Draft

TENTH FIVE YEAR PLAN
[2008-2013]

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GNH COMMISSION
ROYAL GOVERNMENT OF BHUTAN
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PREFACE

The Tenth Plan is being launched at a momentous and auspicious time coinciding as it does with the introduction of parliamentary democracy in the country, the centenary year celebrations of the Monarchy and the accession to the throne of our Fifth Druk Gyalpo, His Majesty Jigme Khesar Namgyel Wangchuck. The period thus represents a defining moment in the history of Bhutan and an opportune time to consolidate development gains of the past and forge new responses and approaches towards achieving long term development objectives, including our overarching goal of Gross National Happiness (GNH).

The Tenth Plan reflects and concerns itself with the changing realities of the post 2008 period, in particular the fundamental changes in the system of governance and national institutions with the establishment of a Democratic Constitutional Monarchy form of government. For democracy to have genuine meaning in our circumstances, it must be accompanied by economic growth and prosperity and effectively translated into jobs, adequate resources for a decent living and freedom from poverty. Political democracy and economic empowerment are mutually reinforcing principles and the Royal Government will actively seek to maximize performance in both dimensions. Naturally economic development must be broad-based, equitable and supported by full social justice and equality for the eventual emergence of a truly egalitarian and equitable Bhutanese society. It is to this end that Poverty Reduction has been articulated as the main objective and theme of the Tenth Plan to be realized through the strategies of vitalizing economic and industrial development, implementing national spatial planning, synergizing integrated rural-urban development, expanding strategic infrastructure, investing in human capital and enhancing enabling environment. These strategies also simultaneously constitute the Tenth Plan's strategic framework for achieving GNH.

The highly favourable prospects for robust socio-economic development for a vibrant democracy, living in harmonious balance with tradition and nature and the continuation of the tradition of good governance for the Tenth Plan have been built on the firm foundations secured over the Ninth Plan and past successive plans. The development successes that the country has enjoyed have largely come about as a result of the efforts of all Bhutanese who have actively participated in the development process. Our development partners too have been key players and without their unstinting support and cooperation, these achievements would not have been possible.

But perhaps more than and above anything else, the golden era of peace and prosperity that the country has enjoyed over the past several plan periods is attributable to the unparalleled and visionary leadership of our inspirational and beloved monarch, His Majesty King Jigme Singye Wangchuck. Words here are completely and grossly inadequate to express the profound gratitude of a nation for His Majesty's selfless and tireless efforts in nation-building and securing the future and well-being of the Bhutanese people. In every sense of the expression, His Majesty has been for all Bhutanese a wish-fulfilling gem, the auspicious jewel from which good fortune, perennial prosperity and lasting happiness flows. We look forward to an even brighter and more prosperous era under our present monarch, His Majesty King Jigme Khesar Namgyel Wangchuck.

The preparation of the Tenth Plan Document has been a collective and fruitful endeavor and is the painstaking result of extensive consultations between the GNH Commission and the local governments and communities, the Ministries, Departments and various agencies of the Royal Government. As such, we would like to extend our heartfelt gratitude to everyone for the wholehearted support extended in the formulation of the Tenth Plan.

Tashi Delek !

(…… ……)
Prime Minister of Bhutan and
Chairman of the GNH Commission

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ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
ANC	Ante Natal Care
APF	Alternative Planning Framework
ATP	Apprenticeship Training Programme
BDI	Bhutan Development Index
BHTF	Bhutan Health Trust Fund
BHU	Basic Health Unit
BHW	Basic Health Worker
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
BLSS	Bhutan Living Standards Survey
BoP	Balance of Payments
CPI	Consumer Price Index
DEC	District Environment Committees
DGPC	Druk Green Power Corporation
DPR	Detail Project Report
DVTCD	Draktsho Vocational and Training Centre for the Disabled
EA	Environmental Assessment
ECCE	Early Childhood Care and Education
EFRC	Environment Friendly Road Construction
EmOC	Emergency Obstetric Care
FYP	Five Year Plan
GDP	Gross Domestic Product
GG Plus	Good Governance Plus
GLOF	Glacial Lake Outburst Flood
GNH	Gross National Happiness
HDI	Human Development Index
HIES	Household Income and Expenditure Survey
HIV	Human Immunodeficiency Virus
HRD	Human Resource Development
ICOR	Incremental Capital Output Ratio
ICT	Information and Communications Technology
IDD	Iodine Deficiency Disorder
IEC	Information Education and Communication
IMR	Infant Mortality Rate
IPP	Individual Power Producer
Kcal	Kilo Calorie
LDC	Least Developed Country
LFPR	Labour Force Participation Rate
LSE	Lower Secondary Education
MCH	Maternal and Child Health
MDGs	Millennium Development Goals
MMR	Maternal Mortality Ratio
MoA	Ministry of Agriculture

MoE	Ministry of Education
MoF	Ministry of Finance
MoH	Ministry of Health
MSME	Micro Small and Medium Enterprises
MSTF	Multi-Sectoral Task Force
MTEF	Medium Term Expenditure Framework
MTR	Mid Term Review
MTTF	Medium Term Fiscal Framework
NCWC	National Commission for Women and Children
NEC	National Environment Commission
NFE	Non-Formal Education
NHAC	
NID	National Institute for the Disabled
NITM	National Institute of Traditional Medicine
NLFS	National Labour Force Survey
NSB	National Statistical Bureau of Bhutan
NSDS	National Sustainable Development Strategy
NWFP	Non Wood Forest Products
Nu	Ngultrum
NUS	National Urbanization Strategy
ODA	Official Development Assistance
ORC	Outreach Clinic
PAAR	Poverty Assessment and Analysis Report
PAR	Poverty Analysis Report
PCS	Position Classification System
PHC	Primary Health Care
PHCB	Population and Housing Census Bhutan
PoA	Programme of Action
PPP	Power Purchasing Parity
PRSP	Poverty Reduction Strategy Paper
PVR	Poverty Vulnerability Indicators
RBM	Results Based Management
RGoB	Royal Government of Bhutan
RIHS	Royal Institute of Health Services
RMA	Royal Monetary Authority of Bhutan
RNR	Renewable Natural Resource
RTM	Round Table Meeting
RWSS	Rural Water Supply and Sanitation
SAARC	South Asian Association for Regional Cooperation
SDGs	SAARC Development Goals
SME	Small and Medium Enterprise
STI	Sexually Transmitted Infection
U-5MR	Under-five Mortality Rate
VET	Vocational Education and Training
VSDP	Village Skills Development Programme
VTI	Vocational Training Institutes

GLOSARY

Chimi	People's representative and member of National Assembly
Drangpon	Judge
Druk Gyalpo	His Majesty The King of Bhutan
Drungtsho	Indigenous physicians
Dzong	Fortress
Dzongkha	National language
Dzongkhag	District
Dzongkhag Yargye Tshogdu	District Development Committee
Gewog	Block
Gewog Yargye Tshogchung	Block Development Committee
Gup	Elected Gewog Leader
Lhenkhag	Ministry
Lhengye Shungtshog	Cabinet
Menpa	Indigenous compounders
Tsa Thrim Chhenmo	The Constitution
Thrimpon	District Magistrate
Thromde	Municipal bodies
Tshogdu	National Assembly
Tshogpa	Village Representative

CHAPTER 1: REVIEW OF DEVELOPMENT PERFORMANCE IN THE NINTH PLAN

1.1: BACKGROUND

The Ninth Plan was launched in July 2002 initially for a five year period with a total outlay of Nu. 70 billion. The plan period has been extended by one year to end in June 2008 in order to complete all the Ninth Plan activities so that the Tenth Plan could start fresh with the launching of the Constitution and installation of the new government in 2008. The five year planning mechanism has been an effective instrument through which the country has made impressive progress in its socio-economic transformation towards the actualization of Gross National Happiness (GNH). The Ninth Plan to date has been the most ambitious plan, both in the size of the outlay that represented a three-quarter increase over the Eighth Plan and in the immense scope of development outcomes that it set out to accomplish. A significant feature of the Ninth Plan was to introduce and implement Gewog based planning system wherein the decision-making for development activities and financial powers were effectively devolved to the local government levels.

The Ninth Plan had five major goals and these were to improve the quality of life and income, especially of the poor; ensure good governance; promote private sector growth and employment generation; preserve and promote cultural heritage and conservation of the environment; and achieve rapid economic growth and transformation. An important part of the development strategy towards attaining these plan objectives involved prioritizing infrastructure development and improving the quality of and access to social services.

Other critical strategies of the Ninth Plan included consolidating governance reforms through strengthening the decentralization process, enhancing popular participation and initiating democratization efforts. Additionally, the development activities for the plan period were to be implemented while maintaining a stable macro-economic environment through sound macro-economic management policies aimed at sustaining growth, expanding investments and savings, keeping domestic and external borrowings within sustainable limits, limiting budget deficits, controlling inflation and generally meeting the rising recurrent development expenditures through enhanced domestic revenues. These goals continue to remain highly pertinent for the Tenth Plan too.

1.2: AN OVERVIEW OF NINTH PLAN ACHIEVEMENTS

An evaluation of the major political, economic, physical and social indicators and developments over the Ninth Plan period provides a picture of significant and tangible achievements. Most of the planned development activities were implemented successfully and a majority of the important development targets fulfilled.

Over the Ninth Plan, the country successfully maintained past trends of sustained rapid economic growth. Indeed, the country has never witnessed such high growth levels before in any of the earlier plan periods, including massive expansions of the economic and social

physical infrastructure. More importantly, this has been accomplished in a highly sustainable manner with minimal impact on the physical, social and cultural environments. There has also been remarkable progress made in advancing social and human development conditions in the country on the basis of the Royal Government's strong social redistributive policies and investments made over the plan. As a result, Bhutan remains firmly on track to achieve the MDGs and has come that much closer to realizing its long-term Vision 2020 social goals.

The following highlights some of the concrete achievements in socio-economic development attained over the Ninth Plan period. Bhutan's GDP per capita has risen to an all time high of US $ 1, 200 in 2006 from US$ 835 in 2002. Even in absolute terms this represents a fairly high level of GDP per capita by both LDC and regional standards. The country's HDI value has similarly been rising steadily over the plan period with the 2006 HDI value assessed at 0.6001 as compared to 0.583 in 2003 and 0.550 in 1998.These HDI gains over the Ninth Plan period have come not only from growth in real income but have accrued as a result of across the board improvements in social indicators such as poverty reduction, expanded educational enrollments, impressive declines in child and maternal mortality and securing high access levels in the provisioning of water and sanitation facilities. As such, Bhutan continued to retain its place among the medium human development countries throughout the Ninth Plan period. These accomplishments appear particularly noteworthy given that only a few decades ago, Bhutan was ranked among the poorest countries in the world with extremely low levels of human and social development. Politically, the Ninth Plan period also stands out as a critical watershed era in the history of the country. Most notably, the period witnessed the drafting and national consultation on the Tsa Thrim Chhenmo or Constitution that formally marked the historic transition in the country's political system to a Democratic Constitutional Monarchy. The Constitution will be adopted in 2008 and a new government that is elected directly by the people will be installed on the basis of the constitutional provisions. Unlike the experience of many countries where such far-reaching political changes were often brought in with tumultuous social upheaval and violence, the democratization processes in our country were solely ushered in under the enlightened, selfless and benevolent leadership of His Majesty the Fourth King. Remarkably, these historic political changes were also introduced at a time of unprecedented peace, economic prosperity, improved social conditions and general well-being for the nation and its people.

1.3: ECONOMIC PERFORMANCE

1.3.1: Growth

Real GDP grew at an average of over 9% over the Ninth Plan period between 2002 and 2006, taking into consideration an estimated growth of over 18.9% in the last year of the plan period boosted by the earnings from the newly commissioned Tala Hydropower Project Corporation. GDP per capita in 2006 was estimated at US$ 1,200 as compared to US$ 835 in 2002.

[1] Rough estimate

The growth rate of 9% exceeded the 8.2% growth targeted for the Ninth Plan. This represents an exceptionally high and sustained rate of growth that matches the pace of growth in the fastest growing economies around the world. Real GDP grew from Nu. 23.5 billion at the start of the Ninth Plan in 2002 to approximately Nu. 39.7 billion in 2007. The major impetus for this sustained growth was derived from the continuous and sustained expansion of the electricity and construction sectors, driving economic sectors that witnessed average annual growths of around 25% and 11.8% respectively over the plan period [see Table 1.1]. The spikes in the electricity sector growth in the final years of the plan are directly linked to the completion of the Tala hydro-electric power project and the subsequent enhanced generation and export of energy to India.

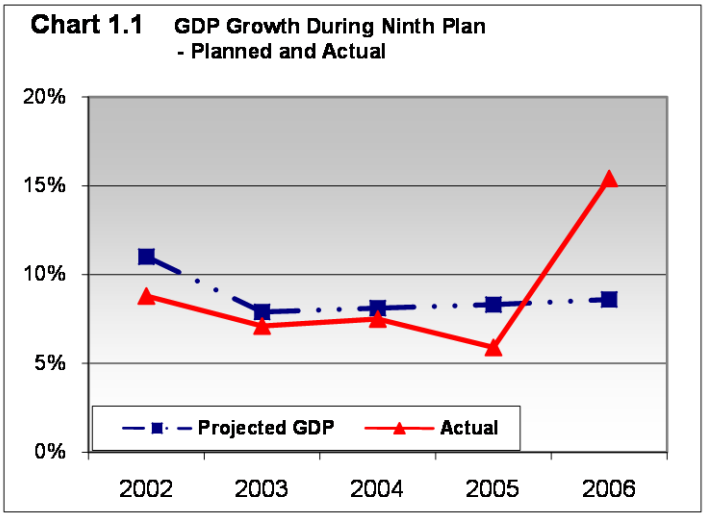


Table 1.1: GDP and sector growth rates

	2002	2003	2004	2005	2006	2007
Real GDP growth	8.80%	7.10%	7.50%	5.9%*	18.9%*	7%*
Agriculture, Livestock & Forestry	3.10%	2.7	2.5	0.4%*	2.2%*	2.2%*
Electricity	10.50%	-0.60%	9.90%	-.8%*	106%*	103%*
Construction	27%	5.30%	8.50%	10%*	8%*	7%*
Manufacturing	2%	6.80%	4.60%	5%*	5%*	5%*
Trade, Financial & Other Related Services	8%	21.80%	13.50%	7.7%*	6.6%*	6.6%*
Public Administration & Social Services	10.10%	7.50%	0.20%	9.7%*	6%*	6%*
Transport & Communications	4.60%	4.60%	18.90%	10%*	7%*	7%*

Source: *Derived from NSB, National Account Statistics 1990-2004, 2005*
**Projected estimates from NSB, 2005*

The agriculture, livestock and forestry sector grew on average by 2.2%, marginally lower than the planned growth rate of 2.5%. In contrast, the 25% annual average growth in the electricity sector over the plan period far surpassed the envisaged growth rates by 8.5 percentage points. This significant difference is largely explained by the enhanced tariff revisions for electricity exports and given that revenue generation from the Tala Hydro-electric power project was expected to impact the economy a little later in the first year of the Tenth Plan rather than at the close of the Ninth Plan, as it did. The trade and other services sector grew at an average of 11.5% and exceeded planned projections by four

percentage points. Similarly, the public administration and social services sector grew a percentage and half points faster than was envisaged in the Ninth Plan projections.

The construction sector also experienced strong growth rates at 11.8%, though this was well below the planned sectoral growth rate by close to five percentage points. Likewise, the transport and communications sector grew strongly but growth was close to three percentage points short of the planned target. Growth in the manufacturing sector remained broadly in line with Ninth Plan expectations at around 5%.

1.3.2: Structural Changes in the Economy

As has been the trend over the decades, the economy continues to transform into a more modern economy with the tertiary and secondary sectors growing much more rapidly than the primary sector. These shifts though – largely due to significant growths in the electrical and construction sectors - have not yet been accompanied by dynamic growth and marked improvements in the manufacturing and industrial base of the country which still remains relatively under-developed.

Given the more rapid growth in the modern sectors of the economy, the share of the primary sector in the economy has declined steadily from 29% of GDP at the start of the Ninth Plan to 19% in 2007 [based on current NSB estimates]. At the start of the Eighth Plan in 1997, the share of the primary sector stood at close to a third of GDP. Macro-economic projections further suggest that this trend of a declining share of the primary sector in the national economy is likely to continue over the current plan period.

In comparison to the significantly slower growth in the primary sector with annual average growths of less than 3%, the secondary and tertiary sectors have been averaging higher growth rates of 15% and 7% over the plan period, resulting in significant changes in the GDP composition. The secondary sector at the end of the plan period constituted 45.5% of GDP, while the tertiary sector accounted for 35% of GDP and the primary sector for 19.5%. On the basis of the estimates for the final year of the Ninth Plan in 2007, the agriculture livestock and forestry sector will be surpassed by the electricity sector for the first time as the most important contributor to the national economy. The latter is expected to contribute close to a quarter of the GDP (22%) as compared to 18% for the agriculture, livestock and forestry sector, and 17% and 6% for the construction and manufacturing sectors respectively at the end of the Ninth Plan period.

1.3.3: Consumption, Investment and Savings

Over the Ninth Plan period, total consumption grew steadily at 10% and on average amounted to around 64% of GDP with private consumption accounting for about 68% of total consumption. Investments also grew at comparable levels (9.4%) and on average amounted to around 58% of GDP through the period, with private investments comprising about 79% of total investments. Savings grew even more rapidly (22%) and approximately comprised on average around 32% of GDP between 2002 and 2007. The increased saving rates were primarily due to higher private (corporate) savings that by the end of the plan period accounted for over 90% of the total gross domestic savings.

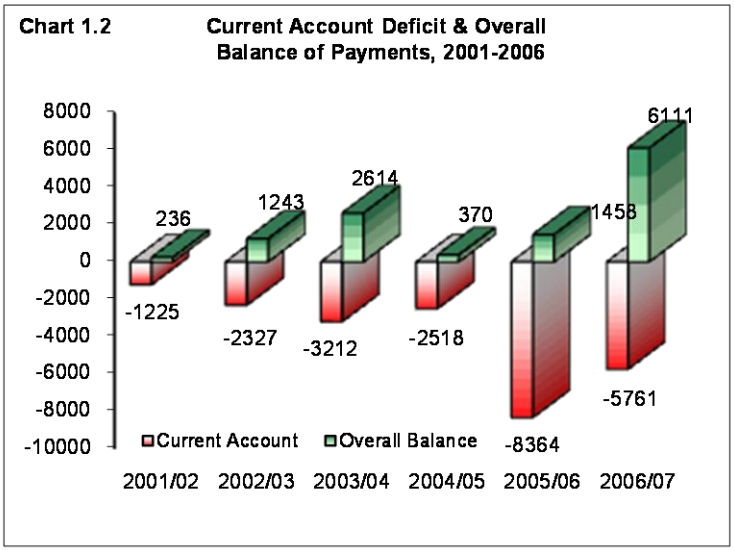
Bhutan over the Ninth Plan period thus enjoyed exceptionally high and sustained rates of growths in savings and investment that has helped fuel the country's high economic growth rates. The incremental capital-output ratio (ICOR) has been rising quickly and in Bhutan's context is explained by the cyclical effect of the construction and commissioning of mega-hydropower projects that also result in the peaking of GDP growth from time to time.

1.3.4: Change in Prices

Inflation (measured by the rate of change in the old consumer price index) over the plan period ranged between 1.2% and 4.4% and roughly averaged around 2.5% annually. This compares favourably to the average annual inflation rate of 6.5% over the eighth plan period. This relatively lower rate of inflation was a result of the declining rate of price increases in both food and non-food items, with much sharper drops for the latter principally on account of stable clothing prices. Notably, inflation for non-food items declined from around 8% in 2001 down to around 5.4% in 2006.

1.3.5: Balance of Payments and External Resources

Bhutan's overall balance of payments situation over the Ninth Plan period has generally been comfortable and showed small surpluses on account of the significant inflows of grant and loan assistance. This inflow of external resources has helped balance out the trade and other invisibles account deficits resulting in an overall positive balance of payments position that averaged around 5% of GDP over the plan period. The trade deficit has been markedly large, climbing to record levels even in the face of strong and sustained export growth. In 2004/2005, the trade deficit crossed Nu. 10 billion, which accounted for around 27% of GDP.



Imports and Exports

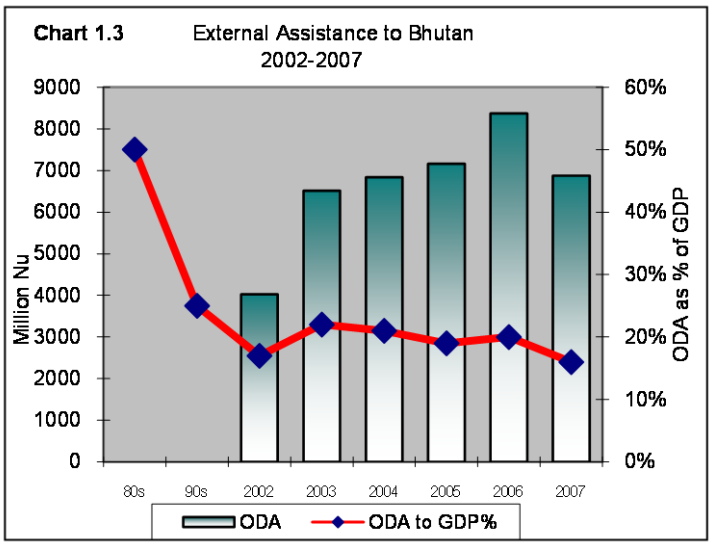
As in past years, Bhutan's major trading partner was India with 92% of Bhutan's imports and exports over the plan period coming in from and going to India. Total imports have been surging sporadically and on average grew at over 29% over the plan period. Imports over the plan period were largely on account of capital machinery and equipment, fuel, vehicles, food and a wide range of consumer products. The purchase of two new aircraft

in 2004 accounted for a large part of the total import value in 2004 which touched a total of Nu. 18.3 billion.

Exports during the plan period grew at an annual average rate of around 30% and in 2004 were valued at Nu. 8.3 billion. Export growths for the Ninth Plan have thus vastly exceeded export growth rates in the Eighth Plan period which averaged around 9%. There have been no changes in the composition of the exports or its principal markets, which predominantly comprise the sale of hydro-electricity and mineral products to India. Electricity continued to dominate the country's exports and roughly comprised around half of total exports over the plan period.

External Resources

Despite trends reflecting a decline in official development assistance to developing countries around the world, total official development assistance to Bhutan registered more than a 45 percent significant increase in the Ninth Plan. Aid disbursements averaged around Nu. 6.5 billion p.a. or approximately 19% of GDP over the plan period.



While there has been a significant increase in external grants and loans accruing to the country in absolute terms, Bhutan's dependence on ODA to finance the country's development expenditures has been decreasing steadily. As compared to ODA levels that financed around 70% and 60% of the total development outlays of the Seventh and Eighth Plans, ODA funding has just financed around half of the total Ninth Plan outlay. Additionally, ODA as a percentage of the total GDP has declined remarkably and have come down to less than 20% at present from levels in the eighties that exceeded half of GDP as reflected in Chart 1.3.

Bilateral sources provided around 75% of the country's development assistance and as in past plans, India remained the country's major development partner. The other important development partners for the country were the ADB, Denmark, Japan and the UN systems. Reflecting the Royal Government's Ninth Plan priorities, most of the development assistance that the country received was allocated to the social, the RNR, energy, infrastructure and communication sectors.

The country had virtually no foreign direct investments until the Eighth Plan period. In the Ninth Plan, FDI grew from Nu. 101 million in 2001 to Nu. 118 million and 157 million in 2002 and 2003. In the subsequent years, FDI declined to less than Nu 3.5 million. Even at

its peak in 2003, FDI inflows constituted less than half a percent of GDP and were entirely for the tourism industry.

Reserves and Debt

Reflecting the positive overall balance of payments situation over the plan period, the country's reserves have been growing steadily. As of September 2007, this amounted to US$ 611.1 million up from US$ 315 million in 2001. Gross reserves over the plan period have generally been adequate to finance around twenty months of current levels of imports though in 2007 this has come down to around 13.4 months.

The country's external debt though has also been growing steadily on account of long term investments into hydro-power development, extensive infrastructure development and social investments. Under the World Bank's debt sustainability analysis Bhutan was "debt distressed." The total stock of outstanding external debt more than doubled from US$ 291.8 in 2001 to US$ 691.as of September 2006. In GDP comparative terms, the debt to GDP ratio increased from 62.9% to 87% over that time. While extremely high in relation to the size of the national economy, much of this debt can be regarded as being sustainable in the context of expectations that these investments will provide sizeable future economic and social capital returns. Debt servicing ratio has also been maintained at sustainable levels and was estimated at 5.6% of total exports over the plan period.

1.3.6: Ninth Plan Development Outlay and Expenditure

The public expenditures for the Ninth Plan are projected to about 93% percent of the original plan allocation of Nu. 70 billion. The budget deficit for the plan period on the whole has been kept at below 10% of GDP and has averaged around 5%.

The social sector received the largest share of the Ninth Plan budget with around a quarter of the total realized budget. Around 19% and 18.5% of the total realized budget were spent for the general public administration and services and the transport, communications and public works sectors respectively. The agriculture and the trade, industries and energy sectors received around 9% and 8.5% of the realized budget.

Table 1.2: Summaries of Ninth Plan Budget Expenditures (In Million Nu)

	2002/03	2003/04	2004/05	2005/06	2006/07 (proj)	2007/08 (proj)
Revenue	4,785	5,055	6,066	6,093	10,038	11,129
External Grants	2,269	5,367	5,033	5,478	7,156	5,183
Total Revenue + External Grants	7,054	10,423	11,099	11,571	17,194	16,312
Current	4,581	5,149	6,506	6,888	8,756	9,471
Capital	5,310	4,653	9,056	7,764	9,461	9,703
Total Expenditure (without Druk Air Planes)	9,890	9,802	15,562	14,652	18,217	19,174
Lending (net)	-48	-6	39	49	-1103	-1283
Overall Surplus/ Deficit	-2891	580	-4106	-3745	80	-1539
Budget Surplus/ Deficit as % of GDP	-10%	1.75%	-11%	-8%	0%	-3%

1.4: SOCIAL DEVELOPMENT TRENDS

Improving the social conditions of people through enhancing access to and the efficiency and quality of social services was a strategic thrust area of the Ninth Plan. This high priority was appropriately reflected in the significant scaling up of resources allocated for the social sector which received more than a quarter of the Ninth Plan's total development outlay, which includes social sector expenditures at both the central and the Dzongkhag and gewog levels.

Table 1.3: Social and Human Development Indicators

	End of 7th FYP (1997)	End of 8th FYP (2002)	End of 9th FYP (2007)
Education			
GPER	72%	81%	105.7%
NPER	-	62%	83.7%
Primary School Completion Rate	60.5%	78.8%	87%*
Teacher Student Ratio (Primary)	1:41	1:39	1:32
Teacher Student Ratio(Secondary)	1:38	1:36	1:27
Gender Parity in Education			
(Girls for every 100 boys)			
- Girl-Boy Ratio (Primary)	81	88	93
- Girl-Boy Ratio (Secondary)	77	87	98
- Girl-Boy Ratio (Higher Secondary)	41	61	85
- Girl-Boy Ratio (Tertiary)	29	39	54
National Literacy	-	-	59.5%
Adult Literacy	-	-	53%
Health & Sanitation			
Life Expectancy	66.1	-	-
Population Growth Rate	3.11	2.52	1.33
IMR (per 1,000)	70.71	60.12	40.13
U-5MR (per 1,000)	96.91	842	61.53
MMR (per 100,000)	3801	2552	150-200
Trained Birth Attendance (%)	10.91	23.62	51%
Access to improved sanitation	80% (1996)	88% (2000)	89%
Access to improved drinking water	-	78% (2000)	84%
Nutrition (Children)			
% underweight	17	-	-
% stunted	40	-	-
% wasted	2.6	-	-
Human Development Index (HDI)	0.550 (1998)	0.583 (2003)	>0.600 (2005)

In this regard, the country has exceeded its commitment to the global 20:20 compact agreed on at the World Summit for Social Development in 1995. The compact required developing countries to devote 20 percent of their national budget for basic social programmes. Bhutan remains among the very few countries in the world to have done so.

As a result of these sustained social investments, Bhutan achieved significant progress in advancing the general social conditions in the country, a development reflected in continued improvements in most of the social and human development indicators. A comparison of the major social indicators over the Seventh, Eighth and Ninth Plans is illustrated in Table 1.3 provides an indication of these sustained improvements. A more

detailed treatment of the prevailing social and human development context over the plan period is provided in the following sections.

1.4.1: Education & Literacy

Progress in terms of access to education over the Ninth Plan period has been particularly notable. With the construction of 40 new schools and institutes over the first four years of the plan period and the significant expansion and upgradation of existing educational institutions, the total enrolment of students has increased from 112,147-116,863 in 2001 to 190,410-152,194 in 2007.

Enrolment growth at the higher secondary level has risen the fastest, averaging close to 25%-29% a year between 2002 and 2006. At the middle/lower secondary and primary levels, enrolment growths have been more modest at 7% and 4% respectively over the plan period. While the sheer growth in numbers of enrolling students has placed an enormous burden on the educational system, strenuous efforts have been made to maintain and further improve the quality of education. Maintaining the quality of education in the light of this unrelenting growth of enrolment has been a major challenge and is likely to remain an important and significant one for the future.

Reflecting this brisk growth in enrolment, the Gross Primary Enrolment Rate (GPER) has increased from 81% in 2002 to 102.1% in 2006 to 105.7% in 2007. As such, the Ninth Plan target to attain a GPER between 90-95% was comfortably achieved. With a faster enrolment rate for girls at both primary and secondary levels, the country has also moved much closer to achieving gender parity in primary and secondary school education with 93 and 98 girls for every 100 boys respectively in 2006. The Population and Housing Census of Bhutan 2005 though revealed that the net enrolment rate for primary education was 79.4%.

Primary and secondary school completion rates have also improved significantly over the last two plan periods. Primary and secondary school completion rates were on average at 78% and 65% over the Eighth Plan period. Over the Ninth Plan period this had improved by 8-9 percentage points at both the primary and secondary levels and climbed to 87% and 74% respectively. This improved efficiency within the primary and secondary education system is partly attributable to the improvements in the teacher student ratio in schools which has improved from around 1:38 at the end of the Eighth Plan to 1:32 at the end of the Ninth Plan (combined primary and secondary estimate). Most schools around the country have achieved the Ninth Plan targeted teacher student ratio of one teacher for every thirty two students.

Some of the other notable achievements in the education sector over the Ninth Plan relate to establishment of the Royal University of Bhutan; the upgradation of the basic education level from the eighth standard to the tenth standard; the establishment of decentralized education monitoring and support services; the continued promotion of Dzongkha and facilitating its usage; the introduction of computer science and applications as an optional subject in the ninth and tenth standards; setting up of national and regional level school

sports programmes; and various initiatives to upgrade the qualification and competency of in-service and new teachers.

In view of the urgency to provide employment for the growing numbers of educated youth entering the labour force, the Royal Government attached a high priority to vocational training. Over the Ninth Plan, the annual intake capacity of vocational training programmes was enhanced by around 35% from around 1,271 to 1,700. In addition to formal training programmes in the VTIs, several other alternative modes of training were also organized under the Apprenticeship, Village Skills Development and Special Skills Development training programmes. However the annual intake of all training programmes fell below the targeted figure of around 4,800 [4,000] as only four of the thirteen new vocational institutes proposed could be established due to a lack of resources. In addition to enhancing access, significant efforts were also directed at improving the quality of vocational training through the adoption and implementation of a VET policy, the establishment of a Skills Training Resource Division and the development of the Bhutan Vocational Qualifications Framework.

To help reduce the low levels of adult literacy, the Non-Formal Education Programme helped train over 18,000 learners through 669 instructors. This represents a doubling of learners from 9,700 and at the same time a virtual tripling of the number of NFE instructors from 256 at the start of the plan period. Not only has the instructor student ratio for NFE programmes improved significantly, qualification levels for new instructors have also been raised to a minimum of the twelfth standard. However, adult literacy levels are still low and assessed to be 53% as reflected by the PCHB 2005. National literacy levels too are not significantly higher at 60%. This falls significantly short of the Ninth Plan target to attain a national literacy level of 80% but this may have been an unrealistic target in the first place as it was projected on the basis of weak baseline data of existing literacy and adult literacy levels.

Table 1.4 Health Human Resources & Infrastructure

	2002	2006
Health Human Resources		
Doctors	122	145
Dungtshos and Menpas	55	66
Doctors per 10,000 population	1.7	2.3
Nurses	495	529
Health assistants	173	210
Nurses per 10,000 population	6.9	8.3
Technicians	335	438
Health Workers	176	253
Total Workers	1,356	1,641
Health Infrastructure		
Hospitals	29	29
Indigenous hospital	1	
Basic Health Units	166	176
Out-reach Clinics	455	485
Indigenous hospital units	19	21
Total hospital beds	1,023	1,400*
Hospital beds per 10,000 population	14	17*
Total health facilities	670	711

*Source: AHB 2002, 2006. *Figs for hospital beds could go up after completion of the various referral hospitals in 2007.*

1.4.2: Health and Nutrition

Over the Ninth Plan period, primary health care coverage has been sustained at above 90%. Additionally, immunization coverage levels were also maintained at over 85% for all Dzongkhags. This sustained level of primary health coverage has contributed significantly in raising the health status of the country's population which is reflected in marked improvements in health indicators across the board.

There have been considerable achievements in reducing child mortality over the plan period. Under-five mortality rates have been brought down by around 29% from 84 per thousand live births to 60 per thousand live births over the plan period. As such the country remains comfortably on track to achieve the MDG target of reducing U5MR by two-thirds. There has been an even faster rate of progress in reducing infant mortality rates with IMR levels being successfully scaled down by around one third from 60.5 per thousand live births to 40.1 in a little over five years. At this rate of progress, it is highly probable that the country will achieve the MDG target of reducing IMR by two thirds well ahead of time.

Similarly, maternal mortality rates have been brought down by 16%, declining from 255 to around 215 per hundred thousand live births. This sustained decline in maternal deaths is partly attributable to an increase in skilled birth attendance which doubled from 24% to 51% between 2000 and 2005. The establishment of nine comprehensive and twenty basic Emergency Obstetric Care centres during the Ninth Plan would also have contributed to the further decline of maternal mortality in the country.

The Ninth Plan period also witnessed a substantial expansion in both human resources and infrastructure in the health infrastructure as depicted in Table 1.4. The ratio of doctors to population (for every 10,000 individuals) improved from 1.7 at the start of the plan in 2002 to 2.3 in 2006. The nurse-population ratios likewise progressed from 6.9 to 8.3 per 10,000 population. With the completion of the construction and or upgradation of the Jigme Dorji Wangchuck National Referral Hospital, the Mongar Regional Referral Hospital, Phuentsholing General Hospital and the Dagana, Trashigang, and Trongsa district hospitals, there was virtually a fifty percent increase in the number of hospital beds available to the general population at large.

The general nutritional (including micronutrients situation) status of the people has been improving over the decade due to focused interventions and the improved availability of food. An MDG target indicator of halving the rate of under-five children who are underweight has been achieved as this indicator has been brought down from 38% in 1989 to 19% in 2000. Likewise there have been similar achievements in reducing stunting and wasting among children. Additionally, there is no major gender difference in the nutritional status of children and where small differences exist, girls are usually better off. The most notable achievements though have been the improvements in the micro-nutrient deficiency situation. A major health achievement over the Ninth Plan was the elimination of iodine deficiency disorder (IDD) as a public health problem with Bhutan becoming the

first country in the region to have achieved this. Today, the incidence of goitre occurrence is less than 5% as compared to 65% two decades ago. The micronutrient deficiency of Vitamin A is also no longer a public health problem though iron deficiency anemia among pregnant women is still a critical concern.

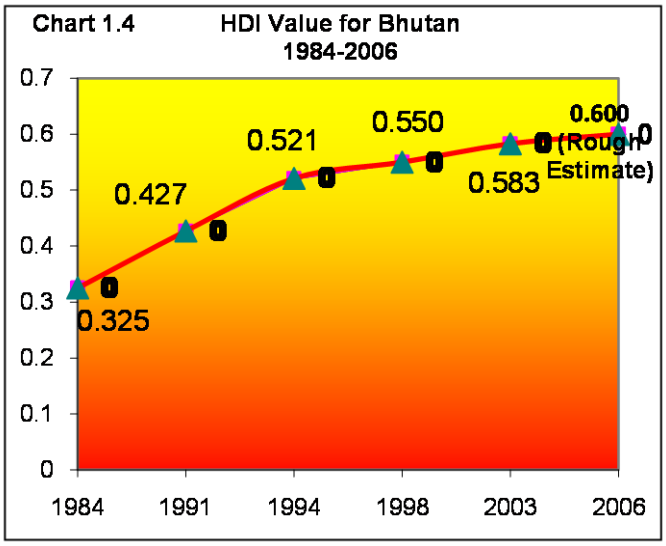
1.4.3: Safe Drinking Water and Sanitation

The provision of safe drinking water and sanitation has been critical to improving the health status of Bhutan's population as there is a close link between enhanced coverage levels of safe drinking water and sanitation and the decreased incidence of infectious diseases such as diarrhoea, typhoid and cholera.

The proportion of the population with access to safe drinking water increased from 78% to 84.2% from 2000 to 2005 with improvements particularly noticeable in rural areas. Currently, around 75% of the country's rural residents have access to safe drinking water sources reflecting a sharp reduction in the rural-urban gap in terms of their access. This is in large part due to the highly effective implementation of the Rural Water Supply (RWS) schemes all around the country. As the MDG target of reducing by half those without access to safe drinking water has already been achieved well in advance, the future challenge will be to achieve and maintain universal access to safe drinking water, particularly in rural areas of the country.

In addition to improved access, considerable efforts were also directed during the plan period to enhance the quality of drinking water and monitor these qualitative aspects in light of their significance to public health and efforts to decrease the spread of water-borne diseases.

Access to sanitation has similarly shown marked improvements over the decade though it has only marginally improved by a percentage point over the plan period. The proportion of the Bhutanese population with access to toilet facilities was 89.2% in 2005 as compared to 88% in 2000. In rural areas sanitary latrines were also available to 86.6% of the rural population. The MDG target in this context of halving the proportion of people without access to safe sanitation was also achieved some time ago. This represents a notable achievement as these levels of access to safe sanitation are comparable to those in considerably more developed countries with much higher levels of human development and GDP per capita levels.



1.5: HUMAN DEVELOPMENT PROGRESS

The Royal Government has consistently sought to assess development in terms beyond the income or economic growth dimension. In light of the current absence of a country specific and relevant development index that takes into account the core principles and dimensions of GNH, the Human Development concept and its measurement, the Human Development Index (HDI) has been a useful interim tool to assess all-round development in the country. In addition to helping assess national development progress, the HDI also provides meaningful comparisons across countries and over time through the annual Global Human Development Reports.

The HDI is a composite index that seeks to capture holistic development progress in countries towards promoting a long and healthy life, knowledge and a decent standard of living. It comprises the three indicators of life expectancy, educational attainment and real GDP per capita in PPP terms. As reflected in Chart 1.4 that traces the HDI value trends spanning roughly the last four plan periods, it is clearly evident that the country has effectively and rapidly scaled up its HDI, roughly doubling in value over the last two decades. This extremely positive trend has resulted in Bhutan's movement out of the low human development countries into the category of medium human development countries. In assessing current levels of the HDI value for 2006 and analysing the reasons for their sustained improvements, certain trends become apparent. Over the eighties the HDI value grew largely on account of improvements in life expectancy and real GDP per capita growth. Over the nineties and more pertinently over the Ninth Plan period, sustained improvements accrued largely on account of improvements in educational attainments (growth in primary and secondary school enrolments) and real income growth. The latter has been the one constant factor underlying these HDI achievements and GDP per capita growths will likely propel and sustain future HDI gains. Life expectancy levels have stagnated at around 66 years but this has not been on account of an existing reality but simply due to the fact that no survey has been undertaken to assess this indicator and continues to be reported at 1994 levels.

Past and existing low adult literacy levels below 53% (PCHB 2005) has been a major reason retarding what would otherwise have been even more stellar improvements in HDI values. The improved but still weak enrolment rates at the tertiary education level constitute another sub-indicator that has held back national HDI progress. As such, future gains in HDI growth will depend on the progress made in addressing these weak aspects of human development in the country. This will also be determined to a large extent by the success that the country has in resolving rural-urban gaps in terms of income, educational attainment and life expectancy levels. In addition to highlighting the importance of tackling existing rural-urban development disparities, the National Human Development Report 2005 conveys strongly the imperative of tackling the challenges of poverty and youth employment to promote human development progress and avoid any possibilities of regression.

CHAPTER 2: DEVELOPMENT OUTLOOK AND PERSPECTIVES

2.1: INTRODUCTION

The development process in Bhutan has been visualized and framed in a broad and utilitarian context that seeks to address a more meaningful purpose for development than just the mere fulfillment of material satisfaction. Accordingly, Bhutan's all-encompassing and penultimate goal of development is the maximization and realization of Gross National Happiness (GNH). This has served and continues to remain as the principal guiding philosophy for the country's long term development vision and rationale. However, strategies for achieving it must and will remain dynamic and evolve based on the particular situation and challenges that confront the country. It is within this overarching development perspective and the Bhutan Vision 2020 framework, coupled with a frank recognition of existing constraints, shortcomings and emerging challenges that has helped shape and determine the Tenth Plan's immediate objectives and strategic priorities, including the imperative to frame a results-based planning approach.

This chapter articulates the Tenth Plan's primary objective of poverty reduction, its strategic priorities and development targets to be achieved within the broad context of the country's long term development vision and outlook. The final section further provides details of the implementation and monitoring aspects of the Tenth Plan's planning process and highlights the main elements and features of the results based planning framework.

2.2: DEVELOPMENT OUTLOOK AND VISION

The core principles of Bhutan's development planning have essentially focused on fulfilling the fundamental objectives of achieving broad based and sustainable growth, improving the quality of life, ensuring the conservation of the natural environment, preserving the country's rich culture and strengthening good governance. Broadly, these are recurring and constant themes that have permeated the spirit and content of all the five year plans undertaken in the country since the inception of development activities in the country. These development objectives also notably underscore a consistent approach taken by the Royal Government to secure a synergistic and harmonious balance between material well-being and the spiritual, emotional and cultural needs of an individual and society.

This approach found a natural and spontaneous expression in the articulation of the profound development philosophy of Gross National Happiness (GNH), propounded initially by His Majesty the King in the eighties. This alternative development model that squarely and unapologetically places human happiness and holistic well-being at the centre of the development equation has since guided Bhutan's normative development approach. The concept of GNH is further elaborated in the following section.

2.2.1: Evolving Strategies to Achieve Gross National Happiness

The single unifying idea that guides the nation's long term development is the Bhutanese concept of maximizing Gross National Happiness. The spirit and intent of this concept as articulated in the Bhutan Vision 2020 document is to "Maximise the happiness of all Bhutanese and to enable them to achieve their full and innate potential as human beings." Reflecting the importance of the concept, the promotion of enabling conditions for GNH has also been enshrined as an important principle of state policy under Article 9 of the Constitution.

Incorporating the notion of happiness and the emotional and spiritual well-being needs of humans into the development equation represented a paradigm shift. It sought to go beyond the conventional income-based measures of development and attempted to address the ends of development rather than just the means. The GNH concept does not in any way exclude or deny the importance of economic growth but strongly advocates achieving a harmonious balance between the material and non-material dimensions of development.

Box 2.1: MEASURING WELL-BEING and HAPPINESS: THE BHUTAN DEVELOPMENT INDEX

In keeping with the spirit of the results based planning approach of the Tenth Plan, efforts are underway to develop an appropriate development measure that will capture the essence of GNH and help in tracking national progress towards meeting this overall long-term development objective. The Bhutan Development Index (BDI) is that critical evaluation tool for the results based planning framework of the Tenth Plan and future plans to ensure that development truly contributes to the achievement of GNH. At present, the Royal Government is developing a GNH preliminary Survey-Based Indicator Framework wherein the model will incorporate three levels and types of indicators. The three categories being considered are the GNH status indicators, the demographic indicators and the causal indicators.

The GNH status indicators are those indicators that are designed to be measures of the specific dimensions which make up the GNH model. They include the various factors of happiness and wellness, time use and balance, physical and mental health condition, community vitality, education and knowledge, effective governance, ecological diversity and health, cultural diversity and resilience and living standards.

The demographic indicators will also constitute an important set of indicators that will allow an analysis of the distribution of GNH dimensions across different social and demographic groups in the country. This includes various age and gender groups, occupational and employment clusters, educational backgrounds, types of households, language groupings and Gewographical areas.

The causal indicators being considered are those factors which could affect the performance of the GNH status indicators. For instance, the general ratings of central government performance could be broken down into more specific components that would allow a more detailed analysis of factors and thereby affect the general governance performance ratings.

The outcome and pertinent findings of the Survey-based Indicator Framework and consultations with the wider Bhutanese public would also allow for a modification and adoption of strategies best suited at a given point of time for achieving the goal of GNH.

In order to translate the multi-dimensional concept of GNH into core objectives for a more focused direction for the country's long term development, four priority strategic areas were initially defined. These four foundation pillars of GNH were the

goals of sustainable and equitable socio-economic development; environmental conservation; preservation and promotion of culture; and good governance. They constituted the broad strategic framework through which national development processes were to be actualized for the maximization of GNH.

While the four pillars of GNH provided for and still constitute a useful framework that defines the broad areas of development activity through which GNH can be pursued, it needs a clearer strategic perspective and framework to operationalize GNH and guide development planning more effectively. As such it will be necessary to revisit the GNH conceptual framework and develop effective and detailed strategies for its realization. Naturally, a meaningful and effective strategic framework must evolve with the changing times and needs and respond dynamically to a particular set of challenges to best achieve GNH. The process must necessarily be open ended and progressive that will allow a variety of creative and innovative strategies to emerge that constantly factors in the varied development lessons and learning experiences for Bhutan. The ideals of GNH, however, necessarily implies that the broader strategic focus will always and constantly be one that places people at the centre of development, that regards people as the real wealth and asset of a nation and human well-being and happiness as the ultimate end and purpose of all development activities.

On the basis of a recommendation emanating from the Good Governance Plus Review 2005, efforts are currently underway to develop a relevant index [Box 2.1] for measuring development progress in the country. The proposed Bhutan Development Index (BDI) will be a composite index of relevant indicators that reflects as closely as possible the essential dimensions of GNH. However, it is unlikely that the BDI will be a fully comprehensive measurement or be able to entirely capture the diversity and significance of GNH. Even if the measures were limited, this may yet provide a useful quantitative dimension through which the country can explore additional ways to further the prospects of maximizing happiness for its people. The measure, just like the strategic framework for GNH, will also need to be dynamic in that it incorporates relevant changes as and when it becomes highly necessary to do so.

2.2.2: A Vision of Bhutan in the Year 2020

Bhutan 2020: A Vision for Peace, Prosperity and Happiness is a twenty year perspective strategy which sets the preferred direction for where Bhutan wants to be in the year 2020 starting from the base year of 2000. To reinforce the guiding direction for the Tenth Plan, it would be useful to recall here briefly some of the desirable long term outcomes for the Kingdom envisioned in the Bhutan 2020 Vision. The Tenth Plan period after all straddles the critical half-way point on to the year 2020 and presents an opportune time to refresh and recollect that special vision and assess what needs to be done to accomplish the milestone goals targeted in that vision. In particular, the Vision 2020 development targets set to be achieved by the end of the plan period are highlighted in the later section on Tenth Plan Targets.

The Vision 2020 projects that Bhutan will emerge to become a respected and active member of the international community and a country recognized for its role in promoting peace and stability in the region. It envisages that Bhutan's sovereignty and borders will be firmly secure, based on constructive and mutually beneficial relationships with its neighbours rather than on military capability. The vision further anticipates that Bhutan will have demonstrated to the world that it is entirely possible to embrace the benefits of modernization without being overwhelmed by accompanying negative influences, while proudly maintaining a distinct identity that is well recognized, valued and respected. In terms of societal outcomes, the vision visualizes the emergence of a compassionate, tolerant, self-confident and egalitarian Bhutanese society with its people living in harmony and unity and imbued with a common sense of purpose and destiny.

Economically, the vision pictures that hydro-power led development and growth will have helped the country achieve a high degree of self-reliance, with much of the responsibility for the financing of development in its own hands. Bhutan by 2020 is expected to be able to sustain rising social-sector investments, meet its growing physical infrastructure development requirements and stimulate the further expansion of and growth in economic activity in order to continually raise the standard of living and quality of life.

The availability of low-cost hydro-power energy and resource endowments deriving from electricity export revenues are anticipated to help transform the industrial landscape in Bhutan with the development of a wide range and host of clean industries and high-technology enterprises. Exports to international markets of high-value Bhutanese niche and eco-based products are also projected to contribute significantly to the national economy and gain notable prominence for their quality. The private sector is expected to grow significantly and become more dynamic, providing the major impetus for the growth in the manufacturing sector that is expected to contribute around one third of GDP by 2010. Another prominent area of private sector engagement, the tourism industry is envisaged to contribute to a quarter of GDP by 2017 with revenues increasing by 150% from prevailing levels in 2000.

As such, the Vision 2020 pictures that while the country's economic future will be rooted in and driven by hydro-power based investments, the economy will also be well-balanced and sufficiently diversified by a thriving horticulture and organic based high-value agriculture sector, a solid and clean manufacturing base and a burgeoning hospitality industry. These non-hydro power sectors are also expected to contribute in very significant ways towards generating productive employment for the growing numbers of youth entering the labour market.

Socially, the Vision anticipates that in 2020, providing equitable access to and delivering improved quality social services across will no longer be an issue. The Vision 2020 expects that the country will in that time boast a health care system comparable to those in developing countries with highly developed indigenous medicine expertise and capabilities. By 2020, child and maternal mortality indicators and life expectancy

figures are expected to approach levels comparable to the current average for all developing countries in 2000.

With regard to education, the Vision 2020 envisages Bhutan will have the full range of institutions required for the formation of all relevant knowledge and skills. The vision expects that education will evolve in ways that successfully develops the innate potential of Bhutanese children and instill in them an awareness of the country's rich cultural values and heritage and a deep appreciation of the importance of ethical and moral choices in their lives. The vision further foresees the imperative for a transformed learning environment wherein education will have better prepared the country's youth for employment and helped them develop a natural curiosity and aptitude to continually learn and acquire new knowledge and skills. In terms of some of the important education targets, the Vision 2020 sees the full attainment of enrolment levels at Class X by 2012 and realization of full adult literacy levels by 2017.
In terms of the state of the natural environment, the Vision 2020 is optimistic that the natural environment and natural resource endowments will still be richly intact, with 60 percent of the country forested and sizeable tracts of protected national parks and reserves harbouring an incredibly rich bio-diversity, the envy of many nations. The vision anticipates that the environmental conservation approach will be dynamic rather than static and will not merely treat natural resources as something to be preserved but as an immense asset that can also be sustainably and wisely utilized for socio-economic development.

Bhutan in 2020 is expected to not only have its rich culture still vibrant, alive and clearly visible in Bhutanese lives, but that it will be richly infused with contemporary relevance and meaning. The vision perceives the latter to be particularly important for young people. It envisages that the country's rich traditions, values, ideals and beliefs must ideally live on in the minds of Bhutanese youths - referred to appropriately in the vision as cultural custodians - and become a positive force and source of inspiration for them. In terms of activities, the vision placed a high priority towards the active promotion of traditional arts and crafts, architectural styles and national language and the conservation and protection of the historical monuments, sites and artifacts while improving accessibility to this rich legacy. The inventorying and recording of this cultural legacy, including the rich oral traditions and folklore were also viewed as being very important.

In terms of good governance outcomes to be attained by 2020, the Vision anticipated the full development of the country's governance and legal institutions and the emergence of a system of jurisprudence based on a body of law respected by all. It also foresaw that these developments would ultimately give rise to new dimensions of the existing traditional concepts of representation and democracy in the country. The Vision however did not quite anticipate that it would happen as early as this, the vast extent of it or the noble manner of its initiation through the ongoing democratization processes and the formulation and adoption of a written constitution, the Tsathrim Chennmo. The Vision further envisaged that the ongoing decentralization processes would be completed by 2020 with local governments fully and effectively empowered

and responsible for many of the development planning and management functions. Through this it is expected that the Bhutanese people would genuinely "own" the development process, thereby helping fulfill both long term national goals and local aspirations and priorities.

2.2.3: International Development Goals

Millennium Development Goals (MDGs)

The MDGs derived from the Millennium Summit held at the United Nations in 2000, where member countries, including Bhutan, pledged to achieve tangible and quantifiable progress in key development areas by 2015. The Millennium Declaration articulated a strong commitment to "create an environment – at the national and global levels alike – which is conducive to development and the elimination of poverty" and mainstreamed a set of inter-connected and mutually reinforcing development goals and targets.

The Millennium Development Goals (MDGs) thus emerged as the principal means of implementing the Millennium Declaration and comprised eight major development goals and eighteen specific targets that were to be monitored by a set of 48 indicators. The MDGs in a sense represents a departure from past approaches in dealing with development and poverty issues as it focused on setting quantifiable targets and time-limits in order to help track progress and tangibly assess the impact of development interventions. These eight MDGs, to be achieved by 2015 from the baseline year of 1990, included the following primary goals of halving extreme poverty and hunger; achieving universal primary education; promoting gender equality; reducing child mortality; improving maternal health; combating HIV/AIDS, malaria and other diseases; ensuring environmental sustainability; and developing a global partnership for development.

While Bhutan remains potentially on track towards achieving most of the MDG indicators, progress varies on various goals and targets. Additionally, while there have been notable advancements in the context of reducing gender gaps in various areas, particularly in primary and secondary education enrollment levels, alleviating existing gender differences in tertiary level education and in the workplace is still a challenge that needs to be continuously addressed. In the case of health sector, even if there is a low prevalence of HIV/AIDS cases in the country today, the increase in the number of cases detected each year is a cause of grave concern.

The country's national development goals and targets are in essence fully compatible and in agreement with the MDGs. In the case of several development indicators, Bhutan has set even higher national targets than the MDGs and these may also be achieved at a faster rate of progress. On the basis of current projections, many of the MDGs will likely be attained by the end of the Tenth Plan in 2013, two years ahead of schedule. The Royal Government of Bhutan is thus wholeheartedly implementing the Millennium Declaration in the full spirit of what was intended and is systematically monitoring the MDGs within the national development framework.

To facilitate the country's further progress on the MDGs and integrate and mainstream these goals more effectively into the development planning and resource allocation processes, an MDG Needs Assessment and Costing exercise was carried out in 2007. This important exercise was undertaken to help provide comprehensive and flexible financial models and policy options to consider development scenarios for achieving the MDGs and estimate critical resource needs to attain those goals.

SAARC Development Goals (SDGs)

The SDGs were conceptualized and formulated as a strategic regional response to the urgent imperatives of ridding South Asia of poverty and achieving the international Millennium Development Goals (MDGs) by 2015. Indeed in certain aspects, the SDGs seek to go much further than the MDG targets and faster. The SDGs are also in a sense a road map for the implementation of the SAARC Social Charter. Endorsed at the Thirteenth SAARC Summit in Bangladesh in 2005, the SDG mandate covers several important development goals within the four broad areas of livelihood, health, education and environment. Taking into consideration both the South Asian context and specificities and the relevant linkages with international goals such as the MDGs, the SDGs include 22 priority goals for the period 2007-2012, eight of which pertain to livelihood, four to health, four to education and six to the environment. Progress towards achieving these specific SDGs will also effectively determine the success the countries will have in combating poverty in the region. In recognition of its importance, the Thirteenth SAARC Summit declared 2006-2015 as the SAARC Decade of Poverty Alleviation.

CHAPTER 3: STRATEGIC FRAMEWORK

3.1: POVERTY REDUCTION

Despite rapid economic growth and significant development efforts in the past, around one third of the country's people, mostly belonging to rural areas, continue to live below the poverty line. In addition to income poverty, notwithstanding the fact that the general quality of life in rural Bhutan has greatly improved, substantial qualitative and quantitative rural-urban differences still remain in terms of access to social services, basic amenities and economic opportunities. As various surveys and studies reveal, there are large and extensive gaps between rural and urban areas in the country for various socio-economic indicators, including income levels. This has not been due to the lack of effort or commitment by the Royal Government but has been determined to a very large extent by the harsh geo-physical reality that has inhibited a more effective mainstreaming of rural communities into the development process.

The Royal Government has in the past addressed poverty reduction mainly through broad sector programs. It has for instance made massive social investments in expanding and improving primary education and primary health care. While such expenditures have greatly helped to improve all round living conditions and ameliorated poverty, experience and lessons from the implementation of the Ninth Plan development activities indicate that poverty reduction efforts could be better served, accelerated further and complimented with specific and improved targeting. Hence, targeted poverty reduction programmes shall be initiated in the Tenth Plan, which will be implemented either directly by the Government or in collaboration with NGOs and other organizations that have the expertise and mandate to help the poor and the vulnerable.

A more focused targeting would be carried out to provide benefits directly to the poor based on a good understanding of localized poverty and development conditions in the various Dzongkhags and Gewogs. In order to do this effectively, the mapping of poverty levels across the country will be highly essential and this would be done using information from the National Poverty Survey 2007. The new planning approach also incorporates the principle of allocating local government resources based on a formula that includes various criteria such as resource endowment levels and poverty incidence. This rationalization of resource allocation is expected to help direct more resources to the poorer and more vulnerable areas and communities in the country.

It is with the clear and unambiguous aim of achieving equitable socio-economic development that the Tenth Plan has adopted poverty reduction as the overarching theme and primary goal. This is wholly consistent and compatible with the country's long term development vision of GNH and Bhutan's commitment to meeting the various global compacts, including the MDGs.

Box 3.1 Poverty Situation in Bhutan

Poverty Analysis Report (PAR) 2007 estimated that **23.2** percent of the population is found to be poor. Poverty in rural areas (30.9 percent) is significantly higher than urban areas (1.7 percent). Only 5.9 percent of the population is subsistence poor (i.e., persons belonging to households with per capita consumption below food requirements of Nu. 688.96).

PAR 2007 established the poverty line at Nu. 1,096.94 per person per month. The poverty line is obtained by adding the estimated food and non-food requirements of Nu. 688.96 and Nu. 407.98 respectively. The poverty line, the minimum acceptable standard of per capita consumption needed to assure a minimum standard of living, is obtained using the Cost of Basic Needs (CBN) approach. This approach estimates the food component of the poverty line as the cost of a food bundle attaining a pre-determined minimum food energy requirement (of 2,124 Kcal per person per day), and then adds some non-food requirements to the food component in order to yield the total poverty line.

In both urban and rural areas, a poor household has a much larger size than a non-poor household. Particularly in the rural areas, female headed households are observed to be, on average, less poor than male headed households.

Although 91 percent the population have access to improved water source, disparity exists between the poor and the non-poor both in urban and rural areas. 96 percent of the population has access to improved sanitation. The disparity between poor and non-poor is more pronounced in urban areas. In rural areas, only three out of five persons belong to households that have access to electricity, with the proportions much smaller among the poor (43%) than among the non-poor (67%).

In urban areas, electricity and gas are widely used for cooking among the non-poor (95%), but among the poor, about half use electricity and gas, while two fifth of the urban poor use wood. In rural areas, wood is predominantly used, especially by the poor (83%) and even by the non-poor (49%). Most of the poor, especially in the rural areas, suggest that road infrastructure and bridges, and electrification should be the priorities of government for improving their living conditions.

The overall macro strategy of the Tenth Plan for poverty reduction will include promoting economic opportunities through broad-based growth and boosting critical sectors such as agriculture and rural industries/enterprises that are important for the poor. Increased resources and investments will be channeled into developing rural regions to help promote income and employment generating activities, expand access to markets and enhance the quality of rural living conditions through well targeted interventions. This is to be done mainly through synergizing integrated rural-urban development for poverty alleviation strategy. Providing land to the landless will be one of the key strategies for poverty alleviation.

As there are direct links between the lack of knowledge and poverty incidence in the country and considering that future development opportunities will depend greatly on productivity levels and the knowledge and technological skills base of the national labour force, the Royal Government's long term pro-poor strategy can also be best and sustainably served by working towards the creation of a knowledge based society. As this is the era of the knowledge economy and society, the empowerment of the poor with information and knowledge is extremely imperative. This will fundamentally shape the potential productive capacities and capabilities of the poor and ultimately determine their prospects for escaping from the poverty trap or marginalized lifestyles.

As much as the division of the rich and poor nations at the international level will be influenced by advancements in knowledge and technological development, this is also likely to be mirrored at national and local levels, hence the need to emphasize this as a critical long term strategy.

However, the strategy of developing a modern society that is highly knowledgeable, skilled and technologically developed cannot be achieved within a single plan period. This necessarily constitutes a long term approach that will span several years and plans but will ultimately contribute positively to poverty reduction and help in the realization of many of the Vision 2020 Goals including GNH.

Thematically, the following five strategies will constitute the core strategies and set of sub-objectives through which poverty reduction will be addressed. These strategic priorities are not to be viewed as being separate or self-standing and have close inter-linkages and frequently spill over into each other. Notably, while they take into consideration the pertinent aspect that poverty in Bhutan is essentially a rural occurrence, these strategies take into consideration the need for an integrated approach to synergise development opportunities in both rural and urban areas for mutual benefit.

These strategic priorities for poverty alleviation are detailed in the following sections:

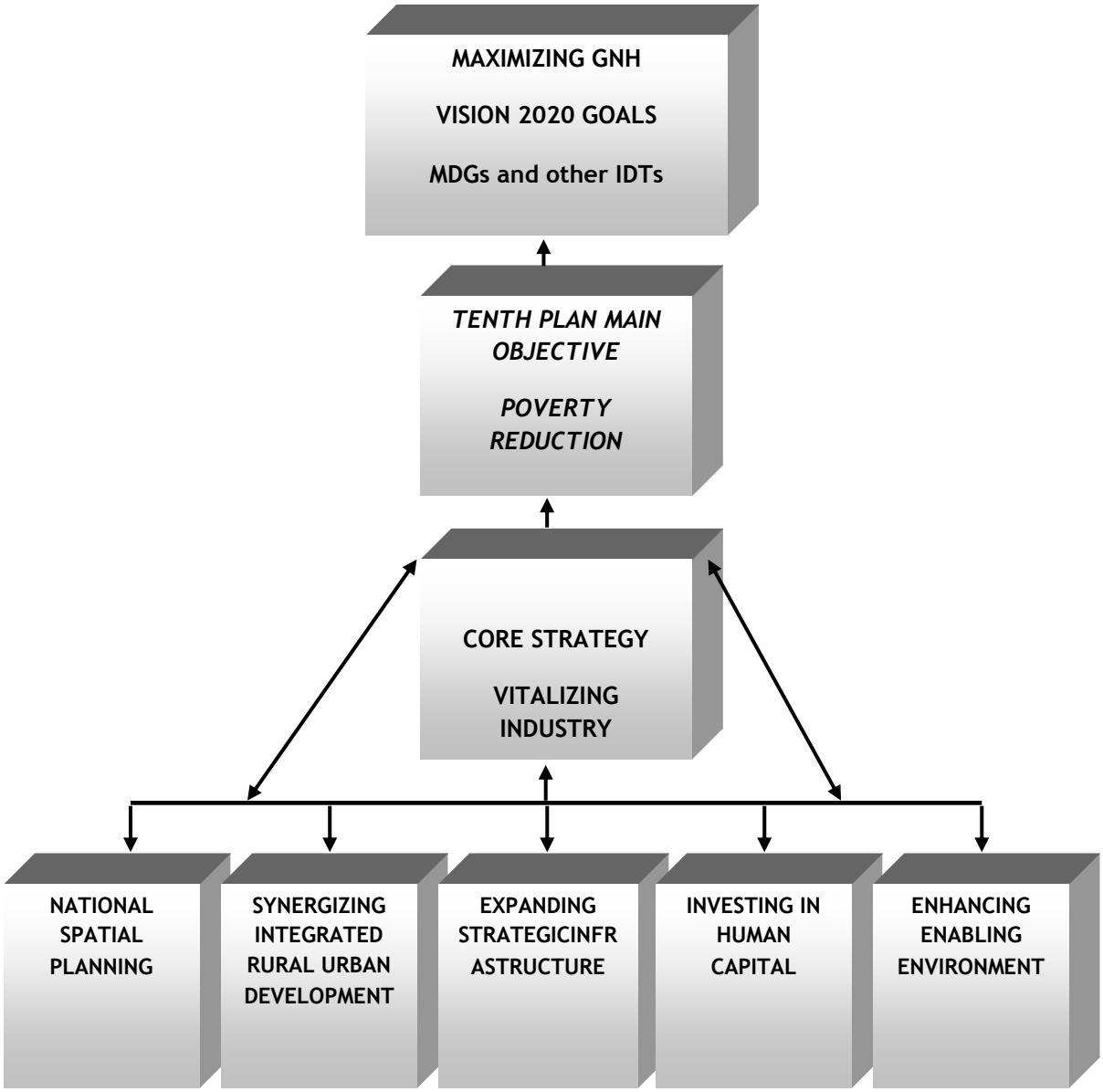
- Vitalizing Industry
- National Spatial Planning
- Synergizing Integrated Rural-Urban Development for Poverty Alleviation
- Expanding Strategic Infrastructure
- Investing in Human Capital
- Fostering an Enabling Environment through Good Governance

Chart 3.1 reflects the strategic framework for the Tenth Plan towards poverty reduction and the longer term goals articulated in the Vision 2020 document including GNH.

3.2 VITALIZING INDUSTRY

The conceptualization of industry and industrialization here is not restricted to the manufacturing sector but is used broadly and encompasses various other economic productive areas like hydropower and the sunrise industries such as tourism, cultural industries and ICT. These collectively represent the core economic sector areas that are expected to boost economic growth significantly through increased market orientation, enhanced export capabilities and competitiveness and active private sector engagement.

Chart 3.1 Strategic Framework for the Tenth Plan



While industry has been an engine of growth in the past, growth has been singularly dominated by the hydropower sector. The industrial and export base thus still remains very narrow, lacks depth and is highly exposed to single market and single commodity risks. Productivity levels in industry have also been among the lowest in the region with only marginal gains in enhancing manufacturing value added within the industrial economy. The manufacturing sub-sector's contribution to national economy has declined steadily from around 16% of GDP between 1990 and 1995 to around 5% of GDP over the last five years. Additionally, manufacturing sector, traditionally among the largest employers around the world, has generated little quality employment and

accounts for only a small fraction of the total labour force. FDI inflows have also been meagre and limited largely to the hospitality industry. While the tourism sub sector has done extremely well, it has considerable scope for achieving more. Much higher and improved levels of performance in industry are thus needed to be achieved over the Tenth Plan and inherent weaknesses of the industrial economy addressed to vitalize the sector. Bhutan's industrialization challenge is therefore to expand and diversify manufacturing exports and tradable services and enhance productivity gains and value addition throughout industry, while maintaining an accelerated pace of hydropower development.

The Tenth Plan places a special emphasis on the expansion and development of the industrial sector with the broad recognition that balanced industrial growth is the principal means for the continued socio-economic transformation of the country, with particular relevance for poverty reduction through enhancing quality employment, entrepreneurial opportunities and income generation. Balanced industrial development as conceptualized under the plan is also intended to allow for a proper spatial dispersal of economic activities around the country based not only on competitive production advantages but considerations to decentralize economic activities and catalyse industrial development in less developed regions.

To achieve these industrial objectives, the Royal Government will adopt and facilitate an integrated and cluster approach towards the optimization of available material and knowledge resources and strategic infrastructure, including marketing facilities and communication networks for the development of particular manufacturing and service industries. Another thematic perspective of the industrial strategy is the underlying values based approach of vitalizing industry through promoting excellence in innovation, creativity and enterprise as the fundamental principles of industrial reform [See Box 3.2]. While these core values are not based on a specific programme of activities, they are nevertheless deeply integral to and should permeate the spirit of all the various industrial development activities to be undertaken over the Tenth Plan.

Box 3.2: Promoting Excellence in Innovation, Creativity and Enterprise

An effective approach to catalyse growth of the industrial economy is to make the most of available resources in innovative and creative ways to enhance productivity and outcomes in all spheres of economic development activity. The qualities of innovation, creativity and enterprise are widely considered to be the primary and dynamic drivers for wealth creation for individuals, companies and nations, particularly in the context of the modern day knowledge and information economy.

The Royal Government for its part views these essential qualities and attributes as conferring a distinct comparative advantage through which Bhutanese industries can effectively achieve productivity gains across all industrial activity to increase outputs, results and efficiency. If Bhutan is to achieve significant economic diversification and expand its productive capacities beyond hydropower development, the country will need to increase the knowledge content of its economy and enhance the value addition/creation capabilities of its industrial base through innovation, creativity and enterprise. The traditional approach and solutions of efficient resource accumulation or raising production through lowering input costs will no longer suffice. Modern industries and businesses today require a much more effective leveraging of technical, organizational and management resources and an approach that recognizes creativity and innovation as the most important factors of production. Given the structure and characteristics of the national labour force profile, Bhutanese non-hydro industries are unlikely to ever compete meaningfully on the basis of cheap labour and the only way forward would be to fully embrace these qualities that are at the heart of productive utilization of labour and investment.

In this context, the role that quality human capital can play in promoting innovation, creativity and enterprise is crucial. A more skilled, learning-oriented and entrepreneurial workforce that continually upgrades its skill and knowledge base is much better positioned to generate new ideas and apply them in business. This is particularly important in Bhutan's context as the country still does not have a critical mass of well educated and skilled labour force. As a first step in that direction, the Royal Government will need to reform education learning processes at all levels and substitute rote learning with those that encourage and reward critical thinking skills and aptitude. There is also the urgent need to strengthen the science and mathematics skills base of students which has chronically remained a weak performance area. Strengthening management education and improving its quality is another area that needs attention and is rightly a high priority for the Tenth Plan.

Rewarding and incentivizing innovative, creative and enterprising behaviour is also absolutely necessary to foster a culture of creative and innovative excellence. The protection and enforcement of intellectual property rights, particularly in the context of the creative industries in Bhutan, and the creation of national awards that recognize creative talents and innovation across all activities and professions are some examples of initiatives that not only provide the necessary incentives and rewards for innovation, creativity and enterprise but that could help raise a general awareness in Bhutanese society of the enormous value of these qualities.

An immediate area of concern is the need to look at maximising entrepreneurship opportunities through innovation in the SMSEs, a potentially high employment generating sector which is plagued by low productivity levels. While the entrepreneurship training courses help to an extent, the programmes need to be expanded to entrepreneurs all over the country and the content enhanced beyond providing basic business skills. Another pressing challenge is the very low level of human resource development investments made by the private sector, a situation that is exacerbated by the inadequate funding of private sector HRD activities by development assistance partners.

While the above ideas provide a broad justification of the imperative for Bhutan to start fostering an innovative, creative and enterprising society and outline some basic measures that could be taken up, it will be highly necessary to develop and implement a comprehensive strategy to actualize this. Without this, there is the real danger that these concepts will remain merely as buzz words without any meaningful progress towards developing higher value-added processes, industries and national productive capacities.

3.2.1 Strengthening the Manufacturing and Trade Sector

The lack of a clear industrial policy and institutional framework has been regarded as a major reason for the slow growth and weak performance of industries in Bhutan, notably for the manufacturing and trade sector. Under the Tenth Plan, particular emphasis will now be given to ensuring that the necessary regulatory and legislative frameworks are in place to effectively manage and promote industrial economic activity. The industrial legislation and policy frameworks will also be appropriately formulated to strengthen competition and innovation so that the private sector is better able to cope with more open domestic markets and perform competitively in export markets. Activities under this programme for strengthening the institutional framework for industrial development include the formulation of industrial legislation, establishment of a single window clearance system, strengthening of company registry, establishing an industrial information system, implementing product certification and developing human resources.

In today's globally competitive environment, small and medium sized enterprises increasingly face strong international competition for both domestic and export markets. Economic clusters allow for an effective provisioning of required strategic infrastructure and common facilities in a strategic location for the development of particular manufacturing and service industries. The significant economies of scale that the cluster approach provides are particularly important for small economies like Bhutan's with a nascent and underdeveloped private sector. Clusters have also known to be highly effective in supporting and improving the competitiveness of local businesses by enhancing their productivity and value addition, promoting innovation and securing greater inflows of FDI.

The development of industrial clusters such as industrial parks and special economic zones – most of them to be strategically situated along the border areas with India – are thus expected to dramatically boost Bhutan's manufactured exports to markets in India, the region and the world at large. This will significantly substantiate the national trade policy goals of achieving a greater degree of economic integration with the Indian, regional and global economy and draw on the advantages that such integration provides.

The establishment of industrial parks in this regard will considerably strengthen the manufacturing base and help achieve the ambitious target of doubling manufacturing

share of GDP to 12%. Industries can be optimally clustered in a particular zone designated for industrial activity in which appropriate infrastructure such as roads and electricity and utility services can be provided in a cost effective and environmentally sound manner. Industrial parks will be developed to encourage the establishment of SMEs and provide gainful employment and entrepreneurship opportunities for unemployed youths. These industrial parks will also facilitate the emergence of strategic growth centres and industrial hubs around the country that will catalyse local industrial development. The Royal Government has identified the Dhamdum, Motanga and Jigmeling industrial parks spread around various parts of the country as the priority industrial parks that need to be established urgently under the Tenth Plan.

As a landlocked country with considerable transit constraints, the establishment of dry ports and trade centers are critical for the expansion and facilitation of trade. Developing dry ports in the regional industrial and economic hubs of Gelephu and Samdrupjongkhar have been deemed ideal for these purposes. Trade facilitation will also be actively promoted through various activities to integrate the national economy into the global and regional trading regimes, including WTO accession initiatives. Export promotion programmes planned include starting up an export credit finance mechanism, upgrading quality of exports, promoting a national brand image and strengthening exporter education and awareness. In addition to these foreign trade development activities, the Royal Government will vigorously promote domestic trade through the development of a consumer protection act and competition policy, streamlining of distribution channels, market modernization and reviewing regulations of third country imports.

The importance of the Micro, Small and Medium Enterprises (MSMEs) sub-sector from an employment and income generation perspective cannot be over-emphasized. With relatively low levels of capital investment required, the sector offers decent employment and income generating opportunities, particularly for Bhutanese youth and other weaker sections of Bhutanese society. The proper development of the Micro and SME sector in Bhutan is thus a very critical strategy for ensuring equitable distribution of income and poverty reduction. The development of MSMEs, especially through local entrepreneurs, requires considerable institutional support, which continues to be inadequate. As such the broad areas of intervention to further the development of MSMEs under the Tenth Plan period are the development of institutional, legal and regulatory frameworks for MSME including their implementation modalities, enhancement of business development services, providing entrepreneurship training and advisory services, establishing a small business resource center, undertaking a feasibility and resource study and the revision of investment opportunity study.

3.2.2: Accelerated Development of Hydropower

Hydropower has been an enormous natural resource endowment for the country. It has been the primary source of energy for domestic consumption and local industrial power needs and constituted the major national export and revenue earner for over

the last two decades. The sector has been the proverbial engine of growth for the economy and the catalytical hub around which all round socio-economic development has been possible. Today, the sector continues to drive the economy and contributes close to a quarter of GDP and around 40% of total national revenue. The economic benefits deriving from future hydropower development - secured under the Indo-Bhutan Agreement for the long-term development of hydropower - will further strengthen the economy to make Bhutan even more prosperous and self-reliant than before.

Additionally, while making sustainable economic development in the country a reality, hydropower development in the country has been pursued in a manner that is environmentally friendly and socially responsible. Bhutan's clean energy exports greatly help in reducing fossil fuel burning and greenhouse gas emissions thereby contributing to a healthier global environment. The eco-friendly aspects of Bhutan's hydropower development are so evident that several of Bhutan's hydropower projects could be considered for carbon credit gains as these green exports do help offset industrial pollution in the region. Moreover, these mainly run of the river hydropower projects virtually do not require any displacement of communities nor the inundation of large tracts of riverine eco-systems. Indeed, the continued sustainable exploitation of hydropower will depend a great deal on the state of the environment and in particular, the condition of the country's watersheds. The conservation of the environment is thus in itself a very strong economic rationale for the long term utilization of hydropower resources in Bhutan.

In the social context too, hydropower development has various spin-off benefits and can help raise the quality of lives and reduce poverty around regions where power projects are built. The massive level of support infrastructure including social service facilities, electricity, road and other economic infrastructure that are built while constructing a hydropower project confers immense and immediate social benefits and economic opportunities for local and regional communities. As the conditions of income and human poverty are known to be inextricably linked to the prevalence of energy poverty – defined as the lack of commercial energy sources necessary for economic growth – with the further development of hydropower resources and the full provisioning of affordable electricity for all, the hydropower sector will effectively contribute toward removing an underlying cause of poverty.

Clearly, there is no question that the further development of hydropower resources for exports to India will remain at the core of Bhutan's economic development strategy. The issue here is centrally about accelerating the pace of hydropower development to further capitalize on the nation's distinct comparative advantage and effectively tackling the major constraints towards meeting the country's Tenth Plan targets set for the sector and the long term capacity addition goals. These economic targets include enhancing electricity's share to 30% of GDP and 60% of total national revenue and expanding hydropower capacity to 2,705 MW. The hydropower agreement with India to develop a minimum of 5,000 MW for exports by 2020 further necessitates accelerated hydropower development as this implies a massive capacity addition of

around 380 MW each year. While the bilateral agreement sets a minimum figure, the Royal Government is keen to aim at developing a total installed capacity of 10,000 MW by 2028 in the main three river basins of the country.

As the development of hydropower projects are highly capital intensive activities with very long planning horizons, it is highly essential for detailed feasibility studies and/or DPRs to be carried out before investment decisions are taken. As such, Tenth Plan major activities to accelerate hydropower development include conducting DPRs for Chamkharchhu I and II, Kholongchhu, Nikkachhu and Sunkosh hydroelectric projects and for the proposed IPP projects at Khomachhu, Ropthashong, Amocchhu and Gongrichhu. The survey and investigation of 58 hydropower project sites and the development of pre-feasibility reports for 10 potential sites also constitute important activities under the accelerated hydropower development programme.

To implement, achieve and manage that level of hydropower capacity addition will clearly require major and urgent efforts towards the institutional strengthening of the energy sector. Some of the important activities to be taken up under the Tenth Plan will include the establishment of a hydropower laboratory for material testing, project modelling and efficiency testing of hydraulic machines; the updating of country hydropower site information and conducting other relevant studies; and capacity building within the Department of Energy, the Bhutan Electricity Authority and the Druk Green Hydropower Corporation that is to be formed.

Additionally, the high capital requirements for the accelerated hydropower development programme make it necessary to mobilize alternative financing sources in addition to development assistance. Investments from private sector and joint venture partnerships could provide the additional resources needed and such arrangements will be promoted. The engagement of the Bhutanese private sector in the various stages of implementing hydropower development and in operations and maintenance would also help further build national capacity in a highly critical economic activity for the country. As there is no clear policy framework for promoting such arrangements, the Royal Government will undertake the formulation of relevant policy documents and guidelines for hydropower development and IPP and FDI involvement and facilitate these partnerships.

To attain the goal of electricity for all by 2020 towards improving the quality of life and poverty reduction, it is deemed necessary to develop access to renewable energy sources for those households (around 12%) that will not be connected to the national electricity grid. The development of solar energy resources, micro-hydels, alternative energy experimental activities, and the institutional strengthening and capacity building in these relevant areas comprise some of the priority activities under the renewable energy programme.

3.2.3: Promoting and Facilitating the Development of Cultural Industries

The country's rich and living cultural heritage is not only a potent source of and relevance for Bhutanese national identity and social interaction, but also holds considerable potential for generating economic and social benefits such as employment creation and poverty reduction through the promotion of cultural industries. The latter are industries centered around the creation and production of goods and services that are cultural in nature and broadly encompass a wide range of activities connected to heritage, literature, performing arts, media and the audiovisual sectors. As these cultural industries are essentially based on harnessing the innovative and creative aspects of human capital, they are also popularly referred to as "creative industries."

For reasons relating to resource constraints and the considerable fragmentation of this diverse sector, apart from activities that support cultural enterprises based on handicrafts and textiles, the strengthening of cultural industries will be largely addressed through and integrated within the Tenth Plan programmes intended for the preservation and promotion of cultural heritage. As such, the active engagement of the private sector, including the hospitality sector, becomes even more pertinent and vital to generate sustained demand for these high value intangible products and continually tap into their unique selling points based on excellence in creativity and innovation. Private sector driven growth of the sector would also be clearly appropriate given the very high levels of innovation, creativity and enterprise required to realize the full potential of such industries, which are often best left primarily in the domain of private enterprise.

The Royal Government for its part will adopt necessary measures to provide an enabling environment such as ensuring intellectual property protection; promoting a higher profile and visibility for the sector through export promotion and media propagation of Bhutan's unique and special cultural image internationally; strengthening and integrating local and regional supply chains with markets within and outside the country; and deepening the skilled human resource base such as through enhanced access to the Zorig Chusum or thirteen traditional arts and crafts trainings. The latter assumes particular significance in the context that certain unique Bhutanese craft skills are gradually dying out and the expertise being irreparably lost to the country. The Royal Government will also study the possibilities of treating cultural industries at par with regular industrial activity and extend necessary fiscal incentives such as tax holidays, lower cost loans and the facilitation of appropriate mortgage financing.

3.3: NATIONAL SPATIAL PLANNING

The broad intent of national spatial planning is to promote balanced regional development that is entirely consistent with the maximisation of economic potential and opportunities while also conserving environmental resources. As such, the principles of sustainable development and equitable regional development are deeply integral to effective spatial planning. National spatial planning is highly essential and relevant as it allows development planning processes to encompass the totality of national space rather than address it on a fragmented basis or a mere sectoral perspective. As it facilitates a better spread of economic, social and environmental benefits for improved quality of life, national spatial planning clearly offers a much more coherent approach for achieving balanced development at regional and local levels and tapping the synergies of rural-urban interdependence while mitigating existing disparities.

The Royal Government's strategy for effective national spatial planning is driven by a strong motivation that all Bhutanese should have equal opportunities to share in the benefits of economic and social growth, regardless of where they choose to live. In addition, the Royal Government also recognizes that effective national spatial planning would meaningfully contribute to maintaining and enhancing the quality and diversity of the country's natural environment and cultural heritage rather than allowing uncontrolled development to happen at its expense. This clearly has always been the heart and soul of the country's development philosophy and perspective. In a sense, national spatial planning would involve bringing people, work areas, living environment, social and economic infrastructure/services and cultural spaces together much more rationally, functionally and efficiently to improve the quality of life for all Bhutanese.

Some of these spatial planning aspects are closely interlinked with the various strategies treated in other sections detailed earlier, particularly those of synergizing integrated rural-urban development and expanding strategic infrastructure. The following section will therefore primarily limit its focus on the two thematic challenges of managing sustainable urban development and strengthening environmental conservation. This also constitutes the core of the various national spatial planning related programmes and activities to be implemented over the Tenth Plan.

3.3.1: Managing Sustainable Urban Development

Over the last decade, Bhutan has experienced a very rapid pace of urbanization. Additionally, with current levels of rural-urban migration, urban populations are projected to rise to around half of the total population by 2020. This has already placed enormous pressures on the two major cities of Thimphu and Phuentsholing and some of the larger towns around the country that could have serious consequences for the future quality of urban life. Urban centres are already experiencing the adverse effects of urbanization such as water shortages, housing scarcity, sanitation and waste disposal problems, deteriorating air quality through pollution and the proliferation of

squatter settlements in sensitive environment areas. Managing urban development effectively and efficiently to build and sustain a quality urban environment is thus a critical area of challenge for national spatial planning policy.

The Royal Government under the Tenth Plan will implement several activities to further strengthen and develop the urban infrastructure and services of the two cities and several towns. Urban infrastructure will be developed in a cost effective manner while ensuring high liveability and functionality. Additionally, the Royal Government, in expanding urban infrastructure, will also seek to maintain those aspects that best reflect the best of Bhutanese values, aesthetics and traditional architecture and that is in harmony with the natural environment.

Ensuring affordable housing is a critical urban issue in Bhutan. A major policy consideration is the need to prioritize various public infrastructure investments. Mainly due to competing needs and considerable resource constraints, it is extremely difficult for the Royal Government to secure the capital investment funds on the scale required to meet the projected demands for urban housing in addition to providing other public urban infrastructure amenities and services. As such, the Royal Government will seek to develop more effective and innovative responses, including actively promoting public-private partnerships to make affordable housing available in urban areas. The major onus for the development of affordable housing will be in the domain of developers in the private sector with the intervention of the Royal Government only in the event of market failure. The Royal Government, however, will ease urban housing shortage through measures such as making available land as and when required on the basis of long term leases and lease rentals and the introduction of various innovative financial intermediation schemes like mortgage finance facilitation, lowered interest rates and tax subsidies for housing projects, etc.

Under the Urban Development Programme for the Tenth Plan, the Royal Government will enhance the national urban management capacity through the institutional strengthening of various agencies and municipalities overseeing urban development issues. This will include human resource development in the areas of urban planning, data collection, GIS, infrastructure design, engineering services, etc. As the quality of urban infrastructure and services are very rudimentary in several of the newer townships, efforts will also be directed towards upgrading water supply and sanitation facilities and solid waste disposal systems. To enhance the efficiency and effectiveness of urban management, the Royal Government will continue to promote the decentralization of urban services management through granting of autonomous status to municipalities based on inherent capacities to take up such functions. The urban public will also be encouraged to participate more actively in the development and management of their cities or towns, including enhancing the aesthetics of their urban environment.

Bhutan's urban areas are important commercial hubs that contribute significantly to the national economy and provide a functional and commercially viable base for businesses environment and activity. They also have the critical human capital

resources and the essential institutions that are necessary to make the pursuit of innovation and creativity for higher productivity and growth in the country a reality. Urban markets, additionally, generate the essential demand that is expected to drive and sustain current and future rural production. As indicated earlier, meaningful rural development and poverty reduction cannot be conceived as separate from the urban context. A well planned and clear vision and strategy for the further planned development of the national urban system is thus highly essential if the country is to maximise the benefits mentioned above.

The broad elements of the national urban system spatial framework as proposed in the draft National Urbanization Strategy (NUS) are outlined here briefly. The national urban system envisages the establishment of two national cities-Thimphu and Gelephu. The NUS also plans for five regional growth centres, sixteen Dzongkhag centres, twelve medium towns, twenty three small towns/Gewog centres and four corridors that link the cities and regional/national centres.

For national spatial planning policy to succeed in its key objective of balanced regional development, the NUS is essentially based on a growth centre strategy, the basic aspects of which are outlined here. The growth centre strategy revolves around the continued strengthening of the existing two cities while developing a few select regional/national growth centres as regional hubs that will offer alternative migration and commercial prospects to Thimphu and Phuentsholing. For instance, Gelephu is to be developed as a major national city and an important regional centre with the development of a second international airport, railway links and a major industrial park and dry port. The road connectivity to this future national city and regional growth centres will also be facilitated by the upgradation of the Gelephu-Trongsa and Gelephu-Wangdue highways and the construction of the Southern East-West National Highway. In addition, the urbanization strategy also envisages and plans for the continued development of the urban and economic infrastructure and services of Thimphu and Phuentsholing.

Several towns with the best prospects to emerge as the regional/national growth centres have been currently identified and prioritized. These towns have been chosen as the growth centres for the reason that they are already the largest towns in the region that they will service, have sufficient physical space for future population expansion and have an economic base required for self sustaining growth. In the context of the latter, the Royal Government will also identify and develop regional and local specialization in particular economic activities for the various regions on the basis of their comparative advantages and strengths.

Significant investments will be required to develop the necessary urban infrastructure and services in these national and regional growth centres to achieve a certain critical mass and to make them viable places to live and invest in. In relation to the urban development of the national growth centres of Thimphu and Phuentsholing, continued investments are planned for the development of the core and extended areas and for the improvement of service delivery. The Royal Government will also prepare the

urban design and plans for the various growth centres, Dzongkhag townships and small towns and implement urban infrastructure development in the new Dzongkhag townships. Additionally, road linkages and corridors between the national and regional growth centres will be strengthened through the expansion of national highways and roads to be taken up under the strategic infrastructure programme for the Tenth Plan.

3.3.2: Conservation of the Environment

The relationship between environmental conservation policy and spatial management are very strong and multifaceted. Environment conservation policy clearly has numerous spatial components as they deal with issues relating to the protection of biodiversity habitats, forest conservation, watershed management, soil conservation and various other land use aspects. Additionally, effective spatial planning concerns itself with creating conditions for an enhanced quality of life and clearly, this is highly dependent on the state of the natural environment and eco-systems, including the availability of clean air and water, abundant and diverse forest resources, etc. As such, the conservation of the environment including the sustainable use and management of natural resources constitutes an integral and critical aspect of national spatial planning.

The added benefit of considering environmental issues from the vantage point of national spatial planning is that it effectively contextualizes and integrates this within the overall national development framework for a fuller realization of sustainable development. This approach to maximise both sustainable utilization and conservation of natural resources is particularly important for Bhutan as the country is encountering growing challenges of balancing development and livelihood opportunities against the need to conserve the environment. The Royal Government intends to utilize national spatial planning strategically to address this critical balance for a win-win situation and in the overall national interest.

The Royal Government will promote mainstreaming environmental issues into the development planning process through the national spatial planning framework and through awareness and capacity building of relevant sectors. As the lack of quality data and information continues to remain a constraint, strengthening the environmental information management system will be an important activity to be undertaken during the Tenth Plan. Other important activities include the institutionalizing of decentralized environmental impact assessment process and the drafting of relevant environmental legislation such as the National Environmental Protection Act and the Water Act.

Environmental conservation will also be supported through the strengthening of the management of protected areas and botanical gardens; the establishment and operationalization of three new protected areas and one botanical park; bringing four biological corridors under scientific management; developing the database of biodiversity in the protected areas; and introducing tourism in one of the designated parks. Spatial planning here is particularly relevant as it can help designate the location of valuable and vulnerable natural areas and help identify buffer zones and

wildlife dispersal corridors. Additionally as part of the Royal Government's spatial planning initiative to balance economic and social priorities with environmental concerns, the Royal Government will ensure that the livelihoods of people living in the protected areas are enhanced rather than reduced through an integrated conservation and development approach.

The Royal Government under the Tenth Plan will continue to fortify its ongoing efforts in biodiversity conservation. This will be done principally through the strengthening of a field gene bank, botanical garden and a herbarium to facilitate the conservation and sustainable utilization of plant and animal genetic resources; strengthening the national biodiversity management and information system; and the implementation of bio-prospecting for the commercialization and sustainable utilization of biological resources.

A major infrastructure development project for the forestry and environment sector under the Tenth Plan is the establishment of the Ugyen Wangchuck Forest and Environment Institute at Lami Gompa in Bumthang. The institute will contribute immensely to advancing the cause of forestry and environmental education and research and strengthening national capacity in the professional management of its natural resources. Among the various activities to be implemented under the project, these also include the creation of a Bhutan Museum of Natural History and the establishment of degree level academic programmes in forestry and environment.

3.4: SYNERGIZING INTEGRATED RURAL-URBAN DEVELOPMENT FOR POVERTY ALLEVIATION

Urban and rural areas in Bhutan are becoming ever more closely and inextricably interlinked as the country makes its transition from a predominantly rural economy to a more modern one in conjunction with rapid urbanization. Improved road and telecommunications connectivity now links many of the country's remote villages to towns and cities with a growing interflow of resources, products, people, information and services. With these rural-urban flows and interactions intensifying, critical development issues can no longer be distinctly compartmentalized as rural or urban but have considerable areas of overlap. It is in this changing context of strong rural-urban interdependence that traditional planning concepts of rural, urban and regional development are now being viewed by the Royal Government from a more integrated and holistic approach that seeks to synergize rural-urban linkages for socio-economic development and poverty alleviation.

In Bhutan, rural poverty is directly linked to low levels of agricultural productivity and inadequate access to markets, economic opportunities, resources, assets and social services. Poverty is thus to a great extent equated with and a resulting condition of the underdevelopment of rural areas and subsistence farming. The successful implementation of an integrated rural-urban development strategy that addresses these issues effectively will thus significantly enhance the prospects of reducing poverty in all its multi-dimensional aspects.

The Royal Government will make strenuous efforts to create enabling and optimal conditions for growth in and mutual synergies between the rural and urban sectors. The focus will be to facilitate an interactive growth process that harmonizes and maximizes inter-sectoral coordination for promoting activities that are most relevant and beneficial. One critical aspect of this strategic approach will be to effectively utilize urban and external market demand and consumption as important drivers for rural growth, income generation and enhanced productivity. Demand from urban consumers and export firms are expected to help invigorate agricultural and off-farm enterprise production. Activities under the Tenth Plan will seek to harness the commercial prospects of various primary, secondary and tertiary economic activities within the rural-urban continuum and efficiently integrate rural supply chains with the urban and export markets.

The strengthening of the agriculture, livestock and forestry sector as well as the off-farm sectors remains at the heart of this strategy to synergize integrated rural-urban development. Greater emphasis will be placed on the strengthening of the commercialization of agriculture and in particular, agriculture value-addition. The promotion of horticulture and cash crops, including the commercial development of non-wood forest products [See Box 3.3] and organic farming in suitable areas are some of the other initiatives that will be undertaken to improve rural livelihoods under the Tenth Plan. Support will also be extended for the development of small-scale and cottage industries, local handicrafts, textiles and arts, and various other off-farm activities and enterprises. Without a strong and concerted inter-sectoral effort in implementing these initiatives, it would be extremely difficult for Bhutan to meet the set targets of doubling rural household incomes to Nu. 35,000 per annum and reduce rural poverty significantly.

An underlying reason for the high poverty incidence in rural Bhutan is the subsistence nature of farming and the weak levels of agriculture productivity. Many Bhutanese farmers are deeply trapped in subsistence farming with meagre surpluses that are barely enough to cover their non-food needs, a situation exacerbated by their inherent vulnerability to weather vagaries and chronic crop depredation by wildlife and the rapid emergence of a cash economy. With regard to the latter, national studies have shown that even simple expenditures on school uniforms and shoes are major reasons why rural children in Bhutan drop out of school and parents are often discouraged from enrolling children into schools despite the widespread awareness of the importance of education.

If Bhutan is to attain the poverty reduction targets set for the Tenth Plan, it will need to break the cycle of poverty engendered by subsistence farming and low agricultural yields. The Royal Government has channelled significant investments into agriculture over the past plans that have had immense benefits for rural farming households. However, there is little to suggest that this has as yet significantly transformed subsistence agriculture all around the country. It is therefore highly imperative to further strengthen efforts to restructure and transform Bhutan's subsistence agriculture through enhancing production and productivity, expanding farm and feeder

road networks and improving commercial orientation through innovative and relevant agricultural marketing mechanisms. These will be implemented without compromising household food security, though the latter will be enhanced more through market forces than relying completely on self-sufficiency.

While Chapter 6 on the RNR Sector articulates the various agriculture policy strategies, the following passages seek to emphasise the particular aspects of the commercialization of agriculture including enhancing market orientation and the creation of off-farm enterprise employment. These in addition to certain targeted poverty intervention programmes including the distribution of land to the landless, are specifically intended to address certain deep rooted conditions of poverty.

In addition to various ongoing efforts to enhance the commercial orientation of agriculture, the Royal Government will promote intensive cultivation of crops including the selective introduction of monoculture forms of agriculture in certain areas on an experimental basis initially. Additionally, as a measure to address the poor market service and access that affects many rural farming communities in Bhutan, the Royal Government will permit and facilitate the introduction of contract farming mechanisms. This is intended to help protect small holder farmers overcome existing market constraints, minimize transaction costs and enhance market access. Contract farming here is used in the commonly accepted definition of an agreement between farmers and private enterprises/firms for the supply of agricultural products usually at predetermined prices. In such a contract, the private enterprises and firms normally advance farmers the initial agricultural input investments such as seed and fertilizer costs which are adjusted against final payments. The full risks of crop damage or loss are undertaken by the private enterprises/firms. Such arrangements help farmers to access credit and initial investments and market information and gain protection from price fluctuations and crop loss vulnerabilities. There are downside concerns such as the possibility that farmers could be subjected to exploitation by larger and established entities, aspects which will need to be effectively monitored and regulated. In this regard, agricultural cooperatives and marketing boards could play a very significant role in protecting farmers and provide an effective response to mitigate any such dangers that may arise in addition to fulfilling their primary role of facilitating marketing linkages.

The Royal Government over the Tenth Plan will further strengthen existing farm cooperatives with technical backstopping and extend assistance with material support in addition to promoting the formation of relevant new producer organizations. The numerous farm and rural groups and cooperatives that have emerged in the country over the last few years have proved highly effective in realizing much of their primary objectives of enhancing marketing and marketability of their produce and products, securing more favourable prices, strengthening local capacity and adding downstream value addition to primary produce. Several have gained wide recognition as success stories such as the Lemon Grass Cooperative of Mongar and the Dozam forest community and the Gogona milk farmer groups. These well-organized cooperatives and

groups produce quality lemon grass oil and cheese products with recognized organic certification standards and good demand in both local and export markets.

There are also other considerable non-monetary benefits such as the empowering effects that these self-help and self-organizing activities engender to infuse greater confidence and capacity in farmers to do more for themselves and tackle common concerns collectively. This can be nothing but highly beneficial for establishing real grass-roots democracy in Bhutan through vitalizing rural farming communities. The formation of cooperatives has also added a very useful dimension for the convenient delivery of development inputs and services from the Royal Government to communities with local cooperatives serving as essential focal points for specific activities. In time, the wider replication of and a greater diversification of the cooperatives base is likely to provide significant economic opportunities for rural farming communities in the country and act as a major source of social and economic change.

Till such time as when agricultural marketing channels become sufficiently developed, there is the need to establish more local based and commodity specific agricultural marketing boards to help farmers' access markets and secure better prices for their agricultural commodities. While the Food Corporation of Bhutan has served at the national level as the premier agricultural marketing board, their presence has been limited to certain areas and a small range of produce. The country will need more Dzongkhag level and regional marketing boards with specialized areas of focus and a greater level of influence and direction in management from the farmers and producers themselves.

The Royal Government to this end will continue to encourage and support the establishment of more of such producer organization groups and more innovative forms of agriculture such as those detailed above. These activities will also be complemented by efforts to strengthen non-farm enterprises.

With known levels of underemployment in the rural economy, the availability of decent off-farm employment could provide a valuable source of income. This is also an integral part of the process of modernizing agriculture in Bhutan. Many Bhutanese farmers have considerable artisan skills such as carpentry and weaving and possess extensive indigenous knowledge of the cultural and environmental attributes of their areas. The development of local based handicraft industries and the promotion of community or rural based tourism could thus enhance income generating opportunities that could be taken up during the non-farming seasons. Additionally, developing downstream agro/forest-based industries that add value to primary agro-forestry produce collected or grown will also further the income generation possibilities of rural families. Once again the role of cooperatives could be important in actualizing these activities and ensuring its success.

Poverty reduction efforts in the past have been mainly addressed broadly through an expansion of social services, rural development and promoting income generation

activities. While such expenditures have greatly helped to improve living conditions, experience and lessons from the past indicate that poverty reduction efforts also can be better served and complimented through targeted programmes. Targeted poverty reduction interventions will be initiated and implemented over the Tenth Plan and will include relevant programmes for specific areas where the poor reside based on the poverty mapping of the Poverty Survey 2007. These interventions will have tailored solutions given the local specific poverty context and the pressing needs of that community. As limited access to land or landlessness is a defining characteristic of the poorest among the poor, the targeted poverty reductions will also include the distribution of land to the landless and a comprehensive programme of resettlement for the landless or land-poor families to areas where arable and productive land is available.

The development and expansion of rural economic infrastructure such as local markets, farm and feeder roads, irrigation schemes and electricity would also be undertaken as they are vital for stimulating and sustaining a thriving rural economy. In addition to points detailed above, the following includes other strategic measures that the Royal Government will undertake towards synergizing integrated rural urban development for poverty alleviation:

- Encouraging specialization based on regional and local comparative advantages for production of goods and services;
- Implementing holistic and integrated area-based development planning;
- Promoting relevant skills development in the rural labour force;
- Promoting MSMEs (agro and handicrafts/textile based cottage industries) and rural cooperatives;
- Enhancing access to micro-credit;
- Expanding rural economic infrastructure such roads, bridges, irrigation and drinking water schemes, electricity and ICT facilities; and linking to markets and growth centres
- Increasing accessibility to and improving quality of social services and basic social infrastructure;
- Establishment of integrated Gewog centres to improve the delivery of development services at the local level;
- Strengthening local capacity to manage and implement local development plans and participate in political and development processes; and
- Establishment of Community Forests and expansion of commercial harvesting of Non-wood Forest Products (NWFPs).

Box 3.3: Enhancing the Commercial Harvesting of NWFPs

The terms "non-wood forest products" (NWFP) or "non-timber forest resources" (NWFR) broadly refer to natural resources collected from forests apart from timber, fuelwood or similar products. As in many other countries, non-timber forest products play a significant role in the economic and cultural lives of virtually all rural households in Bhutan, even though their commercial value has not yet been taken into account while assessing GDP. Bhutan's NWFP resource base is rich and includes a broad range of products from medicines to dyes, oil seeds and nuts, incense, forest vegetables, fruits and nuts, bamboo and cane, spices, resins and high value mushrooms. Despite this rich and diverse resource base and the recent success story of the rising exports of *cordyceps*, the NWFP sector in the country is still very much in its infancy with its enormous commercial potential barely realized.

An essential and high priority activity for the Tenth Plan will be to expand the commercial harvesting of NWFPs significantly. This is expected to further boost livelihoods and income generation in rural communities, particularly for the poor and landless, thereby reducing rural poverty and emerging as a successful example of the greening of national accounts as envisioned in the Vision 2020. Recent RNR reports and case studies reflect the considerable potential of the sector to significantly decrease under-employment among rural households and raise their returns on labour and investment. While in general, the returns to labour from NWFPs are considerably much higher than existing agricultural wages, the rate of return on investment for harvesting certain NWFP crops such as *cordyceps* and *chirata* work out to as much as 500%, with further scope for enhancement through better harvesting and drying techniques. The highest auction price of *cordyceps* in Bhutan in 2007 touched a record high of Nu. 0.411 million a kilogramme (US$ 10,000 a Kg) with the total official value at Nu. 41.15 million for a total of 140 Kgs sold at the auction. Bhutan's annual production of *cordyceps* is estimated to be around 700 Kgs.

The expansion of commercial harvesting of NWFPs is to be taken to a new level where it is restructured from largely subsistence production to industrial level exports catering to rapidly growing overseas markets. Much of Bhutan's NWFP products will be actively promoted in potential markets with a marketing emphasis on their origins being from among the cleanest and least polluted natural environments in the world and the organic and natural methods of production. This would not just include the exports of raw produce but involve developing a wide array of downstream value-addition processing of NWFP products. This large-scale commercial development of the NWFP sector in Bhutan is envisaged to become an important foreign exchange earner rivalling horticulture exports and gradually make a significant impact on the national economy at large. Additionally, the processes through which this will be actualized will effectively empower the rural poor by promoting self-organization and enterprise development through the development of cooperatives, community level business associations and other necessary support mechanisms.

A key challenge in growing the NWFP sector will be to achieve a sustainable balance between commercial harvesting of NWFPs and ensuring their conservation. There is the real danger that these products could easily be overexploited with the possibility of eradication of endemic plant populations. The lack of knowledge and awareness in local communities about sustainable harvesting methods will need to be addressed through appropriate training in crop handling, storing and drying. More research on various aspects of resource management and market opportunities for NWFPs will also need to be carried out including studies on the prospects of broadening the range of NWFPs harvested. Additionally, adequate resource user rights and arrangements must also adequately be provided for to avoid potential resource use conflicts and that benefits accrue mainly to local communities rather than market intermediaries.

3.5: EXPANSION OF STRATEGIC INFRASTRUCTURE

For a small, land-locked and under-developed economy like Bhutan, the expansion of strategic infrastructure is an absolute requisite for the broader economic and social

transformation of the country. Accelerated and broad based economic development with growth targets set at over 8% is essential to achieving the Tenth Plan poverty reduction targets. Achieving this would clearly be difficult without the proper development of strategic infrastructure that critically serves a modern economy. Moreover, accessibility to strategic infrastructure invariably affects the living conditions and welfare of communities all across the country and determines their livelihood opportunities. Strategic infrastructure investments are thus expected to greatly enhance national productivity and competitiveness and stimulate new businesses while also enriching the quality of life for all Bhutanese. These investments would simultaneously facilitate the achievement of the other Tenth Plan strategic objectives of national spatial planning, furthering integrated rural-urban linkages and increasing access to and quality of social services.

Numerous studies point to the inherently weak strategic infrastructure in the country as a major constraint impeding economic and industrial development. Industrial development is severely constrained by the inadequate road and air transport links to both external and domestic markets. Due to the mountainous and rugged terrain, road transportation costs are high with haulage costs for certain products exceeding the value of the product itself. These high transportation costs combined with the poor reliability of roads due to their vulnerability to landslides and adverse climatic conditions make it extremely difficult for local industries to compete efficiently in producing goods. Transportation also adds considerably to inflate import costs for various commodities, materials and goods needed in the country that not only raises the cost of living but adds immensely to development costs. Similarly, the weak air transport system, including the absence of domestic air services, has proved to be a major bottleneck for the further development of the tourism sector and high value niche exports.

The Royal Government's strategic infrastructure priorities for the Tenth Plan are those that have the greatest potential to multiply and expand economic opportunities in both rural and urban areas of the country. Strategic infrastructure development will also continue to be strongly guided by policy considerations to promote equitable access and reach and alleviate conditions of human poverty. Some of the priority areas of strategic infrastructure development are highlighted in the following.

A good and efficient road and transportation network is highly essential as every aspect of development is predicated on the ability to gain access to goods and services. Investments for upgrading and improving transport infrastructure are vital for the growth and integration of markets and for generating economies of scale, enhancing competitiveness and increasing exports and trade. Moreover, the further extension of road networks in rural areas that link up to market and growth centres is highly necessary for tackling underdevelopment and poverty in rural Bhutan. An important strategic infrastructure target for the Tenth Plan will be to ensure that three fourths of the rural population lives less than half a day's walk from the nearest road-head. The target will be achieved through various activities such as the double-laning, realignment, resurfacing and building of national highways and the construction of

thousands of kilometers of feeder roads, mule tracks, suspension bridges and district roads.

For a landlocked country, the improvement and expansion of air transport infrastructure is also necessary. International air transport activity at present is limited to Paro airport with flight operations into Paro, possible only during the day time under good weather conditions. The existing airport infrastructure at the Paro airport ranging from safety and navigation equipment/structures to passenger and cargo capacity is also deemed inadequate. The Royal Government has also been unable to establish a domestic air service as planned in the Ninth Plan which has severely limited the scope of increasing tourist destinations. To remedy this, domestic helipads are to be developed and the existing infrastructure at Paro airport further expanded and upgraded over the Tenth Plan. The construction of a second international airport in Gelephu will also be taken up in the current plan period on the basis of availability of resources.

With the plan for accelerated hydro-power development being initiated in the Tenth Plan, this will necessitate the further expansion of power transmission lines to improve the grid interconnection between the eastern and western regions. The Royal Government will undertake the construction of a 220 KV transmission line from Tsirang to Jigmeling, further extend a 132 KV tie line from Jigmeling to Gelephu and build a 220/132 KV substation at Jigmeling. The other major transmission line to be undertaken is the 220 KV transmission line from Malbase/Birpara to Samtse. The construction of these power transmission lines will provide electricity for the numerous power intensive industries that are emerging, the industrial parks and communities in these regions.

With the plan for accelerating hydropower development over the Tenth and Eleventh Plan periods, road connectivity to these projects for the efficient and quick transport of required plant machinery, equipment and construction materials could prove a major bottleneck as most of the identified hydropower projects are located in the interior areas of the country. The facilitation of accelerated development of hydropower will therefore require new roads to be constructed, existing highways and roads resurfaced, realigned and widened and bridges built to accommodate 70 ton trucks. The construction of the Manmung-Digala (12 Km) and Halaley-Dorokha (16 Km) roads and the upgradation of the Gelephu-Trongsa (174 Km) and Gelephu-Wangdue (75 Km) highways are planned as high priority activities to facilitate heavy transport access to these project sites. This will be in addition to other spillover road projects from the Ninth Plan period.

A major road infrastructure development priority for the Tenth Plan will be the construction of the Southern East-West Highway, a decision taken in the 82nd session of the National Assembly. The proposed highway will include the construction and upgradation of roads and bridges, beginning from Phuntsholing until Gelephu. The highway will be critical in facilitating industrial development in the southern economic hubs and special economic zones and integrating them more effectively with their

primary markets in India. Additionally, the Southern East-West Highway will also provide an internal transit route for Bhutanese passengers and goods.

The provisioning of rural electricity infrastructure is another key strategic infrastructure priority as it has immense potential for raising rural income and employment opportunities. The availability of cheap electricity for rural communities would accelerate the rural economy through modernizing and enhancing productivity of agricultural activities, cottage industries and various non-farm rural enterprises. This will further allow for better ICT and communication facilities thus preventing the emergence of a rural-urban digital divide. The availability of cheap electricity would also notably help rural communities and households in Bhutan reduce their high consumption of fuel-wood for cooking and heating thereby contributing to conservation of forests and the environment. To achieve these ends, the Royal Government will strongly continue the extensive rural electrification programmes in the Tenth Plan with the target of expanding rural electrification coverage to 84% by the end of 2013. This will help realize the long term national goal of Electricity for All by the year 2020.

The following measures will constitute the essential elements for strategic infrastructure development activities over the Tenth Plan:
Formulating a comprehensive plan (including criteria for provision of infrastructure) for strategic infrastructure development;

- Establishing an institutional and legal framework for promoting public private partnerships for strategic infrastructure development;
- Implementing sustainable mechanisms for developing strategic urban infrastructure
- Enhancing quality assurance and good standards in infrastructure development through stringent supervision and monitoring; and
- Prioritizing investments in and development of rural infrastructure (feeder and farm roads, power tiller tracks, mule tracks, bridges, rural electrification, irrigation schemes, telecommunication facilities) that optimizes linkages with market and growth centres.

3.6: INVESTING IN HUMAN CAPITAL

Human capital here is used in the context of the range of productive skills, expertise, knowledge, qualities and aptitude embodied in labor that increases its potential for economic activity. A common definition is that human capital represents the set of skills and abilities that enhances an individual's value and productivity in the market place. Investments into human capital broadly refer to public and private expenditures made for education, training and health care that enhance human capabilities.

It is widely accepted today that the long term sustainable and successful development of any economy is strongly contingent on the investments made in human capital and that the latter constitutes a non-diminishing source of economic growth. The development experience of Japan, Korea and the Asian tigers clearly illustrate the high relevance of human capital to economic growth, all of whom still continue to maintain very high levels of such investments.

The Royal Government too clearly recognizes human capital as an invaluable investment and asset, especially in the light of its considerable geo-physical constraints and limited resources. Under the Tenth Plan, cultivating and sustaining human capital and further improving on its qualitative aspects, continues to represent a strategic imperative for promoting growth and reducing poverty. The quality and critical mass of human quality that is available to the country will also fundamentally shape Bhutan's long term prospects for engendering a culture of innovation, creativity and enterprise so necessary for enhancing national productive capacities.

With regard to the latter, the Bhutan Poverty Analysis Report 2004 clearly highlights an unambiguous link between weak educational attainments and poverty incidence in the country. The report notably points to a striking finding that a mid-secondary level education is generally adequate to raise an individual out of poverty. The industrial and agriculture sectors in Bhutan have also been chronically plagued by very low levels of labour productivity that are among the lowest in the region. In addition to the adoption of appropriate technology, upgrading human capital is therefore absolutely vital for securing any meaningful productivity gains for rapid and sustained growth in the productive sectors. Additionally, the Royal Government also regards the formation of human capital as crucial from a social perspective in that it also confers wider benefits for Bhutanese society and can contribute to the realization of GNH.

It is in this sense that expenditures for human capital formation must necessarily be viewed as essential long term investments rather than expenses. In Bhutan, related investments into human capital formation constitute among the highest in the world calculated either on the basis of expenditures as a ratio of GDP or as a percentage of the national budget. This to a large extent is due to the fact that the Royal Government has always and continues to provide free basic education and health services to its citizens. The allocation for the education, health and human resource development sectors under the Tenth Plan comprises more than a quarter of the total plan budget. This figure would probably be higher if the various training and capacity building programmes of each of the ministries, district and block administrations and local governments were also included. While this continues the earlier high levels of public investments in developing human capital, renewed efforts will also be made under the Tenth Plan to realize all-round qualitative improvements in tapping this potential, for which there is considerable scope and need.

To provide free basic education for all as enshrined in the Constitution necessarily must be viewed in the context of a more efficient utilization of resources and hence the need for consolidation. Over the years, the Royal Government has rapidly expanded primary education infrastructure and built numerous community primary and primary schools. Such a pace of continued school infrastructure expansion cannot be economically sustained for very long. This has also affected the quality of education provided, particularly in rural areas. The Royal Government under the Tenth Plan will seek to adopt a consolidation strategy. The benefits are that in a country with highly dispersed settlements and population like Bhutan, consolidation can greatly help provide educational services more efficiently and sustainably. More importantly,

effective consolidation will help improve the quality of education by creating a viable base for more specialized educational services and various educational opportunities to be offered to a larger body of students. Teachers can also be offered better incentives including the provisioning of staff quarters and better infrastructure facilities. The process of consolidation will not result in reducing access to primary education or decline in school participation. Boarding facilities will be provided in more remote areas including mid day meals in the day schools and bus services in urban areas. For children of poor families, this will also include providing a living stipend, clothes and other essential necessities.

3.6.1: Striving for Excellence in Education

The popular expression of education as both "the seed and the flower of economic development" emphatically underscores the enormous importance that the Royal Government attaches to education as a strategic means for sustaining growth and ensuring a vibrant democracy as well as a desirable end in itself within the context of the eventual emergence of a progressive and enlightened Bhutanese society. For all these to realistically happen, Bhutan must not only improve its education system on all fronts and significantly upgrade the quality of education on a continuous basis but explicitly and ambitiously strive for excellence in these areas.

While the country has undoubtedly made significant progress in the quantitative expansion of education over the last four decades, this may have come at the expense of quality education. Achieving excellence in education requires inculcating capacities for self-learning and developing student's cognitive, analytical and critical faculties and problem solving skills that help stimulate and lay the foundations for creativity and innovation. This obviously must start from an early stage of a student's education and be reinforced throughout secondary and tertiary levels. The education system in Bhutan is still a long way off that standard and will need considerable reforms to fully achieve these objectives.

To address the above issue, the major theme of the Education Sector for the Tenth Plan is to enhance education quality at all levels. To this end, various programmes and activities are to be initiated towards improving curricula and teaching methodologies, enhancing teaching/learning resources including the use of appropriate class-room technology, strengthening education management systems, promoting literary, art and cultural learning, reducing class size to an optimum teacher pupil ratios, providing relevant life skills and vocational training, encouraging physical education, games and sports and promoting an interest for reading. Additionally, as teacher quality is critical in determining student learning outcomes, several measures will be taken to strengthen teacher workforce, improve their professional qualifications and teaching competence and provide appropriate incentives. The Royal Government will work at developing relevant benchmarks to allow for periodic assessments of quality at all levels of education.

An effective way to develop the quality of local school education would be to introduce and allow establishment of schools that set very high academic standards of excellence, possess first-rate educational facilities including boarding amenities and have the best of teaching staff including expatriate teachers. The setting up of such international standard schools would be done through partnerships between the private sector and foreign investors and they would be allowed to operate slightly outside the national education policy framework including the current capping limitations on education fees for private schools and local curriculum content. The Royal Government will actively encourage and support such developments.

While this would initially help raise the education quality benchmark and meet the education needs for many Bhutanese students who study outside, it could also potentially stimulate the formation of a viable education industry. The country affords a safe, friendly and stable environment for international and regional students and in many ways represents an idyllic environment for academic pursuits. Besides school education, this could include Bhutanese institutions offering a range of education and training courses in thematic subjects closely associated with the global image of Bhutan such as in traditional arts and crafts including painting and weaving, cultural and nature based tourism, environmental and wildlife conservation, etc. The Bhutan Vision 2020 distinctly envisages the eventual emergence of such a situation when it refers to people traveling from around the world to the nation's centres of excellence in the fields of education.

An important aspect of the education strategy for the Tenth Plan will also be to considerably enhance access to vocational education and training through establishing new vocational and training institutes, diversifying and expanding various trainings such as the village skills development and the apprenticeship training programmes. In keeping with the principle of excellence in education, efforts will be made toward ensuring a high quality of vocational education and training through continuous improvements in instructional approaches, curricula development and upgrading instructor competence and professional development. One major strategy to be adopted in the Tenth Plan for the Vocational Education and Training would be to come up with a comprehensive policy that would bridge the gap between the vocational education and the formal system of Education.

It is well known that high quality tertiary education can deliver enormous benefits to national economies by expediting the use and adaptation of innovative and modern technologies and in growing the national stock of human capital. However, due to the primary focus on ensuring basic education for all, Bhutan has not performed so well in furthering the advancement of higher education. The National Labour Force Survey 2006 puts the total number of college educated graduates in the country at 3,300. This translates into the number of college graduates comprising less than a percentage point of the country's entire population and a mere 1.4% of the total labour force, even as their numbers have been increasing significantly each year.

These clearly point to considerable difficulties in enhancing access to higher education. A well known major barrier for college education relates to the high costs, particularly for the many who study in regional or international institutions on their own expenses. Another is the weak academic performance at higher secondary levels that dampens entry into colleges. The Royal Government will focus attention on enhancing access to tertiary education, facilitating transition from secondary education and developing a comprehensive policy for quality tertiary education that will include provisions for private sector participation and engagement. Enhancing the quality assurance and accreditation processes will further constitute an integral aspect of the policy to strengthen higher education. As management education is a critical area of higher education needs, the Royal Government is undertaking programmes to enhance the quality, relevance and coverage of management education and the further development of the Royal Institute of Management.

While formal education constitutes an important stage in the development of human capital formation, it is also highly essential to conceptualize the latter as a lifelong learning process. Lifelong learning is clearly necessitated by the fact that markets and the global environment today increasingly and continually demand a much higher level of skills and knowledge from its workforce. Moreover, in this era of rapidly changing business environment and conditions, knowledge and skills become obsolete very quickly and hence the need to keep upgrading them and to promote learning well beyond the time that individuals leave educational and training institutions. Learning to learn is in itself a highly essential skill and attribute of an individual to participate meaningfully in a knowledge-based society.

Lifelong learning is viewed by the Royal Government as a valuable public good with enormous potential to enrich both individuals and society at large. The Royal Government will place a strong emphasis on promoting lifelong learning through all formal and non-formal education processes as well as through effective human resource development in the public and private sectors. Innovative systems will however need to be devised where learners are provided a flexible and multi-education pathway with multiple entry and exit stages. The Royal Government will in this context study and implement various second chance, distance and e-learning educational opportunities. It must also be ensured that such continuing education programmes will be highly relevant, of high quality and find broad acceptance and recognition within the industry. The Royal Government will further explore and seek to learn from the experience of other countries to improve such continuing education opportunities. At a broader level, efforts and measures will also be initiated to encourage a learning culture and reinforce greater awareness of the imperative and significant benefits of lifelong learning among all sections of Bhutanese society.

3.6.2: Human Resource Development for the Public and Private Sectors

Even as the human resource situation has improved to a great extent over the years, the shortage and quality of human resources continues to be a constraining factor in

all sectors and for various disciplines. It remains particularly acute in the areas of professional and high skilled occupations.

The further expansion of HRD programmes is therefore an urgent imperative over the Tenth Plan for the following reasons. As indicated earlier, this has significant bearing on the strategy to actualize excellence in innovation, creativity and enterprise for enhancing productive capacities. Additionally, most of the educated youths seeking employment are without the necessary skills that greatly limits their employability and their access to quality employment. The provisioning of appropriate training would thus significantly enhance their prospects for quality employment and raise their productivity.

Furthermore, in view of the democratization and decentralization activities, this would help foster greater civil service professionalism and specialization while also enhancing capacity at the center and local government levels. Human Resource Development is also a critical issue for improving private sector capacity and performance. The private sector is particularly constrained by the lack of qualified people in the technical and management areas. The extremely low levels of investments committed by private enterprises for any kind of human resource development in their own organizations combined with the paucity of HRD funds available from development partners for the private sector have been a major constraint.

To help address these human resource constraints and challenges, the Royal Government will implement a major programme to encourage more in-country training through partnership with renowned external training institutes. The ongoing courses developed for executives, managers and supervisors in the civil service will also be continued. Additionally, to improve the efficiency and effectiveness in the civil service, the royal government will institutionalize organization development; establish performance management standards and m&e systems; strengthen recruitment procedures and legal frameworks; and provide an incentive system that rewards excellence at the individual and organization levels. The strategy to maintain efficiency in the civil service will also be realized through retaining an optimum size in the civil service that can efficiently provide quality services. To stimulate private sector development, the Royal Government will actively participate in developing the HR capacities of the private sector through short term trainings. However, the private sector will also be encouraged to spend more of their own resources in developing their own human capital.

3.7: Enhancing the Enabling Environment

Enhancing the enabling environment for equitable and sustainable socio-economic development involves certain prerequisites. These include among other things, the need to ensure stable socio-political conditions and good governance, a rationale that is universally accepted and ubiquitously advocated. Indeed, the notion of good governance is often used synonymously with sound development management, reflecting the enormous significance that good governance has on national economic development as an enabling and positive factor.

For Bhutan, the policy imperatives of consolidating the enabling environment of good governance have an even more special and deeply motivating relevance for the Tenth Plan. It is with the start of the plan period that the country will make its historical transition to a democracy, adopt a Constitution and assume its place among the nations of the world as the youngest democracy. The plan period will therefore be a defining time during which the foundations for the future success of a fledgling democracy and the new system of political governance will be laid. The measure of success that Bhutan has in deeply rooting democracy, establishing relevant institutions and mechanisms and generally, availing of the best that democratic governance offers will fundamentally alter the country's future prospects.

Good governance is also important in the context of accelerating poverty reduction, the major goal and development objective of the Tenth Plan. Various studies clearly highlight the role that good governance plays in enhancing the effectiveness of development assistance. These studies reveal that in countries with effective and sound governance, an additional percentage point of GDP in development assistance translates into an equivalent percentage point decline in poverty and a similar decline in infant mortality. The impact of development assistance for countries with weak governance was correspondingly lower underscoring the pertinent point that returns from development investments are generally higher in countries characterized by good governance. While no empirical studies have been done in the Bhutanese context, the country's performance in scaling up its human development levels in the past in large part has usually been attributed to its sound and effective governance.

Under the leadership of the fourth King, His Majesty Jigme Singye Wangchuck, the people of Bhutan enjoyed an era of visionary and people-oriented leadership. The governance system had also been dynamic, effective, and responsive to peoples' needs. As Bhutan has enjoyed such exemplary governance in the past, measured against this impressive benchmark the country must necessarily adopt the highest standards of governance and not remain content with "good enough" governance. The challenge and task for the Royal Government as such will be to ensure quality and excellent governance in all its diverse aspects to gain the complete confidence and trust of the Bhutanese in democracy. The focus will not simply be on removing governance gaps or tackling issues of corruption but involve a much more comprehensive and proactive approach.

The Royal Government to this end will seek to engender a truly representative, responsive and meaningful democracy; maintain proper and effective checks and balances among various branches of the government; ensure the proper management and best use of public resources; strengthen local governments and decentralization processes; enhance the political capabilities and participation of all Bhutanese; ensure administrative and financial efficiency, transparency and accountability and improve public service management; combat the spread of corruption; promote the role of the media and civil society; and enforce the rule of law wherein law is applied impartially. The notion of efficiency in the context of good governance also applies to the

responsible and sustainable use of natural resources and the conservation of the environment. Similarly, the concept of good governance encompasses not just the government but the private sector too. The Royal Government will therefore continue to attach priority to these two issues and implement relevant activities to strengthen them.

With significant changes expected to come into effect with the adoption of the Constitution and the onset of parliamentary democracy, the Royal Government will be faced with numerous and immediate challenges in ensuring a smooth political transition and institutionalization. These naturally will entail significant challenges, some of which can be anticipated and are detailed in the following sections.

The Royal Government will need to build infrastructure to accommodate the new institutions and agencies that will be required to support the new political system. Offices will also have to be constructed to house the Supreme Court, the National Council and various other constitutional offices, all of which will require large capital investments and that are likely to lead to further increases in recurrent expenditure. In addition to the expansion of the above infrastructure, extensive capacity building will need to be undertaken to support the governance reforms being implemented. The development of human resources to foster greater professionalism and expertise at both the center and local government levels will be critical in this regard. The effective implementation of the position classification system (PCS) in the civil service and the expansion of decentralization activities will require significant numbers of adequately trained personnel. In addition, support is also needed to provide training for the private sector in various technical and managerial areas to further strengthen corporate governance and galvanize it into the desired engine of growth.

With the establishment of various constitutional bodies such as the Anti-corruption Commission, Royal Audit Authority, Election Commission and Supreme Court and in light of the expanded roles for local governments and municipalities, institutional strengthening of these institutions will be highly necessary. The introduction of a new planning framework and the development of effective coordination and monitoring mechanisms will further add to this need to strengthen institutional capacity at all levels of government. Additionally as major changes in the political system are anticipated in a relatively short period of time, financing and establishing effective systems will be required such as developing appropriate ICT systems to enhance coordination. However, setting up such ICT systems and promoting their effective use would require both large investments and basic IT training and familiarization for the public at large.

3.8: TENTH PLAN TARGETS

In consonance with the Tenth Plan's results-based management orientation, some very specific quantitative targets have been set for achievement over the plan period. These plan targets have been set keeping in mind the pace required to attain the Vision 2020 targets, the MDGs and the SDGs. The realization of these Tenth Plan targets would also go a long way towards fulfilling Bhutan's development commitments

to the Brussels Programme of Action for the LDCs adopted at the Third United Nations Conference for the Least Developed Countries in 2001.

3.8.1: Economic and Employment Targets

The Tenth Plan targets a growth rate of 8-9 percent during the plan period with population growth stabilized at an annual average of about 1.3 percent. This exceeds the targeted rates of 7 percent growth over the decade under the Brussels Programme of Action for LDCs. To attain this level of sustained growth for significant poverty reduction, it is expected that the agriculture sector should ideally grow at over 4% while non-agriculture sectors should collectively grow at over 10%.

At these targeted levels of income and population growth, GDP per capita is expected to increase substantially and more than double the present level by the end of the plan period. This level of rapid growth along with a 4.5 percent warranted growth in the agriculture sector would comfortably help Bhutan reduce national poverty levels to less than 15% and rural poverty levels to less than 20%. As national per capita income figures do not necessarily reflect real household incomes as a large part of it accrues as corporate income, an additional income growth target important for rural poverty reduction has been set. The additional target will be to enhance rural household cash income levels to over Nu. 35,000 a year. Other GDP aggregate targets to aim for in the Tenth Plan include enhancing national savings and investment to warranted levels of 40 and 66 percent of GDP respectively, with inflation projected to remain between 5 to 7 percent through the period.

The Tenth Plan will seek to attain and maintain full employment, particularly among educated youth. Every effort will also be made to ensure that youths seeking employment will not remain unemployed for more than a year. These are ambitious targets in the context of expected exponential growths in the number of likely job seekers but can be achieved with ongoing efforts and focused interventions of the Ministry of Labour and Human Resources.

3.8.2: Social and Human Development Targets

The target set for poverty reduction is to bring down the number of people living under the poverty line to 15 percent by the end of the plan. This will require rural poverty to be effectively brought down to below 20 percent. The other important social targets set are to boost the national literacy rates to 80%, lower the infant mortality rate to 20 per thousand, increase life expectancy to greater than 70, achieve a 95 and 96 percent access for safe drinking water and sanitation respectively, electricity service to 84% of the rural population and rural telecommunication expanded to cover all 205 Gewogs with a penetration rate of 15%. Improvements on all these social indicators along with projected income growth are likely to push up the HDI value close to 0.700 by 2013.

A summary of the major development targets for the Tenth Plan are presented in Table 3.1 which also confirm other international development targets that the Royal Government subscribes to.

Table 3.1: Major Development Targets for the Tenth Plan

Economic Growth and Employment Targets	
Average GDP growth rate	8-9%
Agriculture	4.5%
Non-agriculture	10.3%
Ratio of National Savings/GDP (percent)	40%
Ratio of Investment/GDP (percent)	66%
Inflation (percent)	5-7%
Maintain full employment	
Major Social Targets	
Population living below poverty line	15%
Rural population living below poverty line	20%
Enhancing annual rural household cash income to	Nu. 35,000
Sustaining access to safe drinking water	>95%
Access to safe sanitation	>96%
Life expectancy	>70
Infant Mortality Rate (per 1,000)	20
Under Five Mortality Rate (per 1,000)	<30
Maternal Mortality Ratio (per 100,000)	100
Basic Enrolment Rate	near 100%
Net Primary Enrolment Rate	near 100%
Literacy Rate	80%
Population Growth Rate	1.3%
HDI	0.700
Major Physical Infrastructure Targets	
Hydro-power generation capacity	2,705 MW
Rural population with access to electricity	84%
Proportion of rural population living within Half a day's walk from nearest road head	85%
Proportion of population within three hours of a Basic Health Unit or ORC	>90%
Rural Telecommunications penetration rate	15%
Access to ICT services	60%
Establish a Cyber Park	
Establish Industrial Parks, Dry Port and Trade Center	

3.9: THE PLANNING PROCESS AND IMPLEMENTATION MODALITY

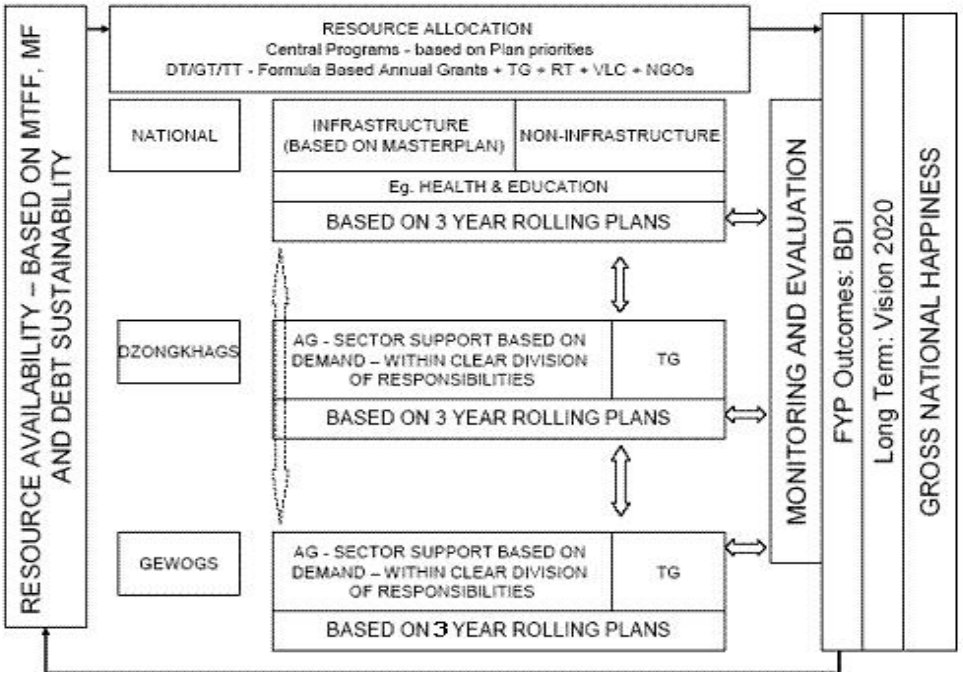
3.9.1: Participatory Planning Approach

The formulation of the Tenth Plan in terms of the consultations and preparatory processes started soon after the completion of the Mid-term Review of the Ninth Plan, i.e. in 2005, a few years ahead of the start of the plan itself. Following extensive deliberations and consultations with various stakeholders, including the private sector and local government bodies across the country, a preliminary set of guidelines were drawn up that contained the core objective, priorities, strategies and resource allocation principles for the Tenth Plan. These policy guidelines also incorporated important recommendations of the MTR and the Good Governance Plus Report. The Guidelines for the Preparation of the Tenth Plan was subsequently circulated to all ministries, agencies, Dzongkhags and Gewogs as the broad policy framework for the formulation of the plan programs.

3.9.2: The Results-Based Planning Approach

On the basis of a critical recommendation from the GG Plus Report of 2005, the Royal Government decided that the Tenth Plan would introduce a new planning framework and accordingly, approved the adoption of the results-based planning framework.

Chart 3.2: THE RBM based NEW PLANNING FRAMEWORK



Results-based planning in essence refers to the context wherein a sector or agency ensures that its processes, products and services contribute to the achievement of clearly stated results, with the latter defined as the effects of a development programme, project or activity. This framework has been incorporated in the planning

process to ensure that the national development planning and the budgeting processes are more dynamic, efficient, responsive and results-oriented and better able to anticipate emerging challenges and imperatives of the socio-political and development context in the post 2008 period.

A new and salient feature of the results-based planning approach is that the actual planning and budgeting time frame for implementing programs and projects will be a three year period rather than five years as was done for past plans. The five-year plans will still continue to provide the medium-term perspective to identify priorities over the plan period and monitor outcomes in terms of measurable goals and targets. The five-year plans though will be operationalized through multi-year rolling plans of three years (1+2) that will be rolled over from year to year based on annual work plans. This is to allow for enhanced predictability and more realistic planning.

The resource envelope will be based on resource projections determined by the Medium Term Fiscal Framework (MTFF). The MTFF provides fiscal projections within a macro-economic framework and accounts for all available resources, indicating the desired level of spending. The resulting fiscal path further reflects the additional resources required in terms of loans, external and domestic, after considering debt sustainability.

The available resources are distributed among the central sectors and agencies with allocations based on the relevance and contribution of proposed programmes to overall national plan objectives and priorities. Resource allocation for local governments, namely the Dzongkhag Tshogdu, Gewog Tshogde and in future the Thromdes, will include the provision of annual grants to be determined on the basis of a rational allocation formula. The criterion for allocating resources to various local governments will be based on several factors such as population, per capita income, poverty incidence, Gewographic area, infrastructure endowment and environmental index. In addition to the annual grants from the centre, local governments will also be able to generate additional resources from rural taxes, locally mobilized resources or contributions and tied grants from sectors.

All plans, at both the central and local levels, will be classified within the infrastructure or non-infrastructure categories. All infrastructure development such as rural electrification, hydropower generation, roads, telecommunication, and industrial estates will be based on Master-Plans to enhance infrastructure planning and priority setting. While these Master Plans will serve as road maps for infrastructure development, the implementation will be undertaken on the basis of the three year rolling plans.

The new planning approach continues to build on the Gewog based planning approach that was adopted and introduced in the Ninth Plan. Planning processes will continue to be further decentralized to provide greater autonomy for sectors and local governments to formulate strategies, select and prioritize activities within their respective annual grants. While allowing for greater planning and fiscal autonomy, the

framework will simultaneously seek to ensure that sectoral plans at the center and development plans of local governments are synchronized to facilitate harmonious progress towards the achievement of important national priorities.

A special aspect of the results-based planning framework is that it requires final outcomes to be defined in terms of quantifiable goals and targets assessed within a five-year context. The overall yardstick designated is the Bhutan Development Index (BDI) which will seek to approximate progress towards GNH – the ultimate objective of Bhutan's development. The BDI will enable decision-makers to assess the pace and direction of development, and help correct imbalances in terms of priorities that will be apparent from the index and shift resources accordingly. The BDI is thus intended as a broad tool to ensure that Bhutan's development truly contributes to the achievement of the country's long term vision and the realization of GNH.

3.9.3: Mechanisms for Plan Implementation

Decentralized and Synchronized Plan Implementation

Following the decentralization policy of the Royal Government, the implementation of planned programs that are within their capacity to implement will be fully decentralized to the Dzongkhags and Gewogs. The central sectoral agencies will provide policy direction and technical support through their network of regional and sub-regional offices and directly to local governments. The revised DYT and GYT Chathrim Guidelines of 2004 clearly provide the nature, scope and extent of administrative and fiscal decentralization of programs and activities to the Dzongkhags and Gewogs from the central agencies. However, as the Dzongkhags and Gewogs currently do not have adequate capacity to plan and manage development programs on their own and given the need for their programs to be in line with the national development goals and objectives, they will be required to abide by the policy directions and technical support from the central sector agencies. The development programs are thus to be synchronized between the central sector agencies and the local governments in a manner that complements rather than duplicates efforts to optimize planning impact and results.

3.9.4: Resource Allocation Mechanism

Resource allocation has been determined on the overall resource availability and based on Medium Term Fiscal Framework (MTFF), macroeconomic framework and debt sustainability. Based on the projected resource availability and the need to enhance local budgets, the Dzongkhags and Gewogs will receive annual grants directly from the Government and this will be determined based on a formula that takes into consideration factors such as Gewographic area, food security as proxy for poverty incidence, population and forest cover as proxy for environmental conservation.

The central sectoral agencies will provide tied grants to the local governments to implement programmes that are required to achieve their national sector goals and objectives. These programmes will be prepared and managed by the central sector

agencies and the local governments will only be requested to implement it just as they do under the current system of carrying out deposit works. The central sector agencies retain the power and responsibility to determine the need, scope and extent of the programmes implemented under the tied grant modality.

On the whole, the plan will be implemented through the Multi Year Rolling Planning and Budgeting System, in which the central and local governments prepare their Annual Plans with additional 2 year projection on program and budgetary targets. The detailed policy and procedures for preparation of the Multi Year Rolling Plan and Budget will be made available to the sectors, Dzongkhags and Gewogs through the guidelines issued by the GNH Commission and the Ministry of Finance.

3.9.5: Monitoring & Evaluation Process

The monitoring and evaluation of the Tenth Plan will be done within the framework of National Monitoring and Evaluation System (NMES). The NMES has been developed by GNH Commission to institute a standardized system for monitoring and evaluation in the country. The NMES consists of two main components the M&E institutional set-up and procedures and a web-based computerized system, the Planning & Monitoring system (PlaMS). This system is expected to be fully operational at the beginning of the Tenth Plan.

The M&E institutional set-up and procedures are described in the M&E Manual. The manual will serve as a guide for ministries, agencies, Dzongkhags and Gewogs in undertaking systematic monitoring and evaluation of their plans and programmes.

The web-based computerized system (PlaMS) is a centralized data collection and management system. It enables real time online data entry, analysis, data storage, and report generation of development programmes and projects. PlaMS will be integrated with the Multi-Year Rolling Budget System which is being developed to ensure efficient and effective coordination in planning, budgeting and monitoring.

The M&E Manual prescribes four levels of M&E: a) Gewog level, b) Dzongkhag level, c) Ministry/Agency level, and d) National level. There shall be systematic linkage between the four levels for reporting, review and communicating the feedback.

At each level, an M&E Review Committee shall be instituted as a reviewing and decision-making body for issues related to development policies, programmes and projects. An M&E Coordinator or focal point at each level shall be appointed for undertaking monitoring and evaluation at the designated levels and supporting the review committees. The concept of Mobile M&E Team will be introduced in the Tenth Plan whereby a multi-disciplinary team will be formed by the GNH Commission in collaboration with the line ministries and agencies. The team will undertake regular field visits to monitor and assess the implementation of development programmes and projects and recommend solutions for reorientation and reprioritization of plans to the Government.

As iterated earlier, the Tenth Plan will also move away from traditional process monitoring to results-oriented monitoring and evaluation which places greater emphasis on assessment of impacts. The GNH Secretariat will review the performance of plans through Mid-Term and Terminal Reviews. It will also conduct periodic evaluations based on indicators of the Bhutan Development Index and various plan targets in collaboration with relevant stakeholders. The lessons and recommendations of these evaluations will then be used as guidance for the reorientation and reprioritization of five year plans and updating the long term plans such as the Vision 2020.

Table 3.2: An Overview of The M&E Institutional Set-up

M&E Level	M&E Review Committee	Review Members	M&E Coordinator/ Focal Point	Focus of M&E
National	GNH Commission	GNH Commission Members. Chaired by Prime Minister	GNH Commission Secretariat	Outcomes, Impacts
			Department of National Budget (Ministry of Finance)	Expenditure performance at Output level
Ministry & Agency	Policy & Planning Committee	Heads of Departments or equivalent. Chaired by Minister or Head of Autonomous Agency	Policy and Planning Division	Outputs, Outcomes, Impacts
Dzongkhag	Dzongkhag Tshogdu	Dzongkhag Tshogdu Members, Dzongda, Planning Officer & Sector Officers. Chaired by DT Chairperson	Dzongkhag Planning Unit	Activities, Outputs
Gewog	Gewog Tshogde	Gewog Tshogde Members, Gewog Sector Staff. Chaired by GT Chairperson	Gewog Administrative Officer	Activities, Outputs

CHAPTER 4: MACRO-ECONOMIC DEVELOPMENT OUTLOOK

4.1 INTRODUCTION

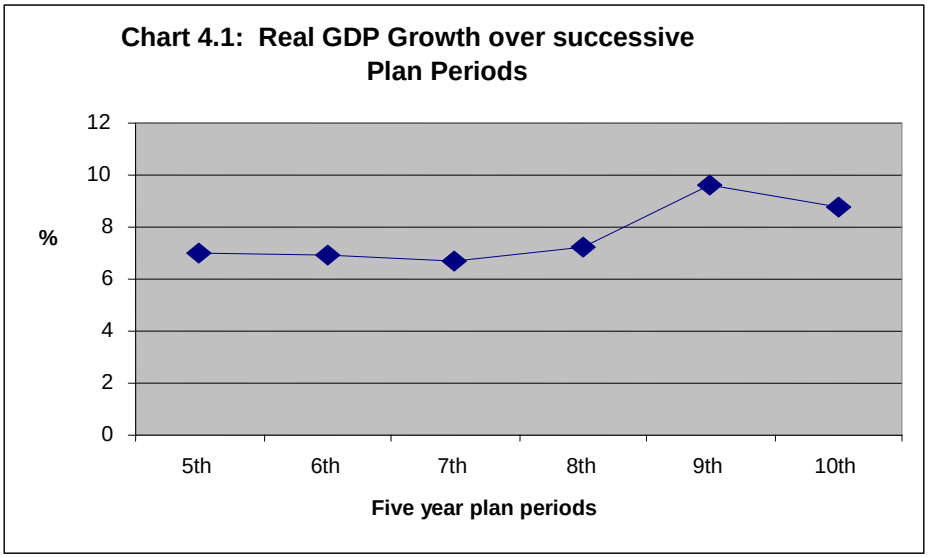
The Tenth Plan will ensure a strong and stable macro-economic framework within which the planned socio-development activities will be implemented to achieve its core objective of poverty reduction. The Royal Government will continue to manage public finances in a highly prudent and proficient manner and will generally address this through enhancing domestic revenue to become more self-reliant, managing expenditures effectively, maintaining a healthy overall balance of payments position, implementing appropriate fiscal and monetary policies to contain inflation, and keeping deficits and debt burdens at sustainable levels. The results based management approach incorporated within the Tenth Plan planning and budgeting framework and specifically the medium-term fiscal framework should also greatly help increase the efficiency and rationalization of resource allocations and plan expenditures.

With poverty reduction as the over-riding objective of the Tenth Plan, the plan strongly emphasizes the imperative for a strategic pro-poor growth approach. In this context, accelerated economic growth during the plan period will be complimented by a further strengthening and amplification of the Royal Government's strong redistributive social policies and activities. The Tenth Plan prioritizes the expansion of infrastructure and road connectivity in rural areas where most of the country's poor live. The strengthening of agricultural production and productivity to help raise rural incomes and improve household food security is another critical dimension of the Tenth Plan. Moreover, special attention will be paid within the Tenth Plan development framework to address the urgent need to create quality employment, particularly for educated youths.

These are not merely articulated as important principles and strategic priorities but have clearly determined the basis of the Tenth Plan's resource allocations and investments. For instance, the social sector easily absorbs the largest share of the capital outlay, accounting for around 24 percent of the capital outlay and the agriculture sector continues to receive around 10 percent of the capital outlay.

4.2 MACRO-ECONOMIC OUTLOOK FOR THE TENTH PLAN

On the basis of preliminary projections, GDP is anticipated to grow by 8-9 percent through the plan period. The GDP forecast is based on more than hundred percent increase in total outlay for the 10th FYP as compared to the previous plan period followed by consistent growth of the three sectors. In order to reduce the poverty rate of 23.2% from the baseline year in 2007 to below 15% in 2013 in keeping with the MDG and SDG poverty reduction targets, it is projected that a growth levels of around 9% over the Tenth Plan period is required.



The projected growth rate of 8-9% in the Tenth Plan is close to the warranted growth rate and it can be said that poverty reduction target is achievable. The focus of the plan will be to stimulate a faster growth in the productive sectors, particularly agriculture and industry, to a higher rate than achieved in the past in conjunction with continued investments into further development of the hydro-power sector.

As in past plans, the major stimulus for growth will come from the energy and construction sectors with the peaks in GDP growth coinciding with the start of construction of planned hydropower projects and their commissioning. However, if the country is to achieve the levels of targeted poverty reduction, real GDP will be required to grow at around 9%, with warranted growth levels of 4.5% in the agriculture sector.

4.3 SECTORAL GROWTHS

The agriculture, livestock and forestry sector is projected to grow by about 3.4% per annum. This increase in the growth of agricultural output is particularly attributable to i) the increase in total outlay in the sector and ii) the increase in the labour productivity from an average of 3% in the Ninth Plan period to projected average growth rate of 4.3% in the Tenth Plan period. On the basis of these growth levels, the contribution of the agriculture, livestock and forestry sector will amount to 16% of GDP.

The manufacturing sector is projected to grow around 14% over the plan period broadly in line with Ninth Plan growth levels. The electricity and construction sectors, both largely boosted by hydro-power development, are expected to grow at 12% and 11% respectively. Collectively, the industrial sector comprising the above three sectors is envisaged to grow at around 10.3% per annum over the plan period, a percentage point slower than the pace maintained over the last five years. At the end of the Tenth Plan period, industry will account for around 47% of GDP. The service sector collectively is anticipated to grow at 9%, with the fastest growth rates in the transport and communication sectors at around 12%.

4.4 BALANCE OF PAYMENTS POSITION

As imports are expected to continue to grow faster than exports, the overall trade balance as in previous years is expected to result in an average annual trade deficit of around Nu. 12.3 billion or around a quarter of GDP. As expected, the majority of the country's exports will be comprised of electricity. Imports once again will be driven primarily on account of machinery and equipment purchases for the planned hydro-power projects. The overall balance of payment position though is likely to be positive over the plan period but will depend a great deal on the extent of external resources that are available.

Table 4.1 Macro-Economic Growth Projections by Activity

	Ninth Plan	% Share of GDP 2006	Annual Sectoral Growth					Tenth Plan
			2008-09	2009-10	2010-11	2011-12	2012-13	
Real GDP Growth (%)	9.6		8.8	8.8	9.1	8.2	8.9	8.8
Agriculture, Livestock & forestry	2.2	19.1	2.4	3.6	3.5	4.0	3.3	3.4
Mining		1.3	14.5	13.4	13.7	12.0	12.5	13.2
Electricity	25	19.8	13.1	12.1	12.4	10.7	11.3	11.9
Construction	11.8	17.7	11.8	11.1	11.4	9.8	10.3	10.9
Manufacturing	5	6.1	6.8	5.7	5.7	3.9	4.1	5.2
Trade, Financial & Other related services	11.5	12.3	11.9	12.4	12.6	11.8	13.1	12.3
Public Administration & Social Services	14	11.6	4.1	4.4	4.5	3.6	4.6	4.2
Transport & Communications	9.6	9.1	8.2	8.7	9.1	8.4	9.7	8.8

The Tenth Plan will witness an enormous rise in recurrent expenditure trends and high debt servicing costs that could potentially affect the overall balance of payment situation. The fiscal deficit is projected to be maintained at below 5% of GDP through the plan period and will be financed through a prudent mix of external and domestic borrowings.

4.5 DEVELOPMENT OUTLAY AND PUBLIC FINANCE PROJECTIONS

4.5.1 Tenth Plan Outlay

The total development outlay for the Tenth Plan is presently estimated at Nu. 141.692 billion. Of the total development outlay, Nu.62.06 billion has been allocated for current expenditures and Nu. 79.63 billion for capital investments. As in past plans, the major investment projects for hydro-power development such as the Punatsangchhu and the Dagachu are not included within the budget framework of the current plan.

Domestic revenues including other receipts are expected to be sufficient to fund only around 46.3% of the total plan outlay or around Nu. 65.6 billion. While Bhutan has become increasingly more self reliant over successive plan periods in being able to meet a larger share of its development expenditures, the country will still require external assistance grants of around Nu. 56 billion to help meet its capital expenditures in the Tenth Plan. The details of projections of public finances are provided in Table 4.2.

Table 4.2 Projections of Public Finances for the Tenth Plan

	2008/09	2009/10	2010/11	2011/12	2012/13	Total
Domestic Revenue	12,332.000	12,459.000	12,749.000	12,889.000	15,143.000	65,572.000
External Resources (grant)	8,963.234	10,083.638	11,204.043	12,324.447	13,444.851	56,020.213
Total Revenue with Grant	**21,295.234**	**22,542.638**	**23,953.043**	**25,213.447**	**28,587.851**	**121,592.213**
Recurrent Expenditure	11,140.300	11,600.800	12,087.900	12,582.200	14,649.000	62,060.200
Capital Expenditure	12,741.122	14,333.762	15,926.403	17,519.043	19,111.683	79,632.013
Total Expenditures	**23,881.42**	**25,934.56**	**28,014.30**	**30,101.24**	**33,760.68**	**141,692.21**
Net Lending	-1,710.446	-1,545.284	-1,601.753	-1,611.154	-1,631.363	-8,100.000
Total Expenditures + Net Lending	**22,170.98**	**24,389.28**	**26,412.55**	**28,490.09**	**32,129.32**	**133,592.21**
Overall Fiscal Position	**-875.742**	**-1,846.640**	**-2,459.507**	**-3,276.642**	**-3,541.469**	**-12,000.00**
Financing	**875.742**	**1,846.640**	**2,459.507**	**3,276.642**	**3,541.469**	**12,000.00**
Project tied loans, Net	-347.120	-254.760	-352.400	-188.040	-39.680	-1,182.000
Repayment of Debt Principal	1,854.000	1,950.000	2,236.000	2,260.000	2,300.000	10,600.000
Project-tied External Borrowing	1,506.880	1,695.240	1,883.600	2,071.960	2,260.320	9,418.000
Resource Gap	**1,222.862**	**2,101.400**	**2,811.907**	**3,464.682**	**3,581.149**	**13,182.00**
Fiscal Deficit (% of GDP)	1.50%	2.78%	3.30%	3.93%	3.75%	3.05%
Resource Gap (% of GDP)	2.09%	3.17%	3.78%	4.16%	3.79%	3.40%

4.5.2 Resource Allocations for the Tenth Plan by Sector

The Tenth Plan sectoral development budget allocation is reflected in Table 4.3. The detail plan resource allocation by agencies and sectors, presented in Table 4.4, reflects the national priorities articulated in Chapter 3. The share of the budget allocation for the agriculture sector in the Tenth Plan remains same at around 10% as in the Ninth Plan. This is in keeping with the macro-economic policy of sustaining the growth in agricultural sector to help reduce rural poverty to targeted levels. The social sector budget has been maintained at past levels and constitutes around 24% of the total outlay. As such the overall pro-poor expenditures of the Tenth Plan continue to be maintained at high levels.

Table 4.3 Tenth Plan Development Budget Allocation (in Nu. Millions)

Sector	***Current***	***Capital***	***Total***	***%***
Economic Services				
Agriculture	6193.60796	7947.2749	14140.88286	9.98
Trade, Industries & Energy	3748.43608	4809.77359	8558.209665	6.04
Transport, Communications & Public Works	12747.16508	16356.4155	29103.58055	20.54
Labour & Human Resources	1011.58126	1298.00181	2309.583072	1.63
Social Services(Health and education)	14652.41322	18801.1183	33453.53149	23.61
General Public Administration & Services	16203.91822	20791.9186	36995.83681	26.12
Others				
Debt Servicing	5622.65412	7214.66038	12837.3145	9.06
Common Public Expenditure	1880.42406	2412.84999	4293.274054	3.03
Total	**62060.2**	**79632.013**	**141692.213**	**100.00**

4.5.3 Financing of Tenth Plan Outlay

Domestic Resources for the Tenth Plan

Continuing with the healthy trend of growing self-reliance for financing development activities in the country, domestic resources will fund an ever larger share of the development outlay. For the Tenth Plan, domestic resources will contribute to around 46% of the total plan outlay and this may be compared to the past plans for which domestic resources were only sufficient to fund around 30% and 40% over the Eighth and Ninth Plans.

Table 4.4: Resource Allocation by Sector

Sl No	Sector	Plan Outlay (Nu. Million)			% of Total
		Current	Capital	Total	
A	**Automous Agencies**	**9058.541**	**13509.971**	**22568.512**	**15.93**
1	His Majesty's Secretariat	107.124	100.000	207.124	0.15
2	Secretariat of His Majesty the Fourth King	40.421	100.000	140.421	0.10
3	National Assembly of Bhutan	175.952	60.865	236.817	0.17
4	Royal Advisory Council (National Council)	71.53	29.061	100.591	0.07
5	Cabinet Secretariat (Prime Minister's Office)	165.008	24.975	189.983	0.13
6	Judiciary (including Supreme Court)	566.786	730.8	1297.586	0.92
7	Royal Audit Authority	341.481	53.555	395.036	0.28
8	Election Commission of Bhutan	673.005	53.5	726.505	0.51
9	Anti Corruption Commission	56.516	56.3	112.816	0.08
10	Royal Civil Service Commission	139.96	4595.626	4735.586	3.34
11	Office of the Attorney General	46.198	10.12	56.318	0.04
12	Council of Ecclesiastical Affairs	1183.155	480.446	1663.601	1.17
13	National Environment Commission	107.23	84.15	191.38	0.14
14	GNH Commission	91.004	1349.178	1440.182	1.02
15	National Statistical Bureau	93.781	36.79	130.571	0.09
16	Royal University of Bhutan	1567.749	2387.489	3955.238	2.79
17	Royal Institute of Management	129.555	275.05	404.605	0.29
18	Centre for Bhutan Studies	62.995	11.59	74.585	0.05
19	Bhutan Narcotic Control Agency	10.2	85.403	95.603	0.07
20	Bhutan Olympic Committee	161.932	150	311.932	0.22
21	Bhutan Broadcasting Service Corporation	0	406.779	406.779	0.29
22	National Land Commission	424.809	384.053	808.862	0.57
23	National Commission for Women and Children	10	57.896	67.896	0.05
24	Dzongkha Development Commission	85	39.05	124.05	0.09
25	Royal Bhutan Police	2747.15	1947.295	4694.445	3.31
B	**Ministries**	**21565.84**	**51122.042**	**72687.882**	**51.30**
26	Ministry of Agriculture	4421.748	3099.421	7521.169	5.31
27	Ministry of Education	1945.778	7451.947	9397.725	6.63
28	Ministry of Finance	2060.609	1466.747	3527.356	2.49
29	Ministry of Foreign Affairs	1429.798	130.76	1560.558	1.10
30	Ministry of Health	3570.418	4469.721	8040.139	5.67
31	Ministry of Home and Cultural Affairs	3830.136	1701.405	5531.541	3.90
32	Ministry of Information and Communications	666.393	5709.97	6376.363	4.50
33	Ministry of Labour and Human Resources	689.974	1599.074	2289.048	1.62
34	Ministry of Economic Affairs	1054.016	7425.35	8479.366	5.98
35	Ministry of Works and Human Settlement	1896.97	18067.647	19964.617	14.09

C	**Others**	**17375.336**	**0**	**17375.336**	**12.26**
36	Debt Serving-Interest/Principal Payment	12720.814	0	12720.814	8.98
37	Common Public Expenditure	4654.522	0	4654.522	3.28
I	**Total for Autonomous Bodies and Ministries**	**47999.717**	**64632.013**	**112631.73**	**79.49**
II	**Total for Dzongkhags**	**13324.05**	**10500**	**23824.05**	**16.81**
III	**Total for Gewogs**	**736.433**	**4500**	**5236.433**	**3.70**
IV	**Total for Dzongkhags and Gewogs (II+III)**	**14060.483**	**15000**	**29060.483**	**20.51**
	Grand Total (I +IV)	**62060.2**	**79632.013**	**141692.213**	**100.00**

Revenues are projected to grow at around 6% a year over the plan period at about the same rate of growth in recurrent expenditures in keeping with the fiscal policy of meeting such expenditures from domestic resources. The total domestic resources that are likely to be available for the Tenth Plan are projected at Nu. 65.6 billion, which is higher than the expected recurrent expenditure costs. Of this, 45.6% will derive from tax revenues most of which will come from corporate taxes and the 54.4% from non-tax revenue.

External Resources for the Tenth Plan

The development financing needs of Bhutan has been increasing rapidly over the plan periods. The capital outlay of the plan is about 56.2% and current outlay is about 43.8%. As in the previous plans, the RGoB's policy of at least meeting current outlay from its domestic revenue will be pursued.

Of the total capital outlay of Nu. 79.6 billion, external resources of around Nu. 66.4 billion is expected to be mobilized through grant and loans leaving a resource gap of Nu. 13.2 billion. With end of the grace periods for most of the loans and with the commencement of loan repayment for Tala Hydro Power Project, the debt-servicing burden has increased considerably and the net resource flow of external borrowings is projected to be negative.

The fiscal deficit and the resource gap as percent of GDP will average around 3.05% and 3.4% respectively. The RGoB will make every effort to contain the fiscal deficit under 5% of GDP.

Debt Situation

The financing for construction of hydropower projects has led to the increase in debt over the past decade. The debt is further expected to grow during the Tenth Plan and beyond as construction of few more major hydropower projects are planned during the plan period.

Although, pipeline hydropower loans will add to the debt stock considerably, the hydropower projects themselves will be able to service the debt and will not tax on to the government revenue for debt servicing.

The external debt to GDP ratio during the Tenth Plan period is projected to be around 65%.Debt service ratio is projected to be around 13% during the plan period which is around 7% higher than the Ninth Plan. The increase in the debt service ratio is mainly due to the commencement of debt servicing for Tala Hydropower Project.

The debt management policy of the government continues to be very cautious, focusing on the concessionary loans by and large for social sector. For projects that are economically and financially viable like the hydropower projects, loans are contracted at commercial terms.

CHAPTER 5: CROSS-CUTTING DEVELOPMENT THEMES

This chapter outlines the centrality of the following cross-cutting development themes in the attainment of national development objectives. While there are several other critical themes that could also be considered, these are regarded to be particularly pertinent for the Tenth Plan period in view of their all-round importance and relevance across all sectors and given the context of the introduction of democracy in the country. The important cross-cutting development themes identified through the consultative planning processes were decentralized governance, employment, women in development, information and communications technology, environment and HIV/AIDS. The Chapter highlights the specific relevance of these themes, assesses their general policy environment, identifies the particular constraints and challenges and outlines the various strategic initiatives that the Royal Government will undertake to address these pressing issues over the plan period.

5.1 DECENTRALIZED GOVERNANCE

5.1.1 Introduction

Since the start of the 5th Five Year Plan in 1981, the Royal Government has actively pursued a proactive policy of devolving institutional powers to govern and promoting participatory development at local levels. The broad rationale underlying the Royal Government's decentralization and participatory development initiatives has been based on the conviction that the meaningful engagement of communities in decision-making, planning and implementing development activities are highly essential and relevant towards strengthening good governance and securing equitable socio-economic progress at local levels all of which support the vision of Gross National Happiness. Decentralization has also been deemed a deeply integral part of the democratization processes initiated under the visionary leadership of the country's fourth monarch, His Majesty King Jigme Singye Wangchuck. As such, the Royal Government has actively promoted decentralization with the twin purposes of empowering people and ensuring balanced, equitable and sustainable socio-economic development.

The major milestones in implementing decentralization in the country include the formation of the DYT and GYT development committees in Dzongkhags and Gewogs in 1981 and 1991; the creation of autonomous municipal city councils or Thromdes with elected representatives in Thimphu and Phuentsholing in 1999; the ratification of the DYT and GYT Acts 2002; the election of Gups based on adult franchise and their appointment as Chairpersons of GYTs in 2002. The Gewog-based planning approach launched in the 9th FYP constituted another critical milestone in strengthening decentralized governance in Bhutan. More recently, the National Assembly passed the Local Government Act 2007 which translates the important constitutional principle of decentralized governance into law and mandates the formation of local governments for the development, management and administration of areas under their jurisdiction.

Although local level administrative autonomy has been considerably enhanced and the concept of democratic and decentralized governance formally enshrined under Article 22 of the Constitution, the process of decentralization in the country is not entirely complete. Efforts to implement the final aspects of decentralization will need to be undertaken within the Tenth Plan period. The elements of final decentralization will include the introduction of rationalized discretionary grants for all local governments based on a formula that takes into consideration factors of population and area, food security and natural environment. The modality and specifics of the sharing of resources and revenue between the central and local governments are treated later in greater detail in the resource allocation mechanism section.

5.1.2 Opportunities and Challenges for Effective Decentralized Governance

The introduction of parliamentary democracy in Bhutan from 2008 provides a special opportunity to fully consolidate the gains of decentralized local governance and enhance prospects for Bhutan's fledgling democracy. The new political environment will facilitate a greater plurality of actors participating in national and local governance that will help promote greater transparency, accountability and efficiency in public service delivery and implementation of development activities at both the national and local levels. Additionally, there is a stronger likelihood of local level interests and concerns being more effectively represented in national decision-making that could determine equitable development outcomes in regions and local communities. Moreover, the success or failure of local governments and decentralized governance processes in turn will considerably influence the course of democracy in Bhutan and how effectively it takes root.

In conjunction with the inception of democratic governance, the Royal Government has been creating a strong enabling environment for effective decentralized governance through local governments. These include the streamlining of the financial systems and regulations, introduction of the multi-year rolling budget, the piloting of annual and tied block grant systems and the implementation of the organizational development exercises and civil service reforms that will help enhance the prospects for improved public service delivery.

Another significant opportunity that decentralized governance provides in the context of the Tenth Plan is the opportunity it provides for poverty reduction. While decentralization has not been effected for the sole purpose of poverty reduction, nevertheless, the institutions and mechanisms it establishes can lead to improved delivery of basic services for the poor, engage the poor and marginalized sections of society through grass-roots participatory planning and implementation of appropriate development activities and provide opportunities for the poor to express their needs and preferences, all of which can significantly help to address poverty issues. With central governments being more focussed on national level issues, it is expected that local governments can and will provide such services more efficiently, effectively and in accordance with the needs and preferences of the poor. Local governments will

also play an important role in helping implement targeted poverty programmes in local areas even as these are administered centrally.

Decentralization also provides the conduit towards accelerating progress towards achieving the MDGs, enhancing human development outcomes, better conservation of natural resource management, all of which ultimately contributes towards realising the vision of Gross National Happiness. Hence, at all levels decentralization offers opportunities to address issues at local levels.

Clearly, the significant opportunities iterated above for enhancing decentralized governance are coupled with critical challenges. The major challenges that has chronically affected the pace and quality of decentralization in the country has been the weak institutional and human capacity at local levels; the meagre and inadequate resource base of local economies and institutions; and the cumbersome and bureaucratic administrative systems and procedures that have hampered the efficiency and effectiveness of local administration.

The Constitution and Local Government Act confer a wide range of important duties and responsibilities to local governments. In order for local governments to shoulder their new roles and responsibilities effectively and discharge their assigned critical functions ably, the existing capacities of local governments and institutions will have to be enhanced considerably. The Royal Government fully recognizes that the institutional capacity building and human resource development at local levels will be an immensely critical factor determining the success that local governments will enjoy in carrying out their functions and responsibilities. Achieving this will require improving the quality and numbers of administrative and technical staff in Dzongkhags and Gewogs, which in the past has been hampered by the reluctance of civil servants to serve in rural areas and the tendency of line Ministries and agencies to retain their most qualified personnel in the centre. As such there will be a need to develop attractive financial and promotion incentives to attract talented and competent staff to work in Dzongkhags and Gewogs.

5.1.3 Operational Framework for Local Governments in the Tenth Plan

Whilst the overall goals and objectives at National level will provide an encompassing framework for the 10th FYP, setting specific objectives for local governments will facilitate a more strategic approach. The following are the objectives for Local Governments:

- Poverty Reduction
- Enhanced Democratic Local Governance
- Effective and Efficient Service Delivery.

5.1.4 Strategies for achieving the objectives

Supporting Greater Autonomy in Development Planning

The Tenth Plan shall see greater autonomy in the way Local Governments plan and manage their development programmes. This will manifest in a new Inter Governmental Fiscal Transfer mechanism i.e. the Annual Block Grant System; which allows for better and predictable development programming, thereby facilitating more responsive, realistic and meaningful planning and budgeting exercises. (See table for formula of Annual Block Grants). It has shown to also build greater participation, ownership and transparency of local development programmes. Local Governments shall also receive Tied Grants to localize specific objectives and targets of National Government pertaining to its national and international obligations.

The Framework on the Assignment of Functional and Financial Responsibilities of Local Governments will provide clear cut guidance in terms of the division of responsibilities between Central and Local Governments and help avoid duplication of roles between various levels of government. The annual grants that Local Governments receive will be decided commensurate with the extent of responsibilities outlined in this Framework.

The new Budget Policy and fiscal framework are also new initiatives to be introduced for strengthening the planning and budgeting system of the RGoB.

Targeted Poverty Reduction Interventions

With the un-reached and poor being harder to reach, the regular system of development programming will not be able to effectively target poverty reduction directly. This will require precise interventions and programmes targeted to reduce poverty in the specific areas where they exist. Activities that enhance sustainable and productive livelihoods such as shift from subsistence to market oriented farming, ensure food security and sustainable utilization of the non-wood forest products will receive priority under this strategy. To enhance the participation of the poor, special efforts will be made to ensure their inclusion in the decision making process.

Capacity Development

Capacities shall be enhanced through trainings, peer learning, on the job trainings, mentoring etc. for better planning, public expenditure management, conservation of natural resources and monitoring of their development programmes. The Integrated Capacity Development Plan will provide the framework for all capacity related activities. Local Governments will also require support in terms of increase in the quality and quantity of staff through incentive packages for staff of Local Governments and greater autonomy in human resource management and development. Other interventions could include up-scaling of best practices, building networks and strengthened monitoring. Additionally, use of Information Technology and Multimedia

for greater reach and sustainability of the training programmes shall be capitalized on wherever possible.

Strengthening the Institutional Framework

The Draft Constitution, the Local Governments' Act, 2007 and the DYT and GYT Chathrims, 2002 provide the legal and institutional framework for the Local Governments. The DYT and GYT Chathrims, 2002 will be reviewed and revised in line with the Draft Constitution and the Local Governments' Act.

Drawing upon the legal and institutional settings, the regulatory and operational framework for Local Governments will be reviewed and revised wherever required. In collaboration with all stakeholders, the decision making and implementation procedures and processes will be constantly reviewed to ensure greater efficiency, effectiveness, accountability and participation of the local communities and beneficiaries, especially the poor and vulnerable sections of the communities. This includes setting service standards and benchmarks for most used services.
Pilot programmes to strengthen transparency and accountability will also be implemented, which will be up-scaled based on lessons learnt and best practices.

Improved Monitoring and Technical Backstopping

Given that the Tenth Plan operates on a results based management framework, the monitoring and evaluation of local development programmes takes on an even greater significance. Local Governments shall be largely responsible for the progress and performance monitoring of the planned development activities and this shall be done in accordance with the National Monitoring and Evaluation Manual of the GNH Commission.

Using this system as the tool to track progress at the local level, support in terms of technical expertise and other resources shall be provided to Local Governments in a strategic manner. It may take the shape of mobile teams that have local development and other specific skills to provide on-site guidance and information.

Policy Dialogue and Coordination at Central Level

In conjunction with the efforts aimed specifically to support the Local Governments, there will a continuous dialogue and coordination with central level agencies to facilitate good governance and public administration reform that supports local autonomy. Activities shall include research and documentation of best practices, advocacy, access to information and provision of forums for better coordination amongst agencies. In the long term, the objective is to facilitate a move towards institutional restructuring where central agencies' roles are limited to policy formulation, oversight, regulation and coordination.

Box 5.1 Resource Allocation Mechanism

The objective of introducing a Resource Allocation Mechanism is to have an objective, unbiased and systematic method of allocating resources equitably. Resources will be allocated based on a formula with local governments enjoying full autonomy over the use of annual grants within the overall national policies and guidelines especially the Framework of Functional and Financial Assignments for Local Governments. The total resources earmarked for Local Governments will be assigned on a 60:40 ratio between Dzongkhag and gewogs respectively. Tied Grants will be allocated by central agencies for the sector specific utilization.

The formula for resource allocation to local governments will be based on the following four factors with varying weightage assigned to them. It may be noted that the criteria will be refined and changed over time as the development situation changes and the information on which the criteria are based become more detailed and disaggregated.

- **Population**: The population factor will be calculated based on actual residency and not the number of people registered. The 2005 Population and Housing Census is source of data. From the overall resource envelope, 70% weight age will be assigned for population with local governments administering to larger populations receiving a higher share of resources.

- **Food Security:** Local Governments that administer regions with poor food security will receive higher allocation of resources. Food security has been taken as a proxy indicator for incidence of poverty. 15% of the total resource envelope will be allocated to factor in the local food security context. This data shall be sourced from Bhutan Living Standard Survey, 2007.

- **Environment**: In order to incentivize conservation of environment, Local Governments that manage and maintain a richer natural environment particularly in terms of forest cover will be rewarded with higher allocations. Based on an environment index, 10% of the resource envelope will be provided to Local Governments. The source of this data is the Ministry of Agriculture.

- **Gewographic Size**: The Gewographic size and area will also be a determining factor for resource allocation with 5 % of the resources devoted to it. Data for this criteria will be sourced from the National Land Commission.

However, for judicious utilization of resources within the overall national policies, local government will be guided by the Annual Block Grants guidelines, DYT and GYT Chathrims, and the Framework on the Assignment of Functional and Financial responsibilities for Local Governments.

5.1.5 Financial Outlay for the Local Government

The local government will receive a tentative capital outlay of Nu. 15 billion in the form of annual grants over the Tenth Plan period. This total capital allocation constitutes an increase of about 61% over the Ninth Plan.

5.2 EMPLOYMENT

Any practical plan for accelerated poverty reduction and expanding human capital must intelligently and urgently address the issue of employment as it offers the poor an escape route out of their poverty and an opportunity to enhance their human capabilities. Given that poverty reduction constitutes the main objective of the current plan, the creation and promotion of quality employment opportunities is an extremely high priority and a vitally important thrust area for the Tenth Plan. Over the Tenth Plan, modest projections indicate that close to 93,000 jobs will have to be created – which is slightly more than the total number of people employed in the formal sector at present and thus constitutes an enormous challenge. The inability to absorb a large part of new entrants into the labour market in decent jobs would effectively constitute a gross underutilization of human capital resources and foster an unhealthy social environment in future.

While employment will primarily have a sectoral focus through development programmes implemented by the Ministry of Labour and Human Resources, it will also be addressed as an important cross-cutting theme. To this end, all possible avenues will be explored to ease the growing unemployment situation, particularly among educated youth, and all sectors will assist actively in addressing this national concern collectively.

5.2: RECENT TRENDS IN THE EMPLOYMENT AND UNEMPLOYMENT SITUATION

Over the Ninth Plan period, the labour force participation rate grew from 56.5% in 2001 to 67% in 2007(BLSS 2007,NSB).The labour force has been growing incrementally faster than employment which translated into the increase of open unemployment. In 1999, national unemployment was estimated at 1.4% and it has increased to 3.7% in 2007(BLSS 2007, NSB). Joblessness has particularly affected youths with their unemployment rate tripling from 1999 levels and is now at levels twice as high as for all working adults. Labour data collated over the last six years also indicate that between 55-60% of the unemployed have always been youths. Female unemployment rates are also particularly pronounced in urban areas and twice as high as compared to men. While in rural areas unemployment rates for women (2.1%) are slightly lower than for men (2.6%), most women are engaged in low or non-paid remuneration employment in farming and housework activities suggesting the existence of a higher level of underemployment.

Table 5.1: National LFPR, Employment Distribution & Unemployment Rates 1999-2005

	1999	2004	2006
LFPR	56.5%	54.4%	61.8%
Employment by Sector Agriculture	74.9%	63.2%	43% (2005)
Services	15.8%	25.5%	38.8% (2005)
Industry	4.8%	9.8%	17.2% (2005)
Unemployment (National)	1.4%	2.5%	3.2%
Age group 15-19	2.1%	7.2%	6.5%
Age group 20-24	2.9%	4%	11.4%
Rural	1.2%	2.6%	2.5%
Urban	3.3%	2%	4.9%
Female	1.6%	3.3%	3.8%
Male	1.2%	1.9%	2.6%

Sources: NLFS (1999, 2004, 2006) PHCB 2005

The National Labour Force Survey 2006 (NLFS) and the Population and Housing Census of Bhutan (PHCB) 2005 reveal an enormous shift in employment activity. In 2005, the PHCB reported that of all those employed, 43% were employed in the agriculture sector as compared to around 75% in 1999.

At the same time, there has been a commensurate expansion in the share of employment in the service and industry sectors. The industrial sector in 2005 accounted for 17% of the total number of the employed labour force tripling from less than 5% in 1999. The share of total employment accounted for by the services sector likewise has more than doubled from around 16% to around 39% in that period. This is not only explained as an outcome of the modernization of the economy from its subsistence agriculture base but can also be attributed to the rural-urban migration trends and accompanying population shifts.

While the unemployment rates have increased to 3.2% in 2006 and 3.7% in 2007, this is not very high by international or regional standards. Indeed, this would even be regarded as near full employment by some economies. However, in disaggregating the employment data further, there are concerns relating to the situation of youth and female unemployment and underemployment. As iterated earlier, unemployment levels for both youths and females are higher than the national average and appear to be on the rise. Unemployment is markedly high among the teenage youth (15-19) and has increased from 2.1 percent in 1999 to 6.5 percent in 2006. Likewise the unemployment rate among youths between the ages of 20-24 has gone from 2.9% in 1999 to 11.4% in 2006. Thus unemployment is a challenge that affects youths particularly. Additionally, in comparing the characteristics of the unemployed in both rural and urban areas, a contrasting image arises where the unemployed are mostly the educated in urban areas whereas in rural areas, the unemployed are largely those without any education.

Another concern is that the unemployment situation could possibly be masking quite high and rising levels of underemployment. Even as the lack of relevant data prevents an accurate assessment of the prevailing levels of underemployment, there are sufficient indications that it could be problematic. The high number of unpaid family workers, the large numbers of people engaged in low remuneration jobs, the growing trend of employers working less number of hours and the high turnover of employees in the private sector all point to a rising prevalence of underemployment. Additionally, the relatively high levels of rural income poverty (30.9%) within the context of comparably low levels of rural unemployment (2.5%) would strongly suggest the need to address underemployment to help ameliorate rural poverty and mitigate the growing rural urban migration trend.

5.2.1: Causes of Unemployment

The causes of the rising unemployment situation can be attributed to various economic, demographic and social factors. A major reason for the slow growth in employment has been that the country's growth has largely been capital intensive with faster growth in sectors that have low employment elasticity whereas the traditionally labour intensive sectors such as agriculture have witnessed relatively slower growths. At the same time, there has been a vast expansion in school enrolment which has given rise to the huge numbers of those entering the labour force. Many of these educated youths, who constitute the majority of the growing ranks of the unemployed, do not have employable skills, knowledge or aptitude required by the labour force market. This is further compounded by the apparent mismatch between the expectations of youth on the quality and location of employment and inherent labour market realities. In addition to the growing numbers of educated youth searching for employment, there are also an increasing number of people migrating to urban centres in search of better job prospects.

While employment demand has scaled up considerably in view of the above reasons, there has been limited employment expansion, particularly in the civil service and public corporations which are the preferred employment choices for most educated youth. This limited public sector employment scenario appears unlikely to improve significantly in the near future. The small and underdeveloped private sector too has been unable to fulfill the potential of becoming the engine of growth and provider of employment.

The lack of an adequate regulatory framework and minimum wage policy has also tended to discourage employment absorption due to a lack of confidence between both potential employers and employees. Employers are concerned about the "job hopping" tendencies of young Bhutanese and the subsequent loss of time and investments which discouraged them from employing. At the same time, many young people were not attracted to work in the private sector and at times remained unemployed on account of low quality jobs, the lack of career opportunities and poor remuneration.

5.2.2 Objectives and Strategies to Promote Employment

The overall employment goal of the Royal Government in the Tenth Plan will be to attain full employment, particularly among the educated youth. In order to achieve this main objective, the following strategic initiatives will be adopted:

- Enhance access to vocational education and training by expanding intake capacities of VTIs and training programmes, establishing new VTIs, diversifying and expanding various programmes such as the Village Skills Development and the Apprenticeship Training programmes;
- Ensure quality of vocational education and training programmes through enhancing the quality of training delivery, curriculum and instructors;
- Minimize number of people migrating from rural to urban areas in search of employment opportunities;
- Improve value and dignity of blue collared jobs;
- Promote private sector growth by improving their human resource capabilities;
- Improve working/employment conditions in the private sector through enactment of the Labour and Employment Act and relevant regulations;
- Strengthen employment promotion services and labour market information;
- Enhance management of foreign workers recruitment; and
- Enhance quality of skilled workers through establishment of output quality assurance and testing/certification systems.

Box 5.2 Targets for the Employment Sector

- 70% of school leavers have access to Vocation Education and Training;
- 80% of all village level skills demand in various trades including construction trades is addressed
- 80% of employers find that trainees can perform their jobs they are trained in
- 100% of courses conducted in VTIs are in line with the labour market demand
- 12,500 job seekers kept engaged in some training activities;
- 400 job seeker have established their own businesses;
- 100% of private sector agencies comply with labour and employment Act provisions
- Incidences of occupational accidents and diseases among workers reduced
- Social welfare scheme for private employees established; and
- Competence of skilled workers in priority trades/occupations tested and certified.

5.2.3 Targets for the Employment Sector

5.3 WOMEN IN DEVELOPMENT

In many ways, Bhutan's gender situation is regarded to be favourable and positive. No overt gender discrimination exists in the country and in general, Bhutanese women

enjoy a high status and have full and complete equality under the law. Instances of female infanticide or under-nutrition, dowry deaths, and other discriminatory social malpractices are virtually unknown and unheard of in Bhutan. Traditional gender relations too were essentially reciprocal and non-discriminatory in nature and broadly explain the Royal Government's gender neutral development policies.

Nevertheless, the theme of women in development has always featured as an integral part of the country's five year plans and the Royal Government has conscientiously worked to ensure that equal opportunities are provided for men and women alike to participate and share in the benefits of development. Reflecting the high priority it places on maintaining gender balance and equality, the country subscribes and is party to various international social conventions that reaffirm the fundamental principles of gender equality. Bhutan has also ratified the Convention on the Elimination of Discrimination Against Women (CEDAW) and has unconditionally accepted all of the provisions contained in it.

However, an analysis of the current situation and data reveals that women are at a disadvantage in some areas and that gender gaps exist. As such, there remains a need to strengthen and develop appropriate policies and strategies that take into consideration the different needs, roles and capabilities of women on the basis of the principles of gender mainstreaming. It is for this reason that under the Tenth Plan, each sector is required to effectively mainstream gender issues into their policies and programmes. Sectors are also required to maintain gender disaggregated data to help identify and monitor potential gender gaps. Mainstreaming gender meaningfully across all development issues within the Tenth Plan will be extremely important if the country is to fully realize the goal of a truly egalitarian and equitable society portrayed in Bhutan's Vision 2020.

5.3.1 Policy and Strategies for Women in Development

The Royal Government is committed to achieving all of the gender equity goals in the various global compacts that it is party to, including the MDGs and SDGs, and implementing the full provisions of CEDAW. To facilitate achievement of these national and international gender goals and targets, a National Plan of Action (NPA) on Gender has been formulated. The NPA on gender identifies seven priority areas wherein interventions would be required and are detailed in the following section.

Good Governance

Since the issuance of the Royal Decree in 1998 that underlined the importance of women's representation in the National Assembly, importance has been given to increasing women's participation in governance. However, there has been a steady decline in the representation of women in the National Assembly, from 11% in 2001 to 3% in 2006. In the judiciary, women account for 2% of the Drangpons, 6% of the Drangpon Rabjams and 40% at the lower registrar level while in the executive branch women account for 28% in 2006. At the local government level, only 4% of the gups, chimis, mangmis and tshogpas are women.

The low literacy of women, physically demanding workload attached to local public offices, predominant engagement in family responsibilities, poor access to information and mobility are the main reasons for low participation of women in governance. With the adoption of the Draft Constitution in 2008 and increased autonomy at the local government level, efforts in the Tenth Plan will be directed towards increasing women's participation in local governance through capacity building and raising awareness.

Education and Training

Bhutan has made good progress towards ensuring gender equity in education and the boy to girl ratio at both primary and secondary education is 1.07. The MDG target to achieve gender parity at these levels is therefore likely to be achieved before 2015. However, attaining gender parity at the tertiary level poses a serious challenge as the male-female ratio in the secondary and tertiary levels rises to 1.51 and 1.79 respectively. In 2005, females accounted for 36% of the total enrolment in the vocational training institutes which represents a considerable improvement from the past. In the Tenth Plan concerted efforts will be made to increase female enrolment at the tertiary levels.

Economic Development with Focus on Employment

The majority of women in Bhutan are employed in the agriculture sector and most of the unpaid family workers too are women. Women are more vulnerable compared to their urban counterparts as they comprise a portion of the rural population living under the poverty line. In the Tenth Plan, focus on poverty reduction and strategies for rural development is expected to improve the quality of life in the rural areas. Some of the issues related to improving women's conditions include improving access to information, markets and services, off-farm employment opportunities, access to micro-credit and the provision of skills.

According to the Gender Diagnostic Study, 2004, a large number of women are involved in working on road infrastructure projects and at times comprise around half of the work force. These women are among the most vulnerable groups with limited access to alternative employment and social services. The National Labour Force Survey 2006 also reflects that unemployment rates for females are higher than for males at 3.8% and 2.6% respectively. The key challenges for gender mainstreaming in the employment sector include promoting greater access for females to economic opportunities and meaningful employment.

Health

Women's health, particularly reproductive health has always been given special attention in policies and programmes and its advocacy has always been actively promoted. Maternal health has improved as evidenced from the declines in the MMR over the decade. While antenatal care (ANC) attendance to at least one ANC clinic has

reached universal levels, less than half of all pregnant women still deliver at home. Efforts will need to be strengthened such as making delivery services more women friendly in order to achieve the desired 100% institutional delivery maternal health target. Another key maternal health issue is early pregnancy as in spite of the awareness programs on adolescent reproductive health issues, 11% of all births are among 15 to 19 year olds or teenage mothers. Anaemia prevalence rates too are high and remain a critical maternal health issue.

According to available health data for 2007, women comprised 55% of the total number of people living with HIV/AIDS with infection incidence highest among house-wives. The reasons for women's vulnerability to HIV/AIDS are generally attributed to the lack of awareness on protection from the disease. As such, mainstreaming gender into health sector policies and programs will be given importance over the Tenth Plan.

Violence Against Women

Although no systematic information is available regarding the prevalence rate of domestic violence in Bhutan, police reports and data from the hospitals reveal growing instances of domestic violence where women are usually the victims. Although laws that protect women against violence exist, many cases go unreported due to fear of social stigma, emotional and financial insecurity and the lack of support mechanisms. There is also a lack of data on the extent and prevalence of trafficking and prostitution but is something that is widely known to be prevalent and growing. The challenges will include dealing with these issues and collecting reliable information about the extent of violence against women and trafficking and prostitution.

Prejudices and Stereotypes

The Gender Pilot Study 2001 reflected that the socio-cultural perceptions of both men and women see women as less capable and confident than men. Bhutan's initial to the sixth CEDAW Report mentioned that the biggest challenge nationwide was to uproot the more subdued and indirect forms of gender bias. Bhutanese society like any other society clearly assigns gender roles and responsibilities which in effect has influenced women's own perceptions and participation in public life. The status of women is influenced by many factors, including socio-cultural perceptions, which has influenced access to higher education and employment. The key challenges and strategies will thus be to eradicate any prevailing social prejudices and stereotypes through awareness and sensitization.

Ageing, Mental Health and Disabilities

Bhutan has an elderly population of 7% out of which 51.6% are males and 48.4% are females, with the old-age dependency ratio estimated at 7.5%. The National Pension and Provident Fund remains one of the few initiatives to provide some support mechanism after retirement. However, since the civil service is predominantly male-dominated, a large proportion of the women are without any form of security and are fully dependent on their spouses, children or relatives. This potentially makes them

more vulnerable to poverty and other insecurities. While Bhutanese society is still highly supportive and caring of the elderly and the infirm, emerging trends of nuclear families and rural–urban migration has weakened the traditional source of support to the elderly. As such, securing the health, psychological and economic well-being of the elderly, particularly women, poses a new challenge.

In the area of mental health, gender disaggregated data from Jigme Dorji Wangchuck National Referral Hospital reveal that depression and anxiety disorders are most common among female patients. Disabled persons comprise 3.1% of the country's total population, out of which 54% are male and 46% female. The government has mainstreamed disabled children with the establishment of the Special Education Program, National Institute for the Disabled (NID), Draktsho Vocational and Training Centre for the Disabled (DVTCD). The proportion of girls though enrolled at NID and DVTCD are much lower at 30% and 26% respectively. Certain studies also reveal that females with disabilities are also more vulnerable to physical abuse and have fewer opportunities for economic security. The challenges will thus be to strengthen strategies to prevent, treat and rehabilitate mental patients and ensure the complete absence of discrimination against disabled persons and provide full support for their effective integration into the workplace.

5.3.2 Strategic Measures to Promote Gender Mainstreaming

The two key cross-cutting policy measures that would be addressed under all the interventions for gender equality are strengthening gender awareness and sensitization at all levels and improving information through collection, analysis and dissemination of gender-disaggregated data.

In the area of governance the Royal Government will adopt strategies to integrate a gender perspective into policies and legislations; assess and address the causes for low participation of women; and increase women's representation at all levels especially in local government. In order to bring about gender parity in education and training, strategies would be adopted to ease the transition of females from the secondary to tertiary levels after studying the causes of low performance by females at the tertiary level and greater female enrolment in technical, professional and vocational institutions will be promoted. Similarly, under the areas of economic development and employment, the government will promote female participation in training programs; help girls transition from school to work; promote cottage and small rural-based enterprises with increased access to micro-credit; and address socio-cultural perceptions and stereotypes.

In the area of women's health, priority will be given to HIV/AIDS and STD control programs; reducing maternal mortality rates; reducing prevalence of anaemia and cervical cancer; addressing teenage pregnancy issues; reducing IMR and U5MR; increasing access to information on sexual and reproductive health issues; improving quality of water and sanitation; and reducing indoor air pollution and the prevalence of Acute Respiratory Infection (ARI). The Tenth Plan strategies to combat violence

against women will include: strengthening the existing legal framework related to domestic violence and sexual harassment; promoting women and child-friendly police and court services; taking appropriate measures to prevent violence against women and care for victims; and raising awareness through community-based awareness programs, help-lines and mass-media campaigns.

5.4 INFORMATION AND COMMUNICATIONS TECHNOLOGY

ICT is identified globally as an enabler of economic growth and a means of poverty alleviation. Addressing the needs of the poor, and fostering pro-poor innovation and growth through the effective and innovative use of ICT, is a priority of the Royal Government. Making ICT more relevant to broader policy and development challenges will lie in strategically addressing ICT as a tool of pro-poor change and instrument for achieving development objectives.

ICT is also a modern tool and its effective usage a defining characteristic of knowledge based societies. Its' utility in furthering innovation, creativity and enterprise productivity in and across all sectors could be invaluable and an instrument through which Bhutan could leverage its economic growth and development.

In view of the above and the wider recognition of harnessing ICT as a tool of poverty reduction and sustainable economic development, the Tenth Plan emphasizes mainstreaming ICT into sectoral development programmes, including in the Dzongkhag and Gewog plans. There is an inadequate understanding of the conditions for success of ICT innovations and the ways in which they might or might not be replicable in other circumstances. Hence, there is an urgent need for better analytical frameworks to understand the role of ICT as tools of poverty reduction and sustainable development and the need for mainstreaming ICT by all agencies in all sectors.

5.4.1 ICT Challenges

Mainstreaming ICT into the sectoral programmes and national strategies faces several challenges. This is partly due to the fact that ICT strategies are often disconnected or considered a distraction from the core development strategies and programmes. Furthermore, in addition to the need for adequate capacity to implement and adapt to changing requirements, resource constraints are a significant challenge. Finding the proper balance between public and private investments to support the scaling up of ICT access and applications, and creating a favorable environment for private sector investment and innovation is critical. This is particularly relevant since ICT is an area that is particularly prone to ill-considered public investments and spurred by faulty models of how ICT inputs can directly promote desired development goals. Nonetheless, establishing ICT systems and promoting their effectiveness will be of enormous benefit and advantage for overall development.

5.4.2 ICT Policy and Strategies

The Royal Government recognizes the need to harness ICT for poverty reduction and sustainable development. ICT can help achieve the poverty reduction target set for the Tenth Plan through its capacity to create and transfer knowledge, improve the efficiency and transparency of institutions and markets, and facilitate the participation and empowerment of the poor. The dissemination of ICT is crucial to information access and spread and to avoid a possible digital divide that could exacerbate the rural-urban disparity. The Tenth Plan thus attaches high importance to mainstreaming ICT in its development programmes and recognizes ICT as an essential tool to help reduce poverty in the Tenth Plan.

The Bhutan ICT Policies and Strategies (BIPS), provides a clear direction for the sectors to harness the potential of ICT. Different sectors, both at the central and local levels, have been guided to formulate ICT driven programmes and projects through the ICT technical guidelines. The Department of Information Technology in this regard will be the key agency to spearhead the development of the ICT sector. The ICT sector will be developed by improving its infrastructure and upgrading and expanding the existing nationwide ICT backbone network. The development of e-services will be carried out to add efficiency to the flow of information between the governmental agencies and also to speed up the service delivery to the public. Community Information Centers (CICs) and regional ICT centers will also be established to take the ICT services to the grassroots and community levels.

A critical aspect of the ICT policy is the importance given to develop and encourage private sector to explore and invest in the ICT sector to generate employment. Measures will be taken to build the capacity related to ICT on priority basis. Establishment of Contact/Call Centers, Cyber Park and ICT Center of Excellence will be undertaken through public-private partnerships to improve the current situation of slow growth in ICT industry. The following comprise the summary policy elements of the Bhutan ICT Policy and Strategies (BIPS):

Objectives:

- Develop ICT infrastructure capable of delivering e-services to all Gewogs;
- Provide community level access to basic ICT services; and
- Promote ICT industry growth.

Strategies:

- Expanding and upgrading existing nationwide ICT backbone network;
- Provide last mile access network through establishment of community information centres and regional ICT centers;
- Establish contact/call centers, Cyber Park and ICT center of excellence through public-private partnerships; and
- Implement e-governance.

5.5 ENVIRONMENT

Environmental conservation constitutes an important part of national spatial planning strategic framework and has always enjoyed a high priority in the country's development agenda. Conservation of the environment has been robustly pursued even as Bhutan, a least developed country, is compelled to make enormous short term sacrifices to serve the long term interests of not just the country alone but the region and world at large. It is this unwavering commitment that has brought widespread global recognition for Bhutan's efforts to protect its environment and natural resources.

The strong emphasis on protecting and conserving the environment will not diminish in any way over the Tenth Plan. Indeed, the environment sector will require more attention than before in view of the accelerated pace of economic and development activities accompanied by increased expansion of infrastructure development, urbanization, industrialization and consumption patterns that are likely to put an even greater burden and stress on the natural environment.

Additionally, environmental conservation imperatives will be increasingly challenged by the need to balance it judiciously against the urgency of sustaining and improving rural livelihoods and ameliorating poverty. Close attention will be required to ensure that the costs of environmental conservation do not fall disproportionately on the poor through crop loss or limited access to forest resources or cultivable land. Some of these important environmental opportunities and challenges that the country must address over the Tenth Plan are highlighted in the section below.

5.5.1 Opportunities and Challenges

There are significant factors that make environmental conservation more and more challenging each year given the rapid pace of development and modernization in the country that places increasing pressures on natural resources and compromises their sustainable utilization. On the other hand, the opening of global and regional markets to local high-value herbal, horticultural and niche products and the harnessing of hydro-power potential provide special opportunities for the country to enhance living conditions and eradicate rural poverty. The natural environment thus presents significant opportunities that the country could capitalize on in a sustainable manner and concurrently also poses significant environmental conservation and management challenges that need to be addressed.

Enhancing rural accessibility primarily through road access is an important consideration that cannot be denied. However, in a mountainous country like Bhutan, road construction activities do have serious environmental consequences that scar and degrade the environment irreparably. A major challenge will be to effectively implement environment friendly road construction (EFRC) methods. While this will certainly add extra costs to the already high investments required to implement these EFRC requirements, they will ultimately prove to be much more cost-effective in the long run. Some of the other rural environment concerns pertain to over grazing by livestock, inefficient use of forest resources, high levels of fuel wood consumption and

the loss of prime agricultural lands to urbanization and development. Another major concern is the country's high vulnerability and proneness to flash floods and landslides due to excessive rain and glacial lake outbursts. Bhutan's receding "high risk" glacial lakes particularly are a particular cause of concern.

While the air and water quality in the country are still relatively good there are emerging problems of air pollution in and around industrial sites and deteriorating water quality near urban centres. Tackling these issues at such an incipient stage will be essential to prevent them from becoming major public health problems in the future. Similarly, the effective management of solid waste disposal in urban areas is proving to be a major challenge due to the acute shortage of landfill sites.

In addition to the above constraints, Bhutan is faced with limited human capacity and expertise to manage and implement environmental conservation activities. Environmental awareness, education and sound practices within Bhutanese society are also nowhere near desired levels and will require to be promoted further. Meeting all of the above challenges and addressing these important environmental concerns is likely to be notably constrained by the future availability of resources.

The rich environment naturally confers significant opportunities and in Bhutan's context it is linked to the rich water resources available in the country. The vast hydro-power resources are Bhutan's natural comparative advantage, the sustainable exploitation of which depends on the health and quality of the country's watersheds. The management and protection of the critical watersheds thus provides not just an environmental benefit but immense economic rewards and hence is accorded a high development priority. Additionally, as a net sequester of greenhouse gases and user of clean energy, Bhutan could benefit from the new international regimes permitting emission trading under the Kyoto protocol.

5.5.2 Environment Policies and Strategies

The objectives of the environment sector for the Tenth Plan are to:

- Ensure sustainable development in conservation of environment;
- Disseminate environmental information and raise awareness among the general public;
- Move towards a cleaner environment;
- Mainstream environment issues into development policies, plans and programmes;
- Develop appropriate environmental legislation;
- Develop environmental standards; and
- Coordination for water resources management.

The above objectives for the environment sector will be addressed through the following strategies and initiatives:

- Development of appropriate policy and legal frameworks;
- Provision of environmental services;

- Decentralizing environmental governance;
- Developing a National Sustainable Development Strategy (NSDS);
- Strengthening environmental information management system to support and improve decision making;
- Advocating and net-working on environmental issues;
- Utilizing environmental assessments as a tool for sustainable development;
- Building and strengthening institutional capacity;
- Mainstreaming environmental issues in sectoral plans, projects and programmes of all government agencies; and
- Development of appropriate legal and policy framework for water resources management.

5.6 HIV/AIDS

5.6.1 Introduction

The Royal Government is fully cognizant and appreciative of the grave threat that HIV/AIDS poses and views it not merely as a health issue but a critical development concern that could severely affect growth and productivity. The potentially devastating economic and social consequences of a full-scale HIV/AIDS epidemic could seriously undermine development in the country due to its widespread and multi-dimensional impact and the critical challenges that it poses for treatment and prevention.

The Royal Government has therefore taken the HIV/AIDS threat extremely seriously. A National AIDS control programme was initiated long before HIV/AIDS manifested and much of these earlier initiatives were largely directed at prevention and awareness building. The programme had in place strategies with effective clinical screening of blood from sentinel sites and anti-natal clinics. A very strong advocacy programme through IEC had also been initiated to promote greater awareness among communities of HIV/AIDS with condom usage being advocated and distributed freely.

Since the discovery of two individual HIV/AIDS infection cases in 1993, the number of infected individuals has grown to 125 as of October 2007 with the main mode of transmission being through heterosexual sex (94%). Mother-to-child transmissions have also increased and constitute around 9.3% and in 2006, the first case of HIV infection acquired through intravenous drug use (IDU) was detected. Of all the total reported number of cases, twenty four have died so far. Around 88% of all the HIV/AIDS cases detected so far belong to the age group between 20-49 of which around half are youths between the ages of 15 and 24. A large number of these cases are also from low income groups. As such, if the HIV/AIDS situation were to deteriorate significantly, this could particularly impact and undermine youth development and poverty reduction efforts in the country.

In recognition of the grave threats that HIV/AIDS posed for Bhutan, His Majesty the King issued a royal edict on the critical implications for development in the country

and the great need to be compassionate to people living with AIDS. Her Majesty the Queen, Ashi Sangay Choden Wangchuck, has also in her role as the UNFPA Goodwill Ambassador, campaigned tirelessly across the nation on the control of HIV/AIDS. At present, the erstwhile National AIDS Committee has been reconstituted as the National HIV/AIDS Commission (NHAC) and the Commission is leading the fight to combat the spread of the disease in the country. Multi-Sectoral Task Forces comprising all relevant stakeholders now exist in each of the Dzongkhags and are actively engaged in taking preventive measures, creating awareness and preparing for possible outbreaks of the disease. This mechanism constitutes a decentralised approach to the HIV/AIDS challenge and allows for an effective targeting of activities specific to the needs and situation of the locality. 15 sentinel sites have also been established around the country with the necessary protocols in place. Additionally, HIV awareness is being actively promoted in schools, teacher training institutes and among vulnerable and at-risk groups.

The country will also adopt and implement a National HIV/AIDS Policy which will support additional measures to prevent mother to child transmission, provide anti-retroviral treatment and standardized care and support for people living with HIV/AIDS, besides the general efforts at prevention. Prevention will however continue to be the main strategic approach in combating HIV/AIDS over the Tenth Plan.

5.6.2 Challenges

The HIV/AIDS prevalence is low at present and estimated to be below 0.1%. While it is quite far from being established among the general population, infection has been growing rapidly in recent years. Case detections in 2006 and 2007 reflect an alarming trend. This rising trend in infection remains a cause of serious concern, particularly in the context of several risk factors that the country faces. These risk factors pertain to Bhutan's proximity to countries with much higher prevalence of HIV/AIDS in conjunction with the high degree of mobility across the borders, commercial sex becoming more common, high occurrence of sexually transmitted diseases, rising levels of substance abuse, low levels of condom usage and the youthful demographic profile of the population.

In addition to these risk factors, the country also faces several issues and challenges in combating the spread of HIV/AIDS. The health authorities and in particular the NHAC are facing a serious and severe shortage of people trained for HIV/AIDS programmes of prevention, rehabilitation and care. The stigma and discrimination attached to HIV/AIDS afflicted individuals is also known to be quite widespread in Bhutanese society and will need to be transformed quickly and require a major sensitization of the public at large and necessary policy changes. The rising levels of HIV/TB co-infection is another critical challenge that the country must deal with. Other constraints in dealing effectively with the HIV/AIDS situation relate to the increased possibilities of mother to child transmission once the epidemic matures, funding the costs of providing comprehensive treatment and care in the context of resource

scarcity and competing demands and gaps in the surveillance data and weaknesses in the risk and vulnerability analysis.

5.6.3 Policy and Strategies

The main strategy to tackle the HIV/AIDS threat will be to focus on promoting condom use, increasing IEC, strengthening counseling, provision of treatment to those already infected, institutional strengthening, especially in terms of human resources to effectively deal with the prevention and treatment of the disease, and carrying out targeted interventions for population groups that are at risk. Some of the strategic activities will also include incorporating religious institutions and figures for more effective HIV/AIDS advocacy and prevention including utilizing trained monks as counselors to further decrease the stigma faced by people living with HIV/AIDS.

CHAPTER 6: RENEWABLE NATURAL RESOURCES

6.1 INTRODUCTION

For an agrarian country like Bhutan, the RNR sector plays a vital role in the growth, balance and stability of the country's economy as reflected in its share of GDP and employment activity. At present, the RNR sector accounts for about one fifth of the GDP and employs a little less than half of the labour force. The RNR sector also has strong links to the rest of the economy and engenders a multiplier effect on other areas too. The exports of primary products from the RNR sector further account for around one tenth of total exports and contribute in a significant manner towards enhancing rural household food security, consumption and income.

While the contribution of the RNR sector to GDP has been declining and is likely to decline even further in the future, it will still continue to be an important sector, particularly in the context of improving people's livelihoods and reducing poverty levels. Additionally, the RNR sector has a critical role to play in the management and conservation of the natural environment.

Much more than any other sector, the RNR sector has the deepest linkage to the Tenth Plan's theme and objective of poverty reduction and the best prospects to address it. Growth in agriculture, as borne out by the experience of numerous Asian and other developing countries, has consistently had a greater effect on reducing poverty than growth in any other sector. Moreover, the single most important factor explaining these poverty reduction achievements in these countries was notably attributed to transforming subsistence agriculture to commercial level agriculture and achieving agricultural productivity gains rather than just increases in agricultural production.

These partly help explain the continued existence of significant levels of poverty in Bhutan's context, wherein weak growth in the agriculture sector and subsistence farming characterised by low agricultural productivity has severely dampened poverty reduction prospects despite the strong overall economic growth sustained over the last two decades. As such, a critical strategic approach for poverty reduction and integrated rural development through the RNR sector will be to transform subsistence agriculture through enhancing agricultural and livestock productivity gains; expanding commercial possibilities of various natural resource based non-farm enterprises including NWFPs; and developing closer market linkages between rural supply chains and urban and export markets.

Clearly, the holistic development of the RNR sector stands out as an extremely high priority thrust area for the Tenth Plan in view of its special relevance to the rural and environment sectors and the associated implications for attaining the Tenth Plan primary objective of poverty reduction. The continued holistic development of the RNR sector and the success in realizing the planned sectoral goals and targets will depend a great deal on how effectively some of the pressing constraints and challenges are

tackled over the Tenth Plan. Some of the relatively more urgent and pressing issues are identified in the following section.

6.2 OPPORTUNITIES AND CHALLENGES

A critical aspect that challenges the country's ability to maintain national food security through agriculture production relates to the steady decline in the farming community population due to outbound migration and changes in occupation that has caused acute farm labour shortages. This is further compounded by the diminishing economic viability of food grain cultivation that has resulted in less acreage being cultivated each year and the chronic loss of crops and livestock to wildlife predation and devastation by natural calamities. As a result, there has been a continued decline in cereal cultivation and production and a corresponding drop in the self-sufficiency levels for cereals.

The Royal Government's national food security policy includes the pragmatic perspective of maintaining broad national self sufficiency through sustaining the cost of food imports (excluding processed food items) from the sale and exports of cash crops and ensuring that the latter is adequate to cover food import costs. The policy also includes ensuring that households have assured access to food at all times for healthy living. Since the country has reliable access to cheap food import for food security, mainly from India and in view of the rapidly growing local and external markets, the strategic focus necessitates a greater degree of commercialization of agriculture and specialization in horticulture export, NWFPs and niche organic products. Efforts to enhance household food security will also be done through the market rather than a complete dependence on self-reliance.

A greater level of commercialization of agriculture and the further promotion of horticulture export, NWFPs and niche organic products represent significant opportunities to stimulate growth of the RNR sector and raise income and employment levels among the rural population while also maintaining national food security concerns. This strategic approach of utilizing urban market and export demand as a key driver for the rural economy is also highlighted in the strategic framework aspect of integrated rural-urban development for poverty alleviation under Chapter 3.

Actualizing this presents a realistic prospect of reducing rural poverty in a significant and sustainable way and this will be effectively capitalized on. While over the Ninth Plan horticulture produce and sale of NWFPs did expand in volume, the potential of earning cash income for farmers from horticulture development and harvesting NWFPs was not fully realized. The main constraints being the restrictions of current land use policy due to environmental concerns, ambiguity and conflict over user rights and the primacy of regional equity that resulted in agriculture investment resources being spread too thinly. Experience over the Ninth Plan reflects that the objective of enhancing household food security, rural incomes and employment could be addressed more effectively through the implementation of concrete, impact-oriented and targeted programmes. The lack of or limited value addition to primary products, small land holdings and difficulties relating to access and the cost of accessing micro-credit

were some of the other factors that restricted income growth from the RNR sector and will need to be addressed during the Tenth Plan.

6.3 RNR SECTOR POLICIES AND STRATEGIES

The policy objectives of the RNR sector for the Tenth Plan are to:

- Enhance sustainable rural livelihoods through improved agricultural and livestock productivity and expansion of commercial prospects of agriculture and other natural resource endowments;
- Conserve and promote sustainable commercial utilization of forest and water resources;
- Promote sustainable utilization of arable agriculture and pasture land resources;
- Enhance food security through the market rather than emphasize self sufficiency; and
- Transform subsistence agriculture to small scale commercial agriculture without compromising food security.

The RNR sector's broad strategy for fulfilling the above objectives will be guided by the Triple Gem concept which emphasizes the importance of Enhancing Production, Promoting Accessibility and Improving Marketing. Production is to be primarily enhanced through development and utilization of best practices and appropriate technology, expanding cultivable land and increasing its productivity. Where techno-economically feasible, consider specialization and monoculture to maximise gains from economies of scale rather than on mixed subsistence cropping with low productivity/volumes. Accessibility will be promoted through the extensive development of farm roads and power tiller tracks in rural areas thus ensuring better access to and from markets and economic and social services, including facilitating the delivery of essential inputs to farmers. Marketing will be improved and strengthened through implementing various mechanisms to promote the further commercialization of agriculture, enhancing links with domestic and external markets, boosting value addition, ensuring high quality standards, promoting exportable organic and high-value low-volume produce, etc. Some of these mechanisms will include the promotion of relevant cooperatives and/or market boards and establishment of marketing infrastructure.

The key sectoral policy objectives outlined earlier are to be attained through the following strategic initiatives:

- Creation of an enabling policy and legal framework and strengthening compliance to this framework;
- Improving planning and management of programmes, information management and dissemination, and research services;
- Effective provisioning of basic agricultural services;
- Strengthening delivery of extension services;

- Creating an enabling financial environment through providing increased access to and types of credit and savings schemes;
- Enhancing farm mechanization to improve agricultural labour productivity and efficiency, value addition and specialization in addition to alleviating farm labour shortages and drudgery;
- Strengthening agriculture marketing mechanisms to expand local markets for primary products and enhance exports of NWFPs and other low-volume and high value niche export products through a higher degree of specialization, standardization and certification;
- Promoting farmers cooperatives and marketing boards to facilitate domestic and international market linkages and improving supply chains.
- Developing adequate levels of rural and agricultural infrastructure;
- Diversifying the economic base of the RNR sector through the promotion of high value niche or organic products and agro and eco-tourism initiatives;
- Enhancing the integrity of natural resources through improved and participatory management of protected areas, sustainable utilization of forests, land and water resources;
- Promoting economic growth and alternative employment opportunities; and
- Improving the monitoring and evaluation of RNR programmes.

6.4 MAJOR RNR TARGETS

In keeping with the results-based management approach that is integral to the Tenth Plan framework, very clear and quantifiable targets have been set for the RNR sector. The major targets for the RNR sector are reflected in the box below:

Box 6.1 RNR Targets

- Rural Poverty less than 20%
- Mean rural household cash income above Nu. 35,000
- At least 70 farmers group established for NWFP production and commercialization
- Value of horticultural export at Nu. 150 million
- 25% of farmers engaged in horticultural export cropping
- 20% of rural population living within one hour's walk from a road-head
- 15% of farmers are certified natural/organic producers
- Master Plans developed for at least two main watersheds
- 4% of forest area to be managed as community or private forestry

6.5 FINANCIAL OUTLAY FOR THE RNR SECTOR

The total approximate capital outlay for the RNR sector (central and Dzongkhag) currently stands at about Nu. 7,532.50 million.

CHAPTER 7: TRADE, INDUSTRY, TOURISM, GEOLOGY AND MINES

7.1 TRADE

Bhutan has evolved from a closed economy to a trading nation that exhibits a high degree of dependence on trade. The trade openness index was estimated to be around 75% in 2005/06 and reflects the Royal Government's commitment to a liberal trade policy. The trade sector was also the highest contributor to national revenue and accounted for around one third of total national revenues in 2005/06, exceeding electricity revenue generation by a percentage point.

Exports have grown rapidly but overall the country's trade deficit continues to widen due to an even faster growth in the value of imports. For most of past plan periods, the country has consistently been an import dependent economy with imports exceeding 60% to 70% of GDP. As a result of the huge and rising import bills, trade deficit climbed to a record Nu. 10 billion in 2005/06. The export portfolio both in terms of products and markets is very narrow with the top ten commodities accounting for over 80% of the total export values and with 94% of these exports bound for India.
Plan recognizes trade as a tool for economic growth and poverty alleviation. In view of the narrow trade portfolio in terms of products and destination markets, the country has been diversifying its trading base through the expansion of both bilateral and multi-lateral trading arrangements. This assumes particular importance in light of the fact that given that the small and limited size of the domestic market, the broad economic strategy must necessarily revolve around a natural resource export oriented strategy. Hence the RGoB's efforts will focus on diversifying exports and trading markets through securing a better integration into the regional and international trading regime. Bhutan is currently a member of SAFTA and negotiations on the BIMSTEC Free Trade Agreement and accession to the WTO are at an advanced stage. Bhutan is also considering membership in the Bangkok Agreement.

7.1.1 Opportunities and Challenges

Under the strategic framework of the Tenth Plan, the trade, manufacturing and services sectors represent the core areas of national industrial policy which is at the heart of the Tenth Plan's development strategy to vitalize economic development and achieve poverty reduction. This represents a significant challenge in view of the critical and chronic constraints that restrict the further development of the sector relating to high trading costs, weak economies of scale, poor productivity, nascent and underdeveloped private sector, inadequate infrastructure etc. At the same time, the sector holds great potential that can effectively galvanize the economy and establish it on a truly sustainable basis.

In considering the trading environment and the country's particular vulnerabilities arising from a non-diversified export base and market, the challenge will be to

continue expanding the country's non-hydro export base and export markets. Bhutan is further challenged by the need to enhance its convertible currency exports as future debt servicing in the context of foreign loans will be large and could potentially deplete foreign currency reserves.

With the rapid expansion of both internal and external trade, the legal instruments and framework for trading regimes are still nascent and will require to be strengthened to provide policy stability and predictability. Relevant laws and laws to promote competition and fair practices have not been enacted and will need to be done. Trading facilities and infrastructure too remain underdeveloped and weak and will need considerable strengthening to boost non-hydro exports.

7.1.2 Trade Policy and Strategies

The main objectives of the Trade Sector for the Tenth Plan period are to:

- Alleviate poverty through trade;
- Enhance contributions from trade to the national economy;
- Create a liberal and enabling environment for the growth of the private sector;
- Pursue trade liberalization and support private sector development;
- Enhance employment and revenue generation;
- Ensure stable market access for Bhutanese products;
- Promote competition and fair trade practices;
- Promote efficient distribution of goods and services;
- Strengthen institutional and professional capacity of the sector to fulfill its mandate; and
- Enhance growth of exports, particularly convertible currency exports.

In order to achieve the above objectives, the Trade Sector will employ the following strategies:

- Establish an enabling legal framework through formulation and amendment of laws, simplification of administrative and licensing procedures and greater service orientation in the sector;
- Strengthen long-term trade relations with principal trading partners and negotiate preferential trade treaties with new and potential trading partners;
- Pursue trade liberalization through regional and multi-lateral frameworks;
- Encourage trade in services including knowledge based and cultural industries;
- Diversify export products and export markets through market studies and appropriate branding initiatives;
- Develop industrial parks, dry ports, trade centers and business incubators to promote manufacture value added export base;
- Collaborate with financial institutions to make export finance available;
- Develop trade infrastructure and networking opportunities through access to e-commerce and web based information exchange facilities;
- Facilitate the flow of trade through a trade facilitation mechanism;

- Enhance skills and knowledge of the private sector in international trade through training courses, seminars and workshops;
- Promote liberalization of the import regime; and
- Ensure competitive market conditions through streamlining of the distribution sector.

7.1.3 Trade Sector Targets for the Tenth Plan

The trade sector targets for the Tenth Plan are listed in the box below.

Box 7.1 Trade Sector Targets

- Increase trade contribution to GDP to 14%
- Expand volume of total trade to Nu. 50 billion
- Enhance exports to Nu. 20 billion
- Enhance contribution of trade to national revenues to 50%
- Increase employment of sector to 5% of total work force
- Increase growth of trading establishments by 50% to 18,000 trade license holders

7.2 INDUSTRY

7.2.1 Opportunities and Challenges

The manufacturing and industry sector is constrained by various factors that impede its further development. Primarily, Bhutanese industries have been affected by low levels of productivity and this is clearly related to the lack of technological development and low levels of human capital. The industries will require substantial investments for capital and human resource development to improve industrial competitiveness for a viable growth in manufactured value added exports.

FDI and joint ventures are some of the mechanisms that must be actively promoted to help jump start the process. Foreign Direct Investment over the Ninth Plan showed a positive growth trend but has largely been directed exclusive into the hospitality sector and has stagnated of late. In order to achieve the annual target 5% growth of FDI and actualize the benefits of foreign investments for export and employment growth, it will be necessary to further streamline the FDI regulations and promote incentives to increase and diversify investments.

Effective coordination among all stakeholders and agencies will greatly help expedite industrial development activities and prevent unnecessary cost escalations and loss of valuable time. The development of industrial parks in the past provides an example of

how land acquisition, compensation rates and resettlement issues tend to create long delays in implementing these activities. Additionally, the shortage of resources and the delays in securing funding have either resulted in scaling down the scope and coverage of activities or delayed implementation.

Industrial development activities were also hampered due to the shortage of manpower and expertise, particularly in the areas of management. The low levels of investments made by private sector companies into developing their own human capital have contributed to this in addition to the lack of development assistance funding for HRD activities for the private sector.

7.2.2 Industrial Policy and Strategy

The main objectives of the manufacturing and industrial sector are to:

- Promote further sustainable industrial development with focus on MSMEs, cooperatives and women entrepreneurs;
- Contribute to economic growth;
- Generate employment opportunities;
- Foster private sector development particularly through human capital development; and
- Stimulate growth of the rural economy in integration with urban and export markets without adverse impact on the environment.

7.2.3 Industrial Targets

The targets for the manufacturing and industrial sector are listed in the box below.

Box 7.2 Manufacturing and Industrial Sector Targets

- Increase contribution to 12% of GDP
- Achieve 5% annual growth in FDI

7.3 TOURISM

The tourism industry has become a major service industry that provides employment and generates valuable foreign exchange. In 2007, total tourist arrivals touched 21,094 and earned US$ 29 million reaching record arrival and revenue generation figures. The industry also figures consistently among the largest generators of convertible currency and is normally among the top three revenue earners in the country. The sector further creates significant economic spin-offs for various other businesses including small and micro enterprises. While the prospects for rural income growth through tourism could be significantly enhanced, it does generate cash income and employment for many rural communities through trekking and nature tourism. As importantly, the tourism industry has also contributed immensely to strengthening

Bhutan's image and identity around the world and brought greater recognition for the country's special efforts in conserving the environment and preserving its rich cultural heritage.

To manage and develop tourism industry in the country with proper focus during the Tenth Plan, the National Tourism Board (NTB) has been created as a separate autonomous body reconstituting the Department of Tourism under the Ministry of Economic Affairs.

7.3.1 Opportunities and Challenges

On the basis of present growth levels and the growing popularity of Bhutan as a special tourism destination, the tourism industry has significant prospects to contribute even further to the national economy, including generating employment and providing opportunities for reducing poverty. The latter could be potentially addressed through the introduction of community based tourism and eco-tourism and rural tourism activities that benefit rural communities.

Another critical challenge will be to continue maintaining the long term sustainability of the industry by minimizing impact that growing numbers of tourists will have on the cultural and natural environment by keeping it well within the carrying capacity. The development of a practical and visionary Tourism Master Plan and enabling legal framework will ensure the long term sustainable development of tourism.
As international tourism travel to Bhutan is almost entirely dependent on air travel, the limited air transport option including adverse weather conditions severely affect tourism poses a major bottleneck. With limited tourism destination points in the country and products, access to prime tourist destinations such as Merak and Sakten and Manas could help increase the number of repeat visitors to the country. Other important access issues that need to be reassessed relate to streamlining cumbersome procedural requirements at immigration check posts and developing alternative entry points from the east and south.

An important aspect of the Royal Government's tourism policy is the high value element. Delivering a high value experience for tourists hinges critically on the level and quality of tourism services provided. The level of hospitality services throughout the industry though has considerable room for improvement and needs to be upgraded which requires considerable investment in human capital development of the tourism sector.

The smooth operation of tourism activities have also been hindered by the lack of effective coordination among government agencies and as such there is a need for improved inter and intra ministerial harmonization.

7.3.2 Tourism Policy and Strategies

Objectives

The Tourism Policy is to maintain a sharp focus on the niche market of high yield tourist that is willing to spend beyond average daily amounts not only for quality but the uniqueness and exclusivity of the experience. This will be achieved through the improvement of service quality, promotion of the right image to the target market and diversified product development. The end results of the approach is expected to contribute to increased and diversified economic growth, employment generation and enhanced income earning opportunities, particularly for rural communities.

The specific objectives for the Tourism sector in the Tenth Plan will be to:

- Promote Bhutan as a unique, exotic, cultural and unspoilt destination;
- Maximise the use of resources and capacities;
- Improve the regional and local spread of benefits;
- Improve the quality of services;
- Develop and upgrade tourism human resources;
- Diversify and develop new tourism products;
- Increase community participation;
- Broaden the base of demand; and
- Improve infrastructure.

Strategies

The following strategies will be employed for the tourism sector to achieve the above stated objectives:

- Keeping abreast of tourism trends and promote tourism through appropriate channels to reach the target market;
- Furthering the focus in the field of cultural tourism on the top segment of internationally experienced and informed travellers;
- Targeting new source markets and groups to broaden the base;
- Training the next generation of tourism professionals in country and according to international standards through the Hotel Tourism and Management Training Institute (HTMTI);
- Strengthening efforts to create new, off season products and or implementing a differentiated seasonal pricing policy;
- Introduction of more restrictive zoning and land use plans in regions where accommodation capacities exist and are not sufficiently utilized;
- Increasing community participation and community benefits in and from tourism activities especially through community based and rural tourism;

- Improving the quality of hospitality services and products through various means; and
- Developing programmes and strategies to raise awareness within the country on tourism and tourism issues.

7.3.3 Targets for the Tourism Sector

The targets for the tourism sector are reflected in the box below.

Box 7.3 Tourism Sector Targets

- Increase tourism contribution to 9% of national revenue
- Increase annual tourism arrivals to 100,000
- Increase employment growth to 5%

7.3.4 Financial Outlay for the Tourism Sector

The capital outlay for tourism sector currently is Nu. 208 million, a major portion of which has been earmarked for the development of tourism infrastructure and services.

7.4 GEOLOGY AND MINES

A country's economic development is often measured in terms of the availability of natural resources and the potential for its exploitation and income generation. Bhutan is endowed with rich mineral resources that has allowed for the sustainable growth of a mineral based industry and export base. This mineral resource exploitation and value addition has helped generate employment and can contribute towards poverty alleviation.

The Department of Geology and Mines has the primary responsibility of geological mapping and exploring for additional mineral deposits and the management of mineral resources of the country. In addition, the department has been mandated to conduct geological investigations for slope stability and foundation, undertake risk assessments from Glacial Lake Outburst Floods, monitor glaciers and glacial lakes and carry out seismic studies.

7.4.1 Policy and Strategies

The strategic objectives of the Geology and Mining sub-sector are:

- Metallic and non-metallic mineral resources discovery;
- Enhance mapping coverage with geological mapping in 1:50000 scale;
- Preparation of site suitability, hazard and risk maps for selected areas;
- Mitigation measures at potential dangerous lakes against GLOF;
- Monitor glaciers and glacial lakes;
- Seismic data generation for earthquake studies;

- Establishment of mineral tiles registry for mineral and mining data management; and
- Environment friendly utilization of mineral resources.

7.4.2 Geology and Mines Targets

Some of the major targets of the Geology and Mines sub sector targets are reflected in the box below:

Box 7.4 **Major Geology and Mines Targets**

- Generation of Toposheet-wise geological maps in 1:50000
- Hazard, site suitability and risk maps for selected sites made available
- Research and analysis centre set up and research initiated
- Remote Sensing and GIS laboratory established
- Seismic network station installed
- Reports on regular monitoring of glaciers and glacial lakes published
- Mitigation of GLOF hazards through installation of early warning systems and artificial lowering of potentially dangerous lakes
- Development of guidelines on best practices for operation of mines and quarries
- Establishment of registry of mineral titles

7.5 Financial Outlay for the Trade, Industries, Tourism and Geology and Mines Sectors

The total capital outlay for the Trade, Industries, Tourism and Geology and Mines Sector currently is Nu. 6236.771 million.

Chapter 8: ENERGY

8.1 INTRODUCTION

Energy is essential for promoting living standards and the level of material progress of a country is often measured in terms of per capita energy consumption. Hydro-power energy production is Bhutan's outstanding and singular comparative advantage and its sustainable exploitation has had an immeasurable impact in boosting the country's economic situation. Resources from hydro-power exports have enabled the country to develop greater economic self-reliance and ability to meet increasingly larger shares of the country's development expenditures. In this sense it has steadfastly underpinned the rapid growth of the economy and further contributed valuable resources for social and other investments.

Bhutan has an estimated 23,760 MW with a mean annual energy production capability close to 100,000 GWh. At present, only 5% of this vast potential has been tapped with the completion of the 1020 MW Tala Hydro-electric project. The completion of the latter project in 2007 will double the share of electricity revenue from around 32% of the total revenue to 55%. Electricity sector's share of the GDP will also rise to 24% in that period, rising to become the single largest contributor to the economy. The development of several more mega hydro-power projects over the current and future plan periods is likely to see an even greater prominence of the electricity sector within the national economy. [Box 8.1]

8.2 OPPORTUNITIES AND CHALLENGES IN THE ENERGY SECTOR

Accelerating hydropower development for electricity exports will continue to be the major strategic opportunity for the country in view of its large unexploited potential for hydropower and the seemingly infinite demand for power in Northern India, where chronic shortages are likely to rise even further. Bhutan currently supplies only a very small amount of what India requires and could easily absorb all that the country could produce over the next twenty years. As the production cost of hydropower in Bhutan is also among the cheapest in the world, this makes it a high return and extremely feasible investment for both countries. However, the fuller exploitation of the hydropower potential is constrained by the extremely high up-front investments and funding required for its development. In Bhutan's case this has been so far largely mitigated due to the favourable financing mechanisms between India and Bhutan. However, in addition to such bilateral arrangements, there is an urgent need to also consider various modes of financing such as through private sector and public partnerships, independent power producers and FDI to attain the desired levels of hydropower capacity addition.

Box 8.1: Water Resources and Hydro-power Development in Bhutan

Water is a natural resource that is in great abundance in Bhutan and the mountainous topography and climatic characteristics have endowed the country with a vast hydropower potential of around 30,000 MW. Of this 23,760 MW is technically feasible which translates into a mean annual energy production capability of around 100,000 GWh. This tremendous comparative advantage for the country has been tapped effectively through a mutually beneficial and highly successful partnership with the Government of India resulting in a win-win situation for both countries. India has generously provided valuable financial and technical resources to undertake the implementation of these complex and mega projects in addition to assuring purchases of any surplus power generated. The availability of reliable electricity also serves India's growing needs for cheap power to continue growing rapidly and ensure its energy security. For Bhutan, the effective and sustainable utilization of its water resources has proved to be the key strategic success factor in furthering its sustainable development goals. The harnessing of the country's hydropower potential closely parallels the rapid pace of socio-economic development and progress in Bhutan and has largely underpinned the strong economic growth and generated valuable resources to pay for a significant part of its social and other development investments.

At the start of the new millennium in 2000, hydropower generation capacity in Bhutan stood at around 353.65 MW. By 2007 it will quadruple to 1,489 MW. This capacity is further expected to double by the end of the Tenth Plan and possibly reach 6,000 MW by 2020 and 10,000 MW by 2028. On average, this represents adding capacity of around the size of a Chukha annually, a substantial accomplishment considering the small size and limited absorptive capacity of the country's economy. The expansion of hydropower production capacity has had an enormous impact as by the end of the Ninth Plan, the energy sector contributed to around a quarter of GDP and 60% of national revenues. This also excludes the major contribution that hydropower infrastructure development makes to the construction sector, which accounts for another quarter of GDP. With a further doubling of capacity envisaged by the end of the 11th Plan in 2017 or by the year 2020, the energy sector will probably contribute close to half of GDP and account for around three-fourths of the total national revenues.

The energy sector is thus strongly poised to continue leading and boosting growth in the future economic scenario and will greatly enhance the prospects of promoting higher living standards and reducing poverty levels in the country. These projections are realistically based on and anchored by the Indo-Bhutan agreement on the long term cooperation in the field of hydropower development signed by the two governments in July 2006. Under this umbrella agreement that is valid for sixty years, India will import a minimum of 5,000 MW of electricity from Bhutan by 2020. Taking into consideration domestic consumption, the country will be required to develop hydropower capacity of around 6,000 MW which would require the capacity addition of another 4,500 MW. This would require an annual capacity addition rate of around 346 MW, the size of a Chukha Hydro-power project each year. At this rate of capacity addition it is envisaged that the country will have tapped around a quarter of its technically feasible hydropower resources by 2020. To reach these capacity addition targets, several hydropower projects have been planned for implementation over the Tenth and Eleventh Five Year Plans which are listed in Table 8.1.

The country's extremely strong environmental conservation policies have affected the pace of implementing energy projects due to the lengthy procedures such as environment impact assessments and securing road clearances. The lack of coordination among various government agencies and accompanying delays in securing sectoral clearances have also impeded the implementation of energy programmes resulting in loss of time and cost escalations. Despite the delays, addressing genuine environmental concerns are necessary in view of the fact that the protection of the country's main watersheds will in the long term determine the sustainability of the hydropower projects. The key challenge will thus be to develop hydropower projects in

an environmentally friendly and sustainable manner and doing it efficiently and in a cost effective manner. Another constraint pertains to the potential environmental hazard of a glacial lake outburst floods as a consequence of global warming. This could influence the long term viability of certain hydropower projects that are on rivers fed by glacial lakes.

Table 8.1: Hydropower Projects Scheduled for Construction in the Tenth Plan and Eleventh Plan Periods

River Basin	Project Name	Installed Capacity-MW	Construction Period
Punatsangchhu	**Punatsangchhu I HEP**	1095	2007-2014
Mangdechu	**Mangdechu HEP**	670	2009-2016
Punatsangchhu	**Punatsangchhu-II HEP**	990	2009-2016
Bumthangchhu	**Chamkarchu-I**	670	2014-2020
Bumthangchhu	**Chamkarchu-II**	570	2017-2022
Drangmechhu	**Kholongchhu**	485	2014-2020
Amochhu	**Amochhu HEP**	500	2010-2018
Nikachhu	**Nikachhu HEP**	210	2010-2018
	Rothpashong HEP	400	
	Dagachu CDM HEP	114	
	Sunkosh	4060	

Source: Department of Energy, MEA

With the planned hydropower projects for the Tenth Plan, many of which lie in the interior parts of the country, the present width and capacity of the highways, roads and bridges could prove a bottleneck for the efficient transportation of large hydropower plant equipments and construction material to these hydropower project sites. The facilitation of accelerated development of hydropower will therefore require new roads to be constructed, existing highways and roads to be resurfaced, realigned and widened and bridges built to accommodate 70 tonne trucks. This expansion of strategic infrastructure to facilitate the programme for accelerated hydropower development will need to be addressed on a high priority basis.

Rural electrification presents a special opportunity to improve the livelihoods and living standards in many rural areas of the country. As such the Royal Government has attached priority to achieving the goal of electricity for all by 2020 and the Tenth Plan target of providing electricity access to 84% of rural households. However this is likely to be seriously challenged by resource and accessibility constraints. Other critical challenges in the energy sector relate to the managing effectively the demand and supply of electricity, meeting domestic demand at subsidized rates against the compulsion to increase exports for revenue generation and the seasonal variation of electricity generation due to hydrological flows.

8.3 ENERGY SECTOR POLICY, STRATEGIES AND TARGETS

The overall objective of the Energy Sector for the Tenth Plan is the sustainable development and efficient use of energy resources for socio-economic development. This will be achieved through accelerated hydro-power development to provide environmentally clean, safe, reliable, equitable and affordable access to energy. The latter is expected to contribute towards economic growth and self-reliance and improved quality of life and income-earning opportunities of the poor.

The specific strategies to achieve the above objective are:

- Accelerated development of additional mega hydro-power plants;
- Development of small, mini and micro-hydels where on-grid connectivity is difficult;
- Expansion of rural electrification; and
- Identification and utilization of alternative sources of energy.

8.4 MAJOR ENERGY TARGETS TO BE ACHIEVED IN THE TENTH PLAN

The major targets for the Energy sector are reflected in the box below. These targets include enhancing the sectors contribution to GDP and national revenue and expanding electrification coverage and the total installed hydropower capacity.

Box 8.2 Energy Sector Targets

- Increase energy sector share of GDP to 30%
- Enhance revenues derived from electricity to 60% of total national revenue
- Expand national electrification coverage to 85%
- Expand rural electrification coverage to 84%
- Expand hydropower installed capacity to 2,705 MW

8.5 FINANCIAL OUTLAY FOR THE ENERGY SECTOR

The capital outlay for the Energy Sector currently is Nu. 5998.699 million.

CHAPTER 9: EDUCATION

9.1 INTRODUCTION

The Royal Government views public resource expenditures on education at all levels as vital investments that have both immediate and long term benefits for individuals and Bhutanese society. Education plays a crucial role in accelerating economic growth through creating a productive national workforce and in advancing various other socio-economic objectives as emphasized in the strategic framework priority for investing in human capital. The advent of a democratic form of governance in Bhutan also demands a better educated polity to make well-informed choices and participate more meaningfully in national and local political affairs. Moreover, the expansion of and improvements in the quality of education at all levels will greatly determine the prospects for the eventual emergence for a knowledge based society in Bhutan.

Equally important, education constitutes a strategic means to achieve poverty reduction in the country. In this regard, the Bhutan PAR 2004 and various studies reveal very strong linkages between educational attainment and poverty while indicating that a mid-secondary education could have a noticeable impact in lifting an individual out of poverty. The benefits of education for poverty alleviation in countries all around the world are also well documented and known. These persuasively argue the case that ignorance and the lack of education have far reaching socio-economic costs and detrimental consequences that perpetuate a vicious cycle of poverty and disempowerment.

For these reasons and the broader quest to improve happiness and life satisfaction in Bhutanese society, the education sector will continue to receive high priority within the Tenth Plan. Special emphasis will be laid on sustaining universal basic education in terms of enhanced net enrolments, providing equal opportunity and access in education at all levels, improving education quality and standards, enhancement of value education, promotion of national literacy and making education more relevant to the workplace. The further expansion of higher education, particularly technical and management education, and the promotion of lifelong learning opportunities are other areas of significant priority too as they considerably advance the quality and level of human capital formation.

9.2 CONSTRAINTS AND CHALLENGES

Progress made within the primary education programme over the last decade to meet the Millennium Development Goals (MDGs), and the Education for All goals has stretched the limited resources of teachers, facilities and finance and severely tested the capacity of the system to deliver Bhutan's commitment to quality education for all. There are also several challenging issues related to monitoring education in remote areas, maintaining staff morale and improving teacher performance. Other important educational concerns relate to inadequate access to primary education in a few small

and isolated communities and enhancing incentives for teachers, especially those in remote areas. The strengthening of inclusive education, including providing adequate access and opportunities to children with special needs or disabilities, and providing boarding facilities in remote and highly dispersed settlements are other issues that will also require attention.

Given these above constraints and the widely dispersed nature of Bhutanese settlements, it is becoming increasingly difficult to provide educational services on the basis of continued expansion of community primary and primary school infrastructure and resources. The strategic shift to be employed over the Tenth Plan will be to consolidate schools for a more effective and rational utilization of resources. This will not only enable a better provisioning and pooling of educational services, resources and opportunities in a optimal location to a larger body of students but will allow for improved quality and monitoring of that aspect. The process of consolidation will not reduce access to primary education or declines in school participation. Boarding facilities are to be provided in more remote areas including mid day meals in the day schools and bus services in urban areas. For children of poor families, this will also include providing a living stipend, clothes and other essential necessities.

The success at the primary level has placed enormous pressures on the secondary and post-secondary levels with an ever-increasing number of students moving up the education ladder. This has resulted in a critical shortage of secondary education places and qualified Bhutanese teachers teaching at this level. There is further the increasing pressure of providing gainful employment to many of the educated youths who do not go on to tertiary level education as many of them are unskilled. Addressing the apparent mismatch between the skill levels of educated youth and job availability in the labour market thus constitutes a major area of concern for education reform.

While policy initiatives have been undertaken to encourage students to enter vocational training, the present vocational education system is both inadequate and inefficient. It is also an unpopular option for many students due to the low status and poor working conditions associated with blue-collar jobs. Career counseling and the introduction of some basic skills training through a system of school clubs and career information system will need to be strengthened to help address this.

Achieving gender parity at the higher secondary and particularly tertiary levels is a particular challenge. While gender parity at the primary and mid secondary levels has been achieved, this remains a problem at the higher secondary and tertiary levels and justifies the need to adopt affirmative action and relevant measures to ensure gender parity at these levels. This would promote the more effective utilization of female human capital in the labour market and address the gender imbalance in more remunerative jobs and higher profile occupations including the upper echelons of political and civil service positions.

Early childhood care and development in the sense of organized stimulation and play centres have hitherto not been considered a priority given the strength of traditional

practices of child rearing in the extended family system. However, with social transformation and added pressure on working parents, this is becoming an important area of concern for the future and will require a coordinated approach involving families, communities, health workers and educators. More so, the gradual weakening of traditional family ties and erosion of conventional social values due to rapid modernization and globalization effects poses the need to strengthen values education in school.

The difficult terrain and widely dispersed population have been the primary hurdles to extending social services and achieving economies of scale. An added challenge for the education sector is to meet and sustain rising recurrent costs associated with an ever expanding education service. The situation thus calls for new ways to organize education and allocate resources more efficiently to maximise their utility.

To meet the growing public demand for a wider and more diverse choice of higher education facilities, partnerships with and engagement of the private sector will be necessary and will be actively promoted. The engagement of foreign investors in partnerships to develop high quality academic schools and institutions will also be considered. These will require the formulation of a comprehensive policy on higher education that will include regulatory aspects for maintaining standards of educational services in all public and private institutions under the mandate of the Royal University of Bhutan.

The most pressing issue is that of maintaining and improving the quality of education at all levels in both public and private educational institutions. There is the ever present danger that the rapid progress made in advancing education goals so far could be eroded if adequate attention is not paid to maintaining and upgrading the quality of education. This will entail a need to undertake a comprehensive review of the quality of education as a first step to addressing the issue. Additionally, the Royal Government will actively consider promoting schools of academic excellence with private sector and foreign participation with a view towards gradually developing a viable and thriving education industry. This is expected to help set useful benchmarks to improve and stimulate education quality in all educational institutes in the country.

9.3 EDUCATION POLICES AND STRATEGIES

9.3.1 Objectives

The main thematic objective for the education sector during the Tenth Plan will be the consolidation and further enhancement of the quality of education. The other key objectives are:

- Provide support mechanisms to promote good practices for early childhood care and development for children between 0 – 6 years;
- Enhance Primary Net Enrolment (enrolment of children aged 6-12 in classes PP-VI) to near 100% by 2013;

- Enhance Basic Net Enrolment (enrolment of children aged 6-16 in classes PP-X) to near 100% by 2013;
- Provide opportunity for at least 40% of class X graduates to enroll in class XI in government schools;
- Establish a programme of inclusive education to enable all children to participate in and benefit from the education process;
- Develop a more sustainable education system through private participation and cost sharing measures;
- Promote an education industry based on high academic quality;
- Enhance the quality of education to achieve competency in languages, ICT, Mathematics and Science to international standard levels;
- Consolidate personal development and value education programmes, including development of multi-skills and further improve and expand youth guidance and career counseling programmes;
- Strengthen and improve pre-service and in-service teacher education to meet challenges of a rapidly growing education system, fulfill need for teachers to be perpetual learners, and encourage in-service teachers to further specialize in specific curricular areas and grade levels;
- Enhance equitable distribution of experienced and qualified teachers across all schools;
- Strengthen and improve the education management system at all levels, with particular emphasis on school level management;
- Review and reform monitoring and professional support services system making it more efficient and effective;
- Establish a higher education system that ensures high quality and offers diverse opportunities for higher learning;
- Enhance enrolment of girls in tertiary education to at least 80 girls for every 100 boys;
- Enhance adult literacy rate to at least 80% with special focus on empowerment of girls and women, particularly in rural areas;
- Expand and strengthen the system of continuing and lifelong education opportunities towards creating a learning society;

9.2.2 Strategies

The following are the strategies outlined for achieving the Education Sector objectives:

- Enhance early childhood care and development support mechanisms through non-formal education, advocacy through media and encouraging private promoters to establish day care centres in urban areas;
- Support Dzongkhags and Gewogs to increase number of schools, especially small community primary schools in remote and interior hamlets to meet the goal of 100% net primary enrolment by 2013;
- Effect a consolidation of schools in urban and rural areas for a more effective rationalization of resources and improvement in quality of education;

- Establish boarding facilities to cater to needs of dispersed settlements;
- Upgrade selected community and primary schools to secondary schools and establish new secondary schools to meet the growing demands at this level;
- Expand number and variety of private schools and institutionalize boarding school payment arrangements for a more sustainable education system;
- Education industry to be promoted through private and foreign participation;
- Enhance the education of the disabled through continuing the inclusive education initiatives to provide support facilities in selected schools to allow disabled children to attend regular schools;
- Enhance management systems with emphasis on monitoring quality of education through provision of adequate personnel, training and IT facilities;
- Review and harmonize present EMSSD, resource centers and school clusters and role of DEOs to ensure greater monitoring and professional support;
- Complete curriculum reform in Dzongkha, English and Mathematics and institutionalize it through a system of decentralized support mechanism within schools and establishment of school clusters;
- To support the new English curriculum, reading programmes in schools will receive a budget of Nu. 10,000 per school and Nu.200-300 a student
- Introduce a system of competency testing and remedial measures for self-improvement for teachers to enhance competency in languages, communication skills and mathematics to international standards;
- Develop a strategic plan to revise and reform environmental studies, science and social science curriculum and consider inclusion of wider curricular options, particularly at secondary and higher secondary levels.
- Conduct a comprehensive review of the whole school curriculum from PP – XII and identify curriculum reform needs based on recommendations of the Education sector review;
- Enhance health and physical education programmes and provide for more organized games and sports;
- Enhance science education at all education levels to meet science related manpower shortages and address unemployment among educated youth;
- Introduce IT literacy in all schools as a tool subject;
- Improve teaching learning resources in schools through better and timely provision of facilities and effective coordination, with priority to enhancing learning resources in the more remote schools such as the use of IT;
- Strengthen and expand areas of curriculum related to personal development, value education, scouts programme, career guidance and orientation, vocational skills, physical education and games/sports. Special emphasis will be placed on career guidance and orientation to vocational skills at the middle and higher secondary levels;
- Promote art and culture and literary activities through the introduction of more formalized clubs in each of the schools. The capability of teachers with special skills and interest in these activities will be further enhanced and developed through existing programmes;

- Enhance the initial teacher education program to four years to give adequate stress to mastery of the subject taught and introduce requirement for those selected for teacher training to pass specific English proficiency and aptitude tests for teaching;
- Enhance quality and professionalism of in-service teachers through opportunities for collaboration and dialogue through the national and cluster based workshops/seminars and informal dialogue and professional exchange in schools or school clusters;
- Establish a system of distributing qualified and experienced teachers through an enhanced system of human resource development and placement of senior and master teachers;
- Schools will be staffed with a minimum teacher pupil ratio of 1:24 with class size of 30-36 students in regular schools and 1:20 in smaller schools with multi grade teaching;
- Provide incentives such as scarcity allowance and difficulty allowance, in particular for teachers posted in rural and remote schools;
- Promote professionalism and dedication of teachers by improving living and working conditions of teachers, providing suitable workspace in the form of staff rooms and staff quarters, particularly in rural and remote schools;
- Provide five to ten ex-country undergraduate scholarships to attract quality candidates in subject areas such as Mathematics, Sciences and English and build a critical mass of educational leaders in these subjects;
- Provide 20 scholarships in Sherubtse College for Mathematics and Physics students at the rate of Nu. 1,500 in addition to free tuition and boarding to encourage students to take up teaching;
- Strengthen counseling and career guidance programmes in schools through specialized training of counseling and career guidance teachers and development of appropriate curriculum and support materials;
- Institute a system of pastoral care and personal counseling including monitoring academic progress for all students to provide timely and appropriate interventions;
- Expand the programme of technical and vocational education clubs in school to provide orientation to technical and vocational education;
- Enhance tertiary education provision to meet the increasing learning needs in terms of numbers as well as in diversity;
- Provide for continuous learning needs of adults through flexible modes such as distance and e learning, part-time and mixed mode learning;
- Draw up a comprehensive policy for tertiary education including the provision of private tertiary education;
- Expand NFE programme by strengthening decentralized policy for establishment and management of NFE programme in Dzongkhags and Gewogs;
- Continue to provide under graduate scholarship to cover areas which are not provided in the country or for reasons of cross fertilization and promoting excellence;
- Develop comprehensive data base information for tertiary/higher education including those studying outside Bhutan;

- Establish a comprehensive and reliable quality assurance and accreditation system for higher education provided not only in country but also for those who study overseas;
- Continue the use of Class XII students to work as part time NFE instructors and encourage their participation in community leadership roles to create a critical mass of effective community leaders;
- Develop and provide relevant training programmes for NFE instructors to enhance their content knowledge and teaching skills;
- Establish data base information on NFE to facilitate strategic planning for expansion of NFE to realize the goal for full adult literacy by 2015;
- Strengthen collaboration with other agencies in improving the relevance and quality of NFE curriculum and provide relevant life skills training;
- Explore and learn from the experience of other countries the different modes of continuing education programme to suit the needs and situation of the learners in different parts of the country;
- Advocate, motivate and encourage private sector to provide Continuing Education programmes in different parts of the country;
- Facilitate the school Dzongkha curriculum reform work and enhance the competency in the use of Dzongkha amongst school graduates;
- Upgrade the qualification of existing staff at all levels; and
- Explore private sector and foreign investor participation in creating an enabling environment for education as an export industry.

9.3 TARGETS FOR THE EDUCATION SECTOR

The Education Sector targets are listed in the box below.

Box 9.1 Education Targets for the Tenth Plan

- Enhance Primary Net Enrolment to near 100%
- Enhance Basic Net Enrolment to near 100%
- Enhance Enrolment of Girls in tertiary institutes to 80 girls for every 100 boys
- Enhance literacy rates upto 80%

9.4 FINANCIAL OUTLAY FOR THE EDUCATION SECTOR

The capital outlay for the education sector is Nu. 11,755.99 million (for both central and Dzongkhag programmes).

CHAPTER 10: HEALTH

10.1 INTRODUCTION

As reflected in the review on health development, considerable progress has been achieved in furthering the health status of the population over the Ninth Plan period. These notable improvements have kept the country well on track to meet all of the MDG health targets and have also been responsible for the significant scaling up of the human development indicators for Bhutan. The main thrust of the health programmes over the Ninth Plan period was on the provision of primary health care services. This was supplemented by efforts to develop further the secondary and tertiary health services and manage communicable and non-communicable diseases through a strategy of prevention and control. Due attention was also given to the relevant integration of traditional medicine services with modern health services.

Within the context of the Tenth Plan's strategic framework, in addition to contributing to GNH and the well-being of Bhutanese society, health is also viewed as an important dimension of human capital. Health expenditures therefore are deemed to be long term investments that are expected to provide both tangible and intangible socio-economic returns. Additionally, continued reinvestments into the health sector will also help protect other long term human capital investments from erosion and enhance their impact considerably. Reflecting this high priority, extending free basic health care has been enshrined as a constitutional obligation. The Constitution mandates that the Royal Government is to "provide free access to basic public health services in both modern and traditional medicines" and that it will "endeavour to provide security in the event of sickness …"

This constitutional commitment to provide free basic health care for all Bhutanese has considerable positive ramifications for the prospects of reducing both income and human poverty in Bhutan. There is growing evidence in many countries that health factors are closely linked to labour productivity and that productivity gains are most prominent for those population groups with the weakest health and nutritional status – which invariably constitute the poorer sections of society. As such, health investments have the greatest productivity benefits for and impact on the poor and low income groups.

Under the Tenth Plan, the Royal Government will continue to attach high priority to maintain universal access to basic health services and ensure that basic health services are distributed more widely throughout the country, including the more vulnerable and isolated communities. However this will be pursued through a consolidation approach rather than a continued expansion of health units for a more rationalized utilization of health resources. Ongoing efforts will be further strengthened toward securing significant reductions in the current levels of infant, child and maternal mortality towards reaching the MDG plus targets. As in past years, a key focus area of health investments will be directed at improving maternal and child health through which the

well-being and productive capacities of entire families are ensured. Also, in the Tenth Plan, efforts will be made to accelerate institutional as well as human resource capacity to manage some of the illness for which services are availed outside the country so far and work in close collaboration with the Royal University of Bhutan and other relevant agencies to increase the pool of trained health workers.

The details of the health policy and the various programmes and activities are treated in the following sections.

10.2. HEALTH SECTOR OBJECTIVES, POLICIES AND STRATEGIES

As with the earlier plans, the overall thrust of the Tenth Plan is to improve the quality of life of the people within the overall development philosophy of Gross National Happiness (GNH). Health is pre-requisite to happiness and therefore forms one of the cornerstones to achieve this national goal.

Despite strong pro-poor development policies and interventions in the past plans, poverty continues to be a serious concern. Therefore Poverty Reduction rightly forms the key framework of the Tenth Plan. Accordingly, the priorities, strategies and programmes for the Ministry of Health for the Tenth Plan are geared towards achieving the overall goal of poverty reduction. Such goal based plan is expected to realize the long term objective of the health sector, which is *to facilitate, through a dynamic professional health care, attainment of a standard of health by the people of Bhutan to lead a socially, mentally and economically productive life, and within the broader framework of overall national development, enhance the quality of life of the people in the spirit of social justice and equity.*

The underlying principle for the Tenth Plan is to continue efforts and sustain the achievements of the earlier plans. Further development of secondary and tertiary services to back up PHC; continued focus on control of communicable and non-communicable diseases through prevention and promotion strategy; and the achievement of the MDGs and other priority health goals form the main areas of work for the health sector in the Tenth Plan.

The health sector plan strictly adheres to the results based national planning framework. In line with this, all central and Dzongkhag health programmes and institutions will endeavour to contribute to the delivery of the following overall health sector impacts through realization of their own specific outcomes and outputs:

- Millennium Development Goals achieved beyond the targets and other priority health goals accomplished (MDG Plus)
- Improved quality and accessibility of health services
- Promotive, preventive, curative and rehabilitative capacity improved
- Enhanced Traditional Medicine services at all levels
- Attained sustainability and uniformity in health care delivery system

Strategies:

In-order to achieve the plan objectives, efforts would be focussed in improving the following four core areas of health services in the country:

- Health Management and Development services
- Health Promotion and Disease Prevention and Control services;
- Diagnostic and Curative Services;
- Sustainability, Regulatory and Monitoring services.

Within the above four strategic focus areas, specific strategies that would be pursued are as follows:

Health Management and Development services

- Building institutional and human capacity to meet the growing demand of health services and improve the quality and access to health services;
- Enhancing and improving health information, data collection, analysis to facilitate and support evidence based decision making through improved ICT;
- Building and increasing the pool of trained health workers including doctors and specialist through accelerated human resource development programme and appropriate deployment of the health personnel.

Health Promotion, Disease Prevention and Control services

As the ultimate goal of health services in the country is for its citizens to lead a socially, mentally and economically productive life, the focus of the health services in the country should be to prevent it's citizens from falling sick: i.e reduce morbidity. Therefore, the second focus of the health sector in the Tenth Planis to promote healthy life style and prevent and control diseases in the country. This will be carried out through:

- Improving the health of children through reduction of ARI and diarrhoeal incidences, promoting and enhancing breast feeding, child care practices and nutritional services, sustaining Universal Child Immunization, scaling up institutional deliveries, expansion of perinatal services to the other regional hospitals , strengthening public health surveillance system;
- Improving the health of women, especially mothers through expansion and improvement of various health services like intensifying safe motherhood initiatives, promoting nutrition for mothers and newborn, expansion and improvement of postnatal and perinatal services, promoting reproductive health, expansion of Basic and Comprehensive Emergency Obstetric Care etc;
- Developing and enhancing institutional capacity to prevent and control communicable and non-communicable diseases including life style related diseases and promoting healthy life style amongst the general citizens;
- Improving and strengthening rapid response system through implementing International Health Regulations (IHR) and building support facilities like laboratory services and mobilisation of multi-stakeholder support including cross border collaboration; and

- Expansion and sustaining of rural water supply and sanitation programmes and community health programmes;

Diagnostic and Curative Services

Even with considerable efforts put in the preventive area, people will continue to fall sick and require diagnostic and curative services including rehabilitation services. Therefore, while the health sector will emphasize on prevention, concerted effort will be made to build capacity to provide diagnostic and curative services for the people. Building on the past efforts, the Tenth Planwill focus on improving the diagnostic and curative capacity of the health sector through amongst others, the following:

- Consolidation of health services to improve efficiency and effectiveness of the
- services;
- Improvement of primary, secondary and tertiary health care services through enhanced institutional and human capacity.
- Expansion and improvement of various health infrastructures including construction of Regional Referral Hospital in Gelephu, district hospitals, Public Health Laboratory, etc;
- Improving the institutional capacity to diagnose, manage and treat various diseases;
- Introduction of new technology in diagnostic and curative services and para-medical services on a pilot basis and expansion of ambulance services throughout the country.

Sustainability and Quality of Services

While the state is mandated even by the constitution to provide free basic health care to its citizens and that the state is committed to continue providing quality health care services, it has to be mindful of sustaining the services and also ensure that health services available in the country are regulated and monitored to ensure quality. Therefore, the Tenth Planwill further build on the results of the past years and work to ensure that the health services are sustainable, regulated and properly monitored for quality. For this, the following broad strategies will be pursued in the Tenth Plan:

- Mobilise additional resources for the Bhutan HealthTrust Fund;
- Continue and explore the possibility of additional cost sharing mechanism for some of the health services and also initiate outsourcing of some of selective medical and diagnostic services
- Implementation and enforcement of the Medicine Act 2003 through amongst others, delinking the Drug Regulatory Authority from the Ministry of Health, development of necessary rules and regulations and other by-laws;
- Enforcement and implementation of Medical and Health Council Act 2002 and re-constituting of the members to ensure independence, quality and accountability;
- Standardisation and quality assurance of services, technologies, infrastructure, equipments and human resource.

10.3: MAJOR HEALTH TARGETS TO BE ACHIEVED IN THE TENTH PLAN

The major targets for the Health sector are reflected in the box below.

Box 10.1 Major Health Sector Targets

- Reduce IMR to 20 per thousand live births
- Reduce U-5 MR to less than 30 per thousand live births
- Reduce MMR to less than 100 per hundred thousand live births
- Enhance Life Expectancy to more than 70 years
- Sustain access to Safe Drinking Water to greater than 95%
- Improve access to Safe Sanitation to greater than 97%
- BHTF funds to reach 30 Million US$
- Improve proportion of population within 3 hrs walking distance of a health facility to more than 90%

10.4: FINANCIAL OUTLAY FOR THE HEALTH SECTOR

The capital outlay for the Health Sector is Nu. 6,972.88 million (for both central and Dzongkhag programmes).

CHAPTER 11: ROADS AND BRIDGES

11.1 INTRODUCTION

Being landlocked, the country is fully dependent on road network for transportation. Considering the country's mountainous terrain, provision of road services is extremely difficult and costly; nevertheless, major investments until now have been channelled into road and bridge infrastructures due to the fact that the national security and socio-economic development of the country largely depends on a safe, efficient and reliable road network. The further development of the road network as an important part of the expansion of strategic infrastructure programme will effectively contribute to the reduction of poverty, an overarching goal of the 10th five-year plan. his is evident from a series of studies, conducted within the country. In the Vulnerability Assessment and Mapping Study 2005, 37% of the most vulnerable Gewogs indicated that the improvement of road accessibility would reduce food insecurity in their Gewogs. Participatory Policy Impact Assessment (PPIA) of Rural Roads on Rural Poverty, conducted by the Planning Commission, also showed a similar result. Generally, roads will help integrate rural communities and dispersed regions to the national economy and enjoy a greater share and benefits of development. A well connected national highway and road system interlinked with rural feeder and farm roads would greatly help reduce rural and regional isolation, expand rural access to social services and urban/export markets and create conditions required to promote rural industrialization and non-farm enterprises. Additionally, the national road and transport connection between regional growth centres, national cities and the various small and medium towns would facilitate growth and development of urban areas and commercial hubs around the country.

Currently, there are 511 km of district roads, 1,247 km of feeder roads, 440 suspension bridges and rudimentary mule-tracks across the country. Despite these achievements, the existing roads, rural road network in particular, still remains inadequate in terms of both connectivity and coverage. The Population and Housing Census (PHCB) 2005 indicates that 9.7% of the population live more than 6 hours away from the nearest motor road and that the rural households in six districts comprise about 73% of this percentage. It is also a matter of concern that the country is dependent on a single East-West national highway running through the northern part of the country. The absence of such an alternative highway running through the south has constrained travel from one part of the country to the other.

Furthermore, the transportation on the existing national highways is highly inefficient, lengthy and susceptible to blocks due to natural calamities and heavy snowfalls. Owing to the difficult topography and resource constraints, roads are generally built following land contours with the minimum number of bridges as possible. Hence, the roads in general, are narrow with sharp curves and steep gradients, prone to accidents. Typically, road distances are about two and half times the straight-line distance between two points. Most of the existing highways and bridges were also constructed at a time when the flow of traffic was very low.

In view of the above, in the 10th FYP, priority has been given to the construction of the southern east-west national highway, based on the decision of the 82nd session of the National Assembly and also in view of the Vision 2020 milestone to complete the construction of the second transnational highway by 2017. Moreover, in order to ensure safety, reliability and efficiency, importance will also be given to the construction and improvement of road network across the country.

11.2 OPPORTUNITIES AND CHALLENGES

For major investment projects such as roads and bridges, comprehensive front-end planning is a pre-requisite for delivering successful projects. Inherent in the prevailing system is the lack of planning and time for detailed pre-construction studies such as, alignment selection, social impact assessment, environmental and geological studies, preliminary/detail survey, design, tendering, etc. that greatly hinder the quality and progress of new road constructions. On the other hand, road constructions have increased dramatically over the years. Therefore, it is necessary to conduct survey and design works related to preconstruction studies/investigations for new roads well in advance.

The planning and surveying of new roads are significantly hindered by non-availability of appropriate maps on required scale. The topographical maps currently available in the country are both old and of 1:50,000 scale, which are difficult and tedious to use for assessing the road alignments, thus leading to erroneous decisions . To carry out planning, surveying, and designing of roads in an efficient and reliable manner, it is desirable to have latest topographical maps of at least 1:10,000 scale (maps of lower scale preferred) and aerial photographs.

There is an acute shortage of qualified and trained engineers in the areas such as structural engineering, engineering geology, environment management, survey & design, contract management, quality control etc. The overall institutional capacity of the sector to meet the increasing demand for technical studies and services needs to be studied through the review of the existing manpower.

The sector's policy of phasing itself out from direct involvement in construction works and concentrating increasingly on design, estimates and regulatory functions is constrained by the limited capacity of the private construction firms in the country. There are only few Class 'A' and Class 'B' contractors, leading to limited and unprofessional competition in the construction sector. As a result,of low quality of work, budget over-runs and inability to finish the work within the specified time are common.

While there is an increasingly high demand for expansion of the country's road network, maintenance and upkeep of the existing road infrastructures to desired level of standards and serviceability has always been a challenging task, particularly in terms of appropriate technology and resources which are in acute scarcity. In the sector's strive to develop a road management system to determine priorities for routine and periodic maintenance treatments, the TIMS software for strategic and maintenance planning has been acquired but its full utility has not been achieved due to lack of trained personnel. The Road Sector

Master Plan (2007-2027) has recommended the establishment of a comprehensive asset management system for monitoring and evaluating road development programmes.

11.3 POLICIES AND STRATEGIES

The policy objectives of the Road sector for the Tenth Plan are to:

- Reduce poverty incidence and improve the quality of life of the rural population through enhanced rural accessibility;
- Enhance national security and solidarity through improved and expanded road network;
- Enhance road connectivity and capacity to facilitate the accelerated hydropower development;
- Consolidate environment friendly construction practices to minimize negative impact on the environment;
- Enhance the reliability, economy, safety, ease and comfort of road communication through reduction in travel time, road user costs, transportation costs of goods and services and traffic accidents;
- Promote and enhance private sector participation in the delivery of construction and maintenance of road and bridge infrastructures; and
- Build professionalism and engineering capacity of the sector in the areas of planning, design, monitoring, quality control and cost-effective construction of road and bridge infrastructure works.

In the Tenth Plan, the Road sector strategies will be guided by the Road Sector Master Plan (RSMP) which provides the strategic tool to guide the development of the road infrastructure over a time horizon of 20 years (2007 to 2027). The key sectoral policy objectives of the sector will be attained through the following strategies:

- Expansion of the network of national highways, district roads and feeder roads;
- Improvement of the major highway network by widening of carriageway, strengthening of pavement, improvement of geometrics, installation of safety measures and realignment of roads wherever feasible;
- Maintenance and upkeep of the road network to acceptable levels of safety, efficiency and serviceability by way of periodic and routine maintenance, monsoon damage restorations and snow clearances, etc;
- Enhancement of professionalism in planning, development, management and operation of the road infrastructure through the following activities:
- Construction, operation and maintenance of roadside accommodations, roadside amenities and sheds, site offices and stores, laboratories, etc;
- Professional services for survey, investigation, design and supervision works as well as for imparting on-the-job and short-term in-country trainings;
- Collaboration with relevant agencies in the region and abroad in the fields of development and management of road infrastructure;
- Up-gradation of the tools and plants required for survey, investigation and design of road and bridge works;
- Promote/pursue studies for road tunneling and research on local construction materials for cost-effective use; and
- Direction and management of services.

11.4 MAJOR ROAD SECTOR TARGETS

In keeping with the results-based management approach, integral to the Tenth Plan framework, very clear and quantifiable targets have been set for the Road sector, which are as listed in the box below:

Box 11.1 Road and Bridges Sector Targets

- Ensure that 75% of rural population live within half-day's walk
- from the nearest road
- Construction and upgradation of 247 km of Southern east west highway
- Construction of 20 southern east west highway bridges
- Construction of 145 km of national highways
- Construction of 20 national highway bridges
- Double-laning of 40 km of national highways
- Realignment of 51. km of national highways
- New construction (28 Km) and upgradation (278 Km) of highways and roads to facilitate access of heavy transport (170 ton trucks) to hydropower sites.

11.5 FINANCIAL OUTLAY

The total capital outlay for the Road and Bridge sector (including Dzongkhag programmes) is Nu.10,158.75 million.

CHAPTER 12: URBAN DEVELOPMENT

12.1. INTRODUCTION

The process of urbanization is more than four decades old and unlike many other countries, where the establishment and growth of towns and cities have been influenced by economic potential, the development of towns in Bhutan initially resulted from the establishment of administrative centres. Today, the urban population comprises 31% of the total population and by 2020, it is envisaged that more than 50% of the population will be living in the urban areas. With this rapidly growing urban population, there has been a huge strain on urban public amenities and services, which requires substantial human and financial resources to address the emerging urban issues and poverty.

Presently, there are urban plans for 31 towns, of which implementation of plans for about 17 towns are underway. In the field of regulations for urban governance, Municipal Act, Building Rules, Urban Area and Property Regulations, Water and Sanitation Rules, Development Control Regulation for Thimphu are in place. In addition to this, the Building and Urban Development Act and the National Urbanization Strategy are under preparation.

While basic rudimentary urban facilities exist in all the towns, they are inadequate and require improvement and expansion. This will be carried out in line with the national spatial planning policy and the National Urbanization Strategy. Until now, piped and potable water supplies have been provided to 20 towns; piped sewerage and treatment facilities to 2 towns and solid waste management and disposal system to 13 towns. Furthermore, water service charges, based on actual consumption, have been introduced in 10 towns while the remaining towns are charged a flat rate, collected along with the land tax.

12.2 OPPORTUNITIES AND CHALLENGES

The uncontrolled growth of satellite towns and the need to consolidate and sustain urban amenities and services are the primary concerns faced by the sector. However, the National Urbanization Strategy, currently under preparation, is expected to address these constraints through provisioning of the much needed policy framework and guidance for the development of urban centres and infrastructure.

The shortage of competent manpower in the public and private sectors poses a major challenge. Currently, the sector has an acute shortage of urban planner, architects, geo-tech engineers, structural engineer, sociologist, economist,

although the sector's workload has increased substantially compared to the past. Additionally, the lack of professionalism in the private sector is also a major concern that impedes the growth of the construction industry.

Until recently, urban planning was largely constrained by the lack of data on population, rural-urban migration, socio-economic data & demographic information, appropriate base map; however, the Population and Housing Census of Bhutan (PHCB) 2005, has addressed this paucity of data to some extent.

Due to the fragile terrain and unstable geological conditions, the cost of construction is generally high. The cost further hikes up, roughly by 30% when the construction, as required, is carried out in compliance to the environmental code of practice. The cost escalation is also due to frequent fluctuation in the cost of the construction materials, which are largely imported.

12.3 POLICIES AND STRATEGIES

In the Tenth Plan, the sector in coordination with relevant collaborators, will prioritize the preparation and implementation of urban plans for all towns and develop urban centers in accordance with the National Urbanization Strategy. The urban management capacity will be enhanced through institutional strengthening on planning, data collection, GIS and designing of infrastructure, and capacity building of Dzongkhag engineering services.

The management of urban services through appropriate legislation and granting of autonomy to municipalities will be promoted. Importance will be given to improving the quality of urban amenities and services- in a consolidated and cost effective manner-through preservation of traditional architecture and the environment. Urban dwellers will also be encouraged to participate in the development and management of towns and urban areas.

12.4 MAJOR TARGETS TO BE ACHIEVED IN THE TENTH PLAN

The following are the major targets for Urban Development

Box 12.1 Urban Development Targets

- Urban Development
  - Urban infrastructure improved and consolidated in the existing towns
  - The establishment of two national cities-Thimphu and Gelephu.
  - Five regional growth centres, sixteen Dzongkhag centres.
  - Twelve medium towns, twenty three small towns/Gewog centres and four corridors that link the cities and regional/national centres.

12.5 Financial Outlay

The total capital outlay for the Urban Development in the Tenth Plan is Nu. 5410.698 million (including Dzongkhag programmes)..

CHAPTER 13: INFORMATION AND MEDIA

13.1 INTRODUCTION

Media in Bhutan is fairly a new development. The concept of the media, as a player in the growth of a modern society began in the mid 1980s, with the establishment of the first Bhutanese newspaper, Kuensel, and the Bhutan Broadcasting Station. In the late 1990s ICT was introduced and electronic media was added to the list with television following the suit few years later. Today Bhutanese media has begun to develop in all its forms - print, broadcast, film, music, etc.

Reading and writing in Bhutan is still associated with office and schools. Reading as a recreation is a new concept. Until recently, Kuensel was the only available print media. However, with increasing literacy rate and changing social needs two private news papers, Bhutan Times and Bhutan Observer were licensed in 2006. Kuensel is a biweekly newspaper sold nationwide with its content in English and Dzongkha. Bhutan Times is also a biweekly edition published in English, while Bhutan Observer is a weekly edition published both in Dzongkha and English. Bhutan Times has also launched a monthly magazine starting November 2006.

Radio is the most effective media in Bhutan and reaches by far the largest audience. BBS is the oldest and first Broadcasting Station in Bhutan. Recently two private FM Radio Stations, Kuzoo FM and Radio Valley, were established. The FM services and shortwave services of BBSC reach the entire country. BBSC now broadcasts 17 hours a day. While Kuzu FM-90 Radio services are available in 12 Dzongkhags, Radio Valley services are available only in Thimphu.

Television has only been introduced recently and is still at its infancy stage. BBSTV is the only television channel that caters local News and programmes in Bhutan. It provides services in both English and Dzongkha. Today BBSTV is available in 62 Nations. It provides 8 hours of programmes a day. Cable television services are available in 19 of the 20 districts in the country and about 40 different channels are provided by the cable TV operators.

Film industry is still in its infancy. Although the number of Bhutanese films has been increasing with more people venturing into the industry, the industry still faces challenges of limited domestic market, lack of skilled people in the industry, professionalism, etc.

Over the recent years media has seen rapid change due to change in government development policies. Realizing this important role played by this sector, the royal government has created the Department of Information and Media (DoIM) to coordinate and steer the development of media.

13.2 OPPORTUNITIES AND CHALLENGES

In the knowledge century, the country will strive to establish a knowledge society that provides access to information as a matter of right for every citizen. The draft Constitution also provides for establishment of freedom of expression and freedom of the media through the government policy. Creating a knowledge society is not an impossible dream for a small and landlocked developing country and the evolution of an information society will develop its own momentum. The media must play a vital role in educating, not just the young, but the entire population. It is only through the media that the decision makers can be reached. But the media community is already gaining visibility and will be an important element of the emerging civil society as there will be sea change in the workplace, the home and the market.

The rugged terrain and scattered population makes it difficult and expensive to reach remote communities early stage of economic development, yet to lay adequate ICT infrastructure. It is largely an oral society without strong literary traditions, thus posing an additional challenge to the information sector. ICT development demands special skills and resources as Bhutan struggles to bridge major gaps, including the digital divide, with limited funds and manpower.

With a literacy rate of 54 percent, the proportion of literate people in the country of 690,000 is limited. Computer literacy is far less with fewer than 10,000 computers in the country (Source: RGoB). Bhutan has a teledensity of four percent with Internet users representing about 0.73 percent of the population (Source: Dept of Information Technology and Bhutan Telecom). Power has reached just 35 percent of the population. All these factors have direct implications for the development of an active public sphere.

These constraints make the country extremely vulnerable. At the same time, Bhutan has many strengths. It has preserved a rich spiritual, cultural, and environmental heritage. It has drawn on the global development experience and followed a unique development path. It has decided to adopt modern technology in a pragmatic strategy to overcome its weaknesses like the shortage of manpower and the disadvantages of being landlocked. Most of all Bhutan has a clear idea of its priorities, symbolised by its development goal: Gross National Happiness.

13.3 POLICES AND STRATEGIES

With the increasing role and impact of media in the development of the society, the Ministry of information and communication will bolster the media sector by establishing standards and regulatory frameworks in place for media productions through coordination and consultation with the stakeholders. Awareness on information and media will be created for the general public as well as the students to build capacity of the people to absorb the contents provided by the media. The overwhelming foreign media content will be carefully regulated to protect the society from any possible undesirable effects, and development of local information and

media content will be given more importance. Private media enterprises will be encouraged and promoted by helping them to develop human resources and required skills.

Bhutan's media policy is the development of a free and responsible press in a competitive environment the royal government emphasizes that the media must continue to grow in professionalism to fulfill its role to "Inform, Educate, and Entertain", it is necessary that the Bhutanese media is able to function independently and responsibly, upholding national interests and the standards of tolerance, decency and sensitivity required for the healthy growth of a stable society and also keep up with the technological trends and developments in the international media.

13.4 FINANCIAL OUTLAY FOR THE INFORMATION AND THE MEDIA SECTOR

The capital outlay for the information and the media sector currently is Nu. 600.5 million.

CHAPTER 14: TRANSPORT

14.1 SURFACE TRANSPORT SUB-SECTOR

14.1.1 Introduction

The Transport sector has witnessed remarkable growth in the last forty six years since Bhutan launched its first five-year development plan. Rapid socio-economic development, improved standard of living and higher purchasing power of the people have led to greater mobility and increased economic activities, thereby increasing demand for better and efficient transport services and facilities. With globalization and increased trade, the need for an efficient transportation system to enhance connectivity in the region, has also gained immense significance.

The sector itself has undergone dramatic transformation. The present Road Safety & Transport Authority (RSTA) was established in 1997 and mandated with responsibilities related to administration of vehicle registration, roadworthiness program, driver licensing, emission control, and monitoring and regulating passenger transport services. Transport services are delivered and enforced through the RSTA's four regional offices, which are further supported by the base offices covering most Dzongkhags. Transport infrastructure, primarily in the form of integrated passenger terminal and bus sheds is available at the four regional offices.

Passenger transport services are available in 18 of the 20 Dzongkhags with the exception of Pemagatshel and Gasa. Accessibility and equity of passenger transport services are ensured through subsidy to private operators for operation of services on the non-profitable routes. Public transport services in the capital city of Thimphu have improved with the induction of four additional buses by Bhutan Post. Taxis services are also available in all urban centers in addition to personalized transport.

Service delivery in the transport sector has seen significant improvement. On-line sharing of information concerning passenger transport services, vehicles, drivers and other related information are now available. Similarly, vehicle registration and roadworthiness system, driver licensing and emission testing facilities have also been streamlined and continually improved. Considering the rapid increase in the number of vehicles, road safety issues are being given due importance.

A new and notable development for the future could be the introduction of railway transport in the southern parts of the country. Feasibility studies are being undertaken to explore the possibility of this mass mode of transport.

14.1.2 Opportunities and Challenges

Despite the very important role which the transport sector plays in supporting the socio-economic development of the country, the quality, quantity and accessibility of

transport infrastructure and services is still far from adequate. The sector therefore, needs improvement in several areas.

Passenger transport services in remote areas are either inadequate or unreliable, mainly due to high operating cost, seasonal flow of passengers and low earnings. This is also the case for urban transport services given the dramatic increase in private vehicle ownership. Problems related to traffic congestion, high rate of road crashes and environmental pollution continues to increase. Traffic enforcement is low due to the lack of trained enforcement professionals, safety equipment and limited mobility. Road safety measures and public awareness call for greater attention, and post accident management capacity needs urgent enhancement.

While there has been a dramatic increase in the number of motor vehicles in the country, the road network has increased only marginally. For this reason, the need for introducing alternative modes of mass transport has also become rather urgent. Transportation costs and travel time are very high, while the freight and logistic industry requires greater streamlining and development. The surface transport infrastructure is also inadequate. Bus terminals and sheds need to be constructed and renovated for better service coverage in several parts of the country. Disabled friendly transport facilities are not currently provided at bus terminals and public amenities along the national highways do not exist. Although the basic legal and policy framework for motor vehicle regulation is already in place, gaps exist in certain areas such as the lack of regulations pertaining to the operation of automobile workshops. The delivery of public service is yet another area requiring careful attention.

14.1.3 Policies and Strategies for the Transport Sector

The surface transport sector activities will be guided by its overall policy objective to improve access to safe, reliable, affordable, convenient, environment-friendly, responsible and high quality transport system in the country by minimizing constraints to the mobility of people, goods and services.

This objective is based on the principles that improved access to reliable and safe transportation system is crucial for socio-economic development of the country and to enhance quality of life and facilitate expansion of trade and tourism; that an efficient transport system is necessary to achieve reduction in travel time, road user cost and the cost of transportation; that road accidents must be reduced if not eliminated; that the adverse impact of the transport system on natural environment and air quality needs to be mitigated; that private sector participation can bring about significant improvement in the level of transport services; that improved and efficient delivery of services to the public lead to higher productivity and promote good governance; and that an efficient transport system maximizes Gross National Happiness by continuously raising living standards and expanding opportunities and choices of our people.

The following specific objectives and strategies have been adopted for the surface transport sector:

Improve accessibility, equity and affordability of passenger transport services:

- Ensure that the needs of all commuters including children, women, sick or the
- physically disabled and elderly are adequately addressed;
- Increase transport network and frequency of services;
- Subsidize passenger transport services on uneconomical routes;
- Regulate tariffs for passenger transport services including taxis, with tariff for freight transport determined by the market forces; and
- Reduce transportation cost and travel time through better and shorter roads including tunneling, in consultation with other relevant agencies.

Promote urban transport:

- Introduce urban transport where lacking and increase the number of city buses and expand route coverage, where already existing;
- Develop mass public transport such as sky train, electric tram or trolley buses;
- Implement car-pooling/car-sharing programmes through appropriate mechanisms; and
- Encourage non-motorized transport such as cycling and walking in consultation with other agencies.

Provide choice of passenger and freight transport:

- Explore, plan and develop alternative modes of passenger and freight transport such as railways and ropeways;
- Explore and implement water transport.

Develop, upgrade and maintain transport infrastructure and facilities:

- Improve land use planning and correct spatial imbalances to address transport infrastructure and operation requirements;
- Develop quality transport infrastructure such as integrated bus terminal, offices and waiting sheds;
- Promote and develop convenient rest facilities along national highways.

Promote road safety to minimize road traffic accidents:

- Promote cooperation and collaboration among stakeholders;
- Improve road traffic management and information network system including road signs;
- Promote safer roads in consultation with relevant agencies;
- Educate road users including pedestrians;
- Develop safer vehicle programmes;

- Develop an efficient incident management or post accident management system; and
- Support enforcement agencies with modern equipment and adequate mobility.

Enhance efficiency of administration and improve public service delivery system:

- Deploy ICT and promote e-services;
- Reduce processing time for driving license to one week and vehicle registration to five hours;
- Study and implement Intelligent Transport System;
- Establish reliable data-bank;
- Develop and enforce service standards and basic facilities in passenger transport vehicles;
- Develop appropriate skills for efficient public service delivery; and
- Achieve better compliance to laws, rules and regulations and ensure fair and effective enforcement

Initiate transport research through:

- Review and amend legal and policy instruments;
- Undertake road safety research and costing of traffic accidents;
- Develop and implement fare model for passenger transport services and taxis;
- Upgrade vehicle standards and maintenance practices;
- Streamline vehicle import procedures in consultation with relevant Ministries/ agencies;
- Review tax, fees and other charges system relevant to motor vehicles and transport system; and
- Develop fuel policy

Develop institutional capacity:

- Develop institutional capacity and professionalism; and
- Foster bilateral, regional and international cooperation.

Promote private sector participation:

- Encourage and facilitate the involvement of private sector in transport activities;
- Support professional development.

Develop efficient freight transport system:

- Establish a comprehensive land freight transport information system;

- Set-up uniform regulations on axle load, construction standards, vehicle and driver requirements; and guidelines to ensure safety and security of freight transport;
- Encourage containerized cargo for international trade; and
- Conduct periodical consultation at the national level among government, public and private sectors, operators, stakeholders and users in order to promote interactive participation towards the establishment of an acceptable and effective land freight transportation system.
- Establish regulations for transportation of hazardous materials and substances.

Protect environment and promote the use of energy efficient and less polluting vehicles:

- Enforce emission standards and develop vehicle maintenance practices;
- Establish regulatory framework and operating standards for automobile workshops;
- Explore, plan and develop environment-friendly transport system including the conversion of diesel engines to appropriate modes.

14.1.4 Financial Outlay for the Surface Transport Sub-Sector

The capital outlay for the Surface Transport sub-sector is Nu. 219.5 million.

14.2 AIR TRANSPORT SUB-SECTOR

14.2.1 Introduction

Even as civil aviation activities in the country were initiated only recently, the basic infrastructure now exists for international air transport. Activities during the Ninth Plan focused on improving the services at Paro international airport to meet its growing requirements and to enhance safety in air transport service. Feasibility studies are also being carried out to construct a second international airport in the country and possibilities of introducing domestic helicopter services being explored.

The Department of Civil Aviation (DCA) is entrusted with the promotion and development of air transport sector in the country. Since DCA is both the regulator and provider of aerodrome and air navigation services, there is a certain degree of overlap in its functions resulting in dilution of its roles and responsibilities. In line with the Civil Aviation Master Plan (CAMP) recommendations, the process to create clear structural and functional separation between the regulatory and service provider (airports and air navigation) functions has already begun.

14.2.2 Challenges and Opportunities

Druk Air, the sole air operator in the country, operates to five destinations in four countries. Flight operation into Paro International Airport is possible only during daytime under Visual Flight Rules (VFR) condition and low monsoon clouds continue to

cause flight disruptions. During the winter season, high velocity winds do not permit flight operations into Paro in the afternoons.

International air transport activity in the country by and large remains confined to Paro airport. The existing airport terminal infrastructure, grossly underutilized during normal operations, can barely accommodate increased passengers resulting from additional flights operated during peak tourist seasons. Service delivery standards at the airport also require to be continuously improved. The development of a second international airport remains critical to improve bottleneck for more tourism growth and the enhancement of high value low weight products.

Despite significant efforts made over the Ninth Plan, domestic air services could not be initiated and a redoubling of efforts will have to be made to improve the existing infrastructure at Paro international and construct the second international airport.

14.2.3: Policy and Strategies

To improve the current situation of air transport sector in the country, the Royal Government will focus on the development and expansion of air transport infrastructure in the country. A feasibility study for the construction of a second international airport in Gelephu is underway. Subsequent to the study, construction of the second international airport with instrument landing system will be undertaken. Introduction of domestic helicopter service, although initiated in the Ninth Plan, will be given more importance in the plan. Required infrastructures like domestic airstrips and helipads will be developed and constructed. Minimum facilities and services at the heliports will be put in place and private sector participation in the air transport business will be encouraged by providing support in the form of subsidy to take up the helicopter service. The human resource and institutional capacity to efficiently run the service shall also be built.

With the focus on the establishment of a variety of air transport services in the Tenth Plan, importance will be given to develop safety measures like security surveillance system, emergency response and search & rescue capabilities. The expansion and development of Paro international airport will also be given priority in the Tenth Plan. Infrastructure expansion will need to be carried out to meet the requirements of the growing number of passengers. Security and airport safety will also be strengthened and navigation aid and communication technologies improved.

Exploration for bilateral, regional and international cooperation will continue to be a regular activity in the development of the sector. The regulatory, safety and security framework will be continuously evaluated and amended on an ongoing basis to achieve compliance with the latest international standards and requirements.

14.2.4 Financial Outlay for the Air Transport Sub-Sector

The capital outlay for the Air Transport sub-sector is Nu. 3.419 billion. A major portion of this outlay will be utilized for the construction of domestic air strips (Nu. 42 million),

infrastructure expansion at the Paro International Airport (551.72 million) and construction of Gelephu International Airport (Nu. 2,826 million).

CHAPTER 15: CULTURE

15.1 INTRODUCTION

The conservation and promotion of cultural traditions, heritage and institutions has always featured as important objectives in all of the five year plans and is an integral aspect of the national development vision and Gross National Happiness (GNH). The fact that the cultural heritage of the country remains vibrantly alive in the everyday lives of its people is in no small measure the outcome of these far sighted policies. For a small country like Bhutan, culture has been and will continue to serve as a deep binding force for building national unity and a shared common identity that has enabled the country to maintain its full sovereignty and security. Moreover, this has greatly contributed to enhancing Bhutan's distinct image and standing in the global community.

With the rapid socio-economic transformation taking place, the country's cultural heritage is not seen as being or becoming irrelevant but actually assuming an even greater pertinence and importance to balance out the influences of globalization and its attendant pressures and impact. Culture can help unify, integrate and build harmony and social cohesiveness while providing society with the capability of internalizing change within tradition. Culture also has a role to play in furthering the economic prospects for the nation. As treated in the strategic priority section for vitalizing industry, the promotion of cultural industries in addition to cultural tourism also holds great promise and potential for community vitalization, employment creation and poverty reduction.

Culture here is interpreted in a dynamic sense rather than in a static manner and is to be promoted in proactive ways that will engender continuing relevance for Bhutanese people and youth and serve as a perennial source of inspiration for future generations. This aspect is reflected in the Constitution which recognizes "culture as an evolving dynamic force" and emphasises the need to "strengthen and facilitate the continued evolution of traditional values and institutions that are sustainable as a progressive society."

15.2 CHALLENGES AND OPPORTUNITIES FOR THE CULTURAL SECTOR

A major challenge for conserving the country's rich culture will be to minimize the effects of globalization that tends to homogenize diverse and rich cultures and causes people's cultural identity to wither often resulting in a dissolution of local languages, knowledge, beliefs and practices. Although not without numerous positive benefits, globalization has to a certain extent contributed to some erosion and partial loss of the country's rich cultural heritage. In pursuit of rapid economic development, Bhutan must take extra care to ensure that patterns of "rootless growth" are avoided that gradually allow market forces to diminish or destroy cultural diversity and engender

faceless cultural homogenisation which could impoverish the quality of lives for all Bhutanese.

Another critical challenge for conserving the cultural heritage relates to the potential loss of many cultural traditions, particularly oral traditions, as much of these have yet to be fully inventoried and documented. Many national treasures are also housed and displayed in buildings that are either dilapidated or unable to provide suitable conditions required for their safe preservation. The lack of resources and expertise are particularly acute in this regard and has seriously hampered conservation efforts.

Changes in traditional social value systems too are noticeable and becoming increasingly manifest in social behavior such as rising trends of ostentatious consumerism, drug abuse among youth, delinquency, desecration of temples and religious edifices, etc. Traditional values that once were the basis of the sound environmental conservation practices are eroding with economical and materialistic values gradually overshadowing considerations for the natural environment.

Culture must necessarily play a role in reversing these negative trends and to do this will need to become more accessible to and meaningful for Bhutanese society in a modern day context. The preservation and promotion of Bhutanese culture must therefore move beyond simply conserving the outer form and structural or institutional aspects and equally focus on inculcating their essence and spirit to engender a deeper understanding and appreciation of the perennial wisdom inherent in the national cultures, particularly among youth. This is in the long run, more than anything else will ensure the sustainability and relevance of Bhutanese culture for present and future generations.

The various other constraints affecting the effective conservation and promotion of cultural heritage relate to the dire shortage of financial resources to implement appropriate conservation activities; the lack of sufficient equipment and facilities; the weak institutional and human resource capacity within the cultural sector; the lacunae in the legislative and regulatory framework; difficulties with access and communications; and the gradual weakening of the sense of responsibility among local communities.

A significant opportunity for the cultural sector is to harness cultural resources and in particular, develop cultural industries for inclusive growth, community vitalization, employment and poverty reduction in the country. Cultural industries are particularly appropriate to propel local level development as the core resources required such as cultural knowledge and skills are well developed and inherent in local communities. Moreover, the development of cultural industries contributes directly to the quality of life in local areas through employment and income generation. In addition, cultural industries can also help to preserve the nation's diverse cultural traditions and further strengthen Bhutan's cultural identity. While the benefits of cultural and heritage tourism is well known and has been tapped, much more needs to be done in the context of other cultural industries.

15.3 POLICY AND STRATEGIES TO CONSERVE AND PROMOTE CULTURAL HERITAGE

The cultural development strategies will focus on areas and activities that in addition to impacting on the preservation of the existing cultural heritage will stimulate opportunities for the dynamic development of the cultural sector to mutually enhance economic and cultural life. The broad strategies of the Cultural Sector for the Tenth Plan are outlined below:

Promotion, Preservation, Development and Sustainability

- Inventorying and documenting Bhutan's Cultural Heritage and making these available to promote research, appreciation, conservation and inspiration;
- Establishing enabling policy and legal framework to conserve and protect Bhutan's cultural heritage and realize the vast potential for cultural industries;
- Development of a concept for establishment of an International Buddhist University in the country;
- Creation of a Fund to support nunneries;
- Establishment of a College for Nuns;
- Promotion and development of traditional arts and crafts a long with support for contemporary art;
- Preservation and promotion of traditional languages and literature along with active advocacy of contemporary literature;
- Adaptation and strengthening of existing cultural centres and institutes to promote and develop culture;
- Establishment of a National Cultural Centre as a focal point to promote culture;
- Reinforcement and formulation of appropriate structures for the cultural sector;
- Formulating and implementing long and short term human resource development plans for the cultural sector;
- Provision of cultural training for decision -makers in non-cultural sectors to ensure cultural dimensions are appropriately incorporated in their activities;
- Promotion of cultural tourism and cultural industries;
- Mapping and classifying architectural heritage;
- Development of local expertise for architectural conservation programmes;
- Establishment and development of conservation laboratories;
- Conservation and establishment of archaeological sites in rural areas to promote community-based tourism and create income earning opportunities for poverty alleviation;
- Preparation of guidelines and legislation to establish common criteria for conservation work;
- Promotion and development of traditional architectural designs and construction methods for contemporary reuse and commercialisation;
- Developing mechanisms to rationalise use of existing resources and explore new methods and mechanisms for the funding of cultural activities;

- Establishing new museums and institutional strengthening and capacity building of existing museums;
- Conservation and development of Doings and their surroundings as major heritage sites;
- Documentation, conservation, promotion and development of traditional and contemporary performing arts;
- Improvements of cultural institutions like libraries and archives;
- Establishment of proper networks, national, regional and international through the application of ICT;
- Production of audio-visual, television, radio programmes and films that promote interest and awareness of cultural issues and activities;
- Promotion and funding of cultural activities in schools; and
- Preparation of suitable educational materials on cultural issues.

Equality and Participation

- Formulation of operational guidelines for management and implementation of programmes for the cultural sector and engaging all stakeholders in the process;
- Supporting and strengthening decentralisation policies for cultural activities; and
- Inclusion of relevant target groups in the formulation and implementation of the cultural projects.

Reciprocity

- Establishment of institutional linkages;
- Promotion and support of cultural exchange programmes, workshops and meetings between Bhutan and different countries and regions;
- Promoting flow of information and efficient communication;
- Co-operation and exchanges between different museums at regional and interregional levels;
- Support of exchange training and study programs; and
- Support of broad dialogue between Bhutan and other countries on issues of culture and contribution to sustainable development.

15.4 FINANCIAL OUTLAY FOR THE CULTURAL SECTOR

The capital outlay for conservation and restoration programmes in the cultural sector is Nu.1,490.75 million.

CHAPTER 16: SPORTS

16.1 INTRODUCTION

Although indigenous sports and an assortment of other sports have been practiced over the centuries, modern organized sports came to the country only in the mid-seventies when the National Sports Association of Bhutan (NSAB) was established. Since then efforts have been made for the promotion and development of sports. Though some progress has been made, a conscious recognition of sports in the development strategy of the country is largely absent.

The Bhutan Olympic Committee (BOC) was set up in 1983 following the government decision to join the International Olympic Movement. As per the Olympic Charter, the goal of the Olympic Movement is to contribute to building a peaceful and better world by educating youth through sports practiced without discrimination of any kind and in the Olympic spirit, which requires mutual understanding with a spirit of friendship, solidarity and fair play. The BOC's primary mission is to propagate the fundamental principles of Olympism in the country within the framework of sports activities and its diffusion in the teaching programmes of physical education and sports in schools and institutions. As such, high priority is given to activities aimed at promotion of sports in educational institutions and encouragement of students to participate in sports.

The National Sports Federations (NSFs) and Dzongkhag Sports Associations (DSAs) have been formed as the necessary functional arms of the BOC. The key objectives of the NSFs are to develop and promote their respective sport through organizing promotional sports events, providing facilities, equipment and training and disseminating information and awareness on sports related issues and international developments and participating in international competitions. On the other hand, the DSAs were formed to promote sports in a balanced and equitable manner through encouraging, promoting and coordinating indigenous and modern sports and games in the Dzongkhags and Gewogs. Under the aegis of the Ministry of Education, the Department of Youth, Culture and Sports (DYCS) was set up in order to promote and develop school sports including sports infrastructure in schools, organizing inter-school competitions, providing physical education teachers, etc. For the development of sports in a coherent and efficient manner, it is very important to strengthen the coordination mechanism amongst the organizations involved in development and promotion of sports.

Sports are gaining increasing popularity in the country especially amongst the youth who comprise 23% of the population. However, in view of the merits derived from sports and physical activities, it is increasingly recognized that involvement of all sections of the population through a "Sports for All" programme is a must. Hence, a holistic approach needs to be adopted in the development of sports that caters to the young and the old, the able-bodied and the physically challenged and people from all walks of life. Promotional activities pertaining to sports needs to be given further impetus and the society at large made aware on the benefits of sports and facilitated to actively

participate in sports and games, with special encouragement for women to participate. Today, the increasing trend of non-communicable diseases (NCDs) like diabetes, rheumatic heart diseases, arthritis, cancers and other stress and diet-related ailments poses a double burden on health services. The sedentary life-style coupled with bad dietary habits and substance abuses are some of the main causes of NCDs. From this aspect sports is expected to play an important role as a preventive as well as rehabilitative strategy.

16.2 OPPORTUNITIES AND CHALLENGES

The development and promotion of sports is yet to be recognized as an important development strategy that contributes to the attainment of the national development goal of Gross National Happiness. The common perception of sports in Bhutan is merely that of a hobby to be pursued when one has the time and not otherwise. As such, it becomes a very challenging task to obtain willing young talents to be groomed and trained for sports as a profession. In addition to the low status attached to sports, there are no incentive schemes provided in order to make sports an attractive option.

Accessibility to sports infrastructure, equipment and proper coaching and training are key elements for the development of the interests and potentials of the public. The lack of sports infrastructure and inadequate technical manpower and sports equipment are some of the main constraining factors to the promotion and development of sports in the country.

As BOC is the only apex body responsible for the promotion and development of sports in the country, the institutional mechanism for sports also needs to be reviewed and further strengthened. In the absence of supporting institutions such as a sports academy, physical education centers, etc. there is shortage of trained manpower to further strengthen the institutional set up.

Sports programmes in general require a large amount of financing that is continuous and sustainable. However the sector has been severely constrained by the non-availability of adequate funding and the absence of mechanisms in place for generating funds locally. Hence, sports and games have continued to be carried out on an ad-hoc basis, been concentrated in a few urban areas, have failed to effectively identify potential talents and as a result, failed to adequately promote and develop both modern and indigenous games in the country. At this point, the need to develop a National Sports Policy to provide a road map and clear guidance for developing sports in a balanced, sustainable, equitable and institutionalised manner is critical.

16.3 POLICIES AND STRATEGIES

The policy objectives of the BOC and the DYCS include improving the country's performance in sports at the national, regional and international levels; altering the attitudes and mentality of people towards the values and importance of sports, recreation and fitness; improving access to sports facilities and information on sports in general; establishing adequate physical and organizational structures for promoting sports for the

physically disabled; promoting traditional sports and interactions with external sports organizations.

The key policy objectives for the promotion and development of sports in the country are to be attained through the following strategic initiatives:

- Adopt policy initiatives such as strengthening physical education in schools, creating sports associations/clubs, providing incentives to outstanding sports persons, participation in national, regional and international competitions;
- Build institutional mechanisms and networks within and outside the country through strengthened coordination between MoE (Department of Youth, Culture and Sports), BOC, NSFs, DSAs and interactions with external sports organizations;
- Build institutional capacities especially in the BOC, DYCS and NSFs for a well managed and progressive sports in the country;
- Adopt a holistic approach in the development of sports especially related to leading healthy life-styles and cater to the young and the old, the able-bodied and the physically challenged and people from all walks of life;
- Develop physical infrastructure and proper training facilities to promote and facilitate sports activities and skills;
- Ensure that each school is provided with standard sports facilities as an integral component of its basic facilities;
- Integrate sports and physical education with the educational curriculum;
- Develop and create a critical mass of trainers and coaches to groom and nurture young talents;
- Ensure access to high quality and precision sports equipments through tax exemption and promotion of local manufacturers; and
- Mobilize government, corporate and private business funds for the development of sports in the country.

16.4 MAJOR TARGETS TO BE ACHIEVED IN THE TENTH PLAN

The following are the major targets for the development of sports:

Box 16.1 Sports Targets

- Formulation of National Sports Policy/National School Sports Policy
- Development of National Sports Complex including Offices for NSFs
- Establishment of Training Centres for NSFs
- Establishment of National and Regional Sports Centers
- Organization of sports promotional activities

16.5 FINANCIAL OUTLAY FOR THE SPORTS SECTOR

The total outlay for the development and promotion of sports in the Tenth Plan is Nu. 311.932 million.