

**KEEPING PROMISES:
A REPORT ON THE STATUS OF IMPLEMENTATION OF THE BRUSSELS
PROGRAMME OF ACTION IN BHUTAN
FOR THE DECADE [2001-2010]**



**GNH COMMISSION
ROYAL GOVERNMENT OF BHUTAN**

Table of Contents

- 1. Introduction**
 - Bhutan's Political and Socio-Economic Context in Bhutan
 - The Brussels Programme of Action and the National Development Framework
 - Purpose and Structure of the Report
 - Overview of the Progress towards the BPoA Goals
- 2. Fostering a People Centred Policy Framework**
 - Economic Growth
 - Poverty
 - Hunger
- 3. Good Governance at National and International Levels**
 - Political Plurality
 - Decentralization
 - Combating Corruption
 - Civil Service Reforms
 - Gender Equality
 - Civil Society and Media
 - Governance Performance
- 4. Building Human and Institutional Capacities**
 - Combating Diseases
 - Tuberculosis*
 - Malaria*
 - HIV/AIDS*
 - Promoting Child Health and Survival
 - Infant and Under-five Mortality*
 - Nutritional Status of Young Children*
 - Improving Maternal Health
 - Expanding Primary Education and Literacy
 - Access to Improved Source of Drinking Water
- 5. Building Productive Capacities to Make Globalization Work for LDCs**
 - Physical Infrastructure
 - Transport and Communications*
 - Energy*
 - Export Infrastructure*
 - Sustainable Tourism
- 6. Enhancing the Role of Trade in Development**
 - Trade Policy and Institutional Context
 - Challenges
 - Measuring Trade Performance
 - Trade to GDP Ratios*
 - Trading Across Borders Indicators*
- 7. Reducing Vulnerability and Protecting the Environment**
 - National Environment Policy Framework
 - Environment Sustainability Indicators
 - Protected to Total Territorial Area and Ecological Protection*
 - Air and Water Pollution*
 - Solid Waste Management*
 - Vulnerability to Natural Disasters
- 8. Mobilizing Financial Resources**
 - Domestic Resource Mobilization
 - Development Assistance and Foreign Direct Investment
 - External Debt
 - Resource Mobilization Challenges

ACRONYMS

ACC	Anti Corruption Commission
AIDS	Acquired Immunodeficiency Syndrome
ANC	Ante Natal Care
BCCI	Bhutan Chamber of Commerce and Industry
BDI	Bhutan Development Index
BLSS	Bhutan Living Standards Survey
BPOA	Brussels Programme of Action
CPI	Corruption Perception Index
DRM	Disaster Reduction Management
EA	Environmental Assessment
ECOP	Environmental Codes of Practice
EIMS	Environmental Information Management System
FYP	Five Year Plan
GDP	Gross Domestic Product
GG Plus	Good Governance Plus
GLOF	Glacial Lake Outburst Flood
GNH	Gross National Happiness
GPI	Global Peace Index
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HRD	Human Resource Development
ICT	Information and Communications Technology
IDD	Iodine Deficiency Disorder
IMR	Infant Mortality Rate
Kcal	Kilo Calorie
LDC	Least Developed Country
LDCF	Least Developed Country Fund
MCH	Maternal and Child Health
MDGs	Millennium Development Goals
MICE	Meetings, Incentives, Conference and Exhibition
MMR	Maternal Mortality Rate
MSTF	Multi-Sectoral Task Force
NAPA	National Adaptation Programme of Action
NCWC	National Commission for Women and Children
NDRMF	Natural Disaster Risk Management Framework
NEC	National Environment Commission
NFE	Non-Formal Education
NNIYCFS	National Nutrition, Infant and Young Child Feeding Survey
NSB	National Statistics Bureau of Bhutan
Nu	Ngultrum
ODA	Official Development Assistance
PAAR	Poverty Assessment and Analysis Report
PAR	Poverty Analysis Report
PHCB	Population and Housing Census Bhutan
PVR	Poverty Vulnerability Indicators
RBM	Results Based Management
RGoB	Royal Government of Bhutan
RMA	Royal Monetary Authority of Bhutan
RNR	Renewable Natural Resources
RTI	Right to Information
RWSS	Rural Water Supply and Sanitation
RWSS	Rural Water Supply and Sanitation
SASEC	South Asia Sub Regional Economic Cooperation
STI	Sexually Transmitted Infection
U-5MR	Under-five Mortality Rate
WWF	World Wildlife Fund

INTRODUCTION

Bhutan's Political and Socio-Economic Context

Bhutan is a small open economy situated in the eastern Himalayas with a total land area of 38,394 square kilometers and a population of 683,407 in 2009. The population density was estimated at 16 people per km² with an urban and rural population of 31% and 69% of the total population respectively. Over the last decade there has been a high rate of internal migration from rural to urban areas. With a population growth at 1.3%, Bhutan does not have a severe population problem at present but localized population pressures exist due to skewed geographical distribution. The country however has an extremely youthful demographic profile with about 45% of the population under the age of twenty.

The country has a vast natural resource base in particular rich forest and freshwater resources. Natural vegetation covers 72.5% of the total land area encompassing rich and diversified ecological systems with slightly more than half the total land area classified as protected areas. The per capita water availability is among the highest in the world with the long-term mean annual water flow estimated to be 73,000 million m³. With this abundance of water availability, Bhutan has 35,000 MW of hydropower potential which the country has started tapping. Bhutan also has considerable occurrences of both metallic and non-metallic mineral resources but the mining industry is relatively underdeveloped and little exploration has been done.

Over the last decade, Bhutan has undergone a process of rapid modernization and democratization, including extensive reforms in the public sector. Under the farsighted and benevolent initiatives of the Monarchy, Bhutan in 2008 emerged as the world's youngest democracy and made this historic transition in a completely peaceful manner. Remarkably, these historic political changes were effected at a time of unprecedented peace, economic prosperity, improved social conditions and well being for Bhutan. The exceptional levels of governance that Bhutan has enjoyed is reflected in the excellent ratings for good governance indicators employed by external independent sources year after year placing it among the top percentile of well governed countries. The challenge for Bhutan will now be to effectively root democracy and strengthen democratic institutions as highly progressive factors for continued and rapid socio-economic development.

Bhutan has enjoyed sustained rapid economic growth at over 8%. This growth is explained by the massive investments and output on account of hydropower development accompanied by enormous expansion in the economic and social physical infrastructure. Notably, growth has happened in a highly sustainable manner with minimal impact on the physical, social and cultural environments. Bhutan's GDP has more than doubled in the period of review growing from Nu.20 billion in 2001 to Nu.54 billion in 2008 resulting in a doubling of per capita income from US\$ 835 in 2002 to 1,852 in 2008. Inflation over the period on average has largely remained below 6%.

<i>Table 1.1</i> Select Socio-Economic Indicators for Bhutan	2001	2008
Population Growth	2.5	1.3
Life Expectancy at birth	66.1	66.1
GDP in Million Ngultrums	20,112	51,522
GDP per capita in US\$	835(2002)	1,852
Percentage of Population living below National Poverty Line	36%(2003)	23%(2007)
Adult Literacy	-	53%
Gross Primary Enrollment	72%	116%(2009)
Net Primary Enrollment	53%(1998)	92%(2009)
Gender Parity Index (GPI) for Education	0.9	1.02(2009)
Primary School Completion Rate	77%	93.6%
IMR per 1000 livebirths	60	40
U-5MR per 1000 livebirths	84.2	61.5
MMR per 100,000 livebirths	255	-
Skilled Birth Attendance	24%	66.3%
Access to improved sanitation	88%	92%
Access to improved drinking water	78%	91%
Human Development Index (HDI)	0.551(1998)	0.619

Sources: NSB, PHCB 2005, AES 2009, HDR 2009

The country has also moved from a low to a medium human development ranked country due to a significant scaling up of its human development indicators. Bhutan's HDI value has been rising steadily with the 2008 HDI value assessed preliminarily at over 0.619 as compared to 0.551 in 1998 and 0.427 in 1991. These HDI gains have come not only from growth in real income but 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.

The Brussels Programme of Action (BPoA) and the National Development Framework

The Brussels Programme of Action (BPOA) for the Least Developed Countries (LDCs) for the decade 2001 - 2010 is an outcome of the Brussels Declaration proclaimed in May 2001 and was designed primarily as a strategic framework of partnership between LDCs and their development partners. Its basic objective is to achieve substantial progress in meeting the Millennium Development Goals (MDGs) of halving poverty by 2015 and promoting sustainable development in the LDCs. The priority issues of the BPOA pertain to poverty reduction, gender equality, employment generation, governance, capacity building, and special problems faced by landlocked and small island developing countries. The BPOA contains thirty international development goals within a framework of seven critical commitments. Additionally, in view of the results orientation approach that underlies these goals as an important principle, numerous indicators are tagged to the goals.

Bhutan wholly subscribes to the BPoA and the MDGs and has sought to prioritize these development goals within the context of its national development policy framework. These international development goals are seen to be wholly consistent, mutually synergistic and completely relevant to Bhutan's aspiration to actualize its overarching development approach of Gross National Happiness (GNH). As such, the Tenth Five Year (2008-2013) Plan for Bhutan has the alleviation of poverty as its major theme and has a strong MDG orientation and focus. Additionally in keeping with the results orientation approach, tangible targets with measurable indicators have been set in each sector to measure development results concretely. The Royal Government is also in the process of implementing its GNH Index that will help evaluate holistic development performance in a wide range of areas including governance, environment and cultural sectors. Most of the national development targets correspond directly to the BPoA and the MDGs, with several of their goals envisaged to be surpassed and achieved earlier than the time frame suggested in the IDTs.

Purpose and Structure of the Report

This national report is intended to provide an overview of Bhutan's experience and achievements made till date in implementing the BPoA. It also addresses the opportunities and the challenges that Bhutan faces in meeting these goals. The national report will help provide inputs to the comprehensive review of the BPoA for LDCs for the decade 2001-2010 and preparations for the Fourth LDC Conference in 2011.

As recommended in the BPoA for LDCs to undertake actualizing the BPoA goals and targets within their respective national development framework and poverty alleviation strategies, this national report draws on various critical national development policy documents including the Tenth Plan Policy and National MDG Status documents. This national status report is conceptually structured within the framework of the seven critical commitments of the BPoA and tracks progress along the various indicators provided in so far as they are available.

Overview of the Progress towards the BPoA

Bhutan has made significant progress towards fulfilling its commitments under the Brussels Program of Action. The seven commitments are effectively integrated into its national development framework and reflected in Bhutan's Ninth (2002-2007) and Tenth Five Plans (2008-2013). In terms of the first commitment to foster a people centred policy framework, Bhutan has enjoyed an accelerated pace of

growth with high levels of capital formation that exceeded the targeted 7% GDP growth and 25% of gross domestic capital formation. These high growth rates have been fueled by the expansion of the hydropower and construction sector reflecting a highly capital intensive kind of growth with relatively weaker growth rates in sectors such as agriculture that people are employed in. As such, corporate income figures disproportionately in measures of national per capita income and household incomes in Bhutan still remain quite low.

Poverty therefore continues to affect about a quarter of the population, the overwhelming majority of who live in rural Bhutan where there is considerable deprivation and human poverty in terms of access to income and economic opportunities, lower living standards and weaker human assets base. The rise in food poverty levels from 3.8% to 5.9% compounded by rising unemployment among youth and the recent food price increases are other critical challenges with severe implications for the nutritional health of many rural communities. While progress at the national level towards reducing income poverty is on track with income poverty levels envisaged to be brought to below 15% by 2015, progress is far from even. Many vulnerable communities are still likely to face acute income and human poverty conditions primarily due to their deep isolation and remoteness given the country's harsh and rugged terrain. This is largely true of all of the BPoA goals where satisfactory achievement at the national level may often mask particular regional and local challenges without reflecting the stark ground realities for many communities. Hence the Royal Government's special efforts over the Tenth Plan to implement targeted poverty interventions to make GNH a reality for all. Another critical challenge that Bhutan faces in ensuring pro-poor and equitable development as envisioned in its Vision 2020 is the tyranny of distance factors that raises efficiency questions of providing critical social and economic services to distant and vulnerable communities that most need them. The cost of achieving last mile access on most development fronts will clearly be enormous and require massive resources.

With regard to the second commitment, Bhutan has made stellar progress in advancing the cause of good governance. While the country's transition to a democracy in 2008 may be viewed widely as the major governance achievement of securing political plurality, this has also been accompanied by equally important progress in advancing decentralization, strengthening the rule of law, moving forward on critical reforms, improving institutional transparency, efficiency and accountability, combating corruption and empowering women. Many of these developments were initiated long before the onset of democracy and the adoption of the Constitution in 2008 and can actually said to have engendered a democratization process that culminated in the birth of the world's youngest democracy. There have also been highly positive developments in the realm of a nascent but forming civil society and the emergence of a highly vocal, independent and robust media. Performance benchmarks on various governance indicators published by credible international sources corroborate these governance gains in Bhutan. The upward movement in country ranking from 157th in 2003 to 70th in 2009 on the press freedom index published by *Reporters Without Borders* is one such example. Some of the challenges in securing these notable governance achievements will lie in how democracy takes root in Bhutan and how effective elected governments are in delivering people centred development and furthering socio-economic progress in the light of rising expectations. Strengthening democratic processes and institutions and institutionalizing necessary checks and balances as laid out in the Constitution clearly are important governance priorities and to this end, enhancing capacity at all levels including at the grassroots for decentralized governance will be critical.

Building human and institutional capacities as the third commitment of BPoA advocates has always been a critical development priority for Bhutan. Around a third of the Tenth Five Year Plan's capital outlay has been earmarked for advancing education, literacy and HRD and ensuring a healthy population free from disease and malnutrition, including vastly improved levels of child and maternal health. Past expenditure patterns to have consistently maintained this strong social development focus and pro poor orientation as a result of which Bhutan has successfully scaled up its social indicators across the board.

Bhutan over the decade has reduced its disease burden considerably and has halted and reversed mortality and morbidity incidence from Malaria and Tuberculosis. The country's HIV/AIDS prevalence

remains low at below 0.1% but the Royal Government is not complacent of the situation in view of the rapidly rising trend in case detections and several high risk factors. The weak capacity and high costs in the treatment and care of people living with HIV/AIDS are some of the critical constraints identified in addressing the HIV/AIDS challenge. Significant progress has been made in advancing child health and survival and improving maternal health. Bhutan is close to securing the BPoA targets of reducing infant and under-five mortality and child malnutrition and a notable success story has been the high levels of child immunization. Maternal mortality rates in Bhutan have declined significantly but of late the pace of progress appears to be slowing down which remains a concern in the light of low levels of skilled birth attendance and institutional births and poor contraceptive prevalence rates. In terms of access to improved drinking water, the BPoA and MDG goals have long been achieved and the challenge will be to retain access at universal coverage levels particularly in the light of a large number of rural water schemes being dilapidated and in need of repair and rehabilitation.

Except for the low rates of adult literacy, the country fares extremely well with regard to progress made in enhancing educational attainment. The BPoA primary education targets have been achieved and surpassed in terms of enrollment and completion rates and maintaining gender parity. Despite the success of the Non Formal Education programme, adult literacy though remains low even by regional standards particularly so for women. However, a positive aspect is that literacy levels among children and youth are much higher (including for females) and with strong enrollment levels, adult literacy levels are likely to climb rapidly.

The fourth BPoA commitment is to build productive capacities to make globalization work for LDCs. This is one area, even though considerable efforts have been made much more remains to be done to improve national productivity and competitiveness - particularly through the expansion of physical infrastructure and export capacity in core critical economic sectors. A nascent private sector, small internal market, distance from seaports, low technological and human resource base in industry, weak FDI inflows and trade transit difficulties are debilitating factors that handicap Bhutan's ability to produce and export goods and services to global and regional markets.

The highway and road network in Bhutan has increased by 43% and the total number of air passengers has quadrupled since 2001 but both air and road transport remain bottlenecks. The ubiquitous development demands in rural communities pertain to the expansion of farm and feeder roads and promoting access to electricity which are both highly valid in view of the strong correlation between infrastructure access and poverty and underdevelopment. While the Royal Government intends to enhance road access to levels where 75% of the population live within half a day walk from the nearest road-head and provide electricity for all, these will be constrained by massive resource requirements particularly in the context of the rugged and harsh terrain and the need to build up this infrastructure in an environment friendly manner.

Access to sanitation in both urban and rural areas are at universal levels but solid waste disposal issues are a growing problem. The expansion of ICT infrastructure holds great promise with the anticipated establishment of a nationwide ICT backbone infrastructure. Teledensity, particularly for mobile coverage, has increased exponentially but internet connections while doubling still remains quite low at 1.5 connections per 100 persons. While data is unavailable for IT literacy in higher secondary and tertiary educations, higher educational institutes have full access to computers and internet connections. Also more than 60% of primary schools have computers and a quarter of all public schools have internet connections. Developments in expanding infrastructure in the energy sector are highly positive and even more promising for the future with the Royal Government's plans to add 10,000 MW capacity by 2020 and provide electricity for all much before that.

With regard to the sixth Commitment to reduce vulnerability and protect the environment, Bhutan has made enormous effort and sacrifices in this regard with its environmental sustainability situation among the best in the world with widespread global recognition for its conservation activities. However, tragically, while maintaining what is possibly the highest ratio of protected area to total land area in the world and a very high level of forest cover that makes it a carbon absorbing rather than

carbon emitting economy, Bhutan is highly vulnerable and exposed to extreme risk from natural hazards due to global climate change and emissions from developed economies.

An interconnected thematic thread that weaves through all of the seven commitments is the critical resource requirements required to meet the BPoA goals. Bhutan has done extremely well in raising domestic revenues to a point that has made it ever more self-reliant and able to finance a larger share of its development expenditures. However, with the BPoA and MDG goals in close sight, there is the imperative to make the final push that will require sustained interventions till these development targets are well surpassed and gains truly consolidated. The well known last mile effect of providing meaningful development to the most vulnerable and inaccessible communities in Bhutan in the spirit of GNH for all will take a gargantuan effort that needs to be fully supported by the international community. Bhutan and other LDCs efforts' to meet the development aspirations of its people has taken its toll in terms of its indebtedness and spiraling levels of debt service and the rising trend of fiscal deficits and resource gaps. These efforts including Bhutan's ethical response and willingness to forego economic opportunities in the greater interests of the global environment cannot be discounted and that it is only right that developed countries meet it halfway.

COMMITMENT I: FOSTERING A PEOPLE-CENTERED POLICY FRAMEWORK

Commitment 1 is central to the BPOA with Its aim is to create an enabling environment to “*eradicate poverty and ... put LDCs on a path of accelerated growth and sustainable development*”. The focus here is on economic growth and poverty reduction for effective pro poor growth.

Bhutan has taken critical steps to combat poverty and ensure sustainable and equitable development. At the heart of its development approach spanning several decades has been the quest to achieve Gross National Happiness (GNH) which comprises four key pillars and provides a wholly people-centred policy framework. The first of the four pillars of the GNH development policy framework pertains to sustainable and equitable socio-economic development. Bhutan has enjoyed notable success in achieving a high level of economic growth that has helped it progress rapidly towards realizing many of its sustainable development goals and MDGs.

Additionally, the Royal Government of Bhutan through its five year development plans prioritized and addressed a range of poverty concerns broadly through an expansion of social services, rural development and income generation activities. The fight against poverty in Bhutan is currently being addressed even more directly and aggressively than before. The Tenth Five Year Plan (2008-2013) has a strong MDG and pro-poor orientation with poverty reduction as the core theme and development objective. Moreover, the current five year development plan establishes clear poverty reduction targets and mainstreams poverty alleviation as a cross-cutting theme with all sectors integrating this objective into their sector specific plan perspectives and programmes. This clearly reflects the strong commitment of the Royal Government to align national priorities and the development planning framework with international development goals such as the BPOA and the MDGs.

Economic Growth

Some important goals under the first commitment of the BPOA is to maintain an annual GDP growth of 7% over the period of review and

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Real GDP Growth	8.2%	10.8%	4.0%	8.0%	7%	6.4%	19.7%	5%	7.4%	8.8%
GDCF (As % of GDP)	60.2%	60.1%	59.7%	64.1%	50.8%	47.3%	36.6%	40.5%	56.3%	57.6%

Source: National Accounts Statistics, NSB, BPFFS

increase the ratio of investment to 25% of GDP per annum. Bhutan has clearly surpassed the BPOA targets of economic growth and investment levels for LDCs.

Real GDP growth in Bhutan over the period of review (2001-2010) on average is estimated at 8.5%, taking into account the provisional and projected estimated growth rates for 2009 and 2010. Projected growth estimates indicate that the economy between 2008 and 2013, coinciding with the current plan period, will be 7.7% though the target growth rates have been set at 9%. This sustained growth pattern has been fueled by the rapid expansion and growth in the hydropower and construction sectors which together currently comprise more than one third of the economy or 37% of GDP in 2007. Additionally, the electricity sector (23.4%) for the first time overtook the agriculture sector (18.6%) as the main contributor to GDP. The enormous spike of 19.7% growth in 2007 occurred on account of the commissioning of all six turbines of the Tala Hydropower project that saw the electricity sector grow by as much as 138.5%.

The rapid growth of Bhutan’s economy has been underpinned by the exceptionally high rates of savings and investment. Gross investment measured in terms of Gross Domestic Capital Formation (GDCF) as a percentage of GDP has been at 53% over the decade between the review period of 2001-2010. This exceeded the high level of capital formation over the 1990-2000 decade that on average stood at 44%

of GDP. These very high rates of capital formation are explained by the dominance of the hydropower sector which is highly capital intensive. Additionally, this high rate of capital formation is likely to continue up to 2020 in view of the mega power projects planned for implementation to reach the targeted 10,000 MW hydropower capacity.

Incremental capital-output ratio (ICOR) is rising fast in Bhutan and has a lagged aspect to it. This is explained by the massive physical infrastructure being created in connection with the hydropower projects with capital formation occurring several years preceding the flow of output. This is also partially a consequence of Bhutan’s high cost of adding physical infrastructure due to its rugged and mountainous terrain and tyranny of distance factors that escalate capital expenditure and development costs in providing economic and social services equitably. The high rates of capital formation and ICOR are expected to remain persistent features of the Bhutanese economy in the medium term.

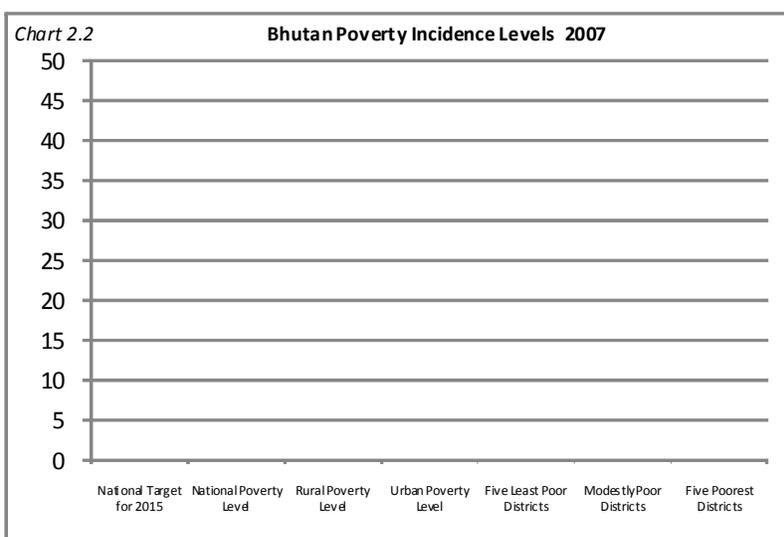
Poverty

As with the MDGs, reducing poverty levels among LDCs is a critical goal of the BPoA and one that has strong linkages in achieving the other identified development goals and targets.

Bhutan has made significant improvements in reducing income poverty, measured by the percentage of population living below the national poverty line. Poverty incidence has declined from 36.3% in 2000 to 23.2% in 2007. As such, the country is well on track towards

realizing its poverty reduction targets well before 2015 with the national Tenth Plan target to reduce poverty levels to below 15% by 2013. The decline in poverty levels has been made possible through rapid economic growth and effective redistributive programmes including sustained social investments. However, poverty continues to be a predominantly rural phenomenon with 98% of the poor in Bhutan residing in rural parts of the country which is exacerbated by human poverty conditions and relatively poorer access to social and economic services.

There is also a significant variation in the poverty incidence across districts and regions as depicted in Chart 2.2.



	2000	2004	2007	2013/2015
% of population living below national poverty line	36.3%	31.7%	23.2%	15% (10 th Plan Target) 20% (MDG Target)
Poverty Gap Ratio	-	8.6%	6.1%	-
Poverty Severity Ratio	-	3.1%	2.3%	-

Source: PAR 2004, 2007, MDG Report 2002

The poverty gap and poverty severity ratios also provide a useful perspective on poverty in Bhutan. Available data for the years for 2004 and 2007 indicate moderate reductions in the poverty gap and poverty severity ratios which declined from 8.6% to 6.1% and 3.1% to 2.3% respectively. The poverty gap and poverty severity ratios for rural areas in Bhutan have also declined from 10.5% to 8.1% and 3.8% to 3% respectively reflecting a slightly lower decline rate than at the nation aggregate.

Hunger

The BPoA affirms the importance of eradicating hunger not only as an important goal in itself but emphasizes its critical linkages to all of the other BPoA goals too. These include better prospects for a healthier population and its well being, reduced disease burdens, better maternal and child health, enhanced educational attainment, improved productive capacities and for the sustainable use of environmental and natural resources. Within Bhutan too, there is a clear recognition that meaningful achievements in combating hunger and food insecurity will help secure significant and tangible benefits in terms of sustainable development including sustained economic growth and poverty reduction. For the Royal Government, any form of hunger or food deprivation would be unacceptable and deeply inimical to the country's GNH development approach and for this reason the Body Mass Index (BMI) is an important measure of happiness and well being within the GNH index.

According to the PAR 2007, about 5.9% of the Bhutanese population suffer from food poverty and consume less than 2,124 Kilocalories a day. While this does not represent a high degree of hunger incidence, it has increased significantly as compared to figures available for 2003 when only 3.8% of the population lived below the minimum level of dietary energy consumption.

Moreover, certain districts are known to face a high degree of food vulnerability and seasonal food deficit. Both the BLSS 2007 and the VAM 2005 reports indicate certain districts such as Samtse, Samdrupjongkhar, Monggar, Zhemgang and Trashigang have much higher levels of population suffering from food poverty. The NNIYCF 2009 Survey also indicates a significant statistical variation in the malnutrition of children in different regions of the country with the eastern and central regions worse off than the western region. Rural-urban disparities are also clearly apparent in the nutritional situation of children. It is highly likely that there exist numerous communities across Bhutan that do experience significant levels of food insecurity and seasonal food deprivation and therefore higher degree of child malnutrition that are often masked by relatively low levels at the national level.

At the national level, there has been a significant reduction in the prevalence of underweight children. On the basis of the NCH Survey undertaken in 1999, 18.7% of under-five children were deemed underweight for their age. The most recent NNIYCF Survey in 2009 based on the new WHO child growth standards deemed that only 11.1% of children suffered from underweight problems. However, stunting among children due to chronic malnutrition has declined only marginally by three percentage points, though the basis of measurement over the two surveys differs. On the basis of the NCH Survey methodology, stunting in children in 2009 would have declined to 30.2%. The other concern is that the prevalence of wasting among children has increased from 2.6% to 4.6%, even though the latter is still relatively low.

Table 2.4		
BPoA Goal 4: Make substantial progress towards halving the proportion of people from hunger by 2015 (MDG 1, T-2)	2001	2009
<i>Proportion of population below minimum level of dietary energy consumption</i>	3.8 (2003)	5.9% (2007)
Child Malnutrition Indicators		
<i>Prevalence of wasting (weight-for-height)</i>	2.6% (1999)	4.6%* (2009)
<i>Prevalence of underweight children (weight-for-age)</i>	18.7% (1999)	11.1%* (2009)
<i>Prevalence of stunting (height-for-age)</i>	40% (1999)	37%* (2009)

Sources: NCHS 1999, PAR 2003, PAR 2007, NNIYCF 2009
* based on new WHO Child Growth Standards

COMMITMENT 2: GOOD GOVERNANCE AT NATIONAL AND INTERNATIONAL LEVELS

Good governance contributes critically to the achievement of BPOA, as it provides the ‘enabling environment’ for the realization of all the other important development goals including poverty eradication. There is widespread recognition that the failure to improve governance could critically impair prospects for realization of the BPOA and other IDGs even with significant investments and efforts. Under the BPOA, Good governance includes various aspects such the promotion of democracy and human rights, strengthening the rule of law and the accountability of public institutions, enhancing participation of people in development and decentralization, promoting gender equality, resolving conflicts and the control of corruption. At the international level, the BPOA advocates promoting good governance in the global financial, monetary and trading systems based on an open, equitable, rules based and non-discriminatory approach.

Good governance is notably a core value in Bhutan’s national development policy framework and is a key pillar of GNH. Promoted through transparency, efficiency and accountability in the political processes and administration, Bhutan has taken tremendous strides in improving and strengthening the quality of its governance over the decade, a brief overview of which is outlined below.

Political Plurality

The commitment to good and effective governance has been mirrored by historic changes in the national political structure. Bhutan in 2008 emerged as the world’s youngest democracy, making a highly successful and peaceful transition from a monarchy. These first national elections with a high level of voter turnout at 79.45% were deemed by the EU Election Observation Mission (EU-EOM) and 41 other international observers to have successfully met international standards for democratic elections. The Druk Phuentsum Tshogpa party was elected to power as the first democratically elected government in Bhutan in 2008 for a term of five years.

Decentralization

Decentralization creates favorable conditions for a more pluralist political arrangement and socio-economic progress at the grassroots level. The Royal Government has since the early eighties actively promoted decentralization with the twin purposes of empowering people and ensuring balanced and equitable socio-economic development. There is also a clear recognition that decentralization can work as an effective strategy to help combat income and human poverty in the country.

The major landmarks in implementing decentralization in Bhutan include the formation of the DYT and GYT development committees in districts and sub districts in 1981 and 1991; the establishment of autonomous municipal city councils with elected representatives in Thimphu and Phuentsholing in 1999; the ratification of the DYT and GYT Acts 2002; the election of village headmen or Gups based on adult franchise and their appointment as Chairpersons of GYTs in 2002. The Gewog-based planning approach launched in the Ninth Plan (2002-2007) constituted another critical milestone in strengthening decentralized governance in Bhutan. In 2008, the principles of democratic and decentralized governance were formally enshrined under article 22 of the Constitution. A full fledged Department of Local Governance was established in 2005 to spearhead, coordinate and oversee the decentralization process, including building capacity. More recently, the National Assembly in an extraordinary session passed the Local Government Act 2009, which translated the important constitutional principle of decentralized governance into law and mandated the formation of local governments for the development, management and administration of areas under their jurisdiction. The Act will also further give impetus to national efforts to strengthen urban governance bodies or *Thromdes*. A National Urban Development Strategy is also in the process of being formulated.

In addition to political and administrative decentralization, Bhutan has further initiated significant financial decentralization measures that include the introduction of rationalized discretionary annual

grants for all local governments based on population size, geographic area and poverty. From 2008-2013, local governments will receive a total of Nu. 27.4 billion (18.8% of the total budget outlay) and Nu.12 billion (16% of the total capital expenditure budget) in annual grants, which approximately represent more than a 60% increase over the last plan allocation. Additionally, local governments at the district and block level will enjoy full autonomy over the use of these annual grants for local development activities. They will further receive additional earmarked funds and central program funds that collectively comprise about 29% of the Tenth five plan outlay. However, these will be implemented in close partnership with central line agencies for sector specific development purposes. Efforts also continue to be made to improve the block and district grant resource allocation formula.

This enhanced infusion of resources clearly reflects the growing maturity and capacity of local governments to plan, administer and implement development projects. However, there is still an urgent need to further strengthen and consolidate the institutional and human capacity at local levels. The pace and quality of decentralization has also been challenged by the poor resource base of local economies and the bureaucratic administrative systems and procedures that act as bottlenecks hampering the efficiency and effectiveness of local administration.

Combating Corruption

On the basis of the various Transparency International Surveys conducted over the years and the Corruption Perception Index (CPI) for 2008, Bhutan is ranked the least corrupt country in South Asia and the eighth least corrupt in Asia. The World Bank's Governance Indicators for the control of corruption also reveal highly effective control of corruption in Bhutan with a 75 percentile ranking in 2008. However, the Royal Government has not remained complacent and has in place a zero tolerance policy toward corruption and taken numerous proactive measures to curb and root out corruption. An independent Anti-Corruption Commission was established and the agency

Box 3.1

THE ACC: Combating Corruption Effectively

A small country like Bhutan cannot survive corruption so it should develop a culture of absolute intolerance to corruption, ...

Chairperson of the Anti-Corruption Commission, Dasho Neten Zangmo

The Anti Corruption Commission (ACC) was established as a constitutional body by Royal Decree in December 2005 on the basis of recommendations of the Good Governance Plus exercise undertaken earlier that year. The Anti-Corruption Act 2006 further arms the ACC with considerable powers to curb and combat corruption towards implementing the Royal Government's zero tolerance of corruption. In a very short span of time, the ACC has effectively undertaken many effective control measures guided by its National Anti-Corruption Strategic Framework. At the heart of this strategy is a comprehensive and integrated approach of prevention, education and advocacy and punitive action.

The ACC introduced the first national corruption perception survey in 2007 and has framed the following rules and regulations, namely, the Debarment (of Corrupt Firms) Rules 2008, Gifts Restriction Rules 2008 and the Asset Declaration Rules 2008. The ACC further introduced the concept of islands of integrity to strengthen organizational integrity and culture towards promoting transparency and accountability in the workplace and community. The reduction of administrative burden exercise and improvement of public service delivery, the integrity assessment exercises, the revision of the procurement manual and the standard bidding document, the introduction of corruption risk management to deal with corruption risk in an organization and the pilot assessment of corruption in three organizations are some of the important initiatives being undertaken by the ACC to fulfill its institutional mandate.

The push and advocacy by the ACC for incorporating Integrity Pacts (IPs) to prevent corruption in public contracting and procurement deserves special mention. The IP as strongly advocated by Transparency International is an agreement between procuring and bidding parties that specifically prohibits the demand or payment of bribes, collusion in bidding for contracts and other such unethical practice or abuses. The Ministry of Finance has recently instituted the IPs as a key component of the bidding document, a practice that is also being adopted by several large corporations in Bhutan as a mandatory requirement.

The Agency has also been working on public advocacy aspects and is actively engaging media and civil society and garnering their support to promote a culture of integrity in Bhutanese society and change perception and behavior to combat corrupt practices. Moreover, the ACC has an extensive reach-out-to-schools and communities programme with its commissioners and personnel interacting frequently with students and local communities across the country. Most notably, a highly successful and popular road show infotainment programme on political corruption has covered fifteen districts reaching more than 40,000 people.

has worked dynamically in combating corruption towards building a corruption free society in Bhutan. [See Box 3.1]. The ACC has as of September 2009 investigated seventy eight cases of which thirty five have been forwarded to the Office of the Attorney General for prosecution and twelve sent to agencies for administrative action. The Courts have passed judgment on twelve cases. There are seven cases still under investigation and four under trial.

Additionally, the Parliament is an important oversight body that is effective in curbing corruption. Oversight parliamentary bodies such as the Legislative and Public Accounts Committees actively scrutinize government activity including legislation and the conduct of various public administration and policy issues. Additionally, the Ethics, Credentials and Financial Committees have also been established to ensure ethical conduct of parliamentarians and prudent government financial management.

Civil Service Reforms

Numerous civil service reforms have been implemented to enhance good governance. Many of these reforms were undertaken following the Good Governance and GG Plus exercises initiated in 1999 and 2005. At the core of these administrative reforms was the introduction of the position classification system in 2006 to promote meritocracy in the civil service and enhance the highest standards of efficiency, transparency, professionalism and accountability. Moreover, in 2007, the Government embarked on an Organizational Development exercise to define the optimal size of the civil service, structures and capacity building and staffing. A Grievance Cell was also created within the Prime Minister's Office in 2008 as a platform for the public to express their grievances to help improve public service delivery. Additionally, the Chairperson and members of the Royal Civil Service Commission (RCSC) was reconstituted in 2009 on the basis of constitutional provisions and a Chairperson and four new commissioners appointed. Additionally, to help regulate and further improve the civil service in Bhutan a Civil Service Act 2009 was enacted.

Gender Equality

Gender equality is deeply integral to and an inherent aspect of good governance as gender discrimination in any form is a clear violation of fundamental human rights. Moreover, gender equality is highly necessary for the rapid attainment of sustainable socio-economic and political development in any country. Recognizing this, promoting gender equality and empowering women has been an important cross cutting development theme in the Royal Government's development agenda, including in its Vision 2020 and the current Tenth Five Year Plan. While women in Bhutan enjoy full freedom and equality under the law and gender relations are highly egalitarian, there are several areas where Bhutanese women remain at a disadvantage and the challenge will be to address the more subtle and hidden forms of gender bias in Bhutanese society.

Bhutanese women generally have enjoyed a comparatively better status than women in many developing countries though there are gaps in achieving full gender equality and empowerment in consonance with international best practice norms. The Constitution enacted in 2008 guarantees equality for all its citizens including women and upholds the principle of equal pay for equal work. Furthermore, it contains special provisions to eliminate all forms of discrimination and exploitation against women including trafficking, prostitution, abuse, violence, harassment, intimidation, degrading treatment and economic exploitation. Additionally, statutory laws do not permit any discrimination against women in the areas of property rights and family law and protects them adequately from crimes of sexual assault and rape, domestic assault and molestation.

As reflected in the educational attainment sections of this report, there is now virtual parity in terms of school enrollment for boys and girls with the gender parity index assessed at 1.02 for the NPER. There is however gender disparity for access to tertiary education though this too has improved remarkably over the years. Female adult literacy levels too have traditionally been much lower at 39%

as compared to 65% for men and this relatively weaker educational attainment levels largely explain the lower levels of female participation in formal employment and high public office.

Women in Bhutan enjoy fairly equitable access to productive and economic resources. Traditional matrilineal inheritance systems in most communities grant women full access to land and ownership. Indeed, while under the law children have equal rights of inheritance, in many communities this is often biased towards daughters. As such over 60% of land title registration deeds are held by women. Labour force participation rates for women have increased significantly to 64.6% in 2009 as compared to 38.4% in 2001 though they still largely remain concentrated in the agriculture sector (72%). Even as women are engaged in less remunerative occupations and many work as unpaid family members, the BLSS 2007 reveals an absence of the feminization of poverty in Bhutan. Female headed households in Bhutan are actually better off in terms of consumption expenditure with regard to both higher food and non-food consumption in both rural and urban areas. Notably, there is also no discernible distinction with regard to the distribution of owned assets between male and female headed households.

Under the law, women are given equal work opportunities and equal work for equal pay is enshrined as a constitutional and legal right. Moreover, the laws, regulations and policies that govern employment in the civil service and the private sector are gender neutral regarding remuneration, hiring, promotion and benefits. These regulations further provide clear protection of women from sexual harassment and exploitation and generally seek to confer a woman friendly work environment. However, while women have equal rights under law, when it comes to formal work they are a minority in many sectors of paid employment. Women account for a little over a quarter of total recruitment in corporate and private organizations. They also form around 29.7% of the total civil service strength, though this has improved steadily from 12% in 1990 and 19% in 2000. In the Judiciary, women make up only 2% of the judges, 6% of assistant judges and 40% at the lower registrar levels. Women are also under-represented in the National Parliament with a mere 13.8% of the total representation even as there has been a modest growth in representation as compared to the past.

The UNDP's Gender Development Index (GDI) ranks Bhutan with a score of 0.605 for the year 2007 at 113 among 155 countries as compared to its HDI ranking of 132 out of 182. Female life expectancy and school enrollment figures were the positive aspects of the GDI measure while the relatively lower earning capacity of women and adult literacy rates were the two areas of weakness that lowered the score. Bhutan was not ranked for its Gender Empowerment Measure (GEM) due to the lack of data for certain indicators. However, the low representation of women in parliament and high public office including cabinet positions and the relative lower incomes and weak presence in technical and professional vocations for women are areas requiring attention. Under the World Bank's CPIA 2008, Bhutan had a 4 out of 6 score for its gender equality sub-cluster under the policies for social inclusion/equity which compares favorably among IDA countries and the regional average of 3.6. Comparison over the years for which the CPIA rating exists for Bhutan further indicates an improvement in the situation of gender equality.

Civil Society and Media

A healthy civil society and independent media play an important role in safeguarding democratic and pluralistic values and fostering good governance. Bhutan's civil society and the media are in a nascent stage of development even as a few of civil society organizations such as the Bhutan Chamber of Commerce (BCCI), National Women's Association of Bhutan (NWAB) and the Royal Society for the Protection of Nature (RSPN) have been around for a long time. Moreover, Bhutanese communities and groups have traditionally enjoyed a strong self organizing capacity even without a formal civil society framework as understood in a modern context.

The main civil society organizations focus on children, youth, women, people with disabilities and the environment, and work closely with the Royal Government to improve the delivery of various critical social services. Under the Tenth Plan, the Royal Government is seeking to expand collaboration with civil society, particularly in the delivery of targeted poverty interventions. Additionally some of these

organizations, notably the BCCI, Youth Development Fund (YDF), Tarayana Foundation and the Association of Bhutan Tour Operators (ABTO) are able to exert varying degrees of influence on the development of government policies and legislation. These developments indicate that despite its recent beginnings, the civil society sector in Bhutan is evolving quickly and has a critical role to play in the strengthening of an effectively functioning and vibrant democracy. Following the enactment of the Civil Society Act in 2007, a Civil Society Organization Authority was established in 2009 and there are 28 CSOs currently listed with the likely registration of many more, particularly at the grass roots level.

The Constitution enacted in 2008 guarantees freedom of speech opinion and expression, the freedom of the press, radio and television and other forms of electronic dissemination of information and the right to information. The Right to Information (RTI) Act has been drafted and will possibly be enacted by 2010. However, the RTI is already a fundamental right given under the constitution and the draft RTI in its present state allows any Bhutanese to demand information from any government agency (with few exceptions) within a period of time failing which the agency could be prosecuted. Under the draft Act, it will be mandatory for every government agency to set up an information cell and designate a specific public authority to deal with such requests for information. The public authority will also be required to report annually to the Prime Minister on its compliance to RTI obligations. The Royal Government is keen to further facilitate the access to information not only as an integral aspect of good governance by enhancing transparency and accountability but strategically to help overcome the constraints of a harsh and rugged terrain in the delivery of various development services.

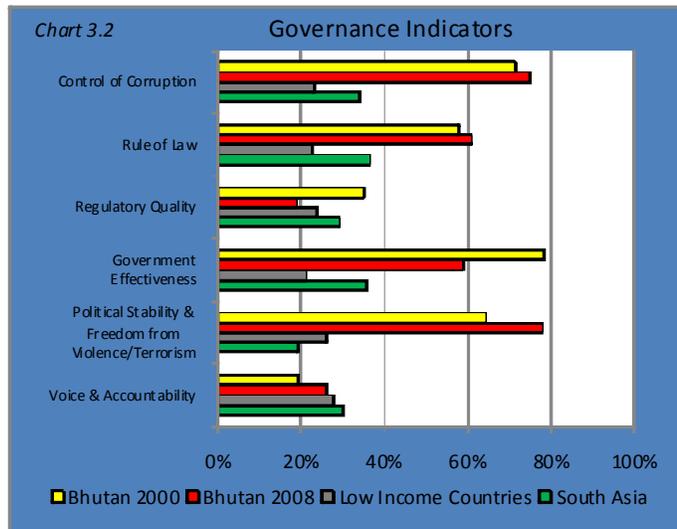
The media in Bhutan in a very short span of time has grown rapidly. With the latest addition of the Journalist, there are currently six local newspapers that publish daily and bi-weekly in English and Dzongkha. The readership base though remains narrow and urban based. The media editorials and news content are not censored and exhibit very robust, highly outspoken, critical and independent views mirroring the growth of a vibrant press. Internet access has expanded with both free dial up internet services and relatively low priced broad band facilities available throughout the country provided by three internet service providers. All international television channels are available and even the earlier bans on a few TV shows with socially inappropriate content have now been removed due to public demand. Television is found in about a third of all Bhutanese households with over half of them having satellite access and cable television networks fully operational in 19 of the 20 Districts. BBS, as the national public service broadcaster provides both radio and television services and currently, forty four towns in Bhutan can watch BBS TV directly while its FM radio service covers all districts. Bhutan also has two other private radio FM stations.

These positive developments, particularly after the inception of democracy has helped scale up Bhutan's press freedom ratings and ranking immensely. In 2003, Bhutan's press freedom ranking published by the *Reporters Without Borders* stood at 157th and following this, Bhutan has since moved up over the years to its current 70th position in 2009, reflecting possibly the most improved media freedom situation.

Governance Performance

The BPoA does not identify specific governance indicators to measure progress towards improving governance in the LDCs. This status report however provides a summary of governance indicators used by various external agencies to reflect governance performance in Bhutan. Bhutan scores extremely well on various good governance indicators including ensuring transparency, accountability and control of corruption. Bhutan's high ratings by TI for control of corruption is reflected in the World Bank's Governance Indicators where Bhutan has a 75 percentile ranking for the control of corruption which compares very favorably with countries in the region and among similar low income countries. Bhutan also performs commendably in relation to the indicator for Political Stability and Absence from Violence/Terrorism with a 78 percentile ranking. On the indicators for Government Effectiveness and Rule of Law, Bhutan scores 59% and 61% which again represents much higher performance levels as compared to both low income group countries and the region. Bhutan however has been rated weak for the indicators pertaining to Regulatory Quality and Voice and Accountability. Chart 3.2 summarizes the GI for Bhutan between 2000-2008 (Governance Matters, WB 2009).

The Freedom House's Annual Global Survey of Political Rights and Civil Liberties 2009, notes a significant improvement of about 50% (from 6 to 4) on the political rights indicator over previous years on the basis of the inception of democracy in Bhutan and various democratic institutions and processes. On the basis of the considerable improvement on the political score, Bhutan's status has also improved from countries rated as Not Free to Partly Free between 2005 and 2009. In terms of peace and conflict measures of good governance Bhutan in 2009 was rated as a state with high peace levels with a ranking of 40th most peaceful country in the world. The Global Peace Index (GPI) ranks 144 countries around the world on the basis of 23 indicators ranging from crime, terrorism, conflict, militarization, government performance, democracy, societal security and respect for human rights.



Additionally, good governance constitutes an important domain of the GNH development index being developed in Bhutan. The GNH Index is intended to help measure genuine socio-economic progress, well being and happiness in the country on the basis of Bhutan's own development yardstick. The various good governance indices and indicators included in the proposed GNH Index are the Government Performance Index (GPI), the Human Rights Index (HRI) and the Trust in Institutions Indicator. The GPI is further comprised of several indicators that evaluate government performance and effectiveness with regard to creating jobs, reducing poverty and inequality, providing and improving social services like health, education, safe sanitation and clean drinking water, and ensuring basic infrastructure such as farm and feeder roads and electricity. As such, there is considerable weightage assigned to good governance indicators within Bhutan's novel development measure, the GNH Index. This perception based indicator will allow an assessment of progress made in furthering good governance in Bhutan.

COMMITMENT 3: BUILDING HUMAN AND INSTITUTIONAL CAPACITIES

Capacity is that combination of human resources and institutional capabilities that allow a state to achieve its development goals. It is increasingly apparent that where human and institutional capacity is weak, the prospects for sustainable development and poverty reduction are dismal. It is for that reason that capacity remains critical for sustainable development and the lack of such human and institutional capacities is both a cause and condition of underdevelopment and poverty. The building of human and institutional capacities is consequently a very important commitment under the BPOA, not merely as an end in itself but also as a means towards achieving other BPOA development goals.

The critical role that investments in building up human and institutional capacities has always been deemed to be important in Bhutan. Public expenditures on education and health have consistently been high and generally upwards of one fifth of the budgetary expenditures over the decade. Additionally, the Tenth Five Year Plan has identified the building of human and institutional capacities as a vital strategy for achieving its central objective of poverty reduction. The Royal Government fully acknowledges that the sustainable and successful development of any economy is strongly contingent on the investments made in building up its human and institutional capacities and that this constitutes an invaluable and non-diminishing resource that must be effectively capitalized upon. Education and human resource development in particular are considered to be integral to shaping Bhutan's long term prospects for engendering a culture of innovation, creativity and enterprise necessary for enhancing productive capacities.

Accordingly, the Tenth Plan capital investment for the education, health and human resource development sectors accounts for 32.5% of the total capital outlay. These moreover do not include certain human capital investment related expenditures which comprise a significant portion of local government budgets. Expenditures over the decade reflect a similar trend of high investments being channeled in strengthening the human and institutional capacities within the country. Such sustained investments have resulted in marked improvements on the various BPOA human and institutional indicators over the decade. This is not to remotely suggest that the process of building human and institutional capacities is anywhere complete as much remains to be done if Bhutan is to achieve its long term Vision 2020 Goals, including the creation of model and knowledge based society.

Combating Diseases

Tuberculosis

Reducing the infection rates of tuberculosis and associated deaths are important objectives of the BPOA, which has adopted the MDG goals of reducing TB deaths and prevalence by half between 1990 and 2010. The prevalence of tuberculosis has declined from 720 cases per 100,000 in 1990 to 168 in

Box 4.1

The Royal Government clearly recognizes human capital as an invaluable investment and asset, especially in the light of its considerable geo-physical constraints and limited resources. ... 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 capital 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.

Tenth Plan Vol 1:
Main Policy Document

Our institutions will have further evolved along distinctively Bhutanese lines. They will provide for stability and participation that in a world of conflict and political turmoil will be the envy of many others. ... Bhutan will have the strong institutions required by a modern and forward looking nation-state, with a well developed capacity to manage and monitor the nation's development and to guide it further along our distinctive Bhutanese path of people-centred sustainable development.

Bhutan 2020: A Vision
for Peace, Prosperity
and Happiness

2000 and 147 in 2008. As such the BPoA and MDG TB incidence reduction targets have been met. In 1990 there were 3,526 TB estimated cases with 42 reported deaths and 1,140 cases and while in 2008 this had fallen to 984 cases with only 4 deaths. The mortality rate of all forms of TB was estimated at 7 per 100,000 in 2007 [WHO Country Profile Report on Bhutan 2007], a figure that is significantly lower than most LDCs. Data over the last five years too continue to reflect declines in death rates from TB.

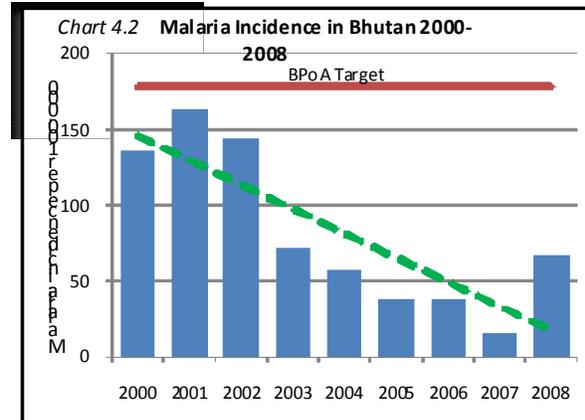
This success, particularly over the last decade, is attributed to the introduction of the Directly Observed Treatment Short Courses (DOTS) in 1997 which has had a noticeable impact on improving cure rates. The case detection rate has been increasing steadily each year and the current state of detection and cure rate for tuberculosis is 70.9 [100% WHO] and 90.9 respectively against the MDG target rates of 70 and 85. The treatment success rate for 2008 was estimated to be 93.3.

Some of the initiatives being undertaken to combat TB are outlined in the following. A national body responsible for coordinating TB-HIV activities was formed in 2007 and a national plan for collaborative TB-HIV activities has been developed. A national plan for TB-HIV collaborative activities is also in place and the cross referral of TB and HIV patients has been established. Moreover, IEC programmes on TB are being undertaken to further community awareness. Additionally a comprehensive HRD plan is in place and a focal point for HR has been designated at the central level.

There are however several key challenges in reducing TB infection. At present there are limited laboratory facilities for culture and drug susceptibility testing (DST) in the country. Culture and DST facilities will need to be upgraded and additional laboratory staff trained in undertaking quality-assured culture and DST. Drug management will also need further strengthening. The other constraints pertain to the limited management capacity, weak TB surveillance including data management and the free migration and movement of people with TB across the open border with India. Additionally, even as the number of TB cases is small, there are concerns as most of the pulmonary cases are highly infectious cases and TB remains an opportunistic infection among HIV/AIDS cases.

Malaria

Malaria incidence too has declined remarkably in Bhutan. Between 1990 and 2007, Bhutan witnessed a sharp drop in malaria cases from 9,497 cases in 1990 and 22,126 in 1991 to 523 cases in 2008. It peaked in 1994 with a reported 38,901 cases of malaria. The reported malaria incidence rate in Bhutan dropped from 162.8 per 100,000 to 67 per 100,000 in 2008. However these prevalence rates over the decade reflect that Bhutan has achieved the BPoA target of halving malaria incidence and the RGoB has set even higher targets of maintaining it to below 69.5 per 100,000. Deaths from malaria too have declined with 20 deaths in 2008 and an average of 22 deaths a year over the last five years. This may be compared to an average of 55 deaths annually between 1990 and 2000. According to the WHO, SEARO, the mortality rate from malaria declined from 3.44 per 100,000 in 2000 to 0.01 per 100,000 in 2008. In this regard, Bhutan has surpassed the MDG and BPoA targets of reducing infection rates and deaths from malaria.



These marked reductions in malarial morbidity and mortality have been attributed to highly successful prevention activities through the use of insecticide treated bed nets, bio-environmental management, strong public advocacy and awareness dissemination, early diagnosis and effective treatment. The national coverage on the use of insecticide treated nets is presently over 90% with an average of 2.2 nets per household in malarial endemic areas. These coverage levels of ITN compares very favorably against both global and regional coverage levels and exceeds the 2010 global target of 80% ITN coverage. While there are clear indications that malaria has been combated effectively, there are

serious concerns though about the possible recurrence of malarial outbreaks and potential emergence of new drug resistant variants cannot be excluded given the highly complex epidemiology of the disease. This is also constrained by the lack of resources and weak intersectoral collaboration and trained manpower, a situation further exacerbated by inadequate health infrastructure and uncontrolled population movement from malaria endemic areas and across the borders. The difficulties of establishing institutional linkages for enabling malaria specific operational research activities has been identified as another critical constraint in preventing future outbreaks of malaria in Bhutan.

HIV/AIDS

The total numbers of HIV cases detected in Bhutan remain small with the prevalence estimated to be below 0.01% of the population. Since the first two cases were reported in 1993, the total number of cases in the country detected is at 160 as of November 2008 with thirty one individuals having succumbed to the disease. The HIV/AIDS prevalence as such is low at present and is quite far from being established among the general population. However, as the Annual Health Bulletin 2009 reports this could just be the “tip of the iceberg” as infection has been growing rapidly in recent years with case detections over the last three years reflecting an alarming trend. Between 2006 and 2008, 83 new cases were detected. As such, the new cases detected between 2006 and 2008 represent more than half the total number of cases detected so far. 90% of these HIV infections are attributed to unsafe sexual practices such as multiple partners, casual sex and low condom usage. While the main mode of transmission has been through heterosexual sex, mother to child transmissions has also witnessed a significant rise in recent years. The people detected with HIV/AIDS are representative of a wide cross section of Bhutanese society but about 46% of those infected were between the ages of 15-29.

The rising trend in infection is compounded by several risk factors which relate to Bhutan’s proximity to countries with high prevalence of HIV/AIDS, high occurrence of sexually transmitted diseases, the spread of commercial sex work, liberal sexual norms, growing levels of substance abuse and limited condom use. There is also very little information about those most-at-risk population groups including behavioral patterns. Some of the other challenges that Bhutan faces in combating the spread of HIV/AIDS relate to a severe shortage of people trained in HIV/AIDS prevention, rehabilitation and care; addressing the stigma and discrimination attached to HIV/AIDS; the rising levels of HIV/TB co-infection; the increased danger of mother to child transmissions; and gaps in the surveillance data and weaknesses in the risk and vulnerability analysis. There is also the significant cost of providing treatment and care with HIV/AIDS interventions estimated to cost US \$ 32.3 million between 2006 and 2015, an estimate taken from the Bhutan MDG Needs Assessment and Costing Report 2007.

The Royal Government is focusing on prevention as the main strategic approach in combating HIV/AIDS including promoting condom use, increasing IEC and public advocacy and strengthening counseling. It is further strengthening efforts to build national health capacity through extensive human resource development and development of local management and technical capacity of agencies and NGOs to undertake HIV/AIDS prevention. The Royal Government is also strengthening surveillance monitoring and evaluation and carrying out targeted interventions for population groups at risk. Starting in 2002, the Royal Government with development partners has helped institutions in Bhutan to improve their responses to HIV/AIDS. Twenty Multi- Sectoral Task Forces (MSTFs) were established in various districts to facilitate a decentralized approach to the HIV/AIDS epidemic, through enabling local level organizations to strengthen capacities, develop and implement well-designed, district-specific response plans to address the threat of HIV/AIDS. In addition to raising public awareness of transmission modes of the disease, this particular activity has helped build a foundation to address prevention of the disease at district level. Furthermore, initiatives are also being undertaken to mobilize religious institutions for more effective HIV/AIDS advocacy and prevention including utilizing trained monks as counselors to mitigate the stigma faced by people living with HIV/AIDS. Measures have also been initiated to prevent mother to child transmission, provide anti-retroviral treatment and standardized care and support for people living with HIV/AIDS.

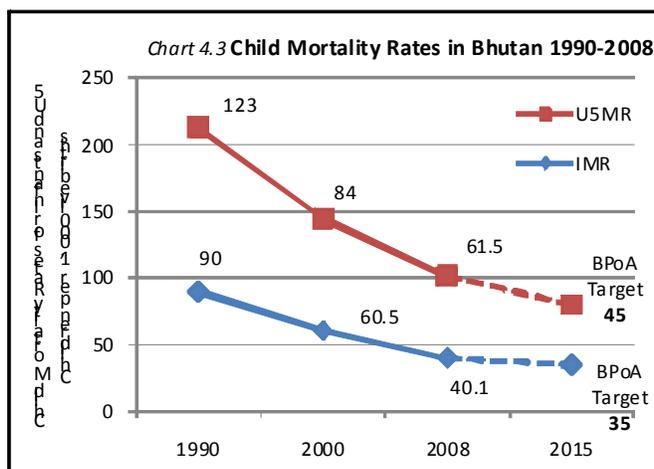
Promoting Child Health and Survival

Infant and Under-Five Mortality

Infant and under-five mortality rates are widely regarded as among the best measures of a nation's health. The BPoA has set targets of reducing infant mortality rates (IMRs) to below 35 per 1,000 live births and under-five mortality rates (U5MRs) below 45 per 1,000 live births by 2015.

Bhutan has enjoyed notable success in scaling down the high child mortality rates that it once suffered from in the past. Between 1990 and 2000, IMRs declined by one third and by 2008 had come down by over 55% from the base year to 40.1 per 1,000 live births.

Likewise the under-five mortality rates have declined to 61.5. On the basis of the current pace of progress and the sustained levels of intervention, Bhutan is on track with regard to both targets.



Infant deaths in Bhutan are attributed to infectious diseases such as diarrhoea, respiratory infections and malnutrition. The high incidence of low birth weights is also an important underlying factor affecting the survival of infants as it is a critical determinant of an infant's chance of survival and health growth. The LBW incidence in Bhutan declined from 24% in 1998 to below 9.3% in 2006 and 2007. However, the LBW data needs to be interpreted with some caution as this pertains only to institutional recorded births in hospitals (70%) and in basic health units (30%).

A major reason explaining the success in improving the situation of child health and survival in Bhutan is the highly successful immunization programme. Bhutan achieved universal primary immunization in 1991 and has successfully maintained these high levels of child immunization since. Immunization coverage was maintained at 94.5% in 2008. This consistent and high level of immunization coverage in Bhutan reported at 95% for TB, measles and DPT is close to coverage levels in developed countries. This achievement was recently recognized in November 2009, when Bhutan along with five other countries received a global award from the Global Alliance for Vaccines and Immunization (GAVI) for best performance in maintaining high immunization coverage.

With regard to the goal to eliminate excess and preventable mortality among girl infants and children, there are no known cases of child infanticide or cultural preference for boys over girls. As such there is no discernible pattern of poorer health conditions or higher mortality rates among female infants and children. However, the low levels of adult female literacy, poor hygiene and nutrition, limited access to emergency obstetric care and skilled birth attendance can impact on the further reductions in infant mortality in Bhutan. The Royal Government to this end is strengthening efforts to promote institutional deliveries, improve skilled birth attendance and enhance breast feeding advocacy that will help sustain progress towards improving child health and reducing mortality rates.

Nutritional Status of Young Children

In Bhutan infants are usually breast fed up to two years (median duration 23 months), but exclusive breast-feeding is not widely practiced. The recent NNIYCFS 2009 Survey revealed that 91.4% of mothers in Bhutan initiated breast feeding within one hour and that exclusive breast feeding was done by 86% of mothers upto the first month. However, only a mere 10.4% of infants were exclusively breast fed for upto six months and 36.9% upto four months. The Royal Government implemented a breast feeding

policy in 2002 that advocates a four month exclusive breastfeeding approach but this may now have to be reviewed in light of recent findings strongly advocating a six month exclusive breast feeding period. With regard to complementary feeding for six to nine month infants, the survey indicated that 89.6% were given complementary food (mainly rice powder and infant formula milk) in addition to being breast fed.

The NNIYCFS 2009 indicates that acute malnutrition (wasting) is not a major problem at the national level although it has increased from 2.6% (1999) to 4.6% (2009). However, the distribution of acute malnutrition reflects regional variation with areas that may require relevant interventions. Underweight and stunting prevalence has decreased over the years on the basis of the NCHS standard but progress has been below expectation. Once again regional variations exist including rural-urban differences for underweight and stunting. The detailed malnutrition indicators are reflected in the section on hunger in the second chapter of the report. With regard to the main BPoA indicator of child malnutrition, namely the prevalence of underweight children, this has been brought down from 18.7% in 1999 to 11.1% in 2009, a reduction of 40%.

The survey data further reveals that Bhutanese children’s anthropometric measurements lie close to the WHO median for weight-for-height Z-score and Height-for-age Z-score at 6 months of age. It is only after 6 months that the deviation from the median occurs and widens as the child becomes older. At present around one third of Bhutanese children are still short for their age as compared to other children around the world but they have the potential to grow as tall as them. The most likely factors that appear to cause child stunting are chronic dietary deficiencies, frequent infection and poor feeding practices over prolonged periods of time.

Bhutan has done extremely well with regard to improving its micronutrient deficiency situation. Iodine Deficiency Disorder (IDD) was once widely prevalent but in 2003, Bhutan became a “Normal Iodine Nutrition Country” and salt coverage at the household level stood at 98.4% in 2008. Moreover, the micronutrient deficiency of Vitamin A is also no longer a public health problem though iron deficiency resulting in anemia still remains a concern among pregnant women. Iron deficiency anemia in pregnant women was estimated to be about 60%.

Improving Maternal Health

Bhutan has enjoyed sustained success in reducing the maternal mortality ratio attributed to the growing network of free maternal services which is integrated with childcare and a trained cadre of village health volunteers. Antenatal coverage (at least one visit) in Bhutan today has touched 88% up from 51% in 2000. The MMR has declined from 5.60 in 1990 to 2.55 per 1,000 livebirths in 2000. Currently no proper survey has been initiated to assess MMR levels but the Royal Government has set a target of reducing it to below 1.4 per 1,000 live births before 2015 with the principal strategy revolving around enhancing institutional deliveries. In terms of skilled birth attendance, this has increased from 15% in 1990 to 24% in 2000 and was estimated at 66% in 2008.

	2000	2008
MMR per 1,000 live births	2.55	-
Skilled Birth Attendance	24%*	66.3%
Contraceptive Prevalence Rates	30.7%	35.4%
Antenatal Coverage	51%*	88%

Sources: AHB 2009, Ministry of Health, *NHS 2000

Contraceptive prevalence rates (CPR) serve as a useful proxy measure of access to reproductive health services that are clearly essential to meeting many of the BPoA goals such as child mortality, maternal health and HIV/AIDS and even gender equality. The CPR rates in Bhutan though have not increased significantly and are still very low at 35.4% in 2008. Additionally, even with the widespread accessibility to reproductive health services there is less than an optimal utilization of these services, particularly in rural Bhutan. This is mainly attributed to cultural factors and the lack of awareness. To remedy this, the Government is working to promote the wider acceptability and awareness of modern

maternal health services and tackle related issues such as the low levels of literacy and educational attainment among women. The rapid expansion of Emergency Obstetric Care facilities will also help improve reproductive health care services and reduce maternal mortality further.

Expanding Primary Education and Literacy

Educational indicators have improved over the last decade at all levels. Gross Primary and Net Primary Enrollment Ratios have gone up to 115.7% and 91.8% in 2008. The proportion of students starting grade 1 who complete grade five has also increased from 75.8% to 93.6% between 2001 and 2009. In terms of gender equity, at the primary and secondary level, Bhutan has achieved full parity with a gender parity index of 1.02 for NPER. Girls enrollment stands at about 50% at every level of basic education with 49.6% even at the higher secondary level. Additionally, the performance levels and survival rate for girls in schools have been equal if not better than for boys over the last few years.

	2001	2009
Gross Primary Enrollment	72%	115.7%
Net Primary Enrollment	73% (05)	91.8%
Net Primary Enrollment (boys)		91%
Net Primary Enrollment (girls)		93%
Gender Parity Index for NPER		1.02
Proportion of pupils starting grade 1 who reach grade 5	75.8%	93.6% (08)
Proportion of pupils starting grade 1 who reach grade 5 (boys)	-	91% (08)
Proportion of pupils starting grade 1 who reach grade 5 (girls)	-	97% (08)
Adult Literacy	-	52.8%(05)
Adult Literacy (male)	-	68.5%(05)
Adult Literacy (female)	-	38.7%(05)
Youth Literacy Rate (15-24)	-	74.4%(05)
Youth Literacy (male)	-	79.9%(05)
Youth Literacy (female)	-	68.5%(05)

Sources: Annual Education Statistics 2009, MoE, PHCB 2005

Adult literacy levels in Bhutan though remain weak, particularly of the older generation, most of who missed out on schooling as educational facilities in the country were extremely limited. Adult female literacy rates too are a significant thirty percentage points lower than for men. The literacy levels of the youth at 74.4% though are much higher due to the significant growths in school enrollment over the years. Female youth literacy rates (68.5%) are about ten percentage points than for men. The gender disparity in literacy levels both at the adult and youth levels are likely to even out over time due to sustained female enrollment in primary education.

The situation of low adult literacy rates, particularly for women, is being addressed through the active promotion of non-formal education programmes where female participation is very high. Of the 13,160 NFE learners in 2009, around 70% comprise female learners and many classes often consist entirely of women. In recognition of the growing success of the NFE programme, Bhutan was awarded the UNESCO Confucius Literacy prize in 2009 for its holistic approach to literacy and its success in reaching remote areas. Over 140,000 men and women have benefited from the NFE programme that was initiated in 1990 by the National Women's Association of Bhutan. The success of the NFE programme and the high numbers of school enrollment will help in the achievement of the Tenth Plan target of 70% adult literacy by 2013.

Access to Improved Source of Drinking Water

The Bhutan Living Standards Survey 2007 reflected that 90.9% of the Bhutanese population had access to an improved water source. Even in rural areas, access to improved source of drinking water coverage levels are now at 88% and all districts have upwards of 80% coverage levels with the exception of the least populated district, Gasa. These near universal levels of coverage have been due to the successful implementation of the Rural Water Supply and Sanitation (RWSS) Programme that was initiated in 1974 when rural access to safe drinking water was at less than 5%. The primary goal is to reach and maintain universal coverage for safe drinking water with the primary interventions focusing on increasing the number of public tap stands in rural areas largely through the normal gravity fed water supply system (99%) and through rainwater harvesting and alternative means (1%).

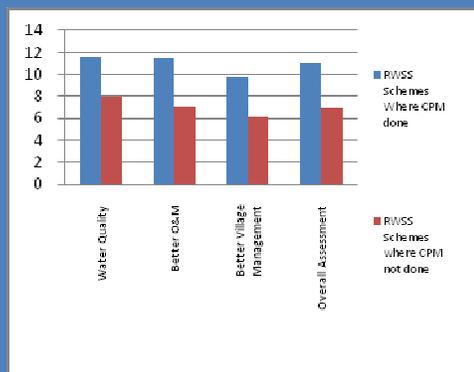
Notwithstanding these high access levels, there are several critical issues that need to be addressed urgently. Many of the older water supply schemes are now in dire need of repair and maintenance. Quite a number of the schemes also appear to be failing due to a drying up of springs and other water sources. Moreover, the RWSS Management Information System data for fifteen districts in 2006 revealed that 40% of the rural water schemes are functioning well, 33% are working with some minor problems, 17% are functioning with need for repairs and improvements and 10% were totally non-functional and require reconstruction. The coverage gains could therefore be severely compromised if the repair, maintenance and rehabilitation of many of the older water supply schemes are not addressed effectively and quickly. An important lesson learnt for Bhutan has been that any future expansion of rural water schemes must necessarily take into consideration the allocation of resources and planned activities for their regular upkeep without which their long term sustainability and functionality is at stake. As such, on the basis of the MDG Resource Needs Assessment and Costing Report (2006-2015), more than 75% of the total outlay for water supply schemes is to be earmarked for recurrent expenditures for the maintenance and upkeep of these schemes. The other constraints of enhancing access to improved sources of drinking water pertain to the feeble sense of community ownership, the substantive lack of capacity and the frequent communal disputes over water rights.

Box 4.6

Some Lessons Learnt from the RWSS Programme in Bhutan

Bhutan's experience with the implementation of rural water schemes point to certain evident benefits of appointing designated and trained water caretakers who receive some form of compensation in cash or kind. A rural water supply functionality survey revealed that schemes with trained and compensated caretakers enjoyed vastly improved water quality, were better maintained of their water schemes and promoted effective community self-management. Another survey also revealed vast improvements in water quality, operation and maintenance of rural water schemes and village management in communities where community planning and management training activities had been conducted.

These surveys convey a valuable lesson that the long term functionality and sustainability of the rural water schemes in Bhutan can be better ensured through the appointment of paid community water caretakers and by strengthening community capacity and ownership through community planning and management activities.



COMMITMENT 4: BUILDING PRODUCTIVE CAPACITIES TO MAKE GLOBALIZATION WORK FOR LDCS

The BPoA calls for the building of productive capacities as being vital for engendering sustained economic growth and alleviating pervasive poverty in the LDCs. As LDCs are constrained deeply by extremely low productivity levels, it is deemed to be particularly important that LDCs improve their competitiveness in international markets in goods and services in order for them to benefit meaningfully from trade openness and globalization and avoid the risk of increased marginalization from the global economy. As defined in the UNCTAD LDC Report 2006, productive capacities here refer to *the productive resources, entrepreneurial capabilities and production linkages which together determine the capacity of a country to produce goods and services and enable it to grow and develop.*

As with many LDCs, Bhutan has been plagued by extremely low levels of productivity in its non-hydropower sectors of the economy. Bhutan's industrial and export base still remains very narrow, lacks depth and is highly exposed to single market and single commodity risks. There is also a clear recognition that productivity levels in Bhutan's industry, manufacture and agriculture sectors have been poor and largely explain their weak levels of growth over the decade. The share of agriculture, livestock and forestry sector has declined from about 40% of GDP in the mid nineties to 18.5% in 2008. Similarly, the manufacturing sector has declined from around 16% of GDP between 1990-95 to around 5% of GDP over the last five years. Moreover, both the manufacturing and agriculture sectors have not generated sufficient quality employment with labor force participation declining in these sectors. Some key supply side constraints responsible for the productivity gap in Bhutan pertain to the weak economic infrastructure including inadequate road access exacerbated by the rugged mountainous terrain, low level of technological base and weak human resources.

Physical Infrastructure

Transport and Communication

The weak strategic infrastructure has always posed a major challenge that has chronically impeded economic and industrial development in Bhutan. Moreover, various national poverty studies clearly reflect a strong co-relationship between road connectivity and poverty incidence. The inadequate road and air transport links to both external and domestic markets have been a critical constraint, a situation exacerbated by the mountainous and rugged terrain. Road transportation costs are therefore 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 further adds considerably to inflate import expenditures for various commodities, materials and goods thereby raising living costs and development expenses considerably. Additionally, 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.

Box 5.1

For a small, land-locked and underdeveloped economy like Bhutan, the expansion of strategic infrastructure is an absolute requisite for the broader economic and social transformation of the country. 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 enriching the quality of life for all Bhutanese.

Tenth Plan Volume I Policy Document

In view of these reasons, the Royal Government has consistently accorded a high priority to the development of socio-economic infrastructure. As in past years, a large share of the capital expenditures has been earmarked for infrastructure development. Over the Tenth Plan, infrastructure development will receive about 36% of the total capital expenditures.

About 25% of the total capital expenditures alone have been earmarked for the expansion of the road network, which does not include local government budgets that have considerable allocations for the development of feeder and farm roads in local communities. On the basis of the road infrastructure expansion activities, the Royal Government anticipates that 85% of the rural population will live within half a day's walk from the nearest road head by the year 2013.

Table 5.2 BPoA Commitment 4: Productive Capacity Indicators for Transport		2001	2008
<i>Increasing Road networks or connections and urban road capacities to the current level of other developing countries and urban road capacities, including sewerage & other related facilities, by 2010</i>			
• National Highway and Road Network (km)		3,745 km	5,362 km
• Access to Improved Sanitation(national)		88%	92%
<i>Modernizing and expanding ports & their ancillary facilities to enhance their capacities to the level of those in other developing countries by 2010</i>			
• Air Passengers Carried		39,009	122,484
• Air Cargo		-	369.8 MT
<i>Modernizing and expanding railway connections and facilities by 2010</i>			
	No rail connection	Rail head established at Phuentsholing by 2010	link at by

At present, international air transport is confined to one single airport at Paro. Domestic air services too have not yet started. However, despite these air transport bottlenecks air passenger traffic and air freight has grown manifold since 2001. The Royal Government plans to start up another airport at Gelephu and will also initiate domestic air services with the participation of the private sector. The development of various domestic airstrips with short take off and landing facilities are being explored currently in Trashigang and Bumthang. Airport facilities and infrastructure including air navigational aids are further expected to be enhanced at the Paro International airport. Expanding air connectivity and access will be particularly important within the context of Bhutan's plans to enhance international tourism including the promotion of Bhutan as a well being and MICE destination and emerging as a regional centre of excellence for educational services.

By 2010, the Golden Jubilee Rail Link will place Bhutan on the global railway map with a railhead in the border town of Phuentsholing connected to the Indian town of Hasimara. Feasibility studies are also to be undertaken for rail connections between other border points with India. This critical railway link with India will help reduce exports and import costs and further boost bilateral trade with India.

The adequate development of ICT infrastructure is deemed highly important for enhancing productive capacities in Bhutan. The Royal Government fully appreciates that without the effective utilization of ICT Bhutan could be effectively marginalized in the global economy and will be unable to take advantage of the opportunities of globalization. There is also the clear recognition that Bhutan cannot afford to be caught on the wrong side of a global digital divide and that ICT holds enormous potential to help the country overcome its considerable geographic and terrain challenges.

Currently, all twenty districts and 199 of the 205 sub- districts are connected to the national fixed line telecom network. Mobile coverage has reached 107 geogs with the plan to provide full coverage to all of the sub districts by the end of 2013. Fixed-line tele-density has increased from 2.8% in 2002 to 4.6% in July 2008 and mobile tele-density as of July 2008 has reached 36% since its launch in November 2003. Fixed-line tele-density has increased from 2.8% in 2002 to 4.6% in July 2008 and mobile tele-density as of July 2008 has reached 36% since its launch in November 2003. As such, with regard to fixed line tele-density Bhutan with 4.6 lines per 100 inhabitants is near the BPoA target of 5. In terms

of mobile tele-density, it is close to levels in developing countries and much higher than the average for LDCs. The startup of a new telecom service provider in the country in 2008 has further helped enhance mobile coverage and drive down consumer costs through competition.

Internet connections have doubled from about 5,000 to 10,000 since 2003 which reflects a ratio of 1.5 connections per 100 inhabitants. This however is considerably below the BPoA target of 10 connections per 100. Internet usage and connections should increase though once the Royal Government establishes a nationwide ICT infrastructure backbone that is fast, affordable and future proofed to the extent possible. Following this and the planned expansion of internet bandwidth and connectivity, Bhutan will potentially have one of the world's highest internet bandwidth per inhabitant. Additionally the Royal Government plans to enhance last mile access of ICT connectivity down to the village level which will help prevent the emergence of a rural-urban digital divide.

Table 5.3 BPoA Commitment 4: Productive Capacity Indicators for Communication		
	2001	2008
<i>Indicator:</i> Increasing communication networks, including telecommunication and postal services, and improving access of poor to such services in urban and rural areas to reach the current levels in other developing countries		
Available National ICT Target Indicators		
<ul style="list-style-type: none"> Set up enabling framework to promote e-business Establish an IT Park Last Mile Access down to village level Establish a nationwide broadband network Establish one ICT Center of Excellence Establish a nationwide ICT backbone infrastructure that is affordable, fast secure and sustainable 		By 2010 By 2010 By 2011 By 2013 By 2013 By 2013
Increasing computer literacy among students in high institutions and universities by 50% and in junior and high schools by 25% by 2015		
<ul style="list-style-type: none"> No data available on computer literacy levels in educational institutions 		
<i>Increasing average telephone density to 5 main lines per 100 inhabitants and internet connection to 10 users per 100 inhabitants by the year 2010</i>		
<ul style="list-style-type: none"> Fixed line Teledensity (%) Mobile Teledensity (%) Internet connections (%) 	2.8% 0% 0.8% (2003)	4.6% 36% 1.5%

A regional development that will further enhance Bhutan's ICT networks is the SASEC information superhighway. Under this regional project, Bhutan along with Bangladesh, India and Nepal will share an information superhighway by 2011 with these countries directly linked to one another with high speed optical fibre cables. The project will not only contribute to cross border connectivity but will considerably enhance Bhutan's ICT human resources and help bridge the urban-rural digital divide. Under this project, 30 communication information centers (CICs) and an ICT Research and Training Institute are to be established in Bhutan.

A major constraint and challenge in promoting ICT development in Bhutan is the critical lack of human capacity in the ICT sector. To address this, the Royal Government proposes to establish an IT Park and an ICT center of excellence and has actively promoted the establishment of private IT training institutes. Additionally, IT literacy has been introduced in all schools as a tool subject with efforts to equip all Higher and most Secondary grade schools with computers. Computer science and computer application subjects are being taught. There is however no available data at present regarding IT literacy. Currently there is an average of 24 computers per school in 62% of all schools in Bhutan (335 schools). 184 schools (35%), most of them community primary schools do not have any computers as many of these schools do not have access to electricity. In terms of internet connectivity, 25% of public schools and 81% of higher secondary schools had working internet connections. With the rural electrification programme reaching close to universal levels and last mile ICT access down to village targeted to be achieved by 2013, it is expected that most schools will have better access to computers and the internet and IT literacy levels will improve significantly.

Energy

Bhutan's hydropower capacity at present stands at 1,488 MW up from 422.8 MW in 2001. Most of the energy generated has always been exported to India with hydropower exports comprising about 45% of the total exports in 2008 and contributing to about 40% of national revenues. National electricity coverage as of 2007 stood at 70% of all households as compared to 54% in 2001. It is envisaged that Bhutan will attain electricity for all within this decade.

The development of energy infrastructure notably for the harnessing of Bhutan's hydropower resources has fundamentally transformed the landscape of Bhutan's economy. As such, the further expansion of hydropower development on an accelerated basis remains at the core of Bhutan's economic development strategy. The Royal Government is envisaging the scaling up the total hydropower capacity in Bhutan to over 10,000 MW by 2020 with a power protocol being signed with the Government of India to that effect in 2009. An empowered joint group has been constituted to fast track the implementation of the hydropower projects agreed upon between the two countries.

For the medium term, the Royal Government has targeted the doubling of hydropower capacity to 1,602 MW with the immediate construction of the Punatshangchhu I. By 2013 it is expected that the energy sector will comprise over 15% of GDP and contribute to over 36% of national revenues. The attainment of electricity coverage by 2013 is 100% of the total population is another critical target to be achieved over the next few years with even the possibility of attaining the goal of electricity for all by 2013. Raising this to near universal access levels through the rural electrification programme will require the targeted electrification of about 40,000 rural households. In view of the accelerated hydropower development programme and the major RE programme, the Royal Government is actively considering the establishment of hydropower training institutes to build up adequate local capacity.

Hydropower Projects to be implemented by 2020	Installed Capacity
Punatsangchhu I	1,200 MW
Mangdechu	720 MW
Punatsangchhu-II	1,000 MW
Kuri Gangri	1,800 MW
Chamkarchu - I	670 MW
Wangchu Reservoir	900MW
Amochhu	620 MW
Kholongchu	486 MW
Bunakha Reservoir	180 MW
Dagachu CDM	114 MW
Sunkosh Reservoir	4,060 MW

Export Infrastructure

Bhutan as a landlocked country has considerable trade transit constraints. To facilitate exports and ease such transit constraints, the Royal Government intends to establish dry ports in the regional industrial and economic hubs of the country and develop industrial parks and special economic zones - most of them along the border areas with India. This will boost Bhutan's manufactured exports to external markets and help double the share of manufacturing sector in the national economy. Additionally the expansion of export infrastructure will promote a greater degree of economic integration with the Indian, regional and global economy and draw on the advantages that such integration provides. However, due to resource gaps several of these activities may have to be financed through a private public partnership model.

Sustainable Tourism

Tourism is a rapidly growing services sector for Bhutan, particularly in terms of its contribution to generating employment and foreign exchange. Promoted and managed in a highly sustainable manner, tourism is also viewed as an effective catalyst for conservation of the environment and for the promotion of local diversity and culture in Bhutan. Moreover, the promotion of community based tourism and forms of eco-tourism are expected to support sustainable rural livelihoods and reduce poverty while also serving to advance environmental conservation activities and awareness in rural communities.

While the total volume of tourism remains extremely small, Bhutan enjoys an exclusive and exotic profile in the global tourism and travel market. The country has consistently been voted among the top travel destinations in the world several times over the last decade in 2005, 2008 and most recently in 2009. In 2001, international tourist arrivals amounted to 6,393 contributing gross earnings of about US\$ 9.2 million. Both tourist arrivals and gross earnings have increased significantly since even as Bhutan continues to pursue its high value low impact tourism policy. In 2008, 27,636 international tourists visited the country contributing US\$ 39 million in hard currency excluding revenues generated for the national airline. This figure however does not include non dollar paying regional tourists nor does it factor in downstream revenues generated from tourism activities. Under the Tenth Plan projections, visitor arrivals are projected to increase to about 100,000 by 2013 with the tourism sector contributing to 9% of total national revenues. However, the aspiration is to overachieve these targets considerably in a sustainable manner and without lowering the quality of the visitor experience. The Royal Government will continue to maintain a sharp focus on the niche market of high value tourism.

Scaling up the number of international tourists will clearly require a commensurate expansion in tourism infrastructure, products and services. Notably, existing air travel bottlenecks that limit tourist arrivals will have to be addressed urgently and to this end the development of the proposed second airport in Gelephu will greatly help ameliorate tourist access constraints. The expansion of air passenger capacity of the national airline Druk Air is also clearly essential. To mitigate the impact of large inflows of tourist arrivals, the Royal Government will address the highly seasonal nature of tourism in Bhutan through evening out visitor arrivals in both time and space. The further improvement of tourism services through human resource development remains another critical challenge, particularly in the context of the policy objective of sustaining high value tourism.

COMMITMENT 5: ENHANCING THE ROLE OF TRADE IN DEVELOPMENT

The promotion of fair and inclusive trade for generating critical resources and growth opportunities for financing growth, development and poverty alleviation in LDCs is a core element in the BPoA. While trade is not deemed to be an end in itself, the BPoA affirms the critical role that trade plays in enhancing access to a diverse range of goods and services, technologies and knowledge and in creating employment and sustainable livelihoods for poverty reduction. Under the BPoA framework, fair and inclusive trade is clearly deemed to be an effective instrument for drawing benefits for LDCs from globalization and trade liberalization.

Trade Policy and Institutional Context

It is for these very reasons that promoting trade remains a deeply integral part of Bhutan's development strategy. The Tenth Five Year Plan (2008-2013) and Bhutan's International Trade Policy 2004 emphasize strongly the relevance of trade for socio-economic development to boost economic growth and reduce income and human poverty. Under the Tenth Plan, trade is targeted to contribute to a quarter of national revenues with exports envisaged to grow by 50% over levels in 2007. In addition to its accelerated hydropower development programme that will further scale up energy exports, the Royal Government is particularly keen to promote trade in knowledge based and cultural industry goods and services as a long term strategy to diversify and broaden its economic and export base and generate quality employment. There is thus a strong national commitment and political will to maintain a liberal trade policy regime and effectively integrate Bhutan's economy into the regional and global economy through various bilateral, regional and multilateral trading frameworks.

Box 6.1

From a virtually closed economy in 1960, Bhutan has completely transformed itself in the subsequent decades into a classical case of a small open economy characterized by a high degree of dependence on trade.

Macroeconomics of
Poverty Reduction: The
Case Study of Bhutan
(2007)

The Royal Government however clearly recognizes that trade openness and liberalization is a necessary process of globalization but that in of itself it is not a panacea or a sufficient requirement for holistic and sustainable development. For the latter to materialize, trade must be fair, equitable and inclusive and the global trading regimes be accommodative of the access needs and structural constraints and challenges of the landlocked and least developed countries. In the context of the BPoA, there is a clear rationale for improving and reforming the WTO system of rules and the decision making process and the need for developed countries to provide greater opportunities for LDCs to expand their exports thereby providing critical resources to help finance measures to meet the BPoA goals and the MDGs.

Bhutan's accession to the WTO is at a very advanced stage with the country preparing for the fifth working party. Bhutan is already a member of the South Asian Preferential Trading Arrangement (SAPTA) and party to the South Asia Free Trade Agreement which came into effect from 2006. SAARC members are also in the process of negotiating a SAARC Trade in Services agreement. It is additionally a member of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), a regional economic grouping under which, members will progressively reduce and ultimately eliminate tariffs and non tariff barriers for virtually all goods. The BIMST-EC framework agreement further spells out the commitment of members to work towards the progressive liberalization of trade in services and facilitate an open and competitive investment regime to promote FDI.

India has always been Bhutan's largest trading partner and the dominance of Indo-Bhutan trade in the country's external trade has only deepened with exports to India accounting for over 90% of total value of exports (2000-2008) and imports from India accounting for over 80% (2000-2008) of the total value of imports. This has arisen primarily due to geographical proximity and the extensive bilateral cooperation in hydropower development that has spurred energy exports to India and also sustained

the high import levels. This has been facilitated by an institutional framework including a bilateral FTA, the use of the Indian Rupee for facilitating trade with India and the fixed exchange rate between the two national currencies. The Indo-Bhutan Agreement on Trade, Commerce and Transit revised in 2006 opened up more four more entry/exit points in addition to the sixteen already in place besides simplifying various export/import procedures.

Bhutan also has a Preferential Trading Arrangement (PTA) with Bangladesh and is seeking to sign additional PTAs with other countries in the region including Nepal and Thailand. More recently the PTA with Bangladesh was renewed during the visit of the Bangladeshi Prime Minister H.E. Sheikh Hasina in November, 2009, during which duty free access was agreed for 18 new Bhutanese products. Following this important state visit, the possibilities of opening up road connections through three additional points and cooperation on a regional electricity grid under the Bangladesh-Bhutan connectivity proposal are being considered.

The Royal Government will actively promote trade through the following priority activities that will reduce transportation and transaction costs, rationalize custom tax administration and help overcome trade transit constraints. These include the expansion of export infrastructure including the establishment of a dry port and railway link in Phuentsholing. The development of industrial parks and business incubators are also other critical activities to be taken up. The Royal Government will also create an enabling legal framework through the formulation and/or amendment of laws to make it more business friendly and streamline various licensing and other business regulatory processes. To this end the Bhutan Automated Customs System (BACS) has already been operationalized and is functional at twenty five customs stations to facilitate the clearance of export and import consignments and strengthen customs administration. Efforts are also underway to enhance the BACS to a single window system in keeping with best custom management practices. Furthermore, to achieve an optimal balance between customs facilitation and control, the implementation of a risk management approach and post clearance customs audit practices are being considered that will do away with the current practice of excessive reliance on physical examination of goods. Moreover, to accommodate Bhutan's growing trading arrangements, a Trade Development Act would be enacted within the Tenth Five Year Plan period that will address issues of trading rights, transparency of trade regulation and inter-agency coordination. Additionally, the New Economic Development Policy and the revised FDI Policy that are to be adopted and implemented soon will provide a massive impetus to growth and facilitation of the trading sector. At the core of all these initiatives to improve the trading sector will be underpinned by efforts to raise national productivity through the strategic approach of promoting innovation, creativity and enterprise in the industrial sector.

Challenges

A major challenge that has always impacted on Bhutan's trade and development prospects has been its landlocked geographical constraints and remoteness from global markets. High transport costs have greatly undermined Bhutan's competitiveness in regional and global markets as well as its ability to produce at lower costs. This has a significant trade reducing effect for Bhutan's non-hydro exports. Bhutan's costs to export as reflected in the Trading Across Borders indicators are much higher than those of countries in the region and those at same income levels. As certain studies indicate, the doubling of transport costs can reduce trade volumes by as much as 80%. The higher transport costs further greatly diminish the spending power and consumption levels and notably decreases the rate of return on capital on investments made.

In considering the trading environment and Bhutan's particular vulnerabilities arising from a non-diversified export base and market, the challenge will also be to continue expanding Bhutan's non-hydro export base and export markets. Expanding and improving the weak economic infrastructure base and enhancing industrial productivity will prove critical in this regard. 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.

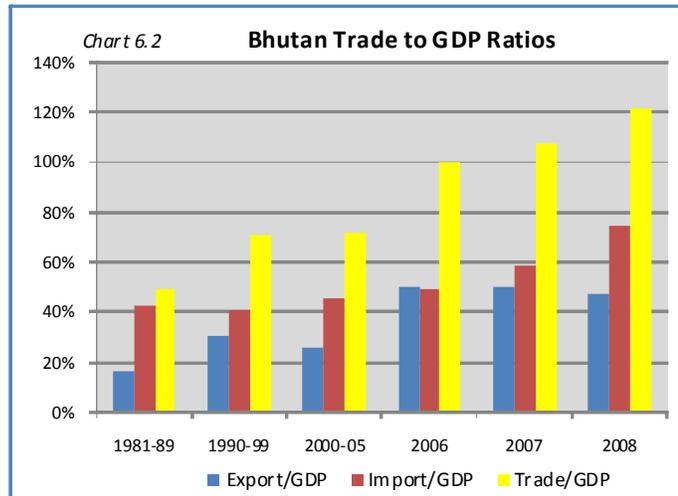
With the rapid expansion of both internal and external trade, the legal instruments and framework for trading regimes are still nascent and will require to be strengthened to provide policy stability and predictability. Relevant laws and laws to promote competition and fair practices have not been enacted 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. Productivity levels too are known to be weak and many domestic industries do not have a competitive edge that could help boost the export base with enhanced market access.

Measuring Trade Performance

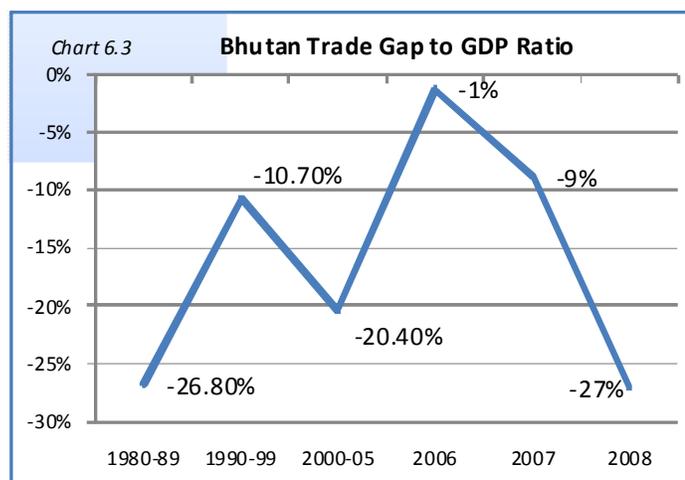
Trade to GDP Ratios

Bhutan remains a highly open economy with a very liberal trade regime and is regarded to be the most open and liberal in the South Asian region. For instance, on the basis of the trade openness index measured in terms of trade to GDP for the last five years (2004-2008), this ratio has been at around 101% of GDP, reflecting a high degree of openness.

Additionally, there is very little or no protection of the domestic economy either in the form of import tariffs or quantitative restrictions and exports do not enjoy any subsidies. The simple average tariff rate for Bhutan in 2007 was estimated by the IMF at 22.1% and has been at that level over the last five years. Although the simple average tariff is high in comparison to many countries suggesting a degree of trade restrictiveness, in reality this does not distort trade as more than 90% of Bhutan's trade is with India, with which it has a free trade agreement. The tariffs are largely in place not as a protectionist measure but to conserve hard currency reserves. Notably, import duties accounted for only 0.6% of imports in 2007/08 and were generally at less than 1% of the total value of imports over the last decade.



The export to GDP ratio has grown over the years climbing from about 17% of GDP in the 1980s to 30.2% of GDP in the 1990s and 42.6% of GDP over the last five years. Exports grew at over 25% a year on average between 2000-2008 and in terms of their value, increased six fold from US\$ 103 million in the year 2000 to US\$ 653.4 million in 2008. This was largely due to the sustained increase in the value of hydropower and mineral based industrial exports to India. Additionally, projection estimates are that exports will reach 52% of GDP by 2010 with a value of US\$ 874 million. The import to GDP ratio on the other hand declined from about 42.5% of GDP in the 1980s to around 40.8% of GDP in the 1990s. However, over the last decade between 2000 and 2008 this increased to over 50% of GDP and is projected to grow further to 79.8% of GDP by 2010 primarily on account of import requirements for capital intensive activities like the mega-hydro power projects. In terms of



of imports over the last decade.

value, imports increased five-fold from US\$ 193 million in 2000 to US\$ 1,025 million in 2008 and were largely on account of capital machinery and equipment, fuel, vehicles, food and a wide range of consumer products.

There has been a positive reduction in the Trade Gap Ratio from 26.8% of GDP in the 1980s to 10.7% in the 1990s. Between 2000-2008, the Trade Gap to GDP Ratio was at -17.5% of GDP and in 2008 was at -27% of GDP. These large trade imbalances have not negatively impacted the current account which has been positive due to the large inflow of grants and loans from development partners, particularly India.

Trading Across Border Indicators

A useful sub-index used in the World Bank Group's Ease of Doing Business Index to measure trade performance is the Trading Across Borders indicator. As assessed in the *Doing Business 2010* Report, Bhutan has made slight improvements in speeding up trade as measured by the reductions in the time taken to export and import and in the documentation required. The number of days to process an export and import product has declined by one and four days respectively between 2006 and 2009. However, the country suffers from extremely high costs measured in terms of the cost to import in terms of US\$ per container which are 44% and 89% higher compared to countries in the region and OECD respectively. As such Bhutan's overall rating for the Trading Across Borders indicators remains weak and explains the low global ranking at 151.

	Bhutan		South Asia		OECD	
	2006	2009	2006	2009	2006	2009
Trading Across Borders (Global Ranking)	150 (2007)	151				
Documents for Export(number)	10	8	8	8.5	5	4.5
Signatures for Export(number)	12	-	12	-	3	-
Time for Export (days)	39	38	33	32.75	12	10.7
Cost to Export (US\$ per container)	1,230 (2007)	1,210	-	1,339	-	1,069
Documents for Import (number)	14	11	12	9	6	5.1
Signatures for Import (number)	12	-	24	-	3	-
Time for Import (number)	42	38	46	32.5	14	11.4
Cost to Import (US\$ per container)	1,950 (2007)	2,140	-	1,487	-	1,132

Doing Business 2010, World Bank Group.

COMMITMENT 6: REDUCING VULNERABILITY AND PROTECTING THE ENVIRONMENT

The Sixth Commitment of the BPoA to reduce vulnerabilities and protect the environment represents a particularly significant goal for LDCs. The BPoA articulates that the long term threats to the global environment are a common and urgent concern of all countries and emphasizes the urgent need to address environment sustainability issues on the basis of common but differentiated responsibility. The BPoA further accentuates that while the LDCs actually contribute the least to global environmental degradation including the emission of greenhouse gases, they are often the most vulnerable to environmental degradation and a variety of natural shocks including natural disasters, and in reality possess the least capacity to adapt to its adverse effects. The BPoA further highlights the overriding concern of LDCs in addressing environmental concerns within the context of poverty eradication and sustainable livelihoods.

In addition to the BPoA commitment, Bhutan is party to a large number of international environmental agreements. It is party to all of the three Rio Conventions - the Convention on Biological Diversity, United Nations Framework Convention on Climate Change, and United Nations Convention to Combat Desertification - and nine other international environmental agreements. Additionally, Bhutan is engaged in a unique and model multilateral partnership with Benin, Costa Rica, and the Netherlands under the Sustainable Development Agreement to finance innovative sustainable development and climate change projects and activities.

National Environment Policy Framework

There is an extremely strong national policy framework for promoting environmental sustainability. The Constitution enshrines the protection of the environment as an important aspect of state policy under Article 5, which emphasizes the responsibility of all Bhutanese to preserve the environment to ensure long term sustainable use of natural resources and stipulates a minimum forest cover of 60% to be maintained for posterity. Moreover, the GNH policy framework and the Bhutan 2020 Vision 2020 strongly commits to maintaining harmony between economic growth, social development and conservation of the environment. Additionally, the Royal Government has continually sought to mainstream environment issues into development policies, plans and programmes and integrate strategic environmental assessment in every aspect of development activity.

The Royal Government continues to strengthen the regulatory and legal framework for the environment sector. Currently, the majority of Bhutan's environmental legislation concerns the conservation of forests and the protection of wild life habitat which include the National Forest Policy 1974, the Forest and Nature Conservation Act 1995, the Environmental Assessment Act 2000 and the National Environment Protection Act (NEPA) 2007. The latter in particular serves as an umbrella act for the planning, implementation and enforcement of environmental legislation over a wide range of areas including the green sector and provides the National Environment Commission (NEC) with the required authority to enforce its mandate and authority to review conflicting sectoral legal provisions and considerations impacting the environment.

The various environmental regulations and guidelines in place are the Regulations for the Environmental Clearance of Projects, the Regulation for Strategic Environmental Assessment, Sector Environmental Assessment Guidelines, Environmental Codes of Practice (ECOP) and the Environmental Discharge Standards. As required under the EA Act 2000, all development projects and industrial activity undertaken in the country require EIA clearances. EIA guidelines for forestry, mines, tourism, highways and roads, industrial projects, power transmission and other overhead utilities, storm water drainage systems, urban development and environment discharge standards have been disseminated widely and are in use. Additionally, under the Environmental Information Management System (EIMS), reporting on environmental conditions and trends is being carried out on the basis of the "pressure-state-response" OECD model which includes incorporating a set of indicators to measure environmental pressures. These indicators were developed in extensive consultations with stakeholders starting in 2006 and continue to be reviewed and modified on the basis of changing realities and circumstances.

The Royal Government is strengthening inter sectoral coordination and participation on environmental issues and working towards further decentralizing environmental governance. District Environmental Committees were established in all districts and in 2007, district environment officers were appointed in all districts to monitor environmental impact at local levels while at the same time facilitating environmental clearances required for development and commercial activities. Efforts are also underway to strengthen institutional capacities and resources to adequately implement new legislation and regulations to improve the quality and effectiveness of the EA system. A major challenge remains the weak house capacity of line Ministries and district EUs to conduct EIA reviews and the urgent need to enhance institutional capacity building to adequately address more complex and technical EIA issues. While the NEC works closely with the line ministries and district environment officers to undertake strategic environment assessments, in country training programmes are also being conducted for them to undertake EIA assessments competently.

The public in Bhutan have a good level of access to information on the environment and participate actively in shaping decisions on environment management. The right to environmental information (section 81) and the right to participation in environmental decisions (sections 86-87) are both ensured under the National Environment Protection Act 2007. The National Environment Strategy is to be revised and updated soon to reflect changing socio-economic and political circumstances and concomitant environmental management needs. The Royal Government further publishes regularly the State of the Environment Reports which are presented to the National Assembly. Brief SoE's have been published in 2004 and 2005 and the current state of the environment report "Bhutan Environment Outlook 2008" is the second comprehensive SoE following the first one published in 2001. The BEO 2008 report follows the pressure-state-response model used for the EIMS. The NEC further maintains a website which can be accessed for all environment related information and data.

Environment Sustainability Indicators

The BPoA does not have any specific indicator for measuring progress on account of environment sustainability even as most synthesis reports for LDCs refer to the ratio of protected to total territorial area as a common measure. In lieu of this, this National Status report refers primarily to the protection of ecosystems and further highlights various environment indicators reported for Bhutan from external sources. Additionally, under the GNH index that is being constructed, the important national environment sustainability indicators being considered for tracking under the Ecological Diversity and Resilience Domain pertain to air and water pollution, soil erosion and waste disposal. As such, this report will also outline progress over the decade on these pertinent environmental indicators.

Protected to Total Territorial Area and Ecological Protection

Bhutan has 72.5% forest coverage (including scrub forests) with more than half of its total land area designated as protected areas. With the recent addition of the Centennial Wangchuck Park in December 2008, the ratio of protected to total territorial area is 51.4%. This compares favorably with an average of around 10% of protected areas for all LDCs over the decade and is significantly higher than the global or regional average. This includes about 9% of the land area retained as biological corridors to facilitate the migratory movement of animals and birds within a wide natural range and between the protected areas. This conservation landscape of protected areas and biological corridors spanning the length and breadth has been identified as the Bhutan Biological Conservation Complex or B2C2. [See Box]

On the current status of Bhutan's bio-diversity, the BEO 2008 rates it as "outstanding" and refers to its natural ecosystem as a jewel of conservation in the Eastern Himalayas. However the BEO 2008 also

Maintaining the Bhutan Biological Conservation Complex B2C2: Protecting Endangered Species and Endangered Spaces

Bhutan is home to three of WWF's Global 200 eco-regions - areas where the Earth's biological wealth is richest, where its loss will be most severely felt, and where the hardest battles for conservation are likely to be fought. At the heart of Bhutan's conservation strategy is a sprawling system of national parks, protected areas and biological corridors that today along with the recent creation of the Wangchuck Centennial National Park collectively covers more than half of the country's total land mass. This protected area network is the Bhutan Biological Conservation Complex, the B2C2.

The B2C2 not only describes the physical boundaries of the protected area network but refers to a landscape approach to conservation that seeks to build a more holistic and integrated perspective that emphasizes the conservation is not merely about protecting endangered species but equally about endangered spaces. A strategic aspect of the B2C2 is its incorporation of designated biological corridors or "wildlife highways" that link up all of the protected areas across the country and intended to enhance their utility and effectiveness. These biological corridors will allow large species to migrate and range uninhibitedly instead of being confined to one particular area.

The B2C2 is Bhutan's brave response to provide a comprehensive mechanism to operationalize the Royal Government's vision and strategy for nature and biodiversity conservation. The success that Bhutan enjoys in maintaining the B2C2 complex for posterity will be a lasting legacy not only for future Bhutanese generations but a valuable gift to the world at large.

The B2C2 encompasses five national parks, four wildlife sanctuaries and one strict nature reserve that are legally protected and have varying management practices in place with the majority of parks zoned into core, administrative, buffer and multiple-use zones. At present, five of the largest protected areas have comprehensive management plans. Management plans for the rest are at various stages of preparation and these will in all likelihood become operational over the next few years. The biological corridors however do not have management plans as yet. While the scientific management of Bhutan's protected areas is still at a nascent stage and it may be too early to evaluate fully the effectiveness of these plans, nevertheless certain lessons are apparent from an assessment carried out on management effectiveness in four protected areas using the WWF's RAPPAM methodology. A brief summary of the findings are highlighted in the following.

- PA management policies/plans found to be wholly consistent with stated objectives and a strength of the PA system with park management clearly understanding their role/responsibilities and PA objectives;
- Community support for the PA was average with initial resentment from park communities. The presence of local residents within protected areas made conservation tasks more complex and challenging, particularly in managing growing human-wildlife conflict and in integrating conservation with sustainable livelihoods. However, no severe community problems were faced though a need was felt to strengthen community interaction and engagement.
- Law enforcement problems of illegal timber harvesting, grazing, poaching, and collection of non-timber forest products (NTFP) with the main cause of inadequate enforcement being insufficient number of field-level staff. For some parks cross border poaching remained a significant law enforcement issue.
- Design layout and configuration of PA system recognized as an unqualified strengths with areas properly designed to optimize biodiversity conservation. However, current zoning system cited as a major source of community tension, particularly over grazing rights.
- Inadequate staffing deemed a critical weaknesses that was widespread. Park management staff found to have adequate skills and training though there were knowledge/skill gaps in certain areas including conflict resolution and community management. Staff employment conditions and remuneration found to be adequate.
- Sufficient availability of funds to manage critical activities though there was a need for better equipment and infrastructure. Concerns over the long term sustainability of PA financing as a significant portion activities are donor funded and subject to funding cycles.
- Major threats and pressures faced: poaching, grazing, road construction, and collection of NTFP. Minor threats: timber felling, fishing, slash and burn and unsustainable cultivation, fuel-wood collection, and forest fires. In terms of vulnerability, the four PAs were found to be moderately vulnerable with the highest levels of vulnerability relating to the monitoring of illegal activities and the recruitment and retention of staff.

highlights critical biodiversity challenges and pressures such as illicit forest harvesting and wildlife poaching; growing human wildlife conflicts; overgrazing; forest fires and the impact of rapid development and urbanization. As a response to address some of these challenges, the Royal Government intends to increase the number of species accorded full protection, operationalize a greater number of protected areas and enhance their coverage and implement integrated human-wildlife conflict management strategies. To enrich agro biodiversity, the number of crop and livestock varieties covered by agro biodiversity and RNR research programs are being enhanced. The National Biodiversity Center has in place the Agro Biodiversity Conservation Programme for ex-situ and in-situ conservation of crop and livestock diversity and established a National Gene Bank. As of 2006, the Gene Bank stored a total of 408 accessions of 215 different cultivars belonging to seventeen different crops.

Bhutan's ecological footprint was rated at 1.0 as compared to 1.6 for Asia and 2.7 for the world according to the WWF's Living Planet Index 2008 published in its Living Planet Report 2008. In terms of the ecological reserve or deficit, the rating for Bhutan was 0.8 as compared to -0.8 in the Asia/Pacific region and was rated the best in South Asia. Bhutan's bio-capacity rating was also assessed at 1.8 as compared to 0.8 for the Asia Pacific region. Bhutan does very well on the basis of the WWF's set of indices that were developed to help monitor and measure the state of the world's biodiversity.

Air and Water Pollution

The BEO 2008 reports air quality in Bhutan as being good and much better than other countries in the region and the world measured in terms of respirable particulate matter or PM₁₀. This has been measured at Thimphu to be in the concentration of 20 ug/m³, which is significantly lower than the US and EU stipulated standards of 50 and 40 ug/m³ respectively. Air quality in other parts of Bhutan is projected to be even better than in the capital due to less urban congestion, industrial activity and vehicular emissions. The Royal Government is also undertaking various initiatives to reduce air pollution including promoting the use of electricity and cleaner sources of energy in place of solid fuels and public transport facilities. Industrial and vehicle emission standards and mandatory emission testing for vehicles have been introduced and industries supported under the Clean Technology and Environmental Management Fund (CTEM) in upgrading their equipment and switching over to technology that meets industrial emission standards.

Bhutan under the Vienna Convention and the Montreal Protocol in 2004 was bound to decrease its annual import of ozone depleting substances (ODS) by half. It has exceeded its target to reduce ODS import by 72 percent a year, from 170 kg to 63 kg which was achieved after a complete ban was imposed from January 2005 on ODS-based equipment and the promulgation of ODS licensing system in 2005. The nationwide survey conducted by the Ozone Unit of the NEC found that ODS in use in Bhutan was about 2,500 kg of which about 450 kg were used by nine major industries. Worldwide, Bhutan is in the low volume consumption category, meaning it consumes less than 30 tonnes of ODS a year.

According to the BEO 2008, the quality of freshwater resources in Bhutan is in a very good state based on the periodic baseline water quality surveys conducted along the major rivers and its tributaries. The water with just a few exceptions is determined to be of "pristine quality" and characterized as highly oxygenated, slightly alkaline with low conductivity and no recorded salinities and low river sediment content. The monitoring of the country's water bodies is undertaken by several agencies including by the NEC. The NEC has also set standards to regulate industrial discharges into water courses and bodies and the MoEA's Environment Unit is now using these standards to monitor and regulate industrial discharges into water courses. The previously mentioned CTEM Fund also helps support industries that existed before the enactment of the EA Act to upgrade their equipment and switch over to cleaner technology that meets these industrial discharge standards.

The Royal Government has developed a Bhutan Water Policy and Bhutan Water Vision that will provide the strategic policy framework to address a wide range of water use issues. A Water Act is also in the

process of being drafted and advocates the principles of integrated water resources management (IWRM) as the way forward for the holistic management of water resources in Bhutan. At present, water management regulations currently derive from traditional community rules that are embedded in the Bhutanese code of law. Various aspects of these rules, including ownership of inherited water rights maintenance of canals, and distribution of water are based on the "laws concerning the soil." Water sharing rights still remain highly contentious issues in rural communities and the effective and fair implementation will comprise a critical challenge in future.

Solid Waste Management

Solid waste generation and disposal has emerged as a major environmental issue, particularly in the urban areas of Thimphu and Phuentsholing. The current per capita solid waste in these two cities was estimated at 0.46 Kg per day in Thimphu and 1.2 Kg per day in Phuentsholing and had increased at the rate of 33% between 2003 and 2005. More recently, the first national survey on waste disposal has estimated that urban household waste per capita was at about a kilogram a day. As a result of this increased generation of household waste, the capacity of existing landfill sites has been exceeded well before their anticipated lifespan. The absence of a waste segregation system and the lack of proper landfill management practices including improper on land storage of solid waste remain a serious challenge.

To reduce waste generation and promote management of waste in an environmentally sound manner, the Solid Waste Management Rules and Regulations was implemented in 2007 and the Waste Prevention and Management Act enacted by the National Assembly in 2008. The Ministry of Works and Human Settlements has further drafted a comprehensive waste prevention and management strategy and action plan to address waste management on a nationwide basis. The Royal Government is also considering purchasing garbage disposal incinerators that could dispose 40 tons of waste at a time to ease the pressure on the landfill sites. Additionally, the Royal Society for the Protection of Nature (RSPB) is undertaking a series of research, action and coordination on waste issues within the Clean Bhutan Program, a collaborative attempt at managing municipal wastes effectively. The project expects to establish institutional and coordination mechanisms to identify waste problems and recommend viable solutions to waste issues at individual, household, community and national levels. This will help raise the level of awareness on solid waste impacts on the environment with the intent to secure positive behavioral change.

An important principle upheld within the Waste Prevention and Management Act enacted by the National Assembly in 2008 is that of the principle of polluter pays. The Act incorporates various sanctions and penalties to enforce its provisions with those polluting the environment or causing ecological harm held responsible for the costs of containment, avoidance, abatement, medical compensation, mitigation, remediation and restoration.

Vulnerability to Natural Disasters

Natural disasters clearly have a major impact on the living conditions, economic performance and development assets for all countries and exert an enormous toll on development progress. Apparently, natural disasters also tend to impact the poor more disproportionately in terms of both lives and livelihoods lost and it is widely known that repeated exposure to disasters can quickly lead to chronic poverty. As such, vulnerability to natural disasters can significantly impede and affect progress towards the realization of the MDG and various BPOA goals and in particular those pertaining to poverty alleviation.

Bhutan is prone and vulnerable to a range of natural disasters such as earthquakes, floods, forest fires and landslides that have taken their toll in terms of lives lost and damage to infrastructure and property. Located in one of the most seismically active zones of the world, Bhutan has experienced several earthquakes measuring over 7.0 on the Richter scale including the 8.7 magnitude quake in 1857, 8.3 in 1934 and 7.9 in 1947. Most recently, the 6.1 magnitude earthquake of 21 September,

2009, took a huge toll claiming the lives of 12 people, injuring 47 and rendering 7,290 people homeless. In terms of the earthquake's physical impact, 4,614 homes, 91 schools, 60 government offices, 25 hospitals and health centres and 281 monasteries were damaged with a total estimated cost of Nu. 2.5 billion (US\$ 23.3 million). Earlier in the year, Cyclone *Aila* had brought unprecedented rain and flooding and wrecked havoc on the transport infrastructure.

Apart from earthquakes, Bhutan is also highly susceptible to natural disasters arising from glacial lake outburst floods (GLOF). This represents a particular degree of vulnerability as Bhutan's entire northern areas abound with glaciers and glacial lakes - 677 glaciers and 2,674 glacial lakes - of which 24 pose potentially high and immediate risks. Moreover, due to climate change these glaciers are retreating at alarming and record rate as a result of which Bhutan has become even more vulnerable to flooding from the outburst of glacial lakes. An immediate concern is the impending danger of a GLOF from the Thorthormi lake, the impact of which could be more devastating to human life and infrastructure than any of the previous GLOFs.

Landslides and mudslides triggered by intense rainfall during the monsoons are another recurring natural hazard that cause extensive and catastrophic damage and incur huge rebuilding and repair costs to the national exchequer. Bhutan is situated on the southern edge of the Himalayan chain extending from Afghanistan to Bangladesh in South Asia that has been identified globally as the area most prone to fatality-inducing landslides. During the 2004 monsoons alone, flash floods and landslides washed away 22 bridges and destroyed hundreds of kilometers of farm and feeder roads besides causing massive damage to physical and industrial infrastructure across the country. Hazards from natural dam formations in rivers further threaten Bhutan's hydropower plants, farmlands and human settlements. Additionally, with national forest cover levels at over 72%, Bhutan also suffers frequently from immense forest fires every year that burn down thousands of hectares of prime forests.

Despite the chronic vulnerability of Bhutan to natural calamities, natural disaster management has begun in earnest only in recent times. The Royal Government adopted a Natural Disaster Risk Management Framework in 2006 and a Natural Disaster Management bill is to be introduced in the National Assembly. To coordinate activities during natural disasters, a National Committee for Disaster Management has been formed and a new Department of Natural Disaster created recently within the Ministry of Home and Cultural Affairs. A Natural Disaster Management Planning Guideline has also been published and widely circulated and a National Strategy for Disaster Management formulated. A specific guideline manual has been introduced for schools and most schools in the country have their own specific disaster management plans and conduct regular safety drills. In conjunction with the nodal national agency, various sectoral agencies are also developing their sector specific disaster management approaches. Furthermore, plans are also underway to create relevant designated authorities with wide stakeholder representation at all district and sub-district levels to cope with local

Box 7.2

Addressing Climate Change Challenges in Bhutan through National Adaptation Funding (LDC Fund)

The most significant climate change impact in Bhutan remains the formation of supra-glacial lakes due to the accelerated retreat of glaciers with rising temperatures. The risk of potential disasters through GLOFs pose a serious and imminent threat to lives, livelihood and development with water levels in several glacier lakes approaching critical geostatic thresholds.

Bhutan's first NAPA project funded through the LDC Fund will integrate climate risk projections into existing DRM practices and implement necessary capacity building measures. A core activity under the project is the artificial lowering of the Thorthormi lake which began in June 2009 and is slated for completion by 2012. Complimentary to this risk reduction effort, the project will ensure early warning mechanisms are enhanced for the Punakha Wangdue valley that is highly vulnerable and weakly equipped to handle the full extent of GLOF risks. The project will notably enhance capacity in the Royal Government and in local communities for disaster risk management and its prevention. The project will also have wider scale benefits, as the lessons learned from this pilot could be replicated in other GLOF areas, both within and outside Bhutan

natural disaster incidents. Public awareness and safety advocacy efforts are also being continually carried out.

COMMITMENT 7: MOBILIZING FINANCIAL RESOURCES

The effective actualization of the sustainable development goals and targets of the BPoA, including poverty alleviation, depends immensely on the mobilization of both domestic and external resources. Resource constraints have always posed a major challenge for LDCs in overcoming their poverty and underdevelopment, thus the BPoA's seventh and last commitment that strongly calls on developed countries to meet ODA targets and for LDCs to enhance domestic resources and promote greater FDI and other external inflows. This commitment assumes particular significance within the context of deteriorating conditions associated with the global financial crisis and recession. As with most LDCs, Bhutan has relied heavily on ODA from development partners to finance its capital expenditures for development, investments that have reaped huge dividends in terms of the marked socio-economic transformation of the country. The continued inflow of ODA thus remains highly critical for Bhutan.

Domestic Resource Mobilization

National revenue has been buoyant for the last decade and highly responsive to economic growth. On average domestic revenues have grown at around 16% increasing from Nu.5,100 million in 2001 to 14,171 million in 2008. The sustained growth in national revenues is inextricably linked to the rapid rise in the income from energy exports to India from the hydropower projects. In terms of the ratio of revenue to GDP, revenues comprised about 35% of GDP in 2008 and between 2001 and 2008 averaged around a quarter of GDP.

Starting initially from a very small tax base, tax revenues now comprise about 48% of total revenues. Traditionally, Bhutan in the past relied heavily on non-tax revenues but this has changed over the last decade. The tax to GDP ratio has risen from 4.8% of GDP in 1990 to 11% in 2000 and to 15.6% of GDP in 2008. The major sources of

<i>Table 8.1</i>	2001-2005	2006	2007	2008	2009
Revenue/GDP Ratio	21.9%	25%	23.9%	34.9%	32.8%
Revenue in Million Nu	6,902 (2005)	10,082	12,346	14,170	14,194
Domestic Saving/ GDP Ratio	40.8%	67.8	65.4	67.2	-

current tax revenues derive from corporate income tax, excise duty, sales tax and royalties from the forestry, mines and minerals and tourism sectors. The introduction of a personal income tax in January 2002 is expected to help broaden the tax base though it only contributes to around 2% of the total revenue base at present. The personal income tax remains quite low mainly due to the low level of monetization of the economy and is expected to grow with the increased monetization of the national economy. Non tax revenues derive mainly from the transfer of profits and dividends from government owned enterprises. Sectorally, hydroelectricity has consistently been the major revenue generator for the country over the last decade and in 2006 and 2007, contributed to about 43% of the total national revenues. There is an unambiguous and strong correlation between the growth of revenues from hydropower and the increase in the total domestic revenue performance and this trend is likely to continue well into the future with the further expansion of hydropower capacity in Bhutan. The Trade and Services sectors also contributed about 20% and 14% of the total national revenues respectively.

Domestic Savings/GDP Ratios has been high and on average constituted about 45% of GDP over the last decade. Gross domestic savings grew rapidly from 4.6% of GDP in the eighties to 20.2% of GDP in the nineties and this has principally been on account of private savings generated largely by the corporate sector rather than by households. Private savings today has largely eclipsed foreign capital as a major source of investment finance in Bhutan. On the basis of these high levels of domestic savings and the

sustained expansion of national revenues, Bhutan has been successful in mobilizing domestic resources for financing its development expenditures and investments.

Development Assistance & Foreign Direct Investment

Official Development Assistance (ODA) plays a central role in Bhutan’s economy and development, constituting a critical role in financing capital expenditures. Between 2001 and 2008, external grants amounted to about 17% of GDP and on average Bhutan received about US\$ 114 million a year. While this represents an increase in absolute terms, ODA has declined relatively in its share of financing development expenditures and in terms of its proportion to GDP. In the first half of 1980s, ODA accounted for over 50% of GDP and also helped pay for 70% of Bhutan’s budgetary expenditure but this high dependence has come down significantly reflecting a growing trend of self reliance even as ODA inflows still constitute a critical input particularly to underpin its massive capital expenditures over the Tenth Plan period.

A perceptible trend has been the increasing share of loan financing in the ODA inflows with loan components of ODA resources making up for an increased share of capital expenditure finances. From a mere 1% of the total budgetary finance in the mid nineties, loans now comprise about 10%, with this trend likely to continue with the donor community increasingly substituting loans for grants.

Bhutan’s major development assistance partner has been India. Other important bilateral and multilateral donors include ADB, Austria, Denmark, EU, Japan, Switzerland, the Netherlands, the UN Systems and the World Bank. Apart from the hydropower sector, most of the ODA was allocated to the social, renewable natural resources, infrastructure and communication sectors.

<i>Table 8.2</i>	2001-2005	2006	2007	2008
Grant Inflows in Million Nu.	4,169 (average)	5,054.3	5,931.9	8,435*
Grant Inflows As % of GDP	16.4% (average)	13.8%	16%	21.5%
FDI in Million Nu.	262.8 (average)	3,238	1,198	954.9*

RMA Annual Report 2007/09 * Estimate

FDI inflows into Bhutan except in the year 2006, has largely been negligible though they have grown over the last five years. FDI inflows grew from Nu. 101 million in 2001 to 3,238 million in 2006 and was estimated at Nu.1,198 million in 2007. With the implementation of the new Economic Development and the revamped FDI 2009 policy and with the probable accession to WTO by 2010, it is expected that FDI resources will be encouraged particularly in the context of the several public private partnerships being encouraged in numerous economic sectors, including the hydropower sector.

External Debt

As of June 2009, Bhutan's total outstanding external debt stood at an equivalent of USD 702 million. The total debt stock has been climbing primarily on account of the significant investments made for infrastructure development and social service works, including the hydropower projects that approximately account for 55% of the

	2001	2005	2006	2007	2008
External Debt (in Million USD)	291.8	689.1	724.7	779.9	702
External Debt to GDP	58.4%	84.3%	77.3%	61.1%	57.5%
Convertible Currency Debt (InMillion USD) & as % of total debt	129.9 45%	277.8 40.3%	309 42.6%	350.9 45%	336.9
Indian Rupee Debt (in Million IRs) and as % of total debt	7,803 55%	18,400 59.7%	18,370 57.4%	17,320 55%	365.4
Debt Servicing Ratio (as% of exports)	5%	7.6%	3.6%	17.9%	29.9%

Source/s:RMA Annual Reports, BPFSS

total debt. The national public debt burden has also risen on account of the trend for development partners to substitute concessionary loans for grants as Bhutan's development resource needs have grown significantly. The Government of India remains Bhutan's largest lender followed by the ADB and the World Bank.

The stock of external debt has two major components - convertible currency or government concessionary borrowings and Indian Rupee debt. Of the total, US\$ 336.9 million were outstanding on convertible currency loans and the remaining equivalent of USD 365.4 million (INR 17.5 billion) are outstanding rupee loans.

Bhutan is categorized as a debt distressed country due to the very high external debt to GDP ratios. Of late though the debt to GDP ratios have been declining and in 2008/09 came down to 57.5% from a high of 84.3% in 2005/06. Even as debt servicing ratios have traditionally been maintained at below 8% until 2006, it has risen steeply over the last two years. In 2007 and 2008 debt serving ratios were at 17.9% and 29.9% respectively due to the commencement of the Tala hydropower project debt.

Additionally, external debt is projected to grow at an average of 17.6% over the next five years with debt servicing ratios to remain on average below 11%. This continued expansion of the external debt is primarily on account of the startup construction of hydropower projects. Convertible currency loans are also projected to grow though at a much slower rate.

The Royal Government has developed a forward looking debt strategy with a long term macroeconomic sustainability focus. The Debt Management Division of the Department of Public Accounts continues to fine-tune the debt policy to manage current debt and guide future borrowing decisions in accordance with the Public Finance Act 2007. A concise loan procedures and regulations manual exists that among other things details standard operating procedures that are effectively in use. A system for loan and grant recording system has also been established to generate timely information and analytical reports to the Royal Government and help formulate critical decisions in macroeconomic and debt management. However, debt management capacity in Bhutan is still constrained by the shortage of adequately trained personnel.

Resource Mobilization Challenges

The full achievement of the international development goals such as the MDGs and the BPoA in Bhutan will hinge on the continued inflow of development assistance including concessional lending as ODA still represents overwhelmingly the largest source of external financing. The Tenth Plan Budget currently has a large resource gap that has been estimated at about Nu. 24.65 billion or 6% of GDP on an annualized basis. The shortfall in resources for financing development in Bhutan can lead to an increasing trend of rising fiscal deficits that are already likely to be upwards of 6.7% of GDP. This would further exacerbate Bhutan's high external debt situation with rapidly growing debt service ratios.

While an estimation of the total cost of meeting the BPoA goals have not been undertaken, Bhutan through the MDG Needs Assessment and Costing exercise conducted in 2007 has estimated the costs of meeting the MDGs that provide a hint of the massive resource mobilization task involved. The total cost of meeting the MDGs in Bhutan was estimated at US\$ 2.5 billion between 2006-2015, with more than a third of the total cost required in the final three years of the MDG period. This represents a massive amount of resources needed to be mobilized as domestic revenues will be nowhere near sufficient to meet both the MDG and various non-MDG development goals.

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