160,513	83	146,541	88
Female	69,904	61	66,363	68
Marginal Workers	77,721	25	50,139	19
Male	33,845	17	19,175	12
Female	43,876	39	30,964	32
Total Workers	308,138	100	263,043	100
Male	194,358	63	165,716	63
Female	113,780	37	97,327	37

Note Percentages have been rounded off.
Source Census of India 2011.

Whereas 45 per cent of women work in rural areas, the proportion is smaller—25 per cent—in urban areas. The composition of female main and marginal workers also differs

from rural to urban areas. In urban Sikkim, main workers account for 84 per cent of the women's work force, whereas the proportion is 57 per cent in rural areas (Table 3.6).

Table 3.6 Status of Women Workers as percentage of Total Women Population and Categories of Workers as percentage of Total Workers

	Total	Rural	Urban
Workers	37	45	25
Main Workers	61	57	84
Marginal Workers	39	43	16

Source Census of India 2011.

Women accounted for 31 per cent of the total agriculture labourers in 1991 (Table 3.7). This proportion has gone up to 50 per cent in 2011. Over the period 2001–11, though there was an absolute increase in the number of women main workers and marginal workers, the increase in marginal workers was at a faster pace, resulting in a greater percentage of women working as marginal workers compared to 2001. Almost 48 per cent of total female workers in Sikkim as against 33 per cent male workers fall in the 'cultivators' category. About 12 per cent women are agricultural labourers, whereas the percentage of male agricultural labourers is only 7 per cent. The percentage of female workers in the household industry accounts for 2 per cent, while 39 per cent female workers as against 60 per cent male workers are in the 'other workers' category (Table 3.7).

Table 3.7 Sikkim's Working Population, 1981–2011

Category of workers	Percentage distribution of working population											
	1981			1991			2001			2011		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Cultivators	50	80	60	51	72	58	42	63	50	33	48	38
Agricultural labourers	3	3	3	8	7	8	5	9	7	7	12	8
Household industries	1	1	1	1	0	1	2	1	2	2	2	2
Other work	45	17	36	40	21	33	51	27	42	59	39	52
Total main workers	100	100	100	100	100	100	100	100	100	100	100	100

Note Figures are rounded off.
Source Census of India.

There has been a shift in the occupational trends for both men and women. With the enhancement of educational opportunities and opening up of employment avenues in the state, the dependence on the primary sector has decreased drastically over the past forty years. The percentage of the working population in agriculture as cultivators has decreased from 81 per cent in 1971 to 38 per cent in 2011. Similarly, the percentage of

female cultivators has gone down from 92 per cent to almost 48 per cent during the same period. The increase in the proportion of the population engaged in the non-agricultural sector from 15 per cent in 1971 (taking household industries and the 'other work' category together) to around 54 per cent in 2011 makes it amply clear that there has been a shift to the secondary and tertiary sectors. This shift is also reflected in the rise of female workers in the non-agricultural sector from almost 5 per cent to 41 per cent in this period. The agricultural labour category which was 9 per cent in 2001 has increased to 12 per cent in 2011.

The state government has been promoting rural livelihoods by creatively investing in ecotourism, organic farming, and a host of other potentially high-income generating activities. Availing these new opportunities, rural women are now increasingly involved in income-generating activities like food processing, trading agricultural products, handicrafts and weaving. In urban areas, women are making their mark in new fields such as consultancy, marketing, interior decoration, beauty clinics, handicrafts, food processing and readymade garments. Notwithstanding this occupational diversification, agriculture continues to be the main source of employment for women—59 per cent of women workers are engaged in agriculture-related work where earnings are typically low and uncertain.

Sikkimese society has traditionally not restricted women's participation in economic activities. Apart from playing an active role in agricultural activities, women are today contributing to other economic activities like trade and business. Rural women are fully engaged in agriculture and allied activities including small farm agriculture, food processing, gathering, small trading and vending, poultry farming, animal husbandry and bee-keeping. They not only contribute to the family income through these activities but also control family expenditure and participate in decision-making in the household. Women have also benefited in terms of greater employment opportunities from the emergence of developmental projects and the expansion of the private sector. Women are also actively undertaking entrepreneurial roles. Under a new scheme of the state government—Educated Women Unemployed Co-operative Society (EWUCS) administered by the Department of Co-operative Societies, women are venturing into the field of contract work and construction. At the same time, rural women are actively participating in employment provided by MGNREGA as indicated by the fact that the state has a total of 163,593 enrolled workers, out of which 53 per cent are men and 47 per cent women. The participation of rural women in self-help groups (SHGs) under the Swarna Jayanti Grameen Swarozgar Yojana is also commendable and outscores the participation of men. Of the total SHGs formed till January 2012, 72 per cent are all-women SHGs.

Government jobs The state government has a provision of 30 per cent reservation for women in posts and services to be filled by direct recruitment under the state government and public sector undertakings. This has certainly benefitted the educated women of Sikkim in gaining socio-economic empowerment, which is instrumental in achieving

Box 3.1
Creative SHG—A Success Story

Creative Self Help Group (SHG) of Namcheybong, Pakyong was set up in 2010 under the Centrally Sponsored Scheme, Swarna Jayanti Grameen Swarojgar Yojana with six members to establish a rural product marketing centre.

After a careful study of potential business opportunities, the SHG zeroed in on the production and marketing of noodles. Noodles is popular not only in Sikkim but also in the neighbouring regions. The team visited noodles production centres in Kalimpong to understand the business model. It also deputed some local youths of their villages to work at these centres so they learn the process. Today, the SHG operates in the East district and produces three types of very popular noodles—plain, vegetarian and non-vegetarian—which are marketed in Gangtok, Pakyong, Singtam and Rangpo under the brand name of 'Sikkim Kanchen Product'. Sikkim Rural Development Agency under Rural Management & Development Department provided financial support to this SHG for the business venture.

The Creative SHG does not limit its activities to entrepreneurship. It is also actively working to create awareness among women folk of Sikkim and helping them to become empowered. Till now, the group has organized awareness and motivational programmes on benefits of SHGs to women of Rhenock, Rongli, Assam Linzey and other parts of the state. Creative SHG has also shared its knowledge and experiences with other existing SHGs in Namcheybong, Dalapchand and Machong of East district. The SHG participates regularly in sales and exhibition meets organized in Gangtok, Jorethang and also outside the State. Creative SHG is well on its way to becoming profitable and self-reliant.

gender equality. However, women continue to be under-represented at the highest levels of bureaucracy. Out of the total departmental heads belonging to the Indian Administrative Service (IAS) cadre in the state, women represented only 8 per cent in 2004–05, which has increased to 12 per cent in 2011. The statistics on Group A& B officers in 2009 in the state shows that women's representation in IAS, Indian Police Service (IPS) and Indian Foreign Service (IFS) is very low, accounting for only 8 per cent. On the other hand, the State Civil Service (SCS) has a much better representation with 34 per cent women officers in Classes A and B—a positive outcome of the reservation policy of the state government. The Engineering Services—civil (5 per cent), mechanical (2 per cent) and electrical (4 per cent)—and the State Forest Service (5 per cent) have a very low representation of women. The State Agricultural Engineering Service shows a relatively better representation of women at 27 per cent. Another area which has a significant number of women officers (47 per cent) in Groups A and B is the State Health Services. Overall, in spite of reservation, women represent only 21 per cent of total officers in the Groups A and B category. The general trend, however, indicates that steadily women are coming out of traditional shackles and embracing the emerging opportunities open to them.

Panchayats and Municipal Corporations Sikkim, one of the youngest states in the Indian Union, has made a slow yet steady progress in terms of the political participation of women. The stipulated reservation of one-third seats for women in panchayats was increased to 40 per cent, and later enhanced to 50 per cent in 2011. The percentage of women in

panchayats, which increased from 36 per cent in 2005 to 42 per cent in 2010–11, has gone up to 52 per cent after the 2012 elections. The zilla panchayat figures indicate a similar trend. The highest percentage of women zilla members is recorded in the West district at 44 per cent. Except South, which has 35 per cent, the remaining two districts have 40 per cent of women members as zilla panchayats. Out of a total of 48 municipal councillors in 7 units all over the state, 19 are women—almost 40 per cent of the total members.

These numbers suggest that the process of democratic decentralization has begun in a fair manner in Sikkim. However, political empowerment in the real sense is far from complete. There are a few cases of proxy and surrogate panchayats in remote rural areas, where the male members of the family make decisions on behalf of the woman panchayat.

Literacy and education Education plays an important role in advancing women's freedom and enhancing their position in society. Over the past 30 years, women in Sikkim have witnessed phenomenal changes in their literacy profile. In both rural and urban areas, the female literacy rates are higher than the national average. Female literacy rates more than tripled—from 22 per cent in 1981 to 76 per cent in 2011 (Table 3.8). Rural female literacy rate increased even more sharply from 18 per cent in 1981 to 73 per cent in 2011. Similarly, urban female literacy rates went up from 45 per cent in 1981 to 85 per cent in 2011.

Table 3.8 Literacy Profile of Sikkim

	1981			1991			2001			2011		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Rural	40	18	30	52	35	44	75	59	68	85	73	80
Urban	61	45	55	75	63	70	89	80	85	93	85	89
Sikkim	44	22	34	57	47	57	77	61	70	87	76	82

Note Figures in percentages have been rounded off.
Source Census of India 2011.

Even though the rural–urban differences persist, the overall gender gap in literacy has gradually narrowed down in Sikkim from 22 percentage points in 1981 to 11 percentage points in 2011 (Table 3.9). In rural areas, the gap has narrowed from 22 percentage points in 1981 to 12 percentage points in 2011. In urban areas, the gap has reduced even more sharply from 16 percentage points in 1981 to 8 percentage points in 2011.

Table 3.9 Gender Gap in Literacy (in per cent)

	1981	1991	2001	2011
Rural	22	17	16	12
Urban	16	11	8	8
Sikkim	22	10	15	11

Note Figures have been rounded off.
Source Census of India 2011.

Sikkim also reports high levels of youth literacy among women aged 15–24 years. Close to 95 per cent of the youth between 15–24 years was literate in 2007–08, and the gender parity ratio was 0.97. The shrinking gender gap in literacy rates is a positive reflection of the attitudes of society particularly towards education of the girl child. The sex-wise enrolment of students in government schools from 2001 to 2012 also substantiates given that girl enrolment has been more than 50 per cent throughout the last twelve years. The district-wise figures also reveal a similar trend. There has also been a marked improvement in girl enrolment in the higher stages—from 49 per cent in 2001 to 55 per cent of total enrolment for classes IX–X in 2012 and from 45 per cent in 2001 to 53 per cent in 2012 or classes XI–XII.

Sikkim fares well on the gender parity index across all categories of schooling compared with both other states of the north eastern region and the national average. With the exception of Classes I-V, the female enrolment rates exceeds that of boys at all levels of schooling (Table 3.10).

Table 3.10 Gender Parity Index (GPI) across Different Categories of Schooling, 2010–11

	Classes							
	I–V	VI–VIII	I–VIII	IX–X	I–X	XI–XII	IX–XII	I–XII
Arunachal Pradesh	0.96	0.95	0.95	0.93	0.95	0.93	0.93	0.96
Assam	1.03	1.02	1.03	0.90	1.01	0.80	0.88	1.00
Manipur	0.96	0.93	0.95	0.96	0.95	0.82	0.91	0.94
Meghalaya	1.01	1.12	1.04	1.02	1.03	1.27	1.08	1.04
Mizoram	0.94	0.94	0.94	1.04	0.95	0.98	1.01	0.95
Nagaland	0.99	1.02	1.00	1.08	1.01	0.91	1.01	1.01
Sikkim	0.98	1.22	1.05	1.13	1.05	1.10	1.12	1.05
Tripura	0.99	0.99	0.99	1.00	0.99	0.78	0.94	0.98
India	1.01	0.95	0.99	0.88	0.97	0.86	0.87	0.96

Source Statistics of School Education 2010-11

Higher Education Gross Enrolment Ratio (GER) in Sikkim has gone up to almost 24 per cent, with 26 per cent for males and 20 per cent for females in 2007–08, higher than the all-India average of 14 per cent. The all-India figure for males and females stands at 16 per cent and 11 per cent respectively. Sikkim ranks second in GER among north-eastern states, next only to Mizoram which has a GER of almost 26 per cent. In terms of the gender parity index in higher education in the same age group, Sikkim has a GPI of 0.77 which is higher than the all-India average of 0.72. Among the north-eastern states, Sikkim ranks fourth, behind Meghalaya (1.09), Mizoram (0.88) and Nagaland (0.87). In Sikkim, 42 per cent of total enrolments in higher education are women, comparable to the national average of 41 per cent in 2009.

Between 2005 and 2012, 70,293 students have enrolled in higher education and professional courses—in 25 government and private institutions. Of these, almost 44 per cent

are female and 56 per cent male students. Institutes running technical courses show a comparatively higher gender disparity, with female enrolment standing at less than 40 per cent. Among the institutes running professional courses, Sikkim Government Law College (59 per cent) and Sikkim Manipal Institute of Medical Science (60 per cent) have a larger number of women enrolled than men.

In 2011, 3,210 students were enrolled in four government colleges in Sikkim. Of these, 59 per cent were female students. There are, however, clear-cut gender differentials across disciplines. In the humanities and social sciences stream, more than 70 per cent of students are female. On the other hand, female students account for only 8 per cent of the total enrolment in science and 11 per cent in the commerce stream. The gender balance in science and commerce is expected to improve with the introduction of science courses in Namchi Government College and commerce in other degree colleges.

The state government nominates students for higher education degrees and also for professional courses outside the state. An examination of such nominations during 2001, 2007 and 2010 shows an encouraging trend for girls. Out of the 1,438 nominated students, around 42 per cent were female. Women candidates represented 54 per cent of the total students nominated in 2005 and 52 per cent in 2010. The proportion of female candidates nominated was 31 per cent for engineering and management, 57 per cent for BA, BCom, BSc and LLB, and 60 per cent in the fields of agriculture and veterinary sciences, hotel management and medical sciences.

Notwithstanding this, the entry of females in non-traditional courses and higher degrees is indicative of the new trend against gender stereotypes and of the fact that women are making their presence in all streams. Sikkim is fast emerging as a rich educational hub. Society's attitude towards the education of girls and women is extremely positive. Although disparities still exist, the gradual transformation and more representation of girls in higher education in both professional and non-professional courses is gaining momentum.

Health and nutrition Women in Sikkim, by and large, enjoy better conditions of health and nutrition than women in other north-eastern states. The female infant mortality rate, 27 per 1,000 live births in Sikkim, is lower than the national average of 44. Similarly, the proportion of women whose Body Mass Index (BMI) is below normal, 11.2 per cent in Sikkim; it is the lowest among north-eastern states—and considerably lower than the national average of 35.6 per cent (Table 3.11).

Women's autonomy Women are said to enjoy greater autonomy in Sikkim than in many other parts of the country. According to the National Family Health Survey-3, for instance, in 2005–06, 37 per cent Sikkimese women have some money that they can decide how to use. The proportion of women with money which they control is the highest among women who are employed for cash (81 per cent), followed by women who are widowed, divorced, separated or deserted (64 per cent) and urban women and women

Table 3.11 Child Survival and Women's Nutritional Status: Sikkim and North-eastern States

	Female infant mortality rate 2012	% women 15–49 years whose BMI is below normal 2005–06
Arunachal Pradesh	35	16.4
Assam	57	36.5
Manipur	11	14.8
Meghalaya	50	14.6
Mizoram	37	14.4
Nagaland	22	17.4
Sikkim	27	11.2
Tripura	29	36.9
India	44	35.6

Source SRS and NFHS 3.

in the highest wealth quintile (48 per cent). One-fifth of women (21 per cent) have a bank or savings account that they operate themselves. Urban women are two and half times as likely as rural women to have such an account. Almost one-fifth (18 per cent) women in Sikkim know of a micro credit programme in the area; however, only 1 per cent of women have ever used one. Over half (51 per cent) the women are allowed to go by themselves to all three of the following places: the market, a health facility, and places outside their own community. And more than three-quarters of married women participate in decision-making about their own health care, large household purchases for daily needs, or visiting their own family or relatives. However, only 59 per cent participate in making all four of these decisions and 6 per cent do not participate in any of them.

Government policies The Government of Sikkim has introduced various policies, plans and programmes for improving the status of women and empowering them. The state established the State Commission for Women (SCW) as a statutory body under the State Commission for Women Act, 2001 to safeguard the rights and legal entitlements of women. It began implementing the Protection of Women from Domestic Violence Act in 2007. The Act is aimed at providing speedy solutions to the victims of domestic violence by involving protection officers and voluntary organizations as service providers. The state government has appointed eight legal providers who are working towards protecting the rights and interests of women by providing of legal, medical, financial and other forms of assistance under the provisions of the Act. Also implemented and enforced are the Prohibition of Child Marriage Act, 2006; the Immoral Traffic (Prevention) Act, 1956 as amended up to Act No. 44 of 1986; the Sikkim Immoral Traffic (Prevention) Rules, 1990; the Dowry Prohibition Act, 1961 (28 of 1961); and the Implementation of Pre-natal Diagnostic Technique (PNDT) Regulation and Prevention of Misuse Act, 1996. In line with the Supreme Court's Vishaka Guidelines, the state government has made it mandatory to set up complaint cells against sexual harassment in all government departments and institutions as well as in private organizations.

Similarly, the Women and Child Development Division of the Social Justice, Empowerment and Welfare Department has adopted various strategies for empowering women through education and awareness generation. Training programmes have been set up for women in floriculture, knitting, tailoring and beautician courses. Two working women hostels (Deorali and Namchi) have been established to provide secure and economical accommodation to working women in the state. The state has introduced a Short Stay Home Scheme for the welfare of distressed women. Non-governmental organizations operate 156 crèches throughout the state with 90 per cent grant aid from the Central Social Welfare Board and 10 per cent from the state government. The Small Family Scheme is an innovative state programme launched in 1997. It aims to encourage the norm of a small family and discourage early marriage among the girl child. Unmarried girls attaining the age of 13 years are provided a grant of Rs 8,000, which is deposited in the State Bank of Sikkim as a fixed deposit for eight years in a joint account of the beneficiary and the area Child Development Project Officer. From 1997–98 to 2010–11, a total of 7,800 beneficiaries have been covered under this scheme. The Integrated Child Development Services (ICDS) has been streamlined to offer a coordinated delivery of early childhood services and services to expectant and nursing mothers. Launched on 2 October 1975, with only one project and 300 anganwadi centres, today the state has 13 projects with 1,233 anganwadi centres. Under the Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (SABLA), adolescent girls between 15–19 years are provided training on health, nutrition and livelihood. Launched during 2011–12 as a pilot project, the scheme has covered 46,211 adolescent girls between 2011–12 and 2012–13. The Indira Gandhi Matritwa Sahayog Yojana (IGMSY) or Conditional Maternity Benefit (CMB) Scheme was rolled out during 2011–12 with the objective of compensating the loss of wages during the pregnancy and lactation period. The scheme provides Rs 4,000 to each eligible beneficiary (up to delivery) in phased manner. A 100 per cent centrally sponsored scheme, the total beneficiaries covered include 1,015 pregnant women, 1,390 nursing mothers with children up to 3 months and 2,170 nursing mothers with children up to 3–6 months.

Areas of concern Despite the many gains, women in Sikkim are faced with challenges particularly when it comes to property rights, age at marriage, alcohol and drug use, and domestic violence.

There are three predominant communities in Sikkim. Sikkimese of Nepalese ethnicity are largely Hindu, whereas the Sikkimese of Bhutia ethnicity and Sikkimese Lepchas are predominantly Buddhists. There are Christians in all communities. In spite of the extension of Hindu Marriage Act of 1955 in Sikkim, the Bhutias and Lepchas of Sikkim are still governed and guided by their customary laws with respect to succession, inheritance, and marriage. Like Sikkimese Nepalese, the social systems of Sikkimese Bhutias and Lepchas have a patriarchal structure. All property, both movable and immovable, belongs to the father or male head of the family. Women have no legal rights in the family property, except their personal belongings and ornaments. Bhutia and Lepcha women may, however, acquire property by way of gift or under a will from their

fathers or other relations. Under the Married Women Property Regulations Act, 1962, if Bhutia or Lepcha women marry outside their community, they shall forfeit their rights to such property.

The Sikkim Succession Act, 2008 is progressive to the extent that it gives unmarried daughters the right of inheritance to an equal share in the father's property along with the sons and wife. According to the Act: 'When a male Sikkimese who dies having at the time of his death an interest in the property or has self acquired property, the property shall devolve to the extent of his interest by survivorship upon the surviving members of his family which includes his wife, sons and daughters if unmarried in equal proportion'. On the other hand, the Act reinforces traditional practices of inheritance by stating that: 'Where female heir or descendent marries a person who does not possess Sikkim Subject Certificate/COI or has acquired foreign citizenship, such female heir/descendent shall follow the personal law of her husband and as such shall not acquire any interest in the property'. Similarly, in the case of divorced women, the Act says: 'An abandoned or divorced woman having liability to take care of the children and has no source of income, shall have the right to a share in equal proportion along with other heirs to the property as per the law provided that where woman has deserted her husband with or without children and has remarried shall forfeit her right to her share in the husband's property'.

Early marriage hinders the prospects of education among both girls and boys. The State government's commitment to universalization of elementary education as well as the change in societal attitudes towards education have resulted in many positive developments as can be seen from the overall rise in literacy rates and the narrowing gender gaps in literacy. In spite of this, early marriages are still prevalent. The mean age of marriage for girls in Sikkim in 2007–08 was 21.5 years as against the all-India figure of 19.8 years. The percentage of girls marrying below 18 years still accounts for 16 per cent in the state as against the national average of 22 per cent. In Sikkim, 12 per cent women in the age group of 15–19 years begin childbearing, compared with 16 per cent at the national level. Rural women in Sikkim are more than three and a half times as likely as their urban counterparts to begin childbearing during their teens. The proportion of young women who have already begun childbearing, decreases steadily, with household wealth and the education of the mother.

There are no cases of marriage below the age of 10 in the state. Overall, nearly 4 per cent of married persons are in the age group of 10–19 years—two per cent of males and 5.5 per cent of females. Almost 6 per cent of married males and 7 per cent of married females who are either separated or divorced are in the age group of 10–19 years. It is expected that the problem of early marriages among both girls and boys can come to end with the effective implementation of the Right to Education, universalization of elementary education through the Sarva Shiksha Abhiyan, and spreading awareness for higher education.

The consumption of alcohol is traditionally acceptable in the Sikkimese society. Liquor is easily available in the state and it is common practice among elders to drink openly in the presence of young children. This tends to promote the habit among the young and impressionable. In the age group of 15–49 years, around 45 per cent of men and 19 per cent of women in Sikkim consume alcohol. Drug abuse has also been on the rise and is today one of the biggest problems facing Sikkimese society. A study on the profile of substance abusers in the emergency services wing of a tertiary hospital in Sikkim shows that out of the 54 patients seeking emergency services, the age range of the substance abusing (all drugs) population was 19 to 68 years, with a median of 36 years. It was seen that the predominant substance abuse-related emergency attendance was related to alcohol (77 per cent). At the same time, alcohol withdrawal (57 per cent) has been the most common cause of attending the emergency ward. The study highlights that alcohol and drug abuse are important public health concerns for the state to tackle.

The problem of addiction can also be gauged from the fact that there has been an increase in the number of rehabilitation centres operating in the state. An analysis of data on recovering addicts from three rehabilitation centres in Sikkim revealed that only 17 per cent of substance abusers seeking treatment were female, whereas a staggering 83 per cent were male. This shows that alcohol-and drug-related problems are male-centric in Sikkim. In terms of occupation, most of the recovering male addicts were unemployed, followed by those working in the lower end of the bureaucracy or some private business, drivers or, in a few cases, retired servicemen. Among females, around 66 per cent of the addicts were housewives, 14 per cent were government servants, 12 per cent were in private jobs and 6 per cent were students. Substance abuse can lead to, and is also sometimes the result of, social decline, break-up of marriage, loss of job, and family ties. This may result in social isolation, which is a potent cause of suicide, another issue ailing Sikkimese society.

The National Crime Records Bureau (NCRB) reports show that crime against women in Sikkim is relatively low, numbering 48 cases and accounting for a mere 0.02 per cent of the total cases of the country in 2008, which is also the lowest among the north-eastern states. The figure for 2009 shows the lowest number of cases (41) of crime against women in Sikkim among all the states in India.

Data from the National Family Health Survey-3 reveal that in 2005–06, levels of domestic violence reported by women 15–49 years was lower in Sikkim than in most north eastern states, and significantly lower than the national average. Close to 19 per cent of women 15–49 years have experienced physical, emotional or sexual violence in Sikkim as against the national average of almost 40 per cent. One in twenty women aged 15–49 years has experienced sexual violence in Sikkim as against one in ten nationally.

According to another recent survey by the Ministry of Health and Family Welfare, 16 per cent women in Sikkim are victims of domestic violence. One in every six women in Sikkim has experienced spousal sexual violence (Table 3.12). Among women in the

Table 3.12 Experience of Domestic Violence

	% of women age 15–49 years who have experienced violence, 2005–06				
	Emotional violence	Physical violence	Sexual violence	Physical or sexual violence	Emotional, physical or sexual violence
Arunachal Pradesh	16.6	37.5	9.5	38.8	43.0
Assam	15.6	36.7	14.8	39.5	42.7
Manipur	13.9	40.7	14.0	43.8	46.2
Meghalaya	7.1	12.6	1.6	12.8	15.0
Mizoram	11.0	22.0	2.0	22.1	25.1
Nagaland	12.6	14.0	3.0	15.3	21.3
Sikkim	10.2	14.8	4.8	16.3	18.8
Tripura	22.8	40.9	19.0	44.1	46.6
India	15.8	35.1	10.0	37.2	39.7

Source NFHS 3.

age group of 15–49 years in Sikkim, 19 per cent have experienced physical violence, while 4 per cent have experienced sexual violence. In all, 21 per cent women have experienced sexual and physical violence, including 22 per cent of married women. The Report states that women whose husbands consume alcohol and get drunk are much more likely to experience violence. Only 32 per cent of women who have experienced violence have sought help. Almost three out of five women have neither sought help nor told anyone about the violence. Abused women most often seek help from their own families and friends. Very few women seek help from any institutional source, such as the police (5 per cent) or social service organizations (2 per cent).

Of the 247 cases of violence against women registered by the crime branch with the Police Headquarters in Gangtok between 2001–11, almost 83 per cent are related to molestation, and 17 per cent are in relation to cruelty by husband or relatives (Table 3.13). Over an 11-year period, 2001 to 2011, only one case of dowry death was reported in the West District in 2010. The maximum number of cases were reported from the East district.

Table 3.13 Cases of Violence against Women Registered in the Crime Branch, 2001 to 2011

District	Molestation		Cruelty by husband/relative		Dowry		Total	
	No. of Cases	% of Total	No. of Cases	% of Total	No. of Cases	% of Total	No. of Cases	% of Total
East	68	33	22	52	0	0	90	36
South	75	37	10	24	0	0	85	34
West	54	26	8	19	1	100	63	26
North	7	3.4	2	4.8	0	0	9	3.6
Sikkim	204	100	42	100	1	100	247	100

Source Crime Branch, Police Headquarters, Gangtok 2011.

An analysis of cases registered with the State Commission for Women (SCW) and NGOs suggests under-reporting of instances of domestic violence. Between 2002 and May 2012, 1,079 cases were registered out of which 1,044 were amicably settled and 35 were referred to the family court (Table 3.14). Most cases are familial in nature, including desertion, family dispute, matrimonial dispute, custody of children, maintenance of allowance and property dispute. Between 2010 and May 2012, the SCW successfully intervened in family and matrimonial cases which constituted 96 per cent of the 216 registered cases. Other cases include assault, mental torture, illicit relations and property dispute.

Table 3.14 Total Number of Cases Handled by the SCW, 2002–May 2012

Year	No. of complaints received	Settled	Referred to family court	Nature of cases
2002–03	13	13	–	• Desertion • Family Dispute • Matrimonial Dispute • Custody of Children • Maintenance of Allowance • Property Dispute
2003–04	103	103	–	
2004–05	159	159	–	
2005–06	100	100	–	
2006–07	162	159	3	
2007–08	110	100	10	
2008–09	115	110	5	
2009–10	101	96	5	
2010–11	122	110	12	
2011–12	94	94	–	
Total	1,079	1,044	35	

Source Sikkim State Commission for Women, May 2012.

The Family Counselling Centre (FCC) run by a non-governmental organization, the Association of Social Health in India (ASHI) and the State Social Welfare Board (SSWB) is an active organization working for women's rights in the state. The victims generally come to the centre with complaints like adultery, torture and harassment by husbands and in-laws, desertion by husband, and alcohol-related maltreatment. A total of 493 cases were registered with the FCC during 2007 and 2012. Problems related to alcoholism comprise 85 cases (or 17 per cent of total cases). The maximum number of cases (32 per cent) related to harassment and torture in various forms. Another 14 per cent of cases were related to bigamy and extramarital affairs, about 17 per cent of cases to maintenance claims, and 7 per cent to divorce and desertion. An analysis of these cases shows that the problem of domestic violence cannot be judged in isolation. The problem is closely linked to the cultural legitimacy of polygamy, alcoholism and patriarchal values.

In conclusion, women in Sikkim have a relatively better position as compared to their national counterparts and have benefitted, especially in the last decade, from educational and livelihood opportunities provided by the state government. However, as Sikkim strives for gender equality, there are certain areas of concern. A majority of women in Sikkim still have little respite from the drudgery of agricultural work. They continue to

Box 3.2
Profile of Victims and Perpetrators of Domestic Violence

An analysis of the 493 cases registered with the Family Counselling Centre reveals the following about the profiles of victims:

- 94 per cent of victims of domestic violence are married.
- More than 90 per cent are aged 16–45 years. Only 7 per cent of victims are above 46 years.
- 15 per cent victims are illiterate, 20 per cent have studied up to the primary level, 27 per cent have studied up to Class VIII, 22 per cent are educated up to the secondary level and only 4 per cent of the total complainants are graduates.
- Housewives are the most vulnerable group and account for almost 65 per cent of the complainants. Another 9 per cent are government employees, mostly belonging to Class III and IV categories.
- 32 per cent of complainants belong to the Other Backward Classes (OBCs), 29 per cent to Scheduled Tribes (STs), 25 per cent belong to the Most Backward Classes (MBCs), 12 per cent to Scheduled Castes (SCs), and 2 per cent to the mainstream communities.
- 34 per cent of the perpetrators (often the victim's spouse or father) are government employees, mostly in Class III and IV categories.

be under-represented in the highest levels of bureaucracy and in the legislative assembly. They also have a long way to go in getting an equal share in property and decision-making in public spheres. Domestic violence even though small in magnitude is reported to be common in Sikkimese society. The problem is closely linked with other social issues like early marriage, alcoholism, bigamy and desertion. There is a need for an interventionist policy and a systematic onslaught against this social malady. The trends in the sex ratio, literacy rates and higher education are, however, encouraging, and it is expected that with time and the spread of education among all sections of society, women will come forward and be more visible in the public sphere. Effective implementation of women-related programmes and legislations needs to be ensured in Sikkim. Proper awareness regarding their rights and privileges and access to information among women will help further accelerate gender equality and promote gender justice in the State.

4

Accelerating Human Development

Sikkim has done well over the past two decades to address many of the first-generation human development challenges. Income expansion has been impressive. Between 2001–12, Sikkim's net state domestic product grew on average by 17 per cent annually—the fastest among all Indian states and well above the national average of 10 per cent. Sikkim ranked among the top five Indian states and union territories in terms of per capita income. The state is well on its way to eliminating income poverty over the next five years. Access to primary health care is nearly universal. Levels of child malnutrition are low, and indications are that they will decline even further. Households in the state have universal access to toilets—no mean achievement in a country where 60 per cent of the population practices open defecation. School enrolment rates are high and gender disparities are negligible. Women enjoy far greater freedoms than in most other parts of the country. Discrimination against girls and women and anti-female biases are not a concern.

Decentralized governance and staying connected with people lie at the heart of public administration in Sikkim. These two factors have enabled Sikkim to win several awards for good governance, and more significantly, they have contributed to the re-election of Chief Minister Chamling for a record fifth consecutive term during the recently held elections to the State Legislative Assembly in May 2014.

Connecting with people An important factor in Sikkim's human development has been the special efforts made by the government to decentralize governance. The Government of Sikkim, as part of its decentralization policy, has devolved all 3Fs—funds, functions and functionaries—to every Gram Panchayat. Though the state has a two-tier PRI system at the village and district level, Gram Vikas Kendras (GVKs) were established, in

Box 4.1
Awards for Good Governance

Sikkim has won several awards for excellence in performance across different sectors including the environment, tourism, education, health and information technology to name a few. Some of the more recent awards are listed below:

- National Award for best state in Transparency and Accountability under MGNREGA programme by Ministry of Rural Development, Government of India for 2013–14
- Prime Minister's Award for Excellence in Public Administration 2013 for Excellence in Rural Management and Development
- e-North East award 2013—for Reconstruction of Earthquake Damaged Houses Project MIS
- Several awards for Panchayat Empowerment and Accountability
- Diamond State Award 2012 (IBN7)—best small state and three other categories
- India Today State of States Award 2012—in the field of education
- e-North East award 2012—Environment for Village Spring Atlas
- Best State—Campaign Clean India Award 2011
- Best State—Comprehensive Development of Tourism Award 2011
- JRD Tata Memorial Award 2009 for outstanding performance in population, reproductive health, and family planning programmes
- Leadership and Good Governance Award, 2009—to the Chief Minister of Sikkim
- State Leadership Award 2009 in horticulture.
- Best State for Adventure Tourism for the year 2009
- Nirmal Rajya Award 2008 for achieving 100 per cent sanitation—the first and only state in the country to receive such an award
- National Award as Best Performing State in Tourism—2008.
- Platinum award for Emerging Tourism State of 2008 by *Today's Traveller*.
- International Ambassador of Peace Award, 2008—to the Chief Minister of Sikkim
- National Tourism Award for the best tourism related programmes for the year 2007–08.
- Hospitality India Award, 2006.
- Best State award for progress in primary health sector, its investment-friendly environment and its positive budgetary trends, 2006, India Today Group, New Delhi.
- Sikkim Nationalised Transport awarded National Trophy for lowest accidents in hilly state category for two consecutive years, i.e., 2005–06 and 2006–07 by the Union Transport Ministry.
- The Best Performing State in Education, 2004–05.
- Skoch Challenger Award—2005, in recognition of commendable work done in the field of information technology.
- Man of Dedication Award, 1999—to Chief Minister of Sikkim.
- Sarwasrestha Paryawaran Badi Mukhayamantri, 1999—for working towards the preservation of the environment.
- Bharat Shiromani Puraskar, 1997—to Chief Minister of Sikkim, in recognition of his endeavour to ensure Sikkim's emotional integration with the rest of the country.
- Manav Seva Puraskar, 1994—to Chief Minister of Sikkim for serving the people with dedication.
- Sikkim was declared the best state among 12 Eastern States in the "State of States Conclave" organized by *India Today*.

Information Source Information Technology Department, Sikkim, accessed on 28 August 2014 at http://www.sikkim.gov.in/portal/portal/StatePortal/Awards/AchievementsContent.

order to strengthen last-mile delivery, to provide administrative, accounts and technical support to a cluster of Gram Panchayats. So far, 31 such centres have been established to cater to the needs of the 176 Gram Panchayats in Sikkim.

Other measures undertaken by the state to ensure the success of its decentralization efforts include the following:

- Seventy percent of the state budget is consciously allocated for the development of rural areas
- Fifty per cent of all posts in PRIs are reserved for women. As a result, women can contest for elections to the posts of Adhyaksha and Up-Adhyaksha in Zilla Panchayats and for Sabhapati and Up-Sabhapati in Gram Panchayats.
- Gram Panchayats and Zilla Panchayats have the power to prepare, sanction, supervise, and implement schemes up to Rs 300,000 and Rs 1,000,000 respectively in their area.
- Capacity-building training programmes have been offered to all the Panchayat Sabhapatis, Sachivas and Rural Development Assistants.
- All government institutions such as primary schools, primary health centres, libraries, rural tourism, minor irrigation works, community centres, and playgrounds have been placed under the administrative control of the President of the respective Gram Panchayat units.

In 2009–10 as well as 2010–11, Sikkim was ranked third in the country by the Ministry of Panchayati Raj in the performance and accountability of Panchayati Raj Institutions (PRIs). In 2010–11, Mellidara Gram Panchayat received the *Rashtriya Gaurav Gram Panchayat Award*.

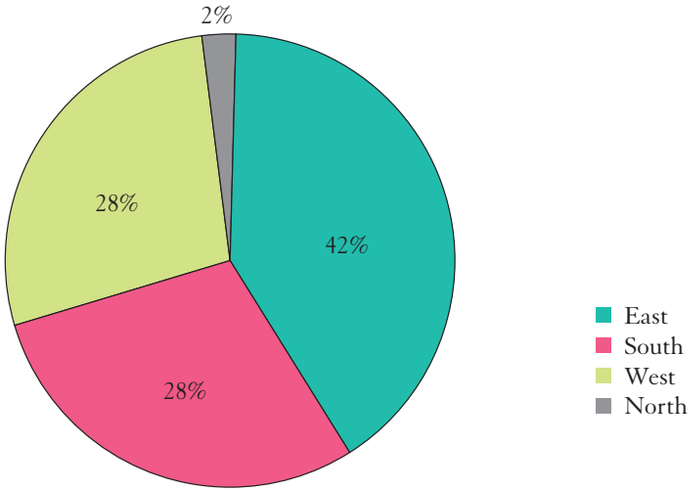
Decentralization has helped with better implementation of several schemes within the state.

- Take the case of implementation of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) which began from February 2006 in North District, and was extended to South and East Districts in April 2007, and in April 2008 to the entire state with the objective of providing 100 days of guaranteed unskilled wage employment to each rural household opting for it. The scheme has been universalized and is operational in all the Gram Panchayats of the state. Of the total 92,000 rural households in the state (Census 2011), 63,000 households (mostly women) were provided employment of 70 days under MGNREGA during 2013–14. Hence, the programme was able to enhance the annual income of 70 per cent of the rural households (mostly mother's) by about Rs 9,000 every year. At the same time durable assets have also been created. In 2013–14, 970 works were completed, of which 149 torrent (*jhora*) training works, 236 water conservation works, 142 drought proofing and plantation works, 74 minor irrigation channels, 268 rural footpaths and 662 land terracing works (including play grounds) were completed. In order to enhance rural water security a new 'spring-shed' development initiative (*dhara vikas*) has also been initiated. This is a unique

initiative across the whole of the Himalayas as it attempts to harvest rainwater for ground water recharge to revive the springs in this area. This initiative has gained widespread recognition and has been referred by UNDP as a case study in 'Greening Rural Development in India'. The system of wage payments through institutional bank and post office accounts has been universalized; 107,771 MGNREGA bank and post office accounts have been opened and 100 per cent of the wage payments disbursed through them in FY 2013–14. Sikkim is among the few states to have institutionalized an independent Social Audit Unit which is conducting effective social audits in all the Gram Panchayats regularly. The biggest beneficiaries in Sikkim are women, whose standing in family and society has gone even further up.

The Chief Minister's 42-day walk The state has been finding innovative ways of staying connected with people. For instance, on 17 May 2011 the Chief Minister Pawan Chamling embarked upon a unique democratic experiment in the form of a village-to-village tour of the entire state, with the idea of 'institutionalising a system in which the people are supreme and the government is generally subservient to the people'. Putting the ideal of 'government is the servant of people' to practice, he took along with him the elected representatives and senior bureaucrats to the doorsteps of people in order to understand their issues first-hand and evolve measures to solve their problems more responsively and sensitively. The chief minister and his team of bureaucrats saw the implementation of various programmes, listened to people, responded to their grievances, and interacted with local officials. This direct civic engagement has helped the government to better understand the diverse regional issues, capture the grass-root voices and empower people from all walks of life.

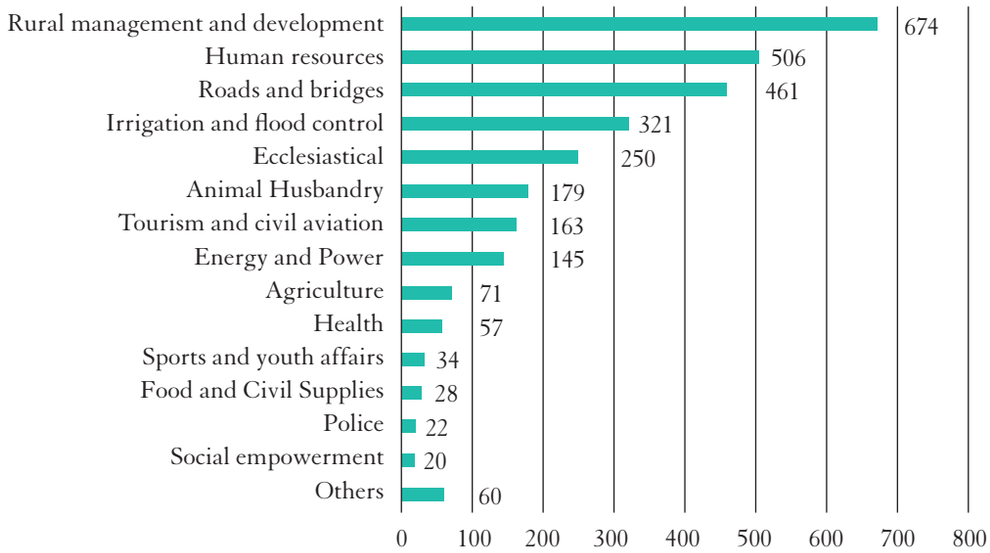
Figure 4.1 Chief Minister's 42-day Walk: District-wise Distribution of Petitions Received from People (%)



The narratives were then documented and converted by Gram Panchayats into letters reflecting the needs and aspirations of the people of Sikkim. The letters were categorically digitized into 3,600 entries, and filtered to obtain 2,991 unique requests from the people of

Sikkim; 41 per cent of the submissions came from East district, followed by South district (29 per cent) and the West district (28 per cent). Only 2 per cent of the submissions came from the North district, reflecting its small population. Less than 9 per cent of the state's population lives in the North district (Figure 4.1).

Figure 4.2 Chief Minister's 42-day Walk: Department-wise Number of Submissions Received



An analysis of the submissions (Figure 4.2) reveals that very few submissions related to the following were made:

- *Police stations*: which points towards a safe and secure environment.
- *Food and civil supplies*: Only 28 requests—less than 1 per cent of the total—were addressed to the Department of Food, Civil Supplies and Consumer Affairs. This suggests effective functioning of the public distribution system and proper reach of benefits to families below the poverty line. There were only six requests for new allotment of LPG connection. There were only nine requests for BPL (2 per cent) which suggests good coverage and effective execution of the distribution of BPL cards. This also suggests effective implementation of the Mukhya Mantri Antodaya Annadan Yojana as well as the Annapoorna Scheme.
- *Health care*: Of the 57 requests, 55 were for either new buildings (43) or for upgrading facilities (12). Sikkim is the only state to achieve the national norms of establishment of one Primary Health Centre (PHC) for 20,000 population and one Primary Health Sub Centre (PHSC) for 3,000 population.
- *Sanitation*: This could be attributed to the success of Total Sanitation Campaign launched in Sikkim in April 1999. The state achieved 100 per cent sanitation coverage across rural households, schools, aganwadi centres, institutional and community halls by 2008.
- *Shelter*: This reflects the effective implementation of the Mukhia Mantri Awaas Yojana (MMAY) launched in 2008) and the Rural Housing Scheme (RHS) that has benefitted over 50,000 households.

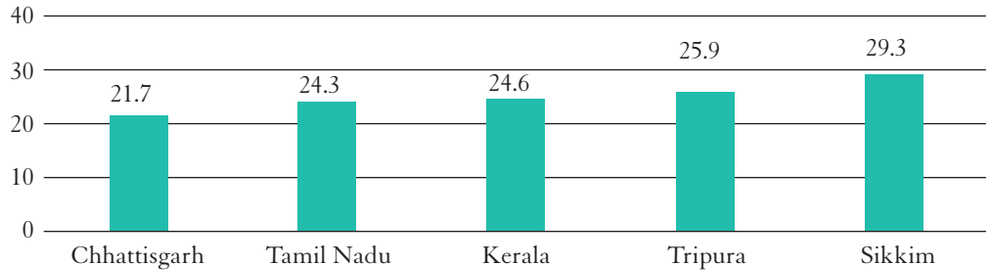
A closer look at the submissions to the different departments reveals the following:

- *Rural management and development*: Of the maximum submissions (674) addressed to the Rural Management and Development department (RMDD), 245 related to water and sewage, 180 related to funds for building panchayat offices, schools, community centres and community halls, and a significant number for torrent (*jhora*) training.
- *Human Resource and Development*: Of the 506 submissions received by the Human Resource and Development Department, there were very few requests related to mid-day meals as well as drinking water supply (2 per cent) and electrification (2 per cent) which suggests good access to electricity and drinking water in most of the schools. A majority of the requests were for constructing, renovating, maintaining new buildings and for upgrading the existing institutes which may suggest a high demand for education at the GP level. There were requests for (i) development of hostels and staff quarters for the convenience of students/teachers; (ii) new construction of three degree colleges and one university as well in Sikkim. There were a large number of requests for appointment of teachers in schools, colleges and universities, and appointment of 18 teachers of diverse languages. There were also a large number of requests (24) for computer labs and computer systems (with internet) which suggests high level of awareness and interest in Computer Literacy and Information Technology.
- *Irrigation and Flood Control:* 207 requests were received for torrent (*Jhora*) Training —the maximum number of requests received for any individual scheme.
- *Roads and Bridges:* Of the 461 submissions, 359 requests (80 per cent) related to roads and 102 requests (20 per cent) to bridges. Most of the requests were from West District, which has the maximum number of water bodies. Of the requests related to roads, a majority were for expansion of existing roads. Fewer requests were put for new connections and maintenance of roads. There were a large number of requests for Schools, *Gumpas* and Markets, as compared with the total number of existing Schools, *Gumpas* and Markets, which points towards the perceived importance of these institutes.
- *Horticulture*: Of the 56 submissions, nearly half the requests related to infrastructure development; and several of them were for development of green houses. There was also a request for Model Floriculture Centre, Floriculture Marketing Centre, Poly House and Bamboo Farming. Most of these were development of plantations for vegetables, fruits, ginger and cardamom.
- *Ecclesiastical:* Of the 252 submissions (maximum were from East district), 162 requests were for development of new buildings such as Hindu temples and *Gumpas* (or monasteries).
- *Tourism and Civil Aviation:* Of the 163 submissions received, close to 25 per cent related to home stay (18 new requests) and beautification. Another 25 per cent of the requests were for developing trekking routes (for instance, Khangchendzonga Trek, Singalila Trek, Kasturi Orar Trek, Himalayan Trek, Jhandi Dara Trekking) and constructing footpaths. Other requests related to setting up of tourist information centres (including one for a traditional tourism centre at Nadho Kabhi in East Sikkim), promoting village tourism, organizing fairs and festivals, and development of view-points and resting sheds.

Concerns of young people Addressing the concerns of young people in order to accelerate human development was another area that was highlighted during the 42-day walk as well as during the deliberations held across the State. As society moves into the era of Facebook and Twitter, the signs of change are palpable. With prospects of finding worthwhile and decent livelihoods becoming increasingly difficult, young people are protesting. The days of garnering an easy job with the government are gone. The writing on the wall is clear. At the same time, young people in Sikkim are not able to compete in the globalized world. Protests and other forms of making frustrations public are occurring more frequently. Adding to the tensions is the issue of jobs being created only to be lapped up by people who come from outside the state.

The growing frustration of unfulfilled aspirations combined with easy availability of drugs is causing many of the young to becoming drug addicts. Sikkim is also losing a number of lives to suicides. The state reports the highest rates of suicide in the country (Figure 4.3).

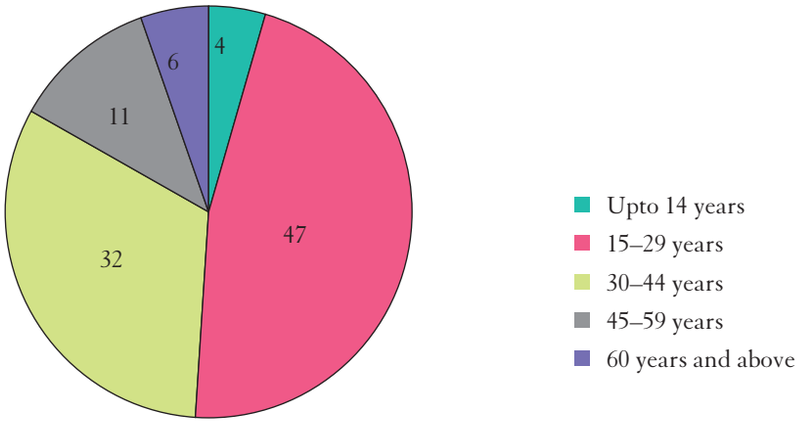
Figure 4.3 Five States with the Highest Suicide Rates in India, 2013



Source National Accidental and Suicide Deaths in India 2013.

Though the overall suicide rate came down from 46 in 2010 to 29 in 2012, a disturbing feature is that the rate is higher among the youth than any other age group. Between 2001 and 2011, 677 out of 1,743 victims of suicide were from the age group of 15–29 years (Figure 4.4).

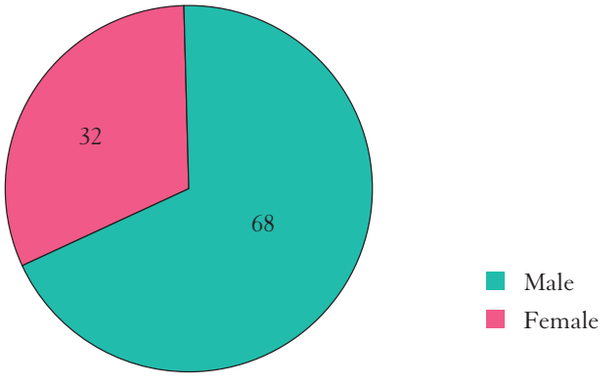
Figure 4.4 Age-wise Suicide Deaths in Sikkim, 2013 (%)



Source Accidental and Suicide Deaths 2013.

And of those who commit suicide, almost two-thirds (65 per cent) are men (Figure 4.5). The main reasons for suicide range from illness, drug abuse, and family problems. Interestingly, none of the suicides in 2012 were due to bankruptcy, poverty or unemployment.

Figure 4.5 Proportion (%) of Male and Female Suicides in Sikkim, 2013 (%)



Source Accidental and suicide deaths 2013.

Second-generation human development reforms Sikkim has demonstrated the need for as well as the possibility of combining economic growth and investments in the expansion of social opportunities. The state has prioritized health, education, sanitation and the delivery of essential services that are critical for improving the standards of living. However, over the next decade, accelerating human development in Sikkim calls for second-generation human development reforms. The state needs to focus more strategically on expanding opportunities, enhancing security and promoting sustainability.

Job creation Underlying the distress among young people is the lack of employment opportunities. The Government of Sikkim has recognized the need to identify and provide appropriate livelihood skills to its youth. Sikkim is the first state to introduce capacity building programmes and livelihood schools (Table 4.1). Started in 2004–05, Sikkim's skill development programme requires every line department to organize trainings in their respective sector. In 2007, the Government created a new directorate of capacity building to organize vocational trainings for educated unemployed youth in the state. In 2010, the State Institute of Capacity Building was established in Karfectaar, South Sikkim, as an umbrella organization for livelihood schools to make the educated and uneducated youth skilled and employable, both within and outside the state. Offering courses varying in duration from three months to a year in a variety of subjects including foreign languages, computer software and hardware, construction, trade, animal husbandry, and tourism. The 44 livelihood schools in the state have trained over 4,000 unemployed youth above the age of 18 years.

Under the Chief Minister's Self-Employment Scheme launched in March 2002, the state provides a six-year interest free loan to educated unemployed youth for setting up of self-employment ventures. Between 2002 and 2013, Sikkim Industrial Development &

Table 4.1 Performance of Livelihood Schools

	Enrolment			No. of students graduated			Placed or Self-employed			Dropouts (%)
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
2009–10	50	27	77	50	27	77	50	27	77	
2010–11	548	501	1,049	488	455	943	330	247	577	10
2011–12	1,005	1,032	2,037	849	838	1,687	694	626	1,320	17
2012–13	1,198	1,056	2,254	750	548	1,298*	636	364	1,000	12
2013–14	332	559	891							
Total	3,133	3,175	6,308	2,137	1,868	4,005#	1,719	1,270	2,989	

Note *783 students are still under various courses; dropout is calculated for courses that are finished
#1,674 students are still under various courses.
Source Government of Sikkim, 2014

Investment Corporation Ltd. (SIDICO), the nodal agency for the scheme, has extended benefits to 6,817 persons (Table 4.2).

Table 4.2 Chief Minister's Self-employment Scheme

Sector	Number of Beneficiaries
Industry	128
Agriculture	358
Animal Husbandry	1,542
Service	304
Business	2,856
Tourism	941
Vehicle / Transport	94
Others	594
Total	6,817

Source SIDICO, as on 31 March 2013.

In addition, the state government has identified certain potential sectors for growth and livelihood creation:

Agriculture and allied sector Despite only 15 per cent of the state's area being available for farming, about 64 per cent of the population in Sikkim still depends on agriculture. Large cardamom, ginger and mandarin orange are some of the leading cash crops in the region and make the agricultural economy mainly export based. Sikkim is home to various indigenous methods of bio-resources management for livelihoods. Fifteen types of indigenous farming systems have been identified, and the farming systems with wild bio-resource supplements have been documented. The government's goal of becoming fully organic by 2015 is changing the dynamics and making agriculture an attractive career option for the youth. Organic farming has also been introduced in 'livelihood schools' to achieve the organic mission, also encouraging youth towards joining agriculture sector.

Box 4.2
Diversified Organic Farming

Azing Lepcha from Rinchenpong in West Sikkim started farming in the year 2004. His father was a farmer and used to mostly grow oranges. Azing experimented and started planting more fruit trees like pineapple, passion fruit, and guava. Over the years, he has never used chemical fertilizers or pesticides. Today his family grows around 300 orange trees, and many other varieties of fruits, vegetables and spices. It has received support from the Horticultural Department for building a 3,000 litre water tank and also been provided with fly traps for the fruit trees. Azing has received training in bee-keeping, and has constructed 10 bee hives to collect honey.

From the fruits that are not sold, Azing's wife, Dilmaya Lepcha, produces different types of fruit wines, juice, pickles and even a natural foot cream. The sales of these products are mainly driven through tourists. Azing has established a network of marketing agents through local traders and taxi drivers who not only bring tourists to his farm but also transport the produce to markets in Jorethang, Geyzing, and other centres. Rinchenpong being a tourist hub is helping his sales. Their products always remain in great demand and the family is exploring new avenues of market linkages. The family also rears livestock—mainly pigs, goats and cows—to supplement their income and provide organic manure for their crops and fruit trees. Currently their farm is undergoing the process of organic certification, and also doubles up as a farm school, notified by the Agriculture Department.

Azing wishes to start a home stay with support from the state government. Their farm in Rinchenpong is an ideal example of an organic farm moving up the value chain to produce different by-products from horticulture through diversified farming and tapping tourism.

Efforts are being made by the state to tap the vast potential for horticulture and floriculture. Most of the floriculture related activities were done on a very small scale and the fruit-processing industry, which has a large potential is controlled by the state. Sikkim is also promoting floriculture as an alternative livelihood in the state among educated youth with free infrastructure, planting material and technology to cultivators to develop cut flower varieties. The state has developed a model of floriculture farming by adopting a cluster approach involving groups of 20 to 100 farmers. Sikkim also hosts the 'International flower show'—the state's official flower showcase, which helps in boosting flori-tourism.

The Government of Sikkim is paying equal attention to animal husbandry and livestock development, which in 2010–11, contributed almost 7 per cent of the Net State Domestic Product. The Government has launched a poultry mission and a dairy mission to uplift the socio-economic status of rural framers engaged in these activities and to also make the state self-sufficient in this sector.

Industry The Government of Sikkim has made full use of the benefits provided by the North East Industrial and Investment Promotion Policy (NEIIPP) 2007 and has offered additional incentives to attract new industries into the State. The NEIIP 2007 extends incentives for a period of 10 years from the date of commencement of commercial production to all new units as well as existing units that go in for substantial expansion, i.e., to units effecting an increase by not less than 25 per cent in the value of fixed capital

investment in plant and machinery for the purpose of expansion of capacity, modernization, and diversification. Such units are granted 100 per cent excise duty exemption on finished products as well as 100 per cent income tax exemption. In addition, units set up in the private sector, joint sector, co-operative sector as well as by the state government are offered, subject to a limit of Rs 150 million per unit, a Capital Investment Subsidy of 30 per cent of the investment in plant and machinery. An Empowered Committee can grant investment subsidy higher than Rs 150 million but upto a maximum of Rs 300 million, and proposals which are eligible for a subsidy higher than Rs 300 million need the approval of the union government's Department of Industrial Policy and Promotion. Units are provided an interest subsidy at the rate of 3 per cent on working capital loan, and new industrial units as well as existing units on their substantial expansion are eligible for reimbursement of 100 per cent insurance premium. The benefits of these incentives are seen in some of the following sectors.

Pharmaceuticals Sikkim has attracted large investments from pharmaceutical companies over the past five years. Key pharma companies, including Sun Pharma, Cipla, Zydus Cadila have set up bases in Sikkim. The state government has made the state investor-friendly by providing incentives such as a 10-year income tax holiday, 100 per cent excise duty exemption, capital and interest subsidies and the availability of land, and uninterrupted power and labour. Over the three-year period, 2007 and 2010, the Sikkim attracted around 14 companies with a total investment of Rs 25 billion. Along with the incentives, minimal interference from the state government and the saturation of other locations in the country as a manufacturing hub can help Sikkim in projecting itself as an attractive industrial destination. Currently, most of the employees, especially in the managerial and supervisory positions are being employed from outside the state. Agreements have been signed up with a few companies for hundred percent local employment and awarding of contract and supplies to locals.

Hydropower The state government has set up the Sikkim Power Development Corporation (SDPC) to tap into the state's hydropower potential, which is estimated to be around 8,000 MW. Independent power producers (IPPs) have approved 29 hydroelectric power (HEP) plants for development. These projects are at various stages of construction and would have an installed capacity of close to 5,350 MW when complete. However, this sector also faces the same problems as pharmaceuticals when it comes to creating livelihoods in the state. Majority of the people employed at managerial/supervisor posts are not Sikkimese people. Also, the temporary nature of the employment constitutes a livelihood vulnerability issue. Most of the jobs that local people work pertain to the construction phase of the projects and thus are of short-term nature. To address this problem, the State Power Policy lays down that the IPPs will have to provide employment to the local skilled, semi-skilled and unskilled manpower as well as create local businesses and contract opportunities.

Tourism Sikkim has a comparative advantage in tourism with its beautiful landscape, diverse flora and fauna with rich culture, tradition, and warm hospitable people.

Sikkim is one of the 26 biodiversity hotspots of the world. It also has advantage over the other north-eastern states, being the most peaceful state in the region. Tourism is estimated to contribute to around 8 per cent of the state GDP. Close to 2.9 million tourists visited Sikkim during the Eleventh Plan period between 2007 and 2012. This number is expected to rise to 5 million tourists during the Twelfth Plan period, between 2012 and 2017. Sikkim has a comparative advantage in tourism with its beautiful landscape, diverse flora and fauna, culture and traditions, and warm hospitable people. It attracted a record 720,000 tourists in 2010—which had been declared as 'the year of tourism'. The number of tourists dipped in 2011 due to the massive earthquake, but saw an increase in arrivals in 2012. Recently, Sikkim has been named the best region to visit in 2014 by *Lonely Planet*, a leading global travel guide. Sikkim's Tourism Mission 2015 seeks to making tourism the main livelihood of the people of Sikkim, and each every household and individual a skilled force for the tourism industry. The mission also seeks to give importance to domestic tourism, focusing on pilgrimage, culture, tradition, heritage, adventure, ecotourism and wellness.

Box 4.3
Sikkim Tops the List

Lonely Planet's Best in Travel 2014—Top 10 Regions
28 October 2013

Picking up national accolades in 2012 for being India's cleanest state with the most innovative tourism project, Sikkim has set new benchmarks for responsible travel in the country. Checkbox sightseeing has rapidly made way for sustainable community-based tourism in less developed areas, while eco-friendly policies have lent new vigour to the virginal Himalayan wilderness that drapes the region's mountains. Food-wise, there's news too. Organic farming is the new mantra in Sikkim and is being promoted in a big way. Much of the produce available in local markets is already junk-free, and the government proposes to convert Sikkim into a fully organic state very soon. And with a new airport scheduled to open near Gangtok in 2014, you can now shave off several hours of transit time and fly in directly from major Indian metros.

Source http://www.lonelyplanet.com/travel-tips-and-articles/lonely-planets-best-in-travel-2014-top-10-regions accessed on 16 June, 2014.

Medium, small and micro-enterprises (MSMEs) have the potential of employing the young both as workers and as entrepreneurs. There are close to 350 registered functional enterprises in Sikkim. By March 2013, 191 enterprises had obtained permanent registration under the Micro, Small and Medium Enterprises Development Act 2006. Of these, 157 fall under the services sector and only 34 are manufacturing enterprises. Again, of the 191 enterprises, 30 are micro-enterprises, 140 are small enterprises and 21 enterprises fall under the medium category. A majority of these enterprises (110) are registered in the East district. Between 2006 and 2013, not even one such enterprise was registered in the North District. MSMEs conduct various activities including management development programmes, entrepreneurship and skill development programmes, and various training

programmes. New and existing micro and small enterprises can, under the Credit Guarantee Fund scheme, avail of collateral free credit facility (term loan and working capital) from eligible member lending institutions up to Rs 10 million per borrowing enterprise.

Managing people's expectations Interactions with young people, civil society organizations, elected representatives, scholars and officials have pointed to many areas where the state has fallen behind targets. Among the most cited was the need to improve implementation and delivery of services by the State.

Box 4.4
Suggestions to Improve Implementation and Delivery of Services by the State

Many of the elected officials and ministers offered several suggestions for improving the implementation of programmes in Sikkim.

1. Fast tracking to avoid delays in project implementation
2. Streamline the flow of funds
3. Strengthen district planning, monitoring and evaluation
4. Train manpower
5. Ensure strict compliance of the laws for the protection, preservation and conservation natural resources for the future generations; strict adherence to law by industries to curb environmental pollution; Regulation for equitable distribution of land
6. Introduce Total Quantity management (TQM) systems
7. Introduce environmentally oriented policies and measures:
   - Revenue mobilization: Consider levying of green taxes especially higher taxes for environmental degradation, environmental pollution and excessive exploitation of natural resources
   - Employment and livelihoods: by (i) promoting eco-friendly industries; (ii) encouraging organic farming and intensifying the work of the State Organic Mission; (iii) promoting ecotourism, pilgrimage and cultural tourism as well as wellness tourism and sports tourism; (iv) encouraging poultry and dairy farming in clusters; (v) incentivizing mass fodder development; (vi) setting up veterinary centres in rural areas; and (vii) introducing schemes to promote self-employment

The group discussions also threw up several challenges and suggestions for the future. The first challenge has to do with the quality of education. Even though school enrolment is high, the educational attainment levels remain poor. Among the many factors that account for this are the poor quality of teacher training and the lack of a passion to make Sikkim's school system the best in the country. The second area has to do with connectivity. The condition of roads remains bad despite several attempts to improve the quality of construction. With a large portion getting washed out during the monsoons, net addition to roads remains low. Connectivity has also been hampered by the absence of telecommunication services, especially in remote hilly areas. The inability to get mobile phone and internet connectivity has been a limiting factor placing many of the communities at a disadvantage.

The third area of neglect has been local planning. The absence of well-designed district plans has meant that the needs of communities have not been fully integrated into public decision-making. As a result, priority requirements of different blocks have remained neglected. The fourth area has been the inadequate attention paid to the farm sector. Even though efforts are being made to promote organic farming, progress has been slow. As a consequence, enough livelihood opportunities have not been generated to satisfy the increasing demand for decent work. A fifth area of deficiency has to do with the implementation of centrally sponsored schemes. While the state has been recognized for its meritorious performance in some areas such as the MGNREGA, it has not been able to meet the additional resource burdens for ensuring effective implementation of such centrally sponsored schemes. Inadequacy of staff with requisite capacity at the district and local levels is a major constraint. Finally, there is a mismatch between the high economic growth that the state is witnessing and the creation of jobs. This mismatch is reflected in the gaps that exist between the nature of work being generated and the aspirations of young people. Most of the jobs being generated are for unskilled labourers which the young do not aspire for. On the other hand, the inadequacy of opportunities for skilled jobs within the state is forcing many young people to go out in search of jobs. While this does offer economic security, the young have to face many forms of social and cultural insecurities outside the state.

Consultations with a range of stakeholders threw up several priorities for Sikkim as well as many suggestions on critical actions that are needed for Sikkim to accelerate its human development (Box 4.5).

Box 4.5
Priorities for Sikkim

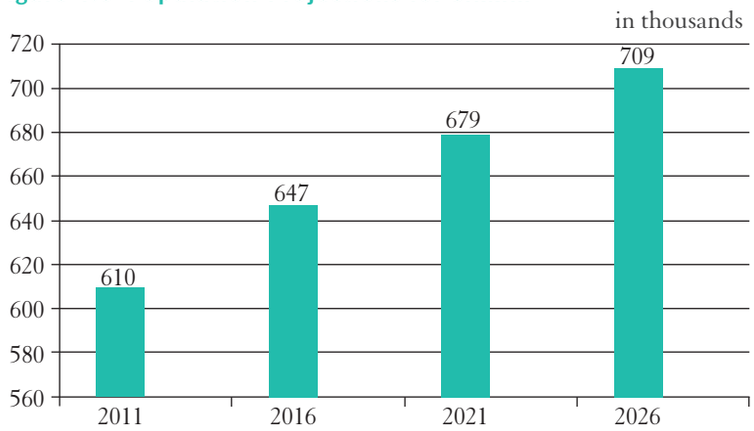
Summarized here are priorities and specific suggestions that emerged in a series of consultations held with young people, non-governmental organizations and elected officials during the course of the preparation of this report.

1. Jobs: Expand employment opportunities by (i) equipping SICB to train and produce highly skilled and employable youth for absorption in different sectors such as pharmaceutical, hydro-power, banking, etc.; (ii) filling manpower shortage in various trades and sectors by trained local youth of Sikkim; (iii) reducing the influx of people from outside to create opportunities for local trained youths; and (iv) earmarking industrial areas and belt so that the other places of the state gets preserved for harmonious village life.
2. Connectivity: Expand connectivity by (i) providing good connectivity of internet and telecom services especially in schools and health centres; (ii) expand road network to ensure 100 per cent coverage to all Gram Panchayats and remote villages; (iii) upgrade NH 10 to double lane; (iv) improve public transportation; (v) decongest cities; and (vi) discourage ownership of private vehicles.
3. Urbanization: Improve by (i) planning for decent urban housing; (ii) decongesting urban areas and earmarking new areas for urban expansion with proper infrastructure and services; (iii) developing piped water and treatment of sewerage systems; (iv) ensuring traffic management; and (v) checking unregulated construction of concrete buildings.

4. Education: Improve the quality of education by (i) recruiting qualified and trained teachers both for primary and secondary school; (ii) improving school infrastructure; and (iii) implementing RTE; (iv) motivating teachers; (v) providing better access to teaching aids and latest text books; (vi) increasing investments in education; (vii) adopting English as the medium of teaching; and (vii) replacing first-generation teachers by highly skilled and trained teachers.
5. Health: Improve health outcomes by (i) improving and universalizing health care facilities especially for the poor; (ii) expanding health infrastructure, access to senior specialists and doctors in the Districts; (iii) reducing referral cases; (iv) getting highly trained doctors to operate and manage 24×7 emergencies; (v) offering proper ambulance services; and (vi) ensuring efficient staff in all districts and sub-divisions so as to reduce the overload on STNM, Gangtok.
6. Environment: Nurture the environment by (i) introducing and adopting sustainable development policies with minimum impact on nature and natural resource; (ii) preparing Disaster Management plans well in advance before a disaster strikes; (iii) performing disaster drills regularly; (iv) forming Disaster Management teams in every village and locality and ensuring proper training in various aspects of rescue and reduction in collateral damage; (v) ensuring adequate availability of basic equipment in villages; (vi) reducing manmade disasters by redefining development to suit the ecology and people of Sikkim; and (vii) ensuring proper planning of Jhoras, drains and culverts of the roads to prevent landslides, road blocks and unwanted flows of excess water in the roads and bazaar; and (viii) taking pre-emptive steps to mitigate the adverse impacts of climate change and ensure continued food, energy and water security.
7. Sports: Encourage sports by (i) upgrading existing sports infrastructure; (ii) developing new infrastructure; (iii) promoting sports as a profession; and (iv) expanding the network of organizations like NCC, Bharat Scouts and Guides and Nehru Yuva Kendras.
8. Democracy: Further strengthen people's involvement especially in (i) delivery of services that seek to merely fulfil basic needs to ensuring provision of quality services—liquid & solid waste management system; and (ii) increasing awareness and instilling a sense of collective.
9. Cultural heritage: Retain Sikkim's uniqueness by (i) preserving and promoting Sikkim's culture and heritage; and (ii) emulate Bhutan in order to promote high-quality tourism.

Seven Point Agenda Looking ahead, Sikkim's population will increase by an additional 100,000 persons by 2026. The number of young people in the age group of 15–29 years—around 186,000 in 2011 is expected to decline to around 180,000 by 2026 (Figure 4.6).

Figure 4.6 Population Projections for Sikkim



Source Population projections for Indian States 2001–2026, Report of the Technical Committee, Office of the Register General, India.

Adopting a Seven-Point Action Agenda can pave the way for accelerating human development in Sikkim. Sikkim has done well over the past two decades to address many dimensions of human poverty and deprivations. The next generation of human development challenges requires a strategic focus on seven priority areas to sustain the momentum as well as address some of the pressing challenges of the times.

Expand livelihoods Unemployment and under-employment are a major concern and cause of insecurity among the youth in Sikkim. Special attention needs to be paid to promoting opportunities for women in all spheres of activity. The situation could get worse as the state transitions from an agrarian to a modern economy, with greater reliance on the tertiary sector. New forms of vocational education will need to be introduced. The manufacturing sector will always be small due to the mountainous topography. Employment opportunities need to expand keeping in mind the need to conserve the natural resources and cultural heritage of the state. The real potential for Sikkim lies in promoting organic farming and eco-tourism. Agriculture will have to move to the industry mode, with a focus on high-value organic produce. Organic farming can give a new meaning to farming in the mountain slopes, with the adoption of new technologies such as 'vertical farms'. Floriculture and fruits have the potential to become viable activities for young people to operate in an industry mode. Fruit and food processing has immense potential as well. Sikkim is yet to fully tap the potential of micro, small and medium enterprises (MSMEs).

A rapid assessment reveals the potential to create at least 30,000 additional jobs by 2015 in different sectors (Table 4.3).

Table 4.3 Employment Potential in Sikkim: Results of a Rapid Assessment Survey

Sector	Current situation, opportunities, and possibilities	Educational qualifications required	New livelihood opportunities by 2015
Tourism	1. 12% growth in the last decade 2. 61% of workers from outside 3. 70% of hotels on lease 4. Large number of seasonal workers 5. Ratio of Employment: Room around 0.5:1 against 1.5:1 for 5-star hotels	Class V to graduates	8,000
Handicrafts	1. Sales turnover of local stores of around Rs 100 million per annum should be higher 2. More than 90% of products procured from outside 3. Local products too expensive, supply not reliable and no quality assurance	Class V to graduates	3,000
Education	1. 60% of the teachers in the private sector are from outside Sikkim 2. Over 1,000 teachers in the government sector are untrained	Class XII pass to graduates	1,500

Transport	1. 90% of workers from outside	Class V to graduates	1,000
Agriculture	1. Dairying and Piggery seem to be the most lucrative activities 2. Opportunities in poultry have to be explored		4,000
Construction	1. Lack of private-sector participation 2. Dearth of competent surveyors, site engineers and supervisors	Class V for workers and Class X and above-Site Engineers	5,000
Retail	1. Large number of licences have been issued by UDHD	Class V to graduates	1,500
Information Technology (IT) and Information Technology Enabled Services (ITES)	1. Shortage of trained personnel both in the government and private sectors	Class XII pass to graduates	1,000
Industry	1. Pharmaceutical companies 2. Skilled workers consists of 26% and remaining unskilled workers 3. 60% of workers are from outside Sikkim	D. Pharm, B. Pharm, Diploma holders	5,000
		Total	30,000

Financial inclusion is critical to the promotion of livelihood opportunities. One of the measures of the level of financial inclusion is the Financial Inclusion Index (Table 4.4). The Index is based on three basic dimensions of an inclusive financial system—banking penetration, availability of banking services and usage of the banking system. Indian states are classified into three categories according to the index: high, medium and low. Though Sikkim does comparatively better than all the other north-eastern states, financial inclusion is still below the national average level, and the state falls in the medium category among Indian states.

Sikkim has taken steps to improve financial inclusion. In 1999, the government set up the Sikkim State Co-operative bank (SISCO) to raise deposits and share capital for giving loans to member cooperatives and other individuals for projects and schemes in farm and non-farm sectors. By March 2012, SISCO bank had 3,292 individuals and 354 cooperative societies as members and had disbursed loans totalling Rs 260 million.

Improve connectivity Improving connectivity is a clear demand of young people. If fulfilled, it will go a long way in ensuring equality of opportunity. Road construction has to be prioritized. Vast improvements are needed in state highways as well as in district and sub-divisional roads. Many projects underway are expected to be completed in the

Table 4.4 State-wise Index of Financial Inclusion

	State	D1 Banking penetration	D2 Availability of banking services	D3 Usage	IFI	IFI Rank
High	Kerala	0.70	0.81	0.28	0.54	1
Medium	All-India	0.27	0.22	0.55	0.33	7
	Sikkim	0.28	0.33	0.34	0.32	9
Low	Meghalaya	0.21	0.28	0.14	0.21	14
	Tripura	0.31	0.22	0.08	0.20	15
	Arunachal Pradesh	0.20	0.16	0.14	0.17	18
	Mizoram	0.13	0.26	0.09	0.16	19
	Assam	0.17	0.17	0.07	0.13	22
	Nagaland	0.03	0.04	0.07	0.05	23
	Manipur	0.00	0.01	0.01	0.01	24

Source Financial Inclusion in India: A Case-study of West Bengal, Sadhan Kumar Chattopadhyay, RBI (2011).

coming years. This includes Sikkim's only airport and the railway link from Sevoke in north Bengal to Rangpo at Sikkim's border. Apart from considering double-lane carpeting and intermediate lanes, several new road networks are also planned connecting Melli–Jorethang, Jorethang–Namchi, Manpur–Namchi, Legship–Nayabazar, Legship–Pelling, Namchi–Mamring and Namchi–Wok. While the replacement of premix carpeting with semi-dense bituminous concrete has helped, much more needs to be done to improve the quality of road construction. The real challenge before the state is to make every village accessible by an all-weather road. Equally important will be to ensure better telecommunications and internet connectivity. Developing a common information technology platform can yield substantial benefits to the state.

The absence of basic infrastructural facilities is a major constraint to the promotion of entrepreneurial ventures in the region. Poor market access and opportunities for value addition for cash crops and locally abundant horticultural crops hinder the possibility of tapping alternative sources of income.

Sikkim is now connected with the rest of the country with NH 10 (earlier NH 31A) between Sevoke and Gangtok. In the absence of air and rail connectivity, the state is solely dependent on NH 10. Due to the uncertain topographical nature of this road, landslides and other blockages frequently hamper the supply of essential goods and travel between Sikkim and the rest of India. Sikkim is yet to have an airport and railway line.

The development of roads, electricity and markets as a result of hydroelectricity projects also creates potential for new areas of economic activity, such as floriculture, tourism and small-scale industries. In Himachal Pradesh, improved electricity supply to remote villages through small hydroelectric project construction enabled villagers to engage in

new tourism and other livelihood ventures, such as spinning wool. People living around and those working in hydroelectricity projects need support, advice, assistance and skills to adapt to new livelihoods or to revive their old occupations.

Manage urbanization Much greater attention will need to be given to issues of urbanisation in the coming years. A new 'smart city agenda' for mountainous regions is needed as the conditions are very different from cities in the plains. The adverse effects of unregulated construction activities will have to be addressed. Building more floors on top of existing buildings add to human risks as the foundations are typically weak which makes them vulnerable to natural calamities. New habitats have to be planned like an envelope as a growing proportion of young people aspire to own a home. Suitable settlements will need to be created with appropriate infrastructure and sufficient connectivity. Similarly, the negative effects of commercial activity on the urban environment (air, water and land pollution) will have to be minimized. Given the shortage of appropriate land, sewage and garbage disposal pose serious problems for Gangtok and other mountainous cities. Special efforts will have to be made for the recycling of waste. More efforts are needed to regulate the number of vehicles in Gangtok and other urban centres to minimize the problems of parking, traffic congestion and pollution. Public transportation has to be given high priority. The State will need to encourage low-polluting vehicles. Proper planning of *jhoras*, drains and culverts of the roads is required in order to check landslides, road blocks and unwanted flow of excess water onto roads—all of which cause serious public health and related problems. It will be critical to develop a legal regulatory framework to guide urban development including construction activities. It is equally important to plan for services like water supply, sewerage and solid waste management. Fundamental to planning for better urbanization is capacity building and acquiring specialized skills for managing urban development. Steps should also be taken to empower the newly formed urban local bodies (ULBs) to generate adequate municipal finances.

Establish a knowledge society Sikkim should aspire to become a knowledge society that is characterized by three important attributes, namely, (i) creative capacity, (ii) innovative talent and, (iii) ability to bring about sustainable development. A knowledge society is not merely a literate society, or a computer literate society, or even just an educated society. A knowledge society requires knowledge workers, who are not just skilled workers, but also have the capacity to analyze, innovate and bring about transformational changes in society. For bringing about tangible improvements in people's lives, knowledge and information should become major sources of creating value. This will require promoting opportunities for knowledge-intensive businesses, enhancing the ability to absorb new technologies, continuously upgrading the skills of workers, and effective networking to tap into new thinking and new ways of organizing businesses.

Establishing a knowledge society is particularly important if the state has to generate decent work and employment opportunities for young people, especially as many move out of traditional agriculture and traditional businesses. Production has to be organised

in innovative ways if the potential of organic farming, horticulture and fruits, floriculture and other sectors have to be tapped for securing livelihoods for young people.

The state should develop a blueprint to overhaul the education system—starting with schools and moving to colleges and other institutions of higher learning—in order to ensure effective learning, critical thinking and analytical reasoning. The Science, Spirituality and Education Conference organized in Gangtok in December 2010 by the Namgyal Institute of Tibetology showed an innovative way of making education more holistic by proposing the introduction of spirituality into the school curriculum and by combining ethics and morals of religious philosophies along with scientific understanding of the brain and mind. Such a combination could help deliver an education that prepares the new generation to face the challenges of the times.

Revamping teacher training should become a priority. The school infrastructure should be appropriately upgraded. Efforts should be made to seek the support and involvement of the general public in the functioning of the schools in their neighbourhood. At the same time, efforts should be made to overhaul the higher education system including vocational education. New programmes relevant to the local context of Sikkim should be introduced so that young people get better equipped with the right knowledge to set up new businesses.

Promote universal health coverage Universal health coverage (UHC) implies that all residents obtain access to the quality health services they need, without suffering financial hardships when paying for them. Many of the pre-conditions for achieving UHC already exist in Sikkim:

- A dominant public sector in health, catering to almost 80 per cent of urban and 90 per cent of rural populations
- A strong, efficient, well-run primary health care system with near universal reach
- A reasonable capacity of well-trained, motivated health workers
- A massive database on health, generated recently by the Comprehensive Annual and Total Checkup for Healthy Sikkim (CATCH) programme
- A committed political leadership that has prioritized health for all

Sikkim can rapidly establish a UHC system that offers cashless health care (preventive, primary, secondary and tertiary) to all residents. Specific actions needed would include consideration of the following:

- Primary care: Expand the reach of telemedicine, offer additional incentives to health care providers in under served areas, establish a sound transport and evacuation system, establish a crisis line, launch a campaign and counselling service to address suicide, addiction and mental health concerns, and explore use of army resources, especially in the north district.

- Secondary care: Consider rebuilding district hospitals so that they become state-of-the-art health centres—which may be more economical in the long run (instead of adding to existing structures).
- CATCH and IT: Plan to convert the CATCH data into a permanent Electronic Health Record (EHR) for every individual.

A practical way of extending existing health provision in Sikkim into a UHC plan will require simultaneous actions to create adequate capacities to deliver care, assure quality, ensure evidence-based medicine, manage expectations of the population, introduce a comprehensive health IT system and pilot UHC.

Eliminate alcohol and drug abuse Use of tobacco and alcohol in Sikkim is much higher than the national average. Data from the National Family Health Survey-3 reveals that 45 per cent of men and 19 per cent of women in Sikkim consume alcohol. According to the State Socio-Economic Survey 2006, one or more members consumed alcohol in 37 per cent of households, smoked *bidi*s in 23 per cent of households, and smoked cigarettes in 38 per cent (Table 4.5). In addition, a little over one per cent of households reported usage of drugs. In a retrospective study of emergency treatment seeking in Sikkim between 2000 and 2005, substance use emergencies constituted 1.16 per cent of total psychiatric emergencies.

Table 4.5 Use of Tobacco and Alcohol in Northeastern States, 2005–06

	Women			Men		
	Who use any kind of tobacco	Who smoke cigarettes/ *bidi*s	Who drink alcohol	Who use any kind of tobacco	Who smoke cigarettes/ *bidi*s	Who drink alcohol
Arunachal Pradesh	27.2	3.1	33.6	62.6	31.4	61.1
Assam	23.2	0.6	7.5	72.4	36.4	37.8
Manipur	39.6	4.3	1.8	69.5	37.9	47.4
Meghalaya	31.9	1.9	3.8	69.2	60.0	49.2
Mizoram	60.8	16.1	0.7	83.4	73.6	42.0
Nagaland	28.1	0.3	3.5	67.9	39.3	38.5
Sikkim	17.8	5.4	19.1	61.8	33.3	45.4
Tripura	48.2	7.9	9.6	76.0	56.7	40.9
India	10.8	1.4	2.2	57.0	32.7	31.9

Note percentage of women and men: 15–49 years.
Source National Family Health Survey 2005–06.

The growing drug abuse amongst children is not confined only to urban centres. It has unfortunately penetrated into even some remote villages. The social and health consequences are serious. Preventive, curative and rehabilitative measures are needed to deal with this problem. Apart from promoting greater awareness about the consequences of drug abuse, promotion of sports in schools and among the youth is an

important preventive intervention. The state should develop a sports policy that offers an opportunity to children across the state to participate in sports. This will require creation of adequate sports infrastructure, recruitment of coaches, setting up training camps and so on. Resources available with Sports Authority of India should be tapped to make this a priority. Professional counselling centres should be set up and school teachers too should be trained in counselling. At the same time, resources should be deployed to set up sufficient de-addiction centres so that young people can get a second chance to shape their lives.

Deepen democracy Increased participation in local governance and forging a strong national identity will be crucial for making life more secure and adequate for the people of Sikkim.

Exclusion is an important constituent of human deprivation. Social and other forms of inclusive growth have been achieved in a unique way in Sikkim. The Sikkimese society has removed all forms of untouchability. That today the Scheduled Castes are finding their place in society without any difficulty is reason to be proud of.

The state has been making special efforts to promote democracy and effective people's participation in governance. Indeed many of the recent gains in human development are the outcome of people becoming more active in defining and articulating their priorities. But more needs to be done if we want to sustain the achievements. Establishing an effective system of participation and local governance is a challenge for Sikkim. People's participation is constrained by geophysical limitations, by the relative isolation of mountain-based communities, limited access to information, and restricted transport and interconnections between districts.

A significant feature of Sikkim has been the existence of community organizations and youth clubs that have traditionally played a major role in promoting development activities in the state. More recently, NGOs have also become active, particularly in the field of health, education and environment. But deprivation manifests itself in the form of extreme isolation in many remote mountainous areas. For days on end, communities are cut off from regular communication. Such a situation is aggravated when men migrate for long periods in search of employment outside their villages and even the state. The forced separation of family members, including children who often need to go out of the state for secondary schooling, creates its own social dynamics—the consequences of which are not yet clear.

Sikkim's vision of an egalitarian society should be rooted in a tradition of peace and overall connectedness. The spiritual and cultural foundations of society have contributed to a strong family and community life in Sikkim. Harmony and peace are central to the lives of Sikkimese people. The tenets of harmonious living are well ingrained in people's psyche. Culture and spirituality are important ways by which Sikkimese society finds orderliness and the meaning of life. The iconic 135-feet high statue of Guru Padmasambhava, the

Box 4.6
Realizing the Vision through Missions

Sikkim is gearing up to face the second-generation human development challenges. The chief minister declared his intent recently in the articulation of a poverty-free Sikkim and the accomplishment of several other goals by the setting up of time-bound missions.

Poverty-Free Sikkim: This mission has time-bound and quantified targets for addressing poverty in its many dimensions including income, essential infrastructure and services, governance, and exclusion. These are also basic rights, the right of each person of the state, we want to secure. Nobel laureate Mother Teresa whose birth centenary is being commemorated (this was in 2010), always believed that, 'We think sometimes that poverty is only being hungry, naked and homeless. The poverty of being unwanted, unloved and uncared for is the greatest poverty'. According to the Chief Minister, this is the vision of Sikkim's Government to ensure that all rural poor are taken care of with utmost tenderness and love. 'Our mission is to build a society which is free from the curse of poverty, to ensure that our future generations can afford every opportunity to grow and be successful and contribute to the prosperity of the State and Nation… When we use the term "poverty", we mean not only a lack of adequate financial resources, but also social exclusion, which is both a consequence and a cause of poverty. Our vision is people centric as aptly described in this phrase: "When the vision is for one year, cultivate flowers; when the vision is for ten years, cultivate trees; when the vision is for eternity, cultivate people'.

Self Sufficiency Mission: Sikkim has taken significant strides in transforming itself into a producer state particularly with respect to enhanced production from agriculture and allied sectors. The government is working hard to ensure that all kinds of demands created in the state are met within the state. And the goal is to see the Sikkimese people themselves fulfil local demands by becoming producers of goods and services. So far, the state has been successful in achieving self-sufficiency in the production of milk, chicken, meat and eggs.

Social Security Mission: The Government has been progressively guaranteeing full socio-cultural and economic security to all section of the people. Special dispensation is provided to the needy and deserving sections of various social groups, differently abled persons, old aged and vulnerable groups.

Skill Development Mission: The Skill Development Initiative was launched in 2003 and apart from the Directorate of Capacity Building, the State Institute of Capacity Building at Karfectar with state-of-the-art facilities for residential training have been established. Under the Chief Minister's Self-Employment Scheme 5,780 youths have been covered for self-vocational ventures encompassing various agro-based activities and IT and tourism-related vocations. As a pioneering step, livelihood schools have been established in every constituency. Many boys and girls primarily from rural areas are undergoing different kinds of vocational upgradation trainings in such Institutes across the State.

Source Adapted from a speech by Pawan Chamling, Chief Minister of Sikkim, 5 June 2014.

Char Dham and now the Buddha Park, also known as Tathagata Tsal, in Rabongla are but ways to give special cultural and spiritual meaning to peace. It is, therefore, not surprising that Sikkim has remained peaceful despite so many provocations in neighbouring regions.

Mountain communities and their environments are exceptionally vulnerable to growing demands for water and other natural resources, expanding tourism, greater rates of

out-migration, and the pressures of industry, mining and agriculture in an increasingly globalised world. Mountains are fragile ecosystems of global importance, as the source of most of the Earth's freshwater, repositories for rich biological diversity, popular destinations for recreation and tourism, and areas of important cultural diversity, knowledge and heritage. Development policies need to ensure the ecological health and the economic and social improvement of mountain areas for the sake of both mountain inhabitants and people living in lowland areas.

Sikkim's progress in the future will depend upon how effectively it promotes sustainable human development. New policy initiatives will need to balance the need for environmental conservation and protection with the demands of economic expansion and employment generation. At the same time, the state will need to address vulnerabilities and enable people to build resilience to future shocks. This requires further investments in embracing the principles of equity and universalism, in putting people first, and in strengthening collective voice and action. Programmes of social protection need to be strengthened. Institutions will need to become more responsive as they endeavour to promote even more social cohesion. Building community-level resilience should be a priority especially when it comes enhancing capacities for disaster preparedness and recovery. Only by ensuring that every member of society benefits from investments in human development can human progress be equitable and sustainable.

The spiritual and cultural foundations of society have contributed to a strong family and community life in Sikkim. Deeply enshrined in Sikkim's heritage are notions of equity and social justice. Drawing upon and strengthening these values should become fundamental to good governance. This is essential for motivating people to take pride and participate in shaping the future of Sikkim.

Notes

Government of Sikkim

Sikkim Human Development Report 2014

Expanding Opportunities, Promoting Sustainability

'Sikkim is one of the brilliantly performing states of the country. It is quite remarkable how it has been able to combine high economic growth along with enhancing those things which make human development a distinguishable phenomenon from economic development as such. This would include, for instance, things like expansion of health (including immunisation) in which Sikkim has done well.

This Sikkim Report is an effective Human Development Report. There is always the danger that one can celebrate the achievements without actually taking note of the problems that a state faces. It is up to the Human Development Reports to outline both what is happening and what is not happening. The fact that this Report does so in an accessible and easily understandable way is a great tribute to this Report.'
Amartya Sen, Nobel Laureate

The 2014 Sikkim Human Development Report comprehensively charts the progress made by the Himalayan state of India over the past decade. The data and analyses presented here highlight:

- the efficacy of state policies in promoting a rapid expansion of both social and economic opportunities;
- the attention paid to sustainable development and preservation of the rich biodiversity of the region;
- the impressive advances made in the area of poverty reduction; and
- the successes achieved in the public provisioning of basic social services (it is the first state in India for instance to achieve total sanitation coverage).

The Report underlines the conscious efforts by the political leadership as well as the state bureaucracy to stay connected with people. It also identifies several areas which require greater attention—such as the need to expand livelihoods, manage urbanization, establish a knowledge society, eliminate drug abuse and promote universal health coverage.

This will be useful to scholars and students of development studies, economics, sociology, northeast studies and Himalayan studies, as well as policy-makers, administrators, academics, and non-governmental organizations in the field.

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