Preface

This issue of the publications is the 23rd edition in the series. It is a comprehensive and systematic compendium of basic statistical information on Bhutan, covering wide-ranging statistics/indicators on various socio-economic aspects of the country.

For the benefit of the users, efforts have been made to provide explanatory notes giving the descriptions of each chapter and methodology of data collection. We have also made an attempt to assess the quality of data source, and wherever necessary the tables have been footnoted to highlight the shortcomings.

Every endeavor has been made to ensure that this publication meets acceptable statistical standards. Data maintenance, its validation, compilation and updating has been done in close collaboration with all the data disseminating/providing agencies, until the compilation was finalized for publication.

However, it was not always possible for us to undertake the detailed assessment of all the data available, albeit the need to place strong reliance on the existing data has been felt very much. Therefore, some shortcomings are inevitable as a result.
Nonetheless, this yearbook will serve as the principal source of information for planners, policy makers, research workers and academicians.

We would solicit any comments and suggestions from the users of this yearbook, in order to improve the forthcoming issues.

December 2005

Director
National Statistics Bureau
Royal Government of Bhutan

NOTES FOR USERS

1. Unless otherwise indicated, the present issue of the Yearbook contains those statistics available as of December 2004
2. At the beginning of each chapter, general description of the statistics contained therein is given.
3. For every table, there is footnote indicating information specific to each figure in the table.
4. Unless otherwise indicated, "year" refers to the calendar year, and "fiscal year" refers to the 12 months beginning July 1 through June 30 of the next year.
5. The following symbols are used in the tables:

n.a	not available
..	rounded to zero
*****	sampling error too high for accurate estimation or estimates less than one percent.
( )	negative numbers
CY	calendar year (period from January to December)
FY	fiscal year (period from April to March until 1985/86 and from July to June since then, unless otherwise indicated.

6. In some cases, minor discrepancies may occur between sums of component items and totals because of rounding.
7. Dzongkhags given in some tables differ from those given in Annex I. This is because of changes, following the creation of new Dzongkhags.
8. Names of the Ministries/Agencies both in tables and footnotes may differ. This is because of changes, following the creation of new Ministries/agencies.
9. Detail figures in the tables may not add up to the totals because of rounding.
10. Singular term is most often used to represent plural terms, example: agency for agencies etc...
11. When contents of this book are to be quoted or copied in other publication/report, please give a due credit by referring the title of this yearbook
    (Example) **Source: Bhutan Statistical Yearbook 2005, National Statistics Bureau**
12. For additional information on data or for any other queries, please refer to the original source or National Statistics Bureau.

SOME UNITS OF MEASUREMENT

Numbering and Scientific notations (US & scientific Community)

Hundred	$= 10^2$
Thousand	$= 10^3$
Million	$= 10^6$
Billion	$= 10^9$
Trillion	$= 10^{12}$

A. Length Measurement

1. Metric equivalents

10 mm	= 1 cm
10 cm	= 1 dm
10 dm	= 1 m
10 m	= 1 dkm
10 dkm	= 1 hm
10 hm	= 1 km

Abbrevations	
mm	= millimeter
cm	= centimeter
m	= meter
dm	= decimeter
hm	= hectometer

2. British units

12 inches	= 1 foot
3 feet	= 1 yard
5.5 yards	= 1 rod, pole
4 poles	= 1 chain
10 chains	= 1 furlong
8 furlongs	= 1 mile

3. Conversion from British to metric units (lengths)

1 inch	= 2.539998 cm	1 m=39.3370113 inches
1 foot	= 0.3047997 m	1 m=3.280843 feet
1 yard	= 0.9143992 m	1 m=1.093614 yard
1 mile	= 1.609343 km	1 k =0.6213717 miles
1 nautical mile	= 1.853182 km	

B. Area measurements

1. British units

144 square inches	= 1 square foot
9 square feet	= 1 square yard
30 1/4 yards	= 1 square rod, pole
40 square rod	= 1 rood
4 roods	= 1 acre
640 acres	= 1 square miles

2. Metric units

100 square mm	= 1 square cm
100 square cm	= 1 square dm
100 square dm	= 1 square m
100 square m	= 1 are
100 square areas	= 1 hectare
100 hectares	= 1 square km

3. Conversion from British to Metric units (Area)

1 square yard	= 0.836 square m
1 square feet	= 0.093 square m
1 square inch	= 6.452 square cm
1 square m	= 1.196 square yard
1 square m	= 10.764
1 square cm	= 0.155 square inch
1 square mile	= 2.590 square km
1 square km	= 0.386 square mile

C. Weight measurements

1. British units

16 dram	= 1 ounce
16 ounces	= 1 pound
28 pounds	= 1 cwt
20 cwt	= 1 ton
14 pounds	= 1 stone

2. Metric units

10 mg	= 1 cg
10 cg	= 1 dg
10 dg	= 1 g
10 g	= 1 dkg
10 dkg	= 1 hg
10hg	=1 kg
100 kg	= 1 quintal
200 mg	= 1 carat

3. Conversion from British to metric units

1 grain	= 0.0648 g
1 ounce	= 31.103 g
1 g	= 15.432 grains
1 pound	= 0.373 kg
1 tone	= 1.016 metric tones

D. Conversion of air temperatures

1. Degree Celsius to degree Fahrenheit.
   (9 x T)/5 + 32, where T is temperature in degree Celsius.
2. Fahrenheit to degree Celsius.
   5 x (T - 32)/9, where T is temperature in Fahrenheit.

KEY FACTS ABOUT BHUTAN

Land area	38,394 sq. km.
Forest cover	72.5%
Population, 2004 (estimate)	752,700
Average Household size, 2000	5.5
National Language	Dzongkha
National Currency	Ngultrum (Nu.)
Hospitals, 2004	29
Doctors, 2004	144
Civil servants, June 2005	16,554
Schools, Institutes & NFE centers, 2005	1,104
Teachers (including in institutes & NFE), 2005	5,772
Students (including in institutes & NFE), 2005	162,545
Labour Force Participation rate, 2004	54.4%
Unemployment rate, 2004	2.5%
Telephone connections, 2004	30,285
Postal infrastructure, 2004	110
Total road length, 2004	4,152.9 km
Registered vehicles, 2004	26,760
Electricity generation, 2004	2,492.3 Mn KWh
Electricity exports, 2004	2,272.9 Mn KWh
Tourist arrivals, 2004	9,249
Revenue earned from tourism, 2004	13 Mn US $
Total establishments, June 2004	15,554
Balance of trade, 2003	-7,980.3 Mn. Nu.
Exchange rate, Nu. Per US $, 2003/04	45.4
Gross international money reserves, 2003/04	383.1 Mn US $
Total Ninth Plan budgetary outlay (2002-07)	70,000 Mn Nu.
Percapita GDP, 2004	834 US $
Average inflation rate, 2004	4.43 %
Purchasing Power of Nu., 2004 (base year =2003)	0.94 Nu.

BHUTAN

I. Location and Extent

Bhutan is one of the Asia's smallest nations, landlocked between the extensive borders of the two great populous nations of China and India. Only 38,394 square kilometers in extent, the kingdom's longest east-west dimension, stretches around 300 kilometers and measures 170 kilometers at its maximum north-south dimension. Bhutan is situated in the eastern Himalayas and is mostly mountainous and heavily forested. It has 470 kilometers long bordered by Tibet (China's Xizang Autonomous Region) to the north and northwest and 605 kilometers with Indian state of Sikkim to the west, West Bengal to the southwest, Assam to the south and southeast, and Arunachal Pradesh to the east. Indian state of Sikkim, which measures eighty-eight-kilometer-wide territory, separates Bhutan from Nepal, while West Bengal separates Bhutan from Bangladesh by only sixty kilometers. The border with Tibet is traditional following the watershed of the Chumbi Valley in the northwest and the crest of the Himalayas in the north while, the southern border with India was established by treaty with the British in the nineteenth century and basically follows the line made by the Himalayan foothills with the plains.

72.5 percent of the Kingdom is covered with forests; 10 percent with year-round snow and glaciers; nearly 6 percent is permanently cultivated or used for human habitation; another 3 percent was used for shifting cultivation (tsheri), a practice banned by the government; and 5 percent as meadows and pastures, while rest of the land is either barren, rocky or scrubland.

II. The Geologic Setting*

The Himalayas of Bhutan consist of, from south to north, the Indian shield, the lower Himalayas, the Higher Himalayan Crystallines, and the Tibetan series. The Indian shield and its cover of sediments are separated from the lower Himalayas by the Main Boundary Thrust (MBT), which is the active thrust fault along which the rocks are being pushed up and over the Indian shield by the collision of India with Asia. The Main Central Thrust (MCT) separates the lower Himalayas from the Higher Himalayan Crystallines (HHC).

This Thrust, now "dead" is the surface along which substantial displacement took place about 20 Ma ago, leading to initial thickening of the continental crust. It can be thought of as an ancient equivalent of the MBT. Above the MCT is the Kakhtang thrust, discovered by Lincoln Hollister and the 1996 expedition to Bhutan and named for the army base through which it passes; it appears to be later than the MCT and brings to the surface deep portions of the crust, which may represent deeper section of the HHC. The South Tibetan Detachment System (STD) separates the HHC from the Tibetan series. The STD is a series of normal faults, all giving a sense of movement of the Tibetan series down to the north relative to the HHC.

The HHC appears to have been expelled out to the south in two pulses: one with the HHC carried south over the lesser Himalayas along the MCT, and the second producing a doubling of the HHC by further thrusting south along the Kakhtang thrust.

Most of the recent uplift of the Himalayas has occurred by thrusting along the MBT; movements associated with this fault causes the earthquakes occasionally felt in the Trashigang district. The uplift across the MBT set the stage for the erosion, which exhumed the deep portions of the HHC and its bounding structures, the MCT and the STD.

The MCT is slightly warped plane dipping northwards and separating the cover rocks of the underlying Indian shield from the highly deformed and thermally altered (metamorphosed) overlying wedge of the HHC. The plane intersects the rough topographic surface of the Himalayas, forming a line of intersection that can be followed across the ground surface. This line of intersection crosses the road several times near Barshong, crosses at the pass between Kanglung and Barshong, goes below the road from Kanglung to Trashigang and crosses the Gamrichu about 2km below Rolong. From there it goes along the east side of the Kurichu valley until it crosses the river, about 10 km below Lhuntse; from there it crosses back along the west side to Trashigang and crosses the Gamrichu about 2km below Rolong. From there it goes along the east side of the Kurichu valley until it crosses the river, about 10 km below Lhuntse; from there it crosses back along the west side of the Kurichu valley and recrosses the road between Monggar and Sengor. It continues northwesterly through Bhutan, Sikkim, Nepal, Ladakh, Kashmir and into Pakistan. To the east it continues through the Northern Frontier of India.

* By Lincoln Hollister and the 1996 expedition to Bhutan

III. Relief and Surface features

Bhutan is one of the most rugged mountain terrains in the world; it has elevations ranging from 160 meters to more than 7,000 meters above sea level Bhutan's highest peak, at 7,554 meters above sea level, is north-central Kulha Gangri, close to the border with China; the second highest peak, Jhomo Lhari, overlooking the Chumbi Valley in the west, is 7,314 meters above sea level; nineteen other peaks exceed 7,000 meters.

In the north, the snowcapped Great Himalayan Range reaches heights of over 7,500 meters above sea level and extends along the Bhutan-China border. The northern region consists of an arc of glaciated mountain peaks with an arctic climate at the highest elevations. Watered by snow-fed rivers, alpine valleys in this region provide pasturage for livestock tended by a sparse population practicing transhumance.

The Inner Himalayas are southward spurs of the Great Himayalan Range. The Black Mountains, in central Bhutan, form a watershed between two major river systems, the Mo Chhu and the Drangme Chhu. Peaks in the Black Mountains range between 1,500 meters and 2,700 meters above sea level, and the fast-flowing rivers have carved out spectacular gorges in the lower mountain areas. The woodlands of the central region provide most of Bhutan's valuable forest production. Eastern Bhutan is divided by yet another southward spur. Western Bhutan has fertile, cultivated valleys and terraced river basins.

In the south, the Southern Hills, or Siwalik Hills, the foothills of the Himalayas, are covered with dense deciduous forest, alluvial lowland river valleys, and mountains that reach to around 1,500 meters above sea level. The foothills descend into the subtropical Plain.

IV. Climate and Vegetation

The country can be divided into three distinct climatic zones corresponding to the three main geographical divisions. Bhutan's climate is as varied as its altitudes and, like most of Asia; it is affected by the monsoons. Western Bhutan is particularly affected by monsoons that bring between 60 and 90 percent of the region's rainfall. The climate is humid and subtropical in the southern plains and foothills, temperate in the inner Himalayan valleys of the southern and central regions, and cold in the north, with year-round snow on the main Himalayan summits.

Temperatures vary according to elevation. Temperatures in Thimphu, located at 2,200 meters above sea level in west-central Bhutan, range from approximately 15° C to 26° C during the monsoon season of June through September but drop to between about -4° C and 16° C in January. Most of the central portion of the country experiences a cool, temperate climate year round. In the south, a hot, humid climate helps maintain a fairly even temperature range of between 15° C and 30° C year-round, although temperatures sometimes reach beyond 35° C in the valleys during the summer.

Annual precipitation ranges widely in various parts of the country. In the severe climate of the north, there is only about forty millimeters of annual precipitation--primarily snow. In the temperate central regions, a yearly average of around 1,000 millimeters is more common, and 7,800 millimeters per year has been registered at some locations in the humid, subtropical south, ensuring the thick tropical forest. Thimphu experiences dry winter months (December through February) and almost no precipitation until March, when rainfall averages 20 millimeters a month and increases steadily thereafter to a high of 220 millimeters in August for a total annual rainfall of nearly 650 millimeters.

Bhutan's generally dry spring starts in early March and lasts until mid-April. Summer weather commences in mid-April with occasional showers and continues through the early monsoon rains of late June. The summer monsoon lasts from late June through late September with heavy rains from the southwest. The monsoon weather, blocked from its northward progress by the Himalayas, brings heavy rains, high humidity, flash floods and landslides, and numerous misty, overcast days. Autumn, from late September or early October to late November, follows the rainy season. It is characterized by bright, sunny days and some early snowfalls at higher elevations. From late November until March, winter sets in, with frost throughout much of the country and snowfall common above elevations of 3,000 meters. The winter northeast monsoon brings gale-force winds down through high mountain passes.

There is a pronounced difference in the vegetation cover in three different zones of the country and it is mostly due to the prevalence of varied climatic conditions across the kingdom. The southern foothills are mostly covered by the dense and thick deciduous trees while the inner regions are dotted by an infinite variety of plants, flowers and trees including birch, pine, chestnut, oak, apples, peaches and plums are also grown in the fertile

valleys. The northern part with the tundra type of climate allows the growth of coniferous trees and other alpines growths like magnolia, rhododendrons, birch, fir, spruce etc... The vegetation is overall expression of various ecological factors, and it is one of the basic analytical tools for developing and understanding the mountain environment.

V. Drainage Pattern

Fed by fresh snow each winter and slow melting in the summer, the glaciers bring millions of liters of fresh water to Bhutan and downriver areas each year. Bhutan has four major river systems: the Drangme Chhu; the Puna Tsang Chhu; the Wang Chhu; and the Amo Chhu. Each flows swiftly out of the Himalayas, southerly through the Duars to join the Brahmaputra River in India. The largest river system, the Drangme Chhu, flows southwesterly from India's state of Arunachal Pradesh and has three major tributaries: the Drangme Chhu, Mangde Chhu, and Chamkhar Chhu. These rivers form the Drangme Chhu basin. In the Duars, where eight tributaries join, the Drangme Chhu is called the Manas Chhu. The 320-kilometer-long Puna Tsang Chhu rises in northwestern Bhutan as the Mo Chhu and Pho Chhu, which are fed by the snows and glaciers from the Great Himalayan Range. They flow southerly to Punakha, where they join to form the Puna Tsang Chhu, which flows southerly into India's state of West Bengal. The Wang Chhu, which is 370 kilometers flows southeasterly through west-central Bhutan, drains the Ha, Paro, and Thimphu valleys, and continues through the foothills, before it finally drains into West Bengal. The smallest river system, the Torsa Chhu, known as the Amo Chhu in its northern reaches, flows swiftly through western Bhutan before broadening near Phuntsholing and then flowing into India. Glaciers in northern Bhutan, which cover about 10 percent of the total surface area, are an important renewable source of water for Bhutan's rivers.

VI. Government

On 17 December 1907, the civil and monastic representatives unanimously crowned Ugyen Wangchuck as the first hereditary monarch of Bhutan. It was as a result of the influence of the strength and the farsightedness of Ugyen Wangchuck that for the first time Bhutan was united under a central authority, which provided the country with stability and opportunity for development. In 1926 his son Jigme Wangchuck, who ruled until his death in 1952, succeeded Ugyen Wangchuck. The third Druk Gyalpo, Jigme Dorji Wangchuck began a campaign of modernization and expansion of Bhutan's government and society based on the accomplishments of his two predecessors in uniting the country under a strong central authority. Hence, the National Assembly consisting of representatives of the people, the Monastic order and civil administration was reestablished in 1953. The present Druk Gyalpo, His Majesty King Jigme Singye Wangchuck acceded to the throne in 1972. His Majesty the king is the head of state. The head of government is nominated from among the Cabinet Ministers. There has been steady decentralization of decision-making and institute building since His Majesty the King was enthroned. The most momentous change in the structure of the government came in 1998 after the devolution of the executive power by His Majesty the King to the Council of Ministers. The change set off a process of adaptation in the relationship between the various branches of the government, as shown in **chart 1** it reflects the logical delineation in the separation of powers along with the establishment of elected Council of Ministers with full executive powers. It shows the apparatus of all the important aspects of the Bhutanese system of governance like the executive, legislative and judiciary going down from the central to the district levels.

Under the unity and farsighted leadership provided by His Majesty the King, the nation will be governed primarily through the Cabinet. The Cabinet Ministers are the heads of ministries, who will oversee that policies are formulated and programmes are carried out. The autonomous bodies have interactions primarily with the ministers, and this is denoted as such in the organogram.

VII. The National Assembly

The Tshogdu (The National Assembly) consists of 150 members; 106 are the elected representatives of the people, 10 are from the Dratshang (Clergy) and 24 are nominated representatives of the Government. The National Assembly as the legislative body is an independent institute, which elects Cabinet Ministers, approves annual budget and legislates acts governing the country, and discusses national issues. The people's representatives are directly elected by the respective constituencies through secret ballot, while the clergy representatives are elected by the Zhung Dratshang (Central Monastic Body) and the concerned Rabdeys (District Monastic Bodies). From among the senior civil servants, His Majesty the King nominates the representatives of the government. All the members serve for a term of three years. The National Assembly from among its members elects the Speaker and the Deputy Speaker. The National Assembly used to meet once a year. Starting from 2005, it will meet twice a year with shorter durations. The assembly enacts legislation and advises the government

on all matters of national importance. Decisions are passed by a simple majority. A secret ballot is taken on all matters of national importance. Any Bhutanese over 25 years of age can be a candidate for membership.

VIII. The Royal Advisory Council

The Lodey Tshogdey (The Royal Advisory Council) was formally established in 1965 to advise the King and government ministers and to supervise the implementation of programs and policies laid down by the National Assembly. The Royal Advisory Council will continue to be consultative and advisory body. The Royal Advisory Council, as stipulated in its chatrim, will ensure the observance of the decisions made during the National Assembly and the Cabinet meetings. Therefore, it will have links with both the Cabinet and the National Assembly. It consists of nine members. There are six representatives of the public (Meeser Thuepoens) who serve for a term of three years. They are elected by the National Assembly through secret ballot from among the representatives of the Dzongkhags. Each Dzongkhag (district) deputes one representative who is elected through secret ballot from among the public. Two members represent the Monastic Body, one each from the Central Monastic Body and the Rabdeys who serve a term of one year. The chairman (Zhung Kalyon) is nominated by the king.

IX. The Monastic Body

The Monastic Body comprises the Central Monastic Body and the Rabdeys (District Monastic Bodies). The current strength of the Monastic Body is about 5,000 registered gelongs (monks) and is financed by an annual subsidy from the Royal Government. Punakha and Thimphu Dratshang having strength of 1,600 constitute the Central Monastic Body. The Monastic Body is the sole arbiter on religious matters. The Je Khempo who is chosen from among high-ranking gelongs is the head of the Body. He is assisted by four high-ranking Lopens of the Central Monastic Body.

X. Local Government

Local administration has been strengthened to meet the requirements of decentralized administration and development. There are twenty Dzongkhags
(Districts), governed by a Dzongkhag administrator (Dzongda) who is responsible for civil administration and developmental activities. Dzongda is assisted by a Dzongrab who is responsible for planning, development and civil administration. The larger Dzongkhags are sub divided into Dungkhags headed by a Dungpa. A Group of villages, from a gewog, the lowest administrative unit each gewog has a headman called the gup (in the north) or mandal (in the south). In each Dzongkhag the Dzongda is assisted in his development function by the Dzongkhag Yargye Tshogchung (District Development Committee), which consists of people's representatives and government officials.

XI. The Judiciary

Bhutan's Legal Code is based on that laid down by Ngawang Namgyal, the first Shabdrung who arrived Bhutan in 1616. Traditional Buddhist precepts are significantly maintained in the legal processes. The High Court consists of eight judges. There is a court in each Dzongkhag headed by a Drangpoen and assisted by Ramjams but minor disputes are settled by village heads (gups). As the final arbiter of law, the judiciary has been independent from other branches of the government since its inception.

CHAPTER 1

POPULATION

The main source of statistics on population is the population census. In most of the countries population censuses are undertaken on a five or ten yearly basis aimed to provide a full count of the population according to a range of characteristics such as demography, health, education and other social aspects. Censuses are useful not only because they provide a range of current population data but are also used as a benchmark for making population estimates in non-census years and for population projections. Population censuses were undertaken in Bhutan in 1969 and 1980. The population figures for those early years were large because of the large influx of migrants from neighboring countries, particularly labor migrants at the instance of construction coinciding with the large-scale development work on infrastructure expansion. With the development emphasis changing to human resource development the large migrants moved out and in 1996 the total population was found to be around 600,000. The next round of Census is scheduled for 2005 and preparations are underway. The Census will be carried out based on the international standards.

The second major element of population statistics relates to the demographic characteristics of the population. The most common source of information on demography is the vital registration system (which usually covers the registration of births and deaths and sometimes marriages and divorces). In Bhutan, the vital registration system does not currently provide the full coverage of births and deaths and it has been necessary to undertake special sample surveys, (the first one in 1984, and second one in 1994 and 2000) to obtain important demographic information. Statistics presented in this chapter includes estimates of current population together with data from 1984 on demographic survey and 1994 and 2000 National Health Surveys. These special surveys carried out at certain intervals provide the changes that are occurring in the population and its indicators. The population data presented in this chapter is an estimated population using the annual growth rates resulting from the National Health Surveys. The interpretations of

Demographic indicators are as follows:

Crude birth rate: Number of live births in a year per thousand populations.

General fertility rate: Number of live births in a year per thousand women in the childbearing age (15 to 49).

Total fertility rate: Average number of daughters born by women during their reproductive span of life.

Gross reproductive rate: Measures the extent to which a cohort of newly born girls will replace their mothers under pre-determined schedules of fertility and mortality.

Crude death rate: Number of deaths in a year per thousand populations.

Infant mortality rate: Number of deaths during first year of life per thousand live births.

Maternal mortality ratio: The annual number of deaths of women from pregnancy-related causes per thousand live births.

Rate of natural Increase: the difference between the crude birth rate and the crude death rate.

Dependency ratio: Measures the number of dependents as a percentage of population aged 15 to 64. Child dependency refers to children aged 0 to 14 years, while old age dependency refers to persons aged 65 and over.

Index of aging: It is the number of person's aged 65 and over as a percentage of the number of persons aged 0 to 14.

TABLE 1.1
POPULATION ESTIMATES BY AGE AND SEX, BHUTAN, 2004

Age group	Person			Percent		
	Male	Female	Total	Male	Female	Total
0-4	58,280	58,010	116,290	7.7	7.7	15.5
5-9	54,130	54,890	109,020	7.2	7.3	14.5
10-14	46,190	45,010	91,200	6.1	6.0	12.1
15-19	34,330	33,350	67,680	4.6	4.4	9.0
20-24	29,690	30,070	59,760	3.9	4.0	7.9
25-29	25,660	25,630	51,290	3.4	3.4	6.8
30-34	23,230	22,800	46,030	3.1	3.0	6.1
35-39	21,790	20,380	42,170	2.9	2.7	5.6
40-44	18,320	17,220	35,540	2.4	2.3	4.7
45-49	14,830	13,750	28,580	2.0	1.8	3.8
50-54	13,950	13,150	27,100	1.9	1.7	3.6
55-59	12,390	11,590	23,980	1.6	1.5	3.2
60-64	11,370	10,660	22,030	1.5	1.4	2.9
65-69	6,540	6,740	13,280	0.9	0.9	1.8
70-74	4,520	4,510	9,030	0.6	0.6	1.2
75+	4,870	4,850	9,720	0.6	0.6	1.3
All ages	380,090	372,610	752,700	50.5	49.5	100.0

Note:
Estimates based on population growth rate 2.5% derived from the 2000 National Health Survey.
Source: National Statistical Bureau, Thimphu.

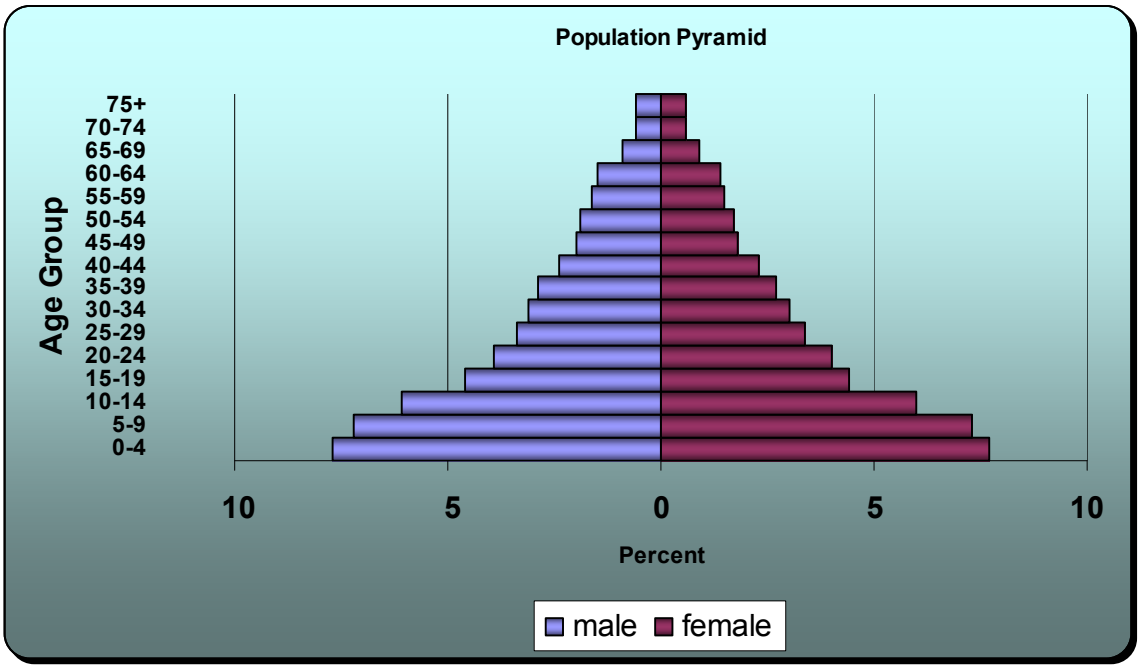


TABLE 1.2
POPULATION ESTIMATES BY YEAR AND SEX, BHUTAN,1994 TO 2004

Year	Female	Male	Total
1994	276,361	287,639	564,000
1995	285,181	296,819	582,000
1996	297,030	302,970	600,000
1997	312,341	306,216	618,557
1998	315,732	322,045	637,777
1999	325,519	332,031	657,550
2000	335,610	342,324	677,934
2001	346,014	352,936	698,950
2002	354,665	361,759	716,424
2003	363,535	370,805	734,340
2004	372,610	380,090	752,700

Source: National Statistical Bureau, Thimphu.

TABLE 1.3
SUMMARY OF POPULATION INDICATORS, BHUTAN, 1998 TO 2003

Population Indicators	1998	1999	2000	2001	2002	2003
Sex Ratio						
(males per 100 females)	102.0	102.0	102.0	102.0	102	102
Age Composition (%)	100.1	100.1	100.0	100.0	100.1	100.1
0 - 14	42.1	42.1	42.1	42.1	42.1	42.1
15 - 49	44.0	44.0	44.0	44.0	44.0	44.0
50 - 59	6.8	6.8	6.8	6.8	6.8	6.8
60 +	7.2	7.2	7.2	7.2	7.2	7.2
Median age(years)	19.4	19.4	19.4	19.4	19.4	19.4
Dependency Ratio						
Child dependency	78.3	78.3	78.3	78.3	78.3	78.3
Old age dependency	8.0	8.0	7.9	7.9	7.9	7.9
Total dependency	86.3	86.3	86.2	86.2	86.2	86.2
Index of aging	10.1	10.1	10.1	10.1	10.1	10.1

Marital Status	Total	Age Group in Years				
		15 or Less	15-19	20-39	40-59	60+
Both Sexes	100.00	100.00	100.00	100.00	100.00	100.00
Married	40.81	0.23	9.88	70.41	84.30	63.75
Never married	53.03	99.77	89.52	24.69	5.74	3.33
Divorced	1.36	-	0.40	2.74	2.32	1.86
Separated	0.64	-	0.20	1.24	0.95	1.33
Widow	4.15	-	-	0.92	6.69	29.73
Male	100.00	100.00	100.00	100.00	100.00	100.00
Married	41.19	-	5.30	69.79	87.73	72.69
Never married	54.83	100.00	94.58	28.27	6.51	3.49
Divorced	0.70	-	0.12	0.79	1.48	2.18
Separated	0.54	-	-	0.77	1.05	1.54
Widower	2.75	-	-	0.39	3.24	20.09
Female	100.0	100.00	100.00	100.00	100.00	100.00
Married	40.46	0.45	14.13	70.91	80.93	53.33
Never married	51.37	99.54	84.82	21.87	4.98	3.15
Divorced	1.97	-	0.66	4.28	3.15	1.48
Separated	0.74	-	0.39	1.61	0.86	1.08
Widow	5.46	-	-	1.33	10.08	40.97

Note:
"-" indicates a sample estimate less than 100 persons. Estimates not sufficiently reliable because of small number of observations.
Source: Bhutan Living Standard Survey 2003, NSB, Thimphu.

CHAPTER 2

HEALTH

Efforts to establish modern medical facilities in Bhutan were begun in 1962. The Ministry of Health now has a wide spread network of Health Facilities across the country, covering around 90% of the population. Institutional health facilities were earlier concentrated in the urban centers, but today the emphasis has shifted to the rural areas where the majority of the population live. Health Care is delivered in a totally integrated system through an organized structure placed at the National, Regional and District Hospitals serving as Referral Centers followed by the Basic Health Units (BHUs) at the Community Level. Basic health units (BHUs) serve remote areas staffed by well-trained paramedical personnel who are equipped to treat minor ailments, and advise on preventive measures to avoid the spread of communicable diseases. Extended Health Centers (Outreach Clinics) and Mobile Health Units support these BHUs.

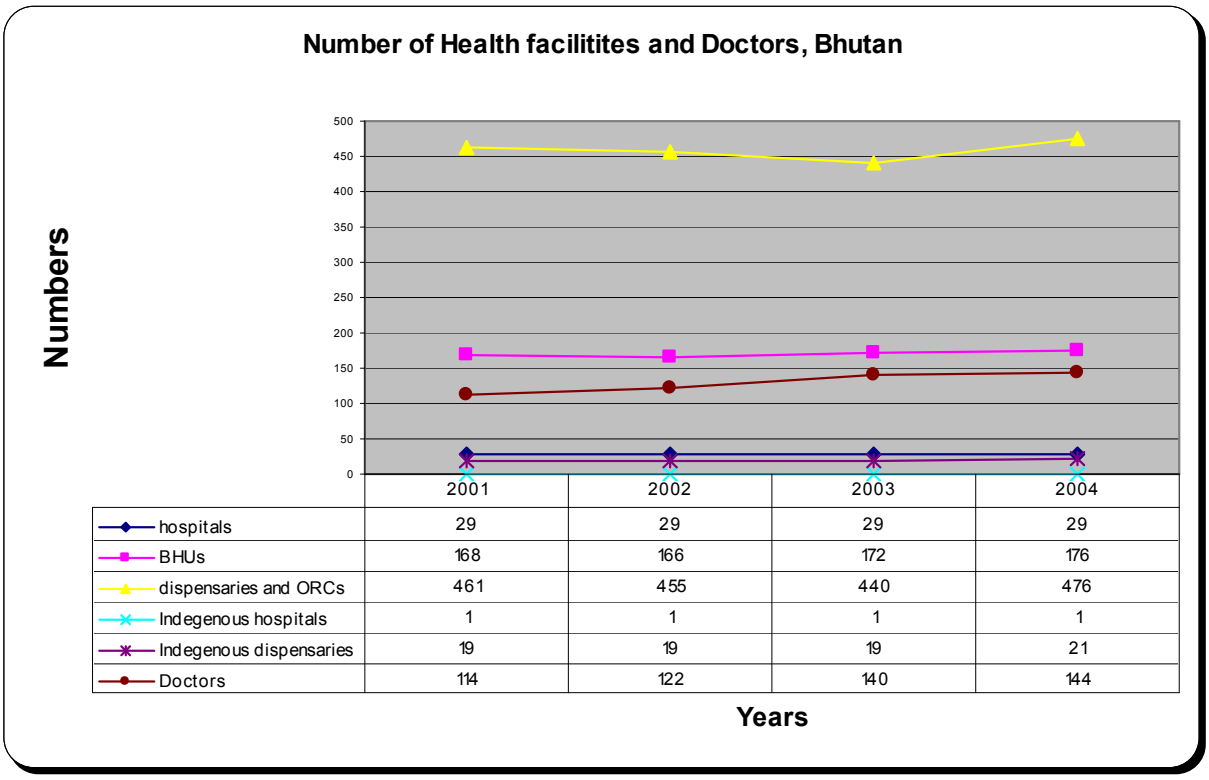
There are also a number of special health programs in Bhutan administered by the Ministry of Health. These cover Child Health and Immunization Program, Reproductive Health Program, Acute Respiratory Infection (ARI) Program, National Control of Diarrhoeal Disease Program (NCDDP), National STD/AIDS Control Program, Rural Water Supply & Sanitation Program (RWSS), Village Health Workers Program (VHW), National Leprosy Program, National Malaria Control Program (NMCP) and Mental Health Program. As of 2004, there were 29 hospitals, 176 BHUs and over 476 Outreach Clinics manned by over 2,713 health personnel of different categories.

Besides the allopathic system, there exists a well established network of Indigenous Medical Facilities under the Institute of Traditional Medical Services that has basically three functions; medical services for out patients; collection and manufacturing of indigenous medicines; and research and training of the Physicians (Drungtsho) and Compounders (Menpas).

The main indicators of the health status of the population are morbidity and mortality. Morbidity refers to the type of illness people suffer from, while mortality relates to death rates and causes of death. The Department of Health has been conducting the National Health Surveys every five years, which is the source for mortality statistics. Over all level of

mortality have been estimated from the Demographic Sample Surveys, but causes of death data have not yet become available. Efforts are under way to improve the vital registration system. Morbidity data are obtained from the patients' records in hospitals and Basic Health Units whose data are presented in the annual publication of Health Department the "Annual Health Bulletins". The available morbidity statistics are based on patients treated by hospitals, basic health units and dispensaries.

General health conditions in Bhutan are affected by low nutrition intake, poor sanitation, high prevalence of parasitic infections and contagious diseases. Acute Respiratory Infection continues to dominate entire morbidity situation. There is also a rising condition of the non-communicable diseases.



	2001	2002	2003	2004
hospitals	29	29	29	29
BHUs	168	166	172	176
dispensaries and ORCs	461	455	440	476
Indegenous hospitals	1	1	1	1
Indegenous dispensaries	19	19	19	21
Doctors	114	122	140	144

TABLE 2.1

SUMMARY OF THE HEALTH FACILITIES AND PERSONNEL, BHUTAN, 2001 TO 2004

Facilities	2001	2002	2003	2004
Number of hospitals	29	29	29	29
Number of basic health units	168	166	172	176
Number of dispensaries/outreach clinic	461	455	440	476
Number of indigenous hospitals	1	1	1	1
Number of indigenous dispensaries	19	19	19	21
Number of doctors	114	122	140	144
Persons per doctor	7,476	5,872	5,245	5,227
Number of hospital beds	1,023	1,023	1,093	1,113
Persons per hospital bed	683	700	672	676
Doctors per 10,000 persons	1.3	1.7	1.9	1.9
Hospital bed per 10,000 persons	15	14	15	15
Population covered by health care (%)	90	90	90	90
Population access to safe drinking water (%)	68	na	71	79
Women attended by trained personnel during child birth (%)	n.a	24	46.7	53.6

Note:

Includes doctors in adminstrative services, expatriates and those on the job training/attachment

Source: Information Section, Department of Health, MoH, Thimphu.

TABLE 2.2
TYPE OF HEALTH FACILITIES IN DZONGKHAGS, BHUTAN, 2004

(Number)

Dzongkhag	Hospitals	Basic health unit	Outreach clinic
Bumthang	1	3	14
Chhukha	3	9	42
Dagana	0	8	11
Gasa	0	4	8
Haa	1	4	12
Lhuntse	1	11	33
Mongar	1	20	55
Paro	1	3	26
Pemagatshel	1	4	24
Punakha	1	5	9
Samtse	3	12	8
Samdrup Jongkhar	2	13	28
Sarpang	2	12	12
Thimphu	4	6	23
Trashigang	3	21	63
Trashi Yangtse	1	6	22
Trongsa	1	6	23
Tsirang	1	6	5
Wangdue Phodrang	1	10	25
Zhemgang	1	13	33
Bhutan	29	176	476

Note:
BHU's figure excludes those centres, which are not functioning.

Source: Information Section, Department of Health, MoH, Thimphu.

TABLE 2.3

HEALTH PERSONNEL BY CATEGORY, BHUTAN, 2001 TO 2004

Health personnel	2001	2002	2003	2004
Doctors	114	122	140	144
District Health Supervisory Officer(DHSO)	23	27	24	23
Health Assistants	163	173	144	201
Basic health workers	176	175	172	171
Sister and nurses	569	500	501	510
B.Sc Nurses	n.a	5	8	12
General Nurse Midwife/Staff Nurses(GNM)	n.a	174	173	183
Auxiliary Nurse Midwife(ANM)	n.a	145	144	140
Assistant Nurses	n.a	176	176	175
Other technicians	259	252	29	368
Indigenous physicians	31	32	29	31
Indigenous compounders/Menpas	23	23	26	26
Malaria workers	59	66	47	47
Village Health workers (VHW)	n.a	n.a	1,097	1,201

Source: Information Section, Department of Health, MoH, Thimphu.

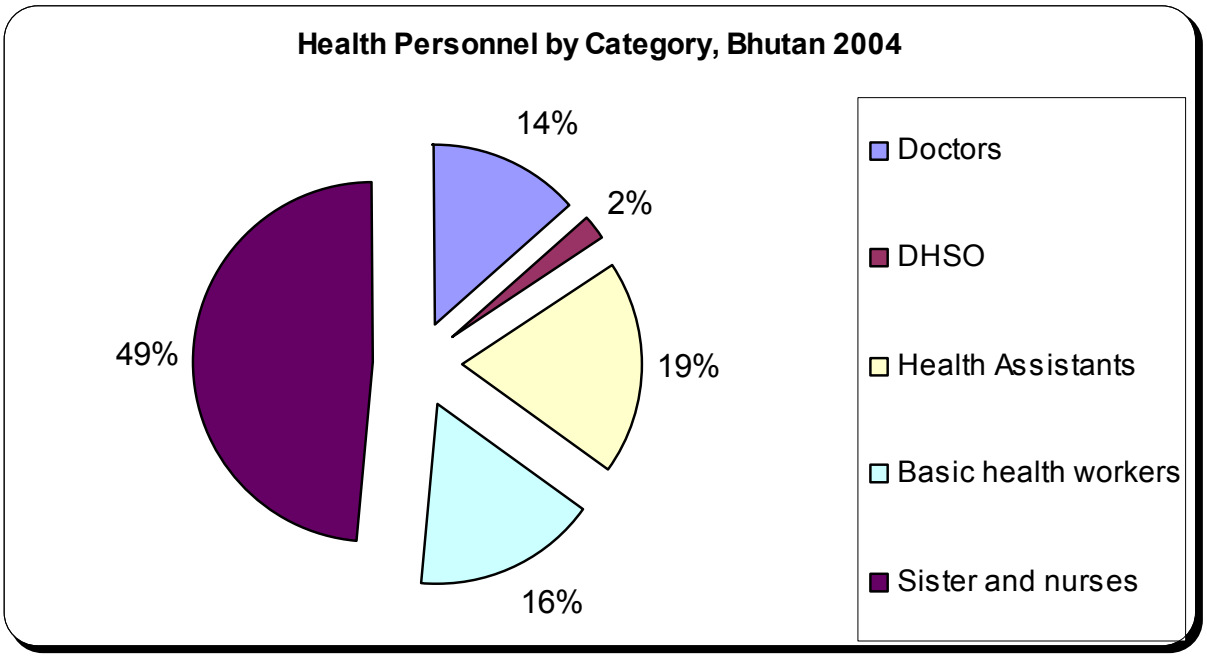


TABLE 2.4
TOP TEN MORBIDITY, BHUTAN, 2004

Priority health problem/Disease	Number
Common cold	263,968
Skin Infection	98,770
Diarrhoea	68,731
Peptic Ulcer Syndrome	57,857
Acute Pharyngitis/Tonsilitis	46,139
Other disorders of skin & Subcutaneous-tissues	45,040
Other Musculo-skeletal disorders	43,255
Conjunctivitis	37,857
ANC, Immunization & other Counseling	33,316
Other Diseases of the Digestive system	31,618

Source: Information Section, Department of Health, MoH, Thimphu.

TABLE 2.5
TOP TEN INDOOR HOSPITAL MORTALITY, BHUTAN, 2004

Priority health problem/Disease	Number
Alcohol Liver Diseases	63
Pneumonia	46
Blood & Immune Disorders	43
Ischemic Heart Diseases/Other Diseases of the Digestive System	32
Other Cancers	30
Other Circulatory Diseases/Neonatal Death	29
Other Kidney, UT/Genital Disorders	26
Cerebro-vascular Diseases	24
Tuberculosis	22
Other Respiratory & Nose Diseases	21

Source: Information Section, Department of Health, MoH, Thimphu.

TABLE 2.6

MORBIDITY CASES REPORTED FROM BASIC HEALTH UNITS, BHUTAN, 2004

Disease Name/Infections	Under 5 years		Above 5 years		Total
	Male	Female	Male	Female	
Cholera	0	0	0	0	0
Typhoid	14	13	147	190	364
Diarrhoea	5,241	5,253	12,026	11,222	33,742
Dysentery	2,410	2,503	6,176	5,705	16,794
Tetanus	0	0	0	0	0
Diphtheria	0	0	0	0	0
Pertussis	0	0	0	0	0
Early Syphilis	1	0	25	22	48
Sexually Transmitted Disease, excluding HIV/AIDS	0	2	522	352	876
Polio	0	0	0	0	0
Rabies	0	0	2	3	5
Viral, Protozoal & Helminthic disease					
Measels	4	2	11	12	29
Viral Hepatitis	10	4	73	54	141
Plasmodium falciparum malaria	15	5	169	123	312
Other malaria	24	21	262	182	489
Intestinal Worms	1,889	2,002	5,220	5,742	14,853
Scabies	540	609	3,143	2,337	6,629
Other Infections (excluding ear, brain, STI)	330	332	1,731	1,905	4,298
Blood diseases					
Nutritional Anaemia	88	105	1,483	4,244	5,920
Blood & Immune Disorders	19	10	134	177	340
Endocrine, Metabolic & Nutritional					
Malnutrition (exclude child clinic attendance)	72	109	152	215	548
Mental disorders					
Other Mental Disorders	6	9	74	117	206
Disease of Nervous syatem					
Meningitis/Encephalitis	2	4	40	43	89
Other Nervous including Peripheral Disorders	88	136	3,691	5,605	9,520
Eye & Ear Diseses					
Conjunctivities	1,641	1,825	8,212	11,485	23,163
Other Eye Disorders	413	510	4,137	5,706	10,766
Otitis Media	1,577	1,572	3,138	3,139	9,426
Other Ear Disorders	411	447	1,491	1,753	4,102
Disease of Circulatory System					
Hypertension	0	0	2,145	2,919	5,064
Other Circulatory Diseases	32	39	1,034	1,443	2,548
Respiratory diseases					
Common Cold	11,701	12,428	53,846	67,183	145,158
Acute Pharyngitis/Tonsilitis	1,291	1,354	6,982	8,478	18,105
Pneumonia	2,109	2,087	990	971	6,157
Other Respiratory & Nose Disesses	727	728	4,187	5,371	11,013

(contd..)

TABLE 2.6 (contd..)
MORBIDITY CASES REPORTED FROM BASIC HEALTH UNITS, BHUTAN, 2004

Disease Name/Infections	Under 5 years		5 years & Older		Total
	Male	Female	Male	Female	
Disease of the Digestive system					
Dental Caries	142	178	3,101	3,766	7,187
Diseases of Teeth & Gums	256	289	2,831	3,564	6,940
Peptic Ulcer Syndrome	51	146	11,282	16,144	27,623
Alcohol Liver Diseases	0	0	95	96	191
Other Diseases of the Digestive System	574	677	4,403	5,028	10,682
Skin Diseases					
Skin Infections	4,800	4,991	20,898	19,156	49,845
Other Disorders of Skin & Subcutaneous	1,380	1,418	7,001	6,498	16,297
Diseases of Musculo-skeletal system & Cogenital deformities					
Arthritis & Arthrosis	39	28	2,156	2,349	4,572
Other Musculo-skeletal disorders	120	146	6,739	7,047	14,052
Genito-Urinary diseases					
Infection of Breasts including Puerperium	0	0	4	229	233
Other Disease of the Breast	0	0	3	511	514
Menstrual Distrubances	0	0	0	1,699	1,699
Other Kidney, UT/Genital Disorders	209	176	2,347	4,972	7,704
Pregnancy, Childbirth and Puerperium					
Abortions	0	0	0	82	82
Pregnancy Included Hypertension	0	0	0	40	40
Ante-Partum Haemorrhage & Placenta Previa	0	0	0	36	36
Malpresentation	0	0	0	29	29
Prolonged Labour	0	0	0	69	69
Obstructed Labour	0	0	0	11	11
Post Partum Haemorrhage	0	0	0	90	90
Retained Placenta	0	0	0	142	142
Puerperal Sepsis	0	0	0	34	34
Other complications of pregnancy	0	0	0	196	196
Perinatal Conditions					
Low Birth Weight	14	20	0	0	34
Foetal Death & Stillbirth	24	9	0	0	33
Noenatal Death	14	12	0	0	26
Conditions Orginating in the Perinatal Period	4	3	0	0	7
Malformations					
Malformations	2	1	1	6	10
Injuries & Trauma					
Burns & Corrosions	376	349	675	504	1,904
Injuries & Poisoning	355	295	4,681	2,066	7,397
Transport Accidents	9	3	201	107	320
Bites & Stings	197	165	1,309	948	2,619
Other External cause of Injury	341	255	4,342	1,968	6,906
Work related injuries	91	106	4,258	1,859	6,314
Complications of Health Care	33	40	602	660	1,335
ANC, Immunisation & Other counselling	1,450	1,589	5,567	10,326	18,932
Total	41,136	43,005	203,739	236,930	524,810

TABLE 2.7
HOSPITAL MORBIDITY CASES REPORTED, BHUTAN, 2004

Disease Name/Infections	Under 5 years		5 years & older		Total
	Male	Female	Male	Female	
Cholera	1	1	4	9	15
Typhoid	83	57	551	566	1,257
Diarrhoea	6,960	6,520	11,942	9,567	34,989
Dysentery	2,161	2,145	5,750	3,785	13,841
Tuberclosis	4	18	100	118	240
Tetanus	0	0	0	0	0
Diphtheria	0	0	0	0	0
Pertussis	0	0	0	0	0
Early Syphilis	0	5	71	58	134
Sexually Transmitted Disease, excluding HIV/AIDS	1	4	783	480	1,268
Polio	0	0	0	0	0
Rabies	1	0	9	1	11
Viral, Protozoal & Helminthic disease					
Measels	7	6	12	7	32
Viral Hepatitis	59	69	214	167	509
Plasmodium falciparum malaria	48	63	351	260	722
Other malaria	92	90	657	406	1,245
Intestinal Worms	1,396	1,443	2,803	2,524	8,166
Scabies	418	462	2,589	1,775	5,244
Other Infections (excluding ear, brain, STI)	508	620	2,552	2,115	5,795
Neoplasm					
Cervical Cancer	0	0	0	0	0
Other Cancers	0	0	0	0	0
Neoplasm (benign + CIS)	0	0	0	0	0
Blood diseases					
Nutritional Anaemia	109	141	1,017	2,422	3,689
Blood & Immune Disorders	9	13	70	70	162
Endocrine, Metabolic & Nutritional					
Diabetes	0	3	251	234	488
Malnutrition (exclude child clinic attendance)	120	109	73	61	363
Other Nutritional & Metabolic Disorders	155	179	793	834	1,961
Mental Disorders					
Psychosis	0	0	89	77	166
Depression	0	0	102	159	261
Anxiety	0	0	95	138	233
Other Mental Disorders	4	0	172	155	331
Disease of Nervous system					
Meningitis/Encephalitis	3	9	70	104	186
Epilepsy	27	12	381	331	751
Other Nervous including Peripheral Disorders	47	48	1,194	1,193	2,482
Eye & Ear Diseases					
Conjunctivities	1,439	1,550	6,128	5,577	14,694
Cataract	8	15	158	165	346
Other Eye Disorders	743	773	7,043	6,715	15,274
Otitis Media	1,579	1,558	3,977	3,398	10,512
Other Ear Disorders	712	757	2,730	2,489	6,688

contd

TABLE 2.7 contd
HOSPITAL MORBIDITY CASES REPORTED, BHUTAN, 2004

Disease Name/Infections	Under 5 years		5 years & older		Total
	Male	Female	Male	Female	
Diseases of Circulatory System					
Rheumatic Heart Diseases	13	12	350	355	730
Hypertension	0	0	3,719	4,599	8,318
Ischaemic Heart Diseases	0	0	188	206	394
Cerebro-vascular Diseases	1	2	25	21	49
Other Circulatory Diseases	42	46	707	637	1,432
Respiratory diseases					
Common Cold	15,965	15,357	44,852	42,636	118,810
Acute Pharyngitis/Tonsilitis	2,096	2,134	11,809	11,995	28,034
Pneumonia	1,817	1,801	1,057	901	5,576
Other Respiratory & Nose Disesses	2,504	2,438	7,157	6,943	19,042
Disease of the Digestive system					
Dental Caries	558	605	9,140	9,304	19,607
Diseases of Teeth & Gums	250	273	3,737	3,232	7,492
Peptic Ulcer Syndrome	122	220	13,679	16,264	30,285
Acute Appendicitis	0	0	110	100	210
Alcohol Liver Diseases	0	0	215	172	387
Gall Bladder Diseases	9	18	126	140	293
Other Diseases of the Digestive system	1,200	1,205	9,274	9,257	20,936
Skin Diseases					
Skin Infections	5,588	5,293	21,515	16,529	48,925
Other Disorders of Skin & Subcutaneous	2,667	2,610	13,277	10,189	28,743
Diseases of Musculo-skeletal system & Cogenital deformities					
Arthritis & Arthrosis	16	19	2,309	1,872	4,216
Other Musculo-skeletal disorders	432	490	15,986	12,295	29,203
Genito-Urinary Diseases					
Cystitis	6	11	157	546	720
Infection of Breasts, including Puerperium	0	0	6	426	432
Other Disease of the Breast	2	2	25	892	921
Pelvic Inflammatory Disease	0	0	0	1,347	1,347
Menstrual Disturbances	0	0	0	1,512	1,512
Other Kidney, UT/Genital Disorders	253	300	3,825	6,684	11,062
Pregnancy, Childbirth and Puerperium					
Abortions	0	0	0	45	45
Pregnancy Included Hypertension	0	0	0	58	58
Ante-Partum Haemorrhage & Placenta Previa	0	0	0	8	8
Malpresentation	0	0	0	2	2
Prolonged Labour	0	0	0	14	14
Obstructed Labour	0	0	0	6	6
Post Partum Haemorrhage	0	0	0	16	16
Retained Placenta	0	0	0	21	21
Puerperal Sepsis	0	0	0	14	14
Other complications of pregnancy	0	0	0	213	213

contd

TABLE 2.7(contd.)
HOSPITAL MORBIDITY CASES REPORTED, BHUTAN, 2004

Disease	Under 5 years		5 years & older		Total
	Male	Female	Male	Female	
Perinatal Conditions					
Low Birth Weight	5	4	0	0	9
Foetal Death & Stillbirth	2	2	0	0	4
Noenatal Death	0	1	0	0	1
Conditions Orginating in the Perinatal Period	0	3	0	0	3
Malformations					
Malformations	1	1	8	8	18
Injuries & Trauma					
Burns & Corrosions	236	173	651	433	1,493
Injuries & Poisoning	583	501	7,020	2,682	10,786
Transport Accidents	24	22	460	139	645
Bites & Stings	214	213	1,538	1,038	3,003
Other External cause of Injury	357	297	3,778	2,063	6,495
Work related injuries	98	74	2,828	1,082	4,079
Complications of Health Care	47	60	313	332	752
ANC, Immunisation & Other counselling	1,388	1,549	3,557	7,890	14,384
Total	53,190	52,406	236,126	221,078	562,800

TABLE 2.8
HOSPITAL INDOOR MORBIDITY REPORT, BHUTAN, 2004

Disease Name/Infections	Under 5 years		5 years and older		Total	Referrals		Deaths
	Male	Female	Male	Female		In	Out	
Cholera	0	0	5	7	12	0	0	0
Typhoid	16	17	253	241	527	28	6	4
Diarrhoea	160	177	219	252	808	12	4	1
Dysentery	72	63	168	172	475	6	3	1
Tuberculosis	19	20	471	343	853	121	57	22
Tetanus	0	0	1	0	1	0	0	0
Diphtheria	0	0	0	0	0	0	0	0
Pertussis	0	0	0	0	0	0	0	0
Early Syphilis	5	5	1	1	12	0	1	0
Sexually Transmitted Disease, excluding HIV/AIDS	0	0	8	7	15	1	1	0
Polio	0	0	0	0	0	0	0	0
Rabies	0	0	0	0	0	0	0	0
Viral, Protozoal & Helminthic disease								
Measels	0	1	3	3	7	0	0	0
Viral Hepatitis	18	11	91	51	171	11	11	2
Plasmodium falciparum malaria	15	11	258	161	445	8	3	4
Other malaria	9	22	218	103	352	5	4	2
Intestinal Worms	10	4	12	8	34	0	1	0
Scabies	8	8	7	2	25	2	0	0
Other Infections (excluding ear, brain, STI)	48	46	258	201	553	17	9	2
Neoplasm								
Cervical Cancer	0	0	0	48	48	0	0	1
Other Cancers	4	0	265	222	491	54	27	30
Neoplasm (benign+CIS)	0	0	0	0	0	0	0	0
Blood diseases								
Nutritional Anaemia	19	28	127	199	373	31	6	4
Blood & Immune Disorders	27	16	60	45	148	12	13	43
Endocrine, Metabolic & Nutritional								
Diabetes	2	0	87	57	146	19	16	10
Malnutrition (exclude child clinic attendance)	33	26	8	16	83	7	2	2
Other Nutritional & Metabolic Disorders	22	19	40	56	137	9	3	4
Mental Disorders								
Psychosis	0	1	33	37	71	4	7	0
Depression	0	0	35	52	87	4	3	0
Anxiety	0	0	20	49	69	3	0	0
Other Mental Disorders	1	1	73	70	145	8	5	0

contd..

TABLE 2.8(contd..)
HOSPITAL INDOOR MORBIDITY REPORT, BHUTAN, 2004

Disease Name/Infections	Under 5 years		5 years and older		Total	Referrals		Deaths
	Male	Female	Male	Female		In	Out	
Disease of Nervous syatem								
Meningitis/Encephalitis	18	16	35	15	84	11	24	19
Epilepsy	8	10	84	45	147	3	5	2
Other Nervous including Peripheral Disorders	28	21	287	130	466	24	30	6
Eye & Ear Diseses								
Conjunctivities	4	3	13	13	33	0	0	0
Cataract	5	2	183	152	342	14	17	0
Other Eye Disorders	10	4	118	78	210	27	20	0
Otitis Media	16	7	47	23	93	1	1	0
Other Ear Disorders	6	5	52	25	88	8	8	0
Diseases of Circulatory System								
Rheumatic Heart Diseases	4	8	88	141	241	24	34	14
Hypertension	0	0	462	351	813	35	34	16
Ischaemic Heart Diseases	0	0	89	7	159	24	11	32
Cerebro-vascular Diseases	0	0	83	41	124	8	8	24
Other Circulatory Diseases	19	13	232	163	427	24	41	29
Respiratory diseases								
Common Cold	218	192	256	229	895	11	1	1
Acute Pharyngitis/Tonsilitis	12	18	72	116	218	6	2	0
Pneumonia	577	618	245	172	1,612	52	16	46
Other Respiratory & Nose Disesses	305	242	752	797	2,096	61	54	21
Disease of the Digestive system								
Dental Caries	31	49	1,235	1,509	2,824	0	1	0
Diseases of Teeth & Gums	99	142	4,531	4,816	9,588	11	7	0
Peptic Ulcer Syndrome	3	6	359	435	803	48	28	3
Acute Appendicitis	1	4	233	216	454	32	55	0
Alcohol Liver Diseases	0	0	349	220	569	55	40	63
Gall Bladder Diseases	10	1	180	452	643	28	27	1
Other Diseases of the Digestive system	131	97	929	724	1,881	93	107	32
Skin Diseases								
Skin Infections	75	61	234	163	533	18	9	0
Other Disorders of Skin & Subcutaneous	56	39	321	203	619	34	28	0
Diseases of Musculo-skeletal system & Cogenital deformities								
Arthritis & Arthrosis	6	14	99	71	190	15	7	1
Other Musculo-skeletal disorders	39	36	601	279	955	120	83	2

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TABLE 2.8 (contd..)
HOSPITAL INDOOR MORBIDITY REPORT, BHUTAN, 2004

Disease Name/Infections	Under 5 years		5 years and older		Total	Referrals		Deaths
	Male	Female	Male	Female		In	Out	
Genito-Urinary Diseases								
Cystitis	0	0	18	45	63	3	1	0
Infection of Breasts, including Puerperium	0	1	0	60	61	11	1	0
Other Disease of the Breast	0	1	1	46	48	2	2	0
Pelvic Inflammatory Disease	0	0	0	363	363	30	10	0
Menstrual Disturbances	0	0	0	89	89	7	6	0
Other Kidney, UT/Genital Disorders	83	51	627	775	1,536	110	85	26
Pregnancy, Childbirth and Puerperium								
Abortions	0	0	0	452	452	31	11	0
Pregnancy Included Hypertension	0	0	0	267	267	21	32	0
Ante-Partum Haemorrhage & Placenta Previa	0	0	0	74	74	10	16	0
Malpresentation	0	0	0	82	82	16	20	0
Prolonged Labour	0	0	0	184	184	30	56	1
Obstructed Labour	0	0	0	205	205	12	18	1
Post Partum Haemorrhage	0	0	0	77	77	4	6	0
Retained Placenta	0	0	0	169	169	23	11	0
Puerperal Sepsis	0	0	0	45	45	6	2	0
Other complications of pregnancy	0	0	0	1,254	1,254	104	93	1
Perinatal Conditions								
Low Birth Weight	124	136	0	0	260	1	5	4
Foetal Death & Stillbirth	37	36	0	0	73	2	1	18
Noenatal Death	18	10	0	0	28	1	1	29
Conditions Orginating in the Perinatal Period	185	142	0	0	327	3	4	
Malformations								
Malformations	32	32	23	21	108	1	3	2
Injuries & Trauma								
Burns & Corrosions	42	34	92	63	231	19	15	4
Injuries & Poisoning	32	26	633	243	934	56	84	11
Transport Accidents	10	15	391	138	554	41	102	9
Bites & Stings	9	4	97	45	155	11	6	1
Other External cause of Injury	25	14	389	148	576	87	48	7
Work related injuries	10	16	366	137	529	74	62	2
Complications of Health Care	1	2	52	31	86	2	3	1
ANC, Immunisation & Other counseling	19	7	121	344	491	11	7	0
Total	2,796	2,611	17,700	19,409	42,516	1,878	1,591	574

Source: Information Section, Department of Health, MoH, Thimphu.

TABLE 2.9
NUMBER OF PATIENTS REPORTED IN DIFFERENT HOSPITALS, BHUTAN, 2001 TO 2004

Hospital	2001	2002	2003	2004
Government hospitals	521.4	274.9	293.7	318.3
Bumthang	12.5	14.6	19.9	14.4
Geylegphug	59.8	26.9	23.9	30.4
Lhuntse	10.3	10.7	8.8	8.2
Mongar	23.2	16.0	14.1	21.7
Paro	25.8	24.9	24.3	27.3
Pemagatshel	15.6	10.6	17.1	17.3
Phuentsholing	60.0	26.1	28.1	29.2
Punakha	43.7	29.1	24.3	27.0
Samdrup Jongkhar	18.4	13.6	17.2	18.3
Samtse	35.9	17.3	16.8	18.8
Sarpang	27.8	16.0	21.4	26.1
Sibsoo	11.7	12.3	10.6	13.2
Tashi Yangtse	11.6	7.5	8.0	8.7
Thimphu	78.2	n.a	n.a	n.a
Trashigang	23.4	9.9	12.7	12.9
Trongsa	14.1	10.8	12.8	5.0
Tshimalakha	21.4	13.2	16.4	19.4
Tsirang	28.0	15.4	17.3	20.4
Leprosy mission hospitals	52.9	53.5	44.6	58.8
Gidakom	5.2	9.2	7.9	11.4
Lhuntshi	10.3	10.7	8.8	8.2
Mongar	23.2	16.0	14.1	21.7
Riserboo	3.6	7.7	6.2	8.2
Yebilaptsa (Zhemgang)	10.6	9.9	7.6	9.3
Army hospitals	16.7	47.6	5.8	39.9
Lungtenphug	n.a	n.a	n.a	10.3
Wangdiphodrang	16.7	19.4	n.a	29.6
Yonphula	n.a	12.3	5.8	n.a
Imtrat (Haa)	n.a	15.9	n.a	n.a
Others	18.3	48.1	12.8	14.0
Dantak (Deothang)	18.3	11.6	12.8	14.0
IBFH (Thimphu)	n.a	36.5	n.a	n.a
Project hospitals	30.4	25.2	28.1	27.7
Gomtu	30.4	25.2	28.1	27.7
Indigenous hospital	35.6	n.a	n.a	32.4
Indigenous dispensary	62.5	n.a	n.a	68.3
All hospitals (b)	737.8	449.3	385	559.4

Note:
Comparisons over time may be affected by different coverage in each year
Source: Information Section, Department of Health, MoH, Thimphu.

TABLE 2.10
EPI COVERAGE IN PERCENTAGE BY DZONGKHAG, BHUTAN, 2004

Dzongkhag	BCG	MEASLES	DPT3/HEPB3	OPV3
Bumthang	301	283	297	289
Chhukha	1,540	1,686	1,688	1,685
Dagana	402	407	431	431
Gasa	50	56	57	57
Haa	176	231	229	229
Lhuntse	346	364	377	380
Mongar	996	848	889	923
Paro	416	556	622	622
Pemagatshel	298	319	277	277
Punakha	427	416	468	469
Samdrup Jongkhar	975	922	916	953
Samtse	1,214	1,187	1,254	1,261
Sarpang	986	937	899	925
TashiYangtse	454	362	434	435
Thimphu	2,819	1,838	2,012	2,014
Trashigang	1,189	1,106	1,188	1,188
Trongsa	226	255	266	260
Tsirang	414	504	429	435
Wangdue Phodrang	560	627	647	648
Zhemgang	373	360	340	341
Bhutan	14,162	13,264	13,720	13,822

Source: Information Section, Department of Health, MoH, Thimphu.

TABLE 2.11
DETAILS OF CHILD GROWTH MONITORING IN IMMUNIZATION CLINICS BHUTAN, 2001 TO 2004

Details	2001	2002	2003	2004
Children weighed (nos)	27,068	122,753	128,083	150,416
Child malnutrition (nos)	4,192	116,016	11,153	13,915
Degree I	2,261	106,141	9,253	11,616
Degree II	1,746	8,155	1,601	1,902
Degree III	185	1,720	299	397
Child malnutrition(%)	13.4			

TABLE 2.12
DETAILS OF MATERNAL AND CHILD HEALTH CARE SERVICES, BHUTAN, 2001 TO 2004

Type of care	2001	2002	2003	2004
Maternal health care attendence (a)	68,719	39,190	50,073	58,804
Antenatal	47,351	39,190	50,073	58,804
Postnatal	21,368	n.a	n.a	n.a
Deliveries attended	6,028	3,826	6,174	7,284
Home	n.a	n.a	2,291	2,125
Hospital/Basic Health Units	6,028	3,826	3,883	5,159
Child health care attendance	122,987	264,824	130,711	150,416
First visit	107,211	39,359	15,114	15,231
Re-visit	15,776	225,465	115,597	135,185
Malnourished children (b)	4,377	404	11,452	14,312
All malnourished	4,192	n.a	11,153	13,915
Third degree	185	404	299	397

Notes:
(a) Refers to total attendance, not comprehensive cases
(b) Children attending health units are classified according to three degrees of malnourishment; Third degree malnourishment refers to the most severe cases.

Source: Information Section, Department of Health, MoH, Thimphu.

TABLE 2.13
DETAILS OF MATERNAL HEALTH CARE ACTIVITIES BY DZONGKHAG, BHUTAN, 2003 TO 2004

Dzongkhag	2003	2004
Bumthang		
Antenatal	719	1,233
Postnatal	..	..
Reported deliveries	277	280
Trained deliveries	97	148
Chhukha		
Antenatal	6,850	7,778
Postnatal	..	..
Reported deliveries	1,582	1,641
Trained deliveries	609	672
Dagana		
Antenatal	849	936
Postnatal	..	..
Reported deliveries	472	405
Trained deliveries	244	166
Gasa		
Antenatal	155	134
Postnatal	..	..
Reported deliveries	45	49
Trained deliveries	9	17

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TABLE 2.13 contd…
DETAILS OF MATERNAL HEALTH CARE ACTIVITIES BY DZONGKHAG, BHUTAN, 2003 TO 2004

Dzongkhag	2003	2004
Haa		
Antenatal	342	495
Postnatal	..	..
Reported deliveries	130	177
Trained deliveries	18	53
Lhuntse		
Antenatal	821	963
Postnatal	..	..
Reported deliveries	364	343
Trained deliveries	136	94
Mongar		
Antenatal	2,094	2,422
Postnatal	..	..
Reported deliveries	846	926
Trained deliveries	468	406
Paro		
Antenatal	2,117	2,809
Postnatal	..	..
Reported deliveries	375	585
Trained deliveries	233	359
Pemagatshel		
Antenatal	699	886
Postnatal	..	..
Reported deliveries	278	268
Trained deliveries	47	84
Punakha		
Antenatal	1,326	1,798
Postnatal	..	..
Reported deliveries	386	355
Trained deliveries	65	147
Samdrupjongkhar		
Antenatal	2,869	3,379
Postnatal	..	..
Reported deliveries	740	884
Trained deliveries	351	404
Samtse		
Antenatal	342	5,536
Postnatal	..	..
Reported deliveries	1,318	887
Trained deliveries	18	557

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TABLE 2.13 contd…
DETAILS OF MATERNAL HEALTH CARE ACTIVITIES BY DZONGKHAG, BHUTAN, 2003 TO 2004

Dzongkhag	2003	2004
Sarpang		
Antenatal	3,714	4,240
Postnatal	..	..
Reported deliveries	993	893
Trained deliveries	580	527
Thimphu		
Antenatal	14,358	15,700
Postnatal	..	..
Reported deliveries	437	455
Trained deliveries	1,737	2,070
Trashigang		
Antenatal	2,830	3,597
Postnatal	..	..
Reported deliveries	974	1,167
Trained deliveries	346	545
Trashiyangtse		
Antenatal	765	953
Postnatal	..	..
Reported deliveries	480	392
Trained deliveries	92	156
Trongsa		
Antenatal	873	651
Postnatal	..	..
Reported deliveries	275	298
Trained deliveries	126	160
Tsirang		
Antenatal	1,129	1,469
Postnatal	..	..
Reported deliveries	417	444
Trained deliveries	162	233
Wangduephodrang		
Antenatal	1,993	2,182
Postnatal	..	..
Reported deliveries	635	733
Trained deliveries	220	181
Zhemgang		
Antenatal	669	1,443
Postnatal	..	..
Reported deliveries	340	392
Trained deliveries	189	254

Note:

Trained delivery refer to deliveries attended by trained health personnels in hospitals/BHUs and at home

Source: Information Section, Department of Health, MoH, Thimphu.

TABLE 2.14
DETAILS OF COMPLICATIONS DURING PREGNANCY AND DURING LABOUR/DELIVERIES, BHUTAN, 2003 TO 2004

	2003		2004	
Complications	Numbers	Percent	Numbers	Percent
Pregnancy of mothers	1,519	100%	2,725	100%
Abortions	464	30.54	579	21.24
Antepartum haemorrhage	111	7.30	118	4.33
P.I.H	254	16.72	365	13.39
Anaemia	-	-	-	-
Hepatitis	-	-	-	-
Malaria	-	-	-	-
Others	690	10.53	1,663	61.02
Labour/delivery	782	100%	1,117	40.99
Obstructed labour	80	11.39	222	8.14
Mal presentation	104	14.81	113	4.14
Prolonged labour/Ruptured uterus	204	29.05	267	9.79
PPH	145	20.65	183	6.71
Retained Placenta	249	35.47	332	12.18
All complications	2,301	-	3,842	-

Source: Information Section, Department of Health, MoH, Thimphu.

TABLE 2.15
FAMILY PLANNING ACCEPTORS BY TYPE OF METHOD, BHUTAN, 2001 TO 2004

Method	2001	2002	2003	2004
Tubectomy	1,941	320	1,049	1,364
Vasectomy	9,884	1,230	4,636	4,919
Minilap	n.a	n.a	1,049	n.a
Intra uterine device (IUD)	2,881	836	25,669	2,111
Pills (OCP)	6,126	n.a	14,403	18,807
Condoms	6,016	n.a	574,834	1,000,679
Injection DMPA	14,740	8,077	51,027	40,745
All methods	41,588	10,463	672,667	1,068,625

Note:
IUD = Number inserted
Pills = Number of cycles
DMPA = Number of Injection
Condoms = Number of distributed

Source: Information Section, Department of Health, MoH, Thimphu.

TABLE 2.16
NUMBER OF FAMILY PLANNING METHODS USED BY TYPE, BY DZONGKHAG, BHUTAN, 2004

Dzongkhag	Family planning methods						Total
	Vasec.	Tubec.	IUD	DMPA	Pills	Condom	
Bumthang	72	6	6	351	102	3,613	4,150
Chhukha	399	24	78	3,627	2,570	334,214	340,912
Dagana	408	19	24	1,277	886	17,275	19,889
Gasa	15	8	..	182	100	3,109	3,414
Haa	4	9	9	961	266	9,427	10,676
Lhuntse	196	17	13	783	351	16,641	18,001
Mongar	355	120	99	4,158	1,204	188,153	194,089
Paro	424	215	217	1,494	400	22,064	24,814
Pemagatshel	6	1	196	1,213	708	9,777	11,901
Punakha	34	11	19	2,445	686	16,882	20,077
Samdrup Jongkhar	563	111	192	3,704	1,130	26,106	31,806
Samtse	353	58	30	2,274	2,155	36,743	41,613
Sarpang	1,049	362	115	2,970	2,147	59,089	65,732
Thimphu	433	210	429	4,234	2,102	65,369	72,777
Trashi Yangtse	..	1	341	1,195	220	6,379	8,136
Trashigang	172	15	81	4,624	1,179	77,194	83,265
Trongsa	169	31	17	429	85	9,957	10,688
Tsirang	6	37	134	1,895	1,382	33,901	37,355
Wangdue Phodrang	46	7	26	1,239	415	16,294	18,027
Zhemgang	215	102	85	1,690	719	48,492	51,303
Bhutan	4,919	1,364	2,111	40,745	18,807	1,000,679	1,068,625

Note:
IUD = Number inserted
Pills = Number of cycles
DMPA = Number of Injection
Condoms = Number of condoms distributed

Source: Information Section, Department of Health, MoH, Thimphu.

TABLE 2.17
NUMBER OF BLOOD SLIDE EXAMINATIONS FOR MALARIA, BHUTAN, 2000 TO 2004

Details	2000	2003	2004
Total blood films examined (numbers)	76,445	61,246	54,892
Blood film detected negative	n.a	n.a	n.a
Blood films detected positive	5,935	3,806	2,670
Plasmodium vivax	3,197	2,126	1,580
Plasmodium falciparum	2,738	1,680	966
Mixed infections	n.a	n.a	124
Deaths due to malaria (numbers)	15	15	15

Source: Information Section, Department of Health, MoH, Thimphu.

TABLE 2.18
NUMBER OF TUBERCULOSIS CASES BY TYPE, BHUTAN, 2001 TO 2004

Year	Cases diagnosed and treated			Total deaths
	Pulmonary	Extra Pulmonary	Total cases	
2001	874	342	1,216	51
2002	758	293	1,051	41
2003	682	344	1,026	31
2004	648	354	1,002	22

Source: Information Section, Department of Health, MoH, Thimphu.

TABLE 2.19
WATER AND SANITATION FACILITY TYPE BY DZONGKHAG, BHUTAN, 2004

(Number)

Dzongkhag	Percentage Coverage				
	Sanitary facility	piped water supply	Drainage & foot path	Vegetable Garden	Garbage disposal bins
Bumthang	2,001	1,939	1,767	1,876	1,922
Chhukha	11,038	10,060	8,801	4,161	9,369
Dagana	2,328	1,579	780	2,271	2,192
Gasa	419	183	188	188	369
Haa	1,508	1,678	537	1,189	634
Lhuntse	2,282	2,287	1,283	2,318	1,606
Mongar	5,507	4,778	2,314	4,412	3,593
Paro	4,486	4,264	3,577	3,889	3,919
Pemagatshel	2,053	2,090	556	1,420	1,230
Punakha	2,145	1,776	541	2,216	1,968
Samdrupjongkhar	6,293	5,426	1,979	4,638	4,726
Samtse	5,494	4,391	1,806	4,968	3,447
Sarpang	5,898	5,620	3,148	3,833	4,056
Thimphu	2,446	2,272	1,930	2,273	1,630
Trashigang	2,978	2,877	1,258	2,625	354
Trashiyangtse	7,678	7,156	2,484	6,800	3,861
Trongsa	2,674	2,430	1,561	2,403	2,122
Tsirang	1,732	1,802	1,062	1,662	1,240
Wangduephodrang	2,647	2,257	1,372	2,524	2,287
Zhemgang	3,110	2,551	2,055	2,664	2,703
Total % coverage	74,717	67,416	38,999	58,330	54,228

Source: Information Section, Department of Health, MoH, Thimphu.

CHAPTER 3

EDUCATION

The development of a comprehensive education system in Bhutan was initiated in 1961. Prior to that time there were virtually no modern education facilities inside Bhutan, apart from the traditional education given in the monasteries. Today there is an extensive network of Schools and other educational institutions spread throughout the country. The present formal educational structure consists of one-year pre-primary (PP), six years primary, two years Lower Secondary School, two years Middle Secondary School, two years Higher Secondary School and three years degree programme. Entry into the formal education system starts at the age of six when the children are admitted into preprimary classes. The medium of instruction in the schools is both 'Dzongkha'-the national language and English. School curricula also include training in traditional arts, crafts, and agriculture. Besides the modern education system, there is large number of traditional institutions offering education to children in monasteries, Drupdas and Shedras, for which data are not maintained by the Education Department. Non-formal education first began formally in 1992, although it had existed in disorganized traditional forms earlier. The division of education maintains an extensive range of data on students; schools and teaching personnel and the summary data are presented in this chapter.

There were 1,55,235 students enrolled in 447 schools/institutes and 455 Non-formal education centers. Of the 447 schools and institutes only 19 were privately run while the rest was run by the government. In 2004, there were 202 community primary schools catering to small and far-flung communities. A community primary school is the basic level in the primary school system, which caters to a specific community, a village or a cluster of defined villages. Number of Non Formal Education centers expanded from 6 in 1992 with 300 learners to 455 centers with 15,866 learners in 2004. The NFE centers provide only basic literacy courses of reading and writing.

The size of enrolment till Higher Secondary Schools was highest in Thimphu Dzongkhag followed by Chukha, Trashigang, Paro and Mongar. Many schools provide boarding facilities for students living in areas far from the nearest school. Children from communities who do not have their own schools enroll in the more distant school either as day scholar or as boarders. This is made possible largely through the provision of meals through the World Food Programme (WFP).

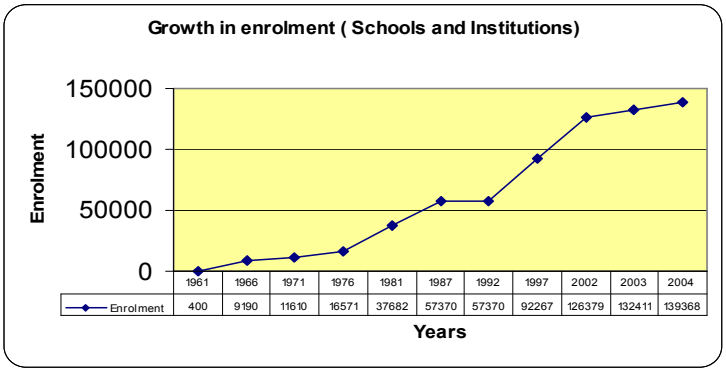

TABLE 3.1
NUMBER OF SCHOOLS AND INSTITUTIONS, STAFF AND STUDENTS, BHUTAN, 2004

Details	CPS	PS	LSS	MSS	HSS	Pvt.	Others	NFE	Total
Number of school and Institution	202	90	77	29	16	19	14	455	902
Teaching staff	707	752	1,461	729	440	287	321	519	5,216
National	704	734	1,281	515	280	196	246	519	4,475
Non-Bhutanese	3	18	180	214	160	91	75	-	741
Number of students	24,533	26,508	48,089	20,775	10,865	5,218	3,381	15,866	155,235
Male	12,878	13,782	24,453	10,773	6,174	2,699	2,245	5,145	78,149
Female	11,655	12,726	23,636	10,002	4,691	2,519	1,136	10,721	77,086
Student to teacher ratio	34.7	35.3	32.9	28.5	24.7	18.2	10.5	31.0	29.8

Note:
CPS-Community School, PS-Primary School, LSS-Lower Secondary School, MSS-Middle Secondary School, HSS-Higher Secondary School, Pvt-Private School.

Source: Policy & Planning Division, MoE, Thimphu.

TABLE 3.2
NUMBER OF EDUCATIONAL INSTITUTIONS, TEACHERS AND STUDENTS, BHUTAN, 2002 TO 2004

Year	Infrastructure			Teacher			Student		
	School	Inst.	Total	School	Inst.*	Total	School	Inst.*	Total
2000	354	7	361	2867	159	3026	110517	1824	112341
2001	375	11	386	3,887	441	4,328	117323	2,467	119,790
2002	397	11	408	3,668	282	3,950	123,283	3,096	126,379
2003	426	14	440	4,005	313	4,318	129,160	3,251	132,411
2004	447	14	461	4,376	321	4,697	135,988	3,381	139,369

Note:
*Excludes NFE

Source: Policy & Planning Division, MoE, Thimphu.

TABLE 3.3
NUMBER OF EDUCATIONAL FACILITIES BY TYPE AND DZONGKHAG, 2004

Dzongkhag	CPS	PS	LSS	MSS	HSS	Inst.	NFE	Pvt.	Total
Bumthang	11	1	2	1	1		23	1	40
Chhukha	14	5	6	4	2	1	11	2	45
Dagana	12	2	0	2	0	0	27	0	43
Gasa	3	0	1	-	-	-	3	0	7
Haa	1	3	3	0	1		12		20
Lhuntse	12	8	1	2	-	-	38		61
Mongar	22	10	5	0	2	-	28		67
Paro	5	2	8	2	1	1	18	2	38
Pemagatshel	10	3	3	1	1	0	24	-	18
Punakha	5	2	4	0	1	2	18	1	33
Samdrup Jongkhar	9	6	6	2	0	0	19	1	43
Samtse	5	3	4	2	0	1	19	0	34
Sarpang	8	2	2	2	0	2	18	2	36
Thimphu	7	6	8	4	1	3	20	10	59
Trashigang	31	12	10	2	2	3	41	0	101
Trashi Yangtse	13	5	2	1	1	1	25	0	48
Trongsa	11	3	3	2	0	0	25	0	44
Tsirang	2	2	2	0	1	0	16	0	23
Wangdue Phodrang	13	5	4	1	1	0	34	0	58
Zhemgang	8	10	3	1	1	0	36	0	59
Bhutan	202	90	77	29	16	14	455	19	902

Source: Policy & Planning Division, MoE, Thimphu.

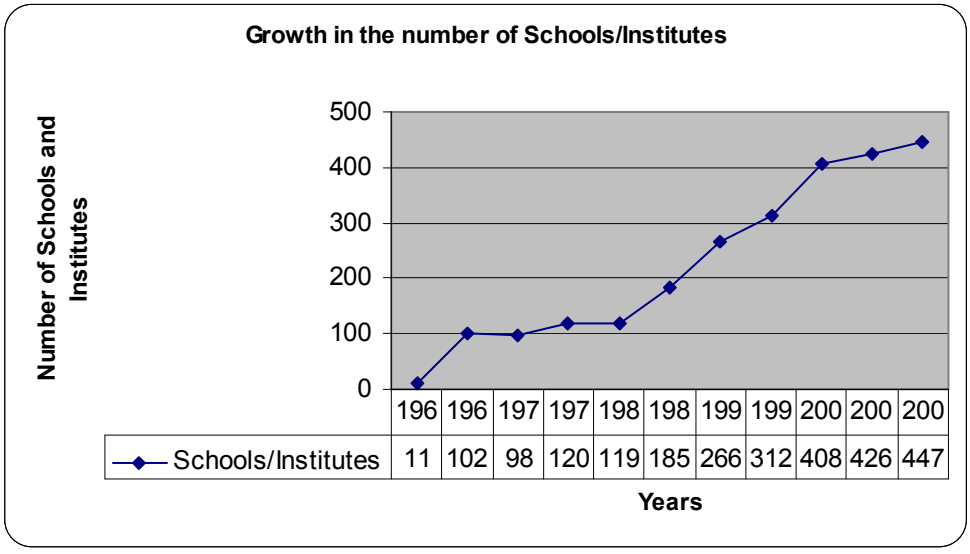

TABLE 3.4
NUMBER OF TEACHERS IN EDUCATIONAL INSTITUTIONS BY NATIONALITY, BHUTAN, 2002 TO 2004

Institution	2002			2003			2004		
	Bht	N/Bht	Total	Bht	N/Bht	Total	Bht	N/Bht	Total
Schools	3000	668	3668	3310	695	4005	3710	666	4376
Community Primary	527	2	529	586	6	592	704	3	707
Primary	724	31	755	679	22	701	734	18	752
Lower Secondary	948	205	1153	1178	210	1388	1281	180	1461
Middle Secondary School	456	214	670	426	197	623	515	214	729
Higher Secondary School	201	145	346	287	179	466	280	160	440
Private School	144	71	215	154	81	235	196	91	287
Specialised/Professional Institutes	472	66	538	453	238	691	713	74	787
Sherubtse College	19	40	59	23	39	62	26	44	70
National Institute of Education, Paro	24	5	29	25	7	32	51	1	52
National Institute of Education, Samtse	49	1	50	51	3	54	31	6	37
Institute of Language and Cultural Affairs	26	1	27	22	2	24	22	2	24
Dhoban Sanskrit Patshala	2	-	2	1	-	1	1	0	1
Survey Sanskrit Patshala	2	-	2	1	-	1	1	0	1
National Institute for the Disabled (NID)	7	1	8	7	1	8	9	1	10
Institute for Zorig Chusum	22	-	22	10	1	11	7	0	7
Royal Bhutan Institute of Technology	58	18	76	39	20	59	39	20	59
Rigney Institute (T/yangtse)	7	-	7	11	-	11	7	0	7
Non Formal Education Programme	256	-	256	263	165	428	519	-	519
Bhutan	3472	734	4206	3763	933	4696	4423	740	5163

Source: Policy & Planning Division, MoE, Thimphu.

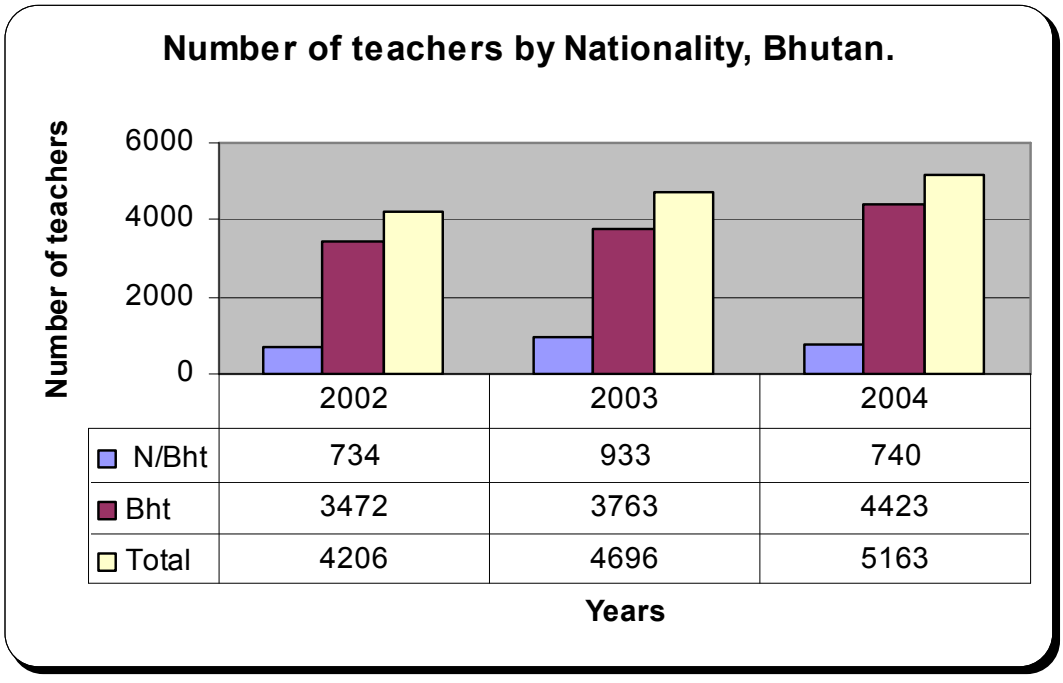

TABLE 3.5
NUMBER OF EDUCATIONAL FACILITIES AND STUDENTS BY DZONGKHAG, 2004

Dzongkhag	Educational facilities	Student		
		Total	Girl	Boy
Bumthang	17	4001	1,969	2,032
Chhukha	33	13754	6,538	7,216
Dagana	16	3506	1,668	1,838
Gasa	4	558	267	291
Haa	8	3049	1,524	1,525
Lhuntse	23	3547	1,711	1,836
Mongar	39	8155	3,739	4,416
Paro	20	8181	4,112	4,069
Pemagatshel	18	3921	1,703	2,218
Punakha	13	5090	2,546	2,544
Samdrup Jongkhar	24	8122	4,346	3,776
Samtse	14	7905	3,595	4,310
Sarpang	16	7892	3,758	4,134
Thimphu	36	22590	1141500	11,175
Trashigang	57	12797	5,899	6,898
Trashi Yangtse	22	4594	2,155	2,439
Trongsa	19	3268	1,636	1,632
Tsirang	7	3603	1,686	1,917
Wangdue Phodrang	24	6718	3,417	3,301
Zhemgang	23	4737	2,115	2,622
Bhutan	433	135988	65,799	70,189

Source: Policy & Planning Division, MoE, Thimphu.

TABLE 3.6
NUMBER OF ENROLMENT IN EDUCATIONAL INSTITUTIONS, 2002 TO 2004

Institutions	2002	2003	2004
Schools	123283	129160	135988
Community	20978	22502	24533
Primary	28849	26168	26508
Lower Secondary	41985	46856	48089
Middle Secondary	19194	17735	20775
Higher Secondary	8464	11268	10865
Private	3813	4631	5218
Other institutions	2711	3251	3381
National Institute for the Disabled (NID)	37	35	38
National Institute of Education, paro	633	656	637
National Institute of Education, Samtse	381	344	489
National Institue of Zorig Chusum, Kawajangsa	139	122	149
Royal Bhutan Institute of Technology	560	429	390
Sherubtse college	625	828	939
Dhoban Sanskrit patsala	35	13	26
Jigmecholing (Surey) Sanskrit patshala	n.a	30	26
Trashiyangtse Institue of Zorigchusum	46	52	54
Construction Training Centre, kawajangsa	n.a	234	165
Institute of Language and Culutural Affairs	255	225	261
Vocational Training Institue, Khuruthang	n.a	72	28
Vocational Training Institue, Ranngjung	n.a	112	111
Vocational Training Institue, Samthang	n.a	99	68
Non-formal Education Centres	9798	12838	15866

Source: Policy & Planning Division, MoE, Thimphu.

TABLE 3.7
NUMBER OF STUDENTS IN HIGH SCHOOLS AND BELOW BY DZONGKHAG AND TYPE OF SCHOOL, 2004

Dzongkhag	Private school			Community school			Primary school		
	Boy	Girl	Total	Boy	Girl	Total	Boy	Girl	Total
Bumthang	97	52	149	556	581	1,137	59	65	124
Chhukha	281	268	549	958	799	1,757	609	462	1,071
Dagana	-	-	-	1,125	955	2,080	225	244	469
Gasa	-	-	-	179	153	332	-	-	-
Haa	-	-	-	30	12	42	331	338	669
Lhuntse	-	-	-	473	470	943	787	820	1,607
Mongar	-	-	-	1,209	1,131	2,340	1,081	988	2,069
Paro	180	119	299	307	291	598	464	464	928
Pemagatshel	-	-	-	572	506	1,078	226	155	381
Punakha	318	286	604	273	311	584	425	427	852
Samtse	-	-	-	628	481	1,109	760	534	1,294
Samdrup Jongkhar	29	34	63	735	601	1,336	1,140	962	2,102
Sarpang (a)	68	60	128	1,491	1,268	2,759	1,097	1,132	2,229
Thimphu	1,726	1,700	3,426	343	361	704	2,466	2,459	4,925
Trashigang	-	-	-	1,737	1,511	3,248	1,190	936	2,126
Trashi Yangtse	-	-	-	591	584	1,175	472	438	910
Trongsa	-	-	-	480	424	904	409	425	834
Tsirang	-	-	-	318	297	615	316	295	611
Wangdue Phodrang	-	-	-	558	631	1,189	932	948	1,880
Zhemgang	-	-	-	315	288	603	793	634	1,427
Bhutan	2,699	2,519	5,218	12,878	11,655	24,533	13,782	12,726	26,508

contd..

Source: Policy & Planning Division, MoE, Thimphu.

TABLE 3.7(contd..)

NUMBER OF STUDENTS IN HIGH SCHOOLS AND BELOW BY DZONGKHAG AND TYPE OF SCHOOL, 2004

Dzongkhag	Lower secondary			Middle secondary			Higher secondary			All school		
	Boy	Girl	Total	Boy	Girl	Total	Boy	Girl	Total	Boy	Girl	Total
Bumthang	739	735	1,474	331	351	682	250	185	435	2,032	1,969	4,001
Chhukha	2,527	2,447	4,974	2,245	2,008	4,253	596	554	1,150	7,216	6,538	13,754
Dagana	-		-	488	469	957		-	-	1,838	1,668	3,506
Gasa	112	114	226	-	-	-		-	-	291	267	558
Haa	770	803	1,573	-		-	394	371	765	1,525	1,524	3,049
Lhuntse	139	145	284	437	276	713	-			1,836	1,711	3,547
Mongar	1,224	1,085	2,309	-	-	-	902	535	1,437	4,416	3,739	8,155
Paro	2,277	2,399	4,676	430	497	927	411	342	753	4,069	4,112	8,181
Pemagatshel	598	461	1,059	438	399	837	384	182	566	2,218	1,703	3,921
Punakha	1,075	1,175	2,250	-	-	-	453	347	800	2,544	2,546	5,090
Samtse	1,452	1,158	2,610	990	1,021	2,011		-	-	4,310	3,595	7,905
Samdrupjongkhar	1,579	1,343	2,922	1,343	1,237	2,580		-	-	4,346	3,776	8,122
Sarpang (a)	606	554	1,160	872	744	1,616		-	-	4,134	3,758	7,892
Thimphu	4,615	4,694	9,309	1,347	1,446	2,793	678	755	1,433	11,175	11,415	22,590
Trashigang	2,453	2,311	4,764	788	648	1,436	730	493	1,223	6,898	5,899	12,797
Trashiyangtse	593	588	1,181	532	364	896	251	181	432	2,439	2,155	4,594
Trongsa	519	542	1,061	224	245	469	-	-	-	1,632	1,636	3,268
Tsirang	942	847	1,789	-	-	-	341	247	588	1,917	1,686	3,603
Wangduephodrang	1,424	1,483	2,907	74	105	179	313	250	563	3,301	3,417	6,718
Zhemgang	809	752	1,561	234	192	426	471	249	720	2,622	2,115	4,737
Bhutan	24,453	23,636	48,089	10,773	10,002	20,775	6,174	4,691	10,865	70,759	65,229	135,988

.

Source: Policy & Planning Division, MoE, Thimphu

TABLE 3.8

NUMBER OF STUDENTS BY GRADE AND TYPE OF SCHOOL, BHUTAN, 2004

Grade	Private			Communitry Pry.			Lower Secondary		
	Boy	Girl	Total	Boy	Girl	Total	Boy	Girl	Total
Nursery	281	245	526	..	..	..	..	..	..
Pre primary	315	264	579	2,645	2,487	5,132	2,696	2,608	5,304
I	185	188	373	2,435	2,294	4,729	2,655	2,582	5,237
II	150	118	268	2,465	2,122	4,587	2,608	2,569	5,177
III	76	93	169	1,822	1,650	3,472	2,558	2,398	4,956
IV	62	69	131	1,519	1,358	2,877	2,806	2,667	5,473
V	57	61	118	1,181	1,027	2,208	2,475	2,459	4,934
VI	37	41	78	811	717	1,528	2,398	2,433	4,831
VII	0	0	0	..	..	..	3,659	3,473	7,132
VIII	0	0	0	..	..	..	2,598	2,447	5,045
IX	3	2	5	..	..	..	..	..	..
X	19	20	39	..	..	..	..	..	..
XI	805	774	1,579	..	..	..	..	..	..
XII	709	644	1,353	..	..	..	..	..	..
Bhutan	2,699	2,519	5,218	12,878	11,655	24,533	24,453	23,636	48,089

contd..

Source: Policy & Planning Division, MoE, Thimphu.

TABLE 3.8(contd.)

NUMBER OF STUDENTS BY GRADE AND TYPE OF SCHOOL, BHUTAN, 2004

Grade	Middle Secondary			Higher Secondary		
	Boy	Girl	Total	Boy	Girl	Total
Nursery						
Pre-primary	709	637	1,346	…	…	…
I	686	638	1,324	…	…	…
II	606	658	1,264	…	…	…
III	638	570	1,208	…	…	…
IV	705	631	1,336	…	…	…
V	559	567	1,126	…	…	…
VI	521	529	1,050	…	…	…
VII	1,184	1,268	2,452	204	248	452
VIII	1,083	1,008	2,091	239	208	447
IX	2,232	2,059	4,291	1,631	1,617	3,248
X	1,850	1,437	3,287	1,554	1,405	2,959
XI	…	…	…	1,375	656	2,031
XII	…	…	…	1,171	557	1,728
Bhutan	10,773	10,002	20,775	6,174	4,691	10,865

Source: Policy & Planning Division, MoE, Thimphu.

TABLE 3.9

NUMBER OF STUDENTS BY GRADE, 2000 TO 2004

Grade	2001	2002	2003	2004
Primary grade	88,382	90,944	93,841	97,323
Nursery				
Pre-primary	15,166	15,604	15,977	16,636
I	15,006	14,828	15,517	15,925
II	13,846	14,526	14,268	15,081
III	12,494	12,947	13,616	13,643
IV	12,253	12,594	12,939	13,805
V	10,255	10,954	11,251	11,756
VI	9,392	9,491	10,273	10,477
Lower Secondary grade	15,128	15,988	16,207	17,619
VI(a)	n.a	n.a	n.a	n.a
VII	8,439	8,859	9,093	10,036
VIII	6,689	7,129	7,114	7,583
Middle Secondary grade	10,508	11,423	12,537	13,829
IX	5,890	6,613	7,241	7,544
X	4,618	4,810	5,296	6,285
Higher Secondary school	2,719	4,432	5,804	6,691
XI	1,631	2,749	2,991	3,610
XII	1,088	1,683	2,813	3,081
Bhutan	105,353	72,369	122,585	135,462

Note:

In the above table, nursery grade is excluded

(a) grade vi is in junior level as well. Figures now included under primary level.

Source: Policy & Planning Division, MoE, Thimphu.

TABLE 3.10
NUMBER OF STUDENTS ENROLED, PROMOTEES, REPEATERS AND DROPOUTS BY GRADE, 2004

Details	Enrolment	Promotees	Repeaters	Dropouts
PP	16,636	14,186	1,761	44
I	15,925	13,555	1,739	275
II	15,081	12,420	1,526	267
III	13,643	12,079	1,223	314
IV	13,805	10,721	1,726	492
V	11,756	9,672	1,035	566
VI	10,477	8,936	805	532
VII	10,036	7,239	1,100	822
VIII	7,583	6,677	344	164
IX	7,544	6,205	867	169
X	6,285	3,594	80	1,622
Bhutan	128,771	105,284	12,206	5,267

Note:
Promotees and dropout figures are imputations

Source: Policy & Planning Division, MoE, Thimphu.

TABLE 3.11
PER HEAD COST OF EDUCATION, 2003-2004

School/Institute	Cost per student per annum
Community pry./ Pry. School	
Day Scholars	5751
Boarders	5,581
Lower Secondary Schools	6,761
Day Scholars	5975
Boarders	5787
Middle & Higher Secondary School	8,047
Day Scholars	8274
Boarders	10,534
Institutes under the Ministry of Education	
Sherubtse Collge, Kanglung	88,121
National Institute of Education, Samtse	79168
National Institute of Education, Paro	72195
Inst. Of language & Cultural Studies, Semtokha	34,898
National Institue for the Disabled, Khaling	55,880
Institutes under NTTA	
Royal Bhutan Institue for Technology, Phuntsholing	51,251
Vocational Training Institutes (4)	31,979
Institute for Zorig Chusm, Kawajangsa	70,986
Trashiyangtse Institue for Zorig Chusm	66,000

Note

The figures for the NTTA institues are estimates worked out based on the 2002-2003 budegt statistics due to non-availability of 2003-2004 budget information at the time of compilation

Source: Policy & Planning Division, MoE, Thimphu.

TABLE 3.12
NUMBER AND EDUCATIONAL LEVELS OF TEACHERS IN THE SCHOOLS AND INSTITUTES, 2004

Education Level	CPS	PS	LSS	MSS	HSS	Pvt.	Total
Trained	579	683	1313	555	424	161	3715
All Teachers	592	701	1388	623	466	235	4005
Untrained	13	18	75	68	42	74	290
Masters	4	0	58	113	111	56	341
Trained	0	0	44	91	90	49	274
Untrained	4	0	14	22	21	7	67
Bachelors	2	23	167	163	185	45	585
Trained	1	7	118	124	173	28	451
Untrained	1	16	49	39	12	17	134
Higher Sec./Matriculate	424	472	827	245	103	84	2155
Trained	418	470	817	238	94	43	2080
Untrained	6	2	10	7	9	41	75
Under Matriculate	35	51	81	9	1	11	188
Trained	35	51	81	9	1	6	183
Untrained	0	0	0	0	0	5	5
ZLT	128	155	255	93	66	40	737
Trained	125	155	253	93	66	35	727
Untrained	3	0	2	0	0	5	10

Note:
CPS-Community School, PS-Primary School, LSS-Lower Secondary School, MSS-Middle Secondary School, HSS-Higher Secondary School, Pvt.-Private School.

Source: Policy & Planning Division, MoE, Thimphu.

CHAPTER 4

HUMAN RESOURCES

The economy of Bhutan is characterized by the predominance of people engaged in self-employment, particularly those working on their own land. There is also a good deal of small cottage industry often undertaken in the home. The number of person working for wages is relatively small. Statistics on human resources are designed to measure the involvement of people in economic activities. Economic activities refer to the production of economic goods and services and include people who are self-employed (e.g. farmers operating their own land) as well as persons who work for wages (i.e. employees). Broadly, a statistical system for human resources should cover topics such as size and characteristics of the labor force, employment, wage rate and conditions of work. Labour statistics usually presented in this chapter are from sample surveys and the national Labour Force Surveys. The National Statistical Bureau conducted the two consecutive Labor Force Surveys in 1998 and 2000. The Department of Employment and Labour conducted the third round of Labor Force Survey in 2001 since its creation in 2000. The fourth and fifth Labour Force Surveys were conducted by Department of Employment in 2003 and 2004.
Although share of primary sector in GDP is gradually decreasing, agriculture is still the predominant sector providing employment to around 63% of the labour force. Labour force is marred by high dependency ratio.

The private sector is emerging as the important sector generating employment opportunities for the rapidly increasing labour market.

As observed from the National Labour Force Survey 2004 that among the economically active labour force of 2,16,500, the urban area constituted about 23% with 98% employed. However, the unemployment rate is found comparatively higher in the urban area as increasing number of school leavers continue to look for job opportunities. Unemployment rate in 2004 was estimated to around 2.5 %. It was also observed that 14.3% of all the unemployed were those in ages between 15 and 19.

TABLE 4.1
EMPLOYMENT IN CIVIL SERVICE, BHUTAN, 2001 TO JUNE 2005

Ministry/Division	2001	2002*	2003**	2004
All Ministries	13,119	12,906	14,224	14,879
Ministry of Agriculture	2,399	2,445	2,493	2,410
Ministry of Communications	1,278	1,267	..	..
Ministry of Education	..	..	5,112	5,225
Ministry of Finance	636	624	664	645
Ministry of Foreign Affairs	112	109	121	127
Ministry of Information & Communication	..	..	287	311
Ministry of Health	..	..	1,954	2,061
Ministry of Home & Cultural Affairs	1,382	1,498	1,764	2,159
Home & Cultural Affairs	458	499	614	399
Dzongkhags	924	999	1,150	1,760
Ministry of Labour & Human Resources	..	..	221	204
Ministry of Trade & Industry	1,177	527	468	509
Ministry of Works & Human Settlement	..	..	1,140	1,228
Other Non-Ministerial Organizations	1,365	1,359	826	1,215
His Majesty's Secreteriat	37	33	33	32
Dratshang Lhentshog	26	26	28	27
National Assembly	20	23	22	23
Royal Advisory Council	15	15	15	14
Cabinet Secretariat	9	9	7	9
Royal Civil Service Commission	45	44	39	47
Royal Court of Justice	..	..	296	295
Centre for Bhutan Studies	8	10	11	14
Bhutan Olympic Committee	19	8	9	10
Office of the Legal Affairs	..	12	13	17
National Environment Commission	37	37	37	40
Royal Institute of Management	109	89	71	69
Royal Audit Authority	143	139	141	152
Royal University of Bhutan	..	..	5	329
National Pension and Provident Fund Bureau	1	1	1	..
Planning commission Secretariat	56	54	..	..
National Commission for Cultural Affairs	104	108	..	..

contd...

TABLE 4.1(Contd.)

EMPLOYMENT IN CIVIL SERVICE, BHUTAN, 2001 TO JUNE 2005

Ministry/Division	2001	2002*	2003**	2004
Other Non-Ministerial Organizations	1,365	1,359	826	1,215
National Commission for Women & Children	..	..	..	..
National Women's Association of Bhutan	..	..	..	..
National Technical Training Authority	178	191	..	..
Judiciary	286	276	..	..
Dzongkhag Development Commission	24	23	..	..
Royal Monetary Authority	2	..	..	..
Department of Legal Affairs	13	..	..	..
National Employment Board	17	22	..	..
National Statistical Bureau	..	..	..	34
Corporations	..	..	38	46
Financial Institutes (Corporations)	..	..	3	3
Defence	..	..	23	26
Others	216	239	34	28
All Civil Servants	14,484	14,256	15,050	16,094
Seconded to Intl., Corporations, Private Organizations	..	..	46	46
GSC & ESP Personnel (Number of Approved Corporations/Agencies outside the civil service	..	..	2,151	..

Note:

*Till Sept 2002

**Till Sept 2003

Source: Royal Civil Service Commission

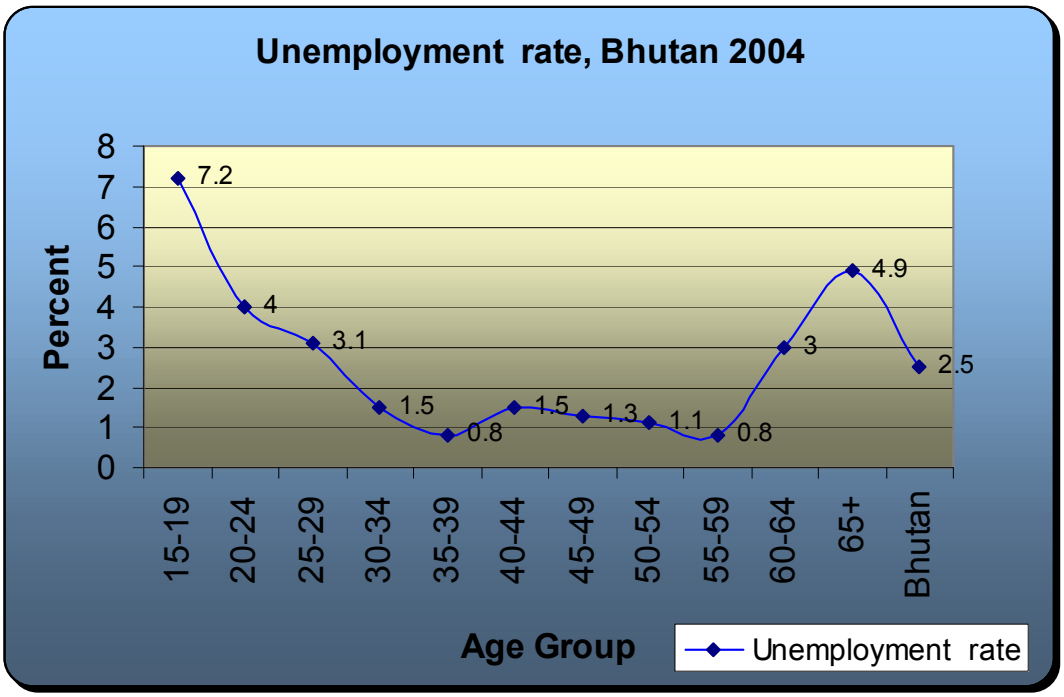

TABLE 4.2
ECONOMICALLY ACTIVE POPULATION BY EMPLOYMENT BY AGE, BHUTAN, 2004

Age group	Economicallly active population				
	Total	Participation Rate (%)	Employed	Unemployed	Unemployment rate (%)
Total	216500	54.4	211100	5400	2.5
15-19	16600	24.1	15400	1200	7.2
20-24	25200	50.5	24200	1000	4.0
25-29	32100	70.7	31100	1000	3.1
30-34	26800	75.5	26400	400	1.5
35-39	23900	68.9	23700	200	0.8
40-44	20500	73.5	20200	300	1.5
45-49	22600	71.1	22300	300	1.3
50-54	18000	67.9	17800	200	1.1
55-59	12700	61.7	12600	100	0.8
60-64	10000	50.3	9700	300	3.0
65+	8100	22.0	7700	400	4.9

Source: Bhutan Labour Force Survey 2004, Department of Employment, MoLHR, Thimphu

TABLE 4.3
ECONOMICALLY INACTIVE POPULATION BY EMPLOYMENT BY AGE, BHUTAN, 2004

	Economicallly active population				
	Total	Study	Family responsibilty	Not vailable/ Old age	Disabled
Total	180600	71900.0	73700	27700	7300
15-19	52000	47000.0	4600	200	200
20-24	24700	15700.0	8700	0	300
25-29	13300	3100.0	9800	0	400
30-34	8700	700.0	7700	0	300
35-39	10400	1200.0	8700	0	500
40-44	7300	400.0	6400	0	500
45-49	9300	300.0	7900	500	600
50-54	8500	400.0	6600	1200	300
55-59	7800	300.0	5300	1500	700
60-64	10000	600.0	3800	4700	900
65+	28600	2200.0	4200	19600	2600

Source: Bhutan Labour Force Survey 2004,Department of Employment, MoL&HR

TABLE 4.4
TOTAL EMPLPYED PERSONS BY EMPLOYMENT STATUS AND ECONOMIC ACTIVITY, BHUTAN 2004

		EMPLOYMENT STATUS								
Main economic activity	Total	Employer/ Owner Manager	Regular paid employee	Casual paid employee	Paid worker by piece rate	Paid non-family apprentice	Unpaid family worker	Own account worker in non-agriculture	Onwer cultivator	Share cropper
Agriculture and forestry	132800	0.0	2.0	3.0	0.6	0.6	47.1	0.0	46.1	0.6
Mining and quarrying	100	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing	12600	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity,gas & water supply	1000	0.0	90.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0
Construction	6900	1.4	42.0	26.1	13.0	1.4	11.6	4.3	0.0	0.0
Wholesale & retail trade, repairof motor vehicles,motorcycles & personal & household goods	4800	2.1	18.8	16.7	2.1	0.0	25.0	35.4	0.0	0.0
Hotels & restaurants	1400	0.0	35.7	21.4	0.0	0.0	14.3	28.6	0.0	0.0
Transport,storage & communications	2600	0.0	84.6	11.5	0.0	0.0	0.0	3.8	0.0	0.0
Financial intermediation	2500	0.0	84.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0
Real estate, renting & business activities	9700	1.0	35.1	20.6	5.2	0.0	6.2	32.0	0.0	0.0
Public administration & defence, compulsory social security	10000	1.0	97.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Education	3900	0.0	94.9	5.1	0.0	0.0	0.0	0.0	0.0	0.0
Health & Social work	2400	0.0	87.5	8.3	4.2	0.0	0.0	0.0	0.0	0.0
Other community, social & personal service activities	15700	0.0	22.3	21.0	5.1	0.0	49.7	1.9	0.0	0.0
Private households with employed persons	600	0.0	66.7	16.7	0.0	0.0	16.7	0.0	0.0	0.0
Not classifiable by economic activity	3100	0.0	45.2	16.1	22.6	0.0	6.5	9.7	0.0	0.0
Total	210100	0.2	19.1	8.2	2.6	0.6	36.5	3.4	29.1	0.4

Source: Bhutan Labour Force Survey 2004, Department of Employment, MoLHR

TABLE 4.5
PERCENT OF ALL EMPLOYED WORKED DURING SRUVEY PEIOD BY ECONOMIC ACTIVITY AND HOURS OF WORK, 2004

Main economic activity	Total Hours Worked Per Week							
	Total	<30	30-39	40-49	50-59	60-69	70-79	80+
Agriculture & forestry	100	9.4	5.3	21.0	29.6	19.2	13.7	1.8
Mining & quarrying	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing	0	18.1	7.9	20.5	22.8	11.8	13.4	5.5
Electricity,gas & water supply	100	8.3	16.7	33.3	16.7	8.3	8.3	8.3
Construction	100	4.4	4.4	26.5	20.6	14.7	22.1	7.4
Wholesale & retail trade; repair of motor vehicles, motor cycles & personal & household goods	100	3.9	2.0	7.8	11.8	17.6	25.5	31.4
Hotels & restuarents	100	6.3	0.0	12.5	6.3	18.8	25.0	31.3
Transport, storage and communications	100	3.6	10.7	35.7	17.9	10.7	14.3	7.1
Financial intermediation	100	4.0	8.0	32.0	40.0	8.0	4.0	4.0
Real estate, renting and business activities	100	8.1	5.1	13.1	21.2	11.1	25.3	16.2
Public administration & defence	100	11.8	12.7	31.4	17.6	10.8	6.9	8.8
Education	100	7.7	7.7	46.2	20.5	5.1	10.3	2.6
Health & Social work	100	3.8	15.4	38.5	23.1	15.4	0.0	3.8
Other community, social work & personal service	100	9.1	9.1	46.9	14.0	6.3	10.5	4.2
Private households with employed persons	100	0.0	0.0	33.3	16.7	16.7	16.7	16.7
Not elsewhere classified	100	14.8	7.4	33.3	11.1	14.8	11.1	7.4
Total	100.0	9.4	6.2	23.9	25.6	16.2	13.9	4.6

Source: Bhutan Labour Force Survey 2004, Department of Employment, MoLHR

TABLE 4.6
PERCENT OF UNEMPLOYED BY AGE AND AREA OF RESIDENCE, 2004

Age group	Total			Rural			Urban		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
15-19	100	41.7	58.3	100	40.0	60.0	100	50.0	50.0
20-24	100	30.0	70.0	100	28.6	71.4	100	33.3	66.7
25-29	100	40.0	60.0	100	42.9	57.1	100	33.3	66.7
30-34	100	50.0	50.0	100	50.0	50.0	100	50.0	50.0
35-39	100	100.0	0.0	100	100.0	0.0	0	0.0	0.0
40-44	100	33.3	66.7	100	33.3	66.7	0	0.0	0.0
45-49	100	33.3	66.7	100	33.3	66.7	0	0.0	0.0
50-54	100	50.0	50.0	100	50.0	50.0	0	0.0	0.0
55-59	100	0.0	0.0	0	0.0	0.0	0	0.0	0.0
60-64	100	33.3	66.7	100	33.3	66.7	0	0.0	0.0
65+	100	75.0	25.0	100	75.0	25.0	0	0.0	0.0
Total	100	44.4	55.6	81.5	45.5	18.5	18.5	40.0	60.0

Source: Bhutan Labour Force Survey 2004, Department of Employment, MoL&HR

TABLE 4.7
TOTAL EMPLOYED BY LEVEL OF EDUCATION AND AREA OF RESIDENCE, 2004

Level of education	Total	Area	
		Urban	Rural
Both Sexes	5700	1400	4300
No education	3300	500	2800
Primary	500	100	400
Junior	600	200	400
High	500	200	300
Higher Secondary	200	200	0
First Year degree & above	200	200	0
Non-formal	400	0	400
Lama/gaylong/gomchen/anim	0	0	0
Male	2700	600	2100
No education	1700	100	1600
Primary	300	100	200
Junior	300	100	200
High	200	100	100
Higher Secondary	100	100	0
First Year degree & above	100	100	0
Non-formal	0	0	0
Lama/gaylong/gomchen/anim	0	0	0
Female	3000	800	2200
No education	1600	400	1200
Primary	200	0	200
Junior	300	100	200
High	300	100	200
Higher Secondary	100	100	0
First Year degree & above	100	100	0
Non-formal	400	0	400
Lama/gaylong/gomchen/anim	0	0	0

CHAPTER 5

LAND USE AND GRICULTURE

The Ministry of Agriculture, over the past four decades, was concerned about "how to grow" by establishing various agriculture infrastructures to produce and distribute the inputs. Currently the Ministry of Agriculture established 4 main RNR research centers. The Ministry of Agriculture with the accumulated experiences having accomplished one five year plan to the other, maintains the three basic objectives that are to conserve the environment, enhance the rural income and attain self reliance in cereals and essential oil crops. In 2004, Agriculture contributed 24.7% to the total economy i.e., as measured by the Gross Domestic Product. It was also the single largest sector that provides livelihood to 79% of the population.

Agricultural practices have changed tremendously over the years. Until a decade ago, agriculture was practiced on a subsistence basis. Whatever was produced on the farm was consumed having little or no marketable surplus. The farm production is supplemented by keeping different kinds of domestic animals such as cattle for draught and milking purpose, chicken for eggs and pigs for meat etc. At higher altitudes, herds of yaks and sheep are also kept for draught and milking. Owing to the improved communication facilities in the country, there is an increasing tendency to go for cash crops like apples in the temperate north; oranges, areca nut and cardamom in the subtropical south. Other cash crops that are exported include ginger, chilies and vegetables. Strategies to increase livestock and cereal production include the propagation and practice of double cropping of the paddy production and distribution of high yield verities. In the livestock sector the artificial insemination covers not only for the Jersey breeds that are high yielding but also for the production of Jatsha and Jatsam that are local high yielding varieties. As a result, increasing number of farms is mechanized with sizable investment on the machinery and other inputs that are subsidized by the government.

The issue is not only to formulate well-balanced agricultural policies and the response shown by the farmers to designed policies but also to monitor the progress. To do this, a good statistical database, giving the trends or time series is required. Back in 1988/89, the National Agronomic Survey was carried out in collaboration with the then Department of Agriculture. The Ministry of Agriculture conducts nation wide sample surveys and the major source of Agricultural data is now available from the National Agricultural Census that was conducted in 2000.

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TABLE 5.1
LAND-USE AND VEGETATION TYPES AS PERCENTAGE
OF TOTAL AREA, BHUTAN, 1996

Land-use and vegetation types	Percent
Forests	72.5
Conifer forest	26.5
Fir	8.6
Mixed conifer	12.1
Blue pine	3.2
Chir pine	2.5
Broadleaf forest	37.7
Broadleaf + conifer	3.4
Broadleaf forest	34.3
Forest plantation	0.2
Conifer plantation	0.1
Broadleaf plantation	0.1
Scrub forest	8.1
Pasture	3.9
Natural pastures	3.9
Improved pastures	0.0
Agriculture	7.7
Wetland cultivation	1.0
Irrigated wetland	1.0
Rainfed wetland	0.0
Dryland cultivation	2.4
Terraced dryland	0.3
Unterraced dryland	2.2
Tseri (Shifting cultivation)	2.2
Mixed cultivated land	2.1
Horticulture	0.1
Orchards	0.1
Apple orchards	0.0
Citrus orchard	0.0
Horticulture plantations	0.1
Cardamom plantation	0.1
Arecanut plantation	0.0
Ginger plantation	0.0
Settlement	0.1
Others	15.7
Snow/glaciers	7.5
Rock outcrops	5.0
Water spreads	0.8
Marshy areas	0.1
Landslips/erosion	2.4
Total	100.0

Note:
Horticulture areas might be underestimated as they were too small to be mapped at a scale 1:50,000 and because they were under forest cover.

Source: PPD, Ministry of Agriculture, Thimphu.

TABLE 5.2
PERCENTAGE OF AREA BY DZONGKHAG, BY TYPE OF LAND COVER, BHUTAN, 1995

(percent)

Dzongkhag	Forest	Pasture	Agri-culture	Horti-culture	Settle-ment	Others	Total area
Bumthang	4.5	0.6	0.1	0.0	0.0	1.6	6.8
Chhukha	3.9	0.1	0.4	0.0	0.0	0.1	4.5
Dagana	2.8	0.0	0.4	0.0	0.0	0.1	3.5
Gasa	3.6	0.6	0.0	..	0.0	6.8	11.0
Haa	3.4	0.3	0.1	0.0	0.0	0.5	4.3
Lhuntse	5.4	0.2	0.3	..	0.0	1.2	7.2
Mongar	4.3	0.0	0.5	..	0.0	0.0	4.9
Punakha	2.2	0.0	0.1	0.0	0.0	0.1	2.4
Paro	2.1	0.2	0.2	0.0	0.0	0.7	3.2
Pemagatshel	0.7	0.0	0.6	0.0	0.0	0.0	1.3
Samdrup Jongkhar	4.5	0.0	1.1	0.0	0.0	0.2	5.8
Samtse	3.2	0.0	0.6	0.0	0.0	0.1	3.9
Sarpang	4.8	0.0	0.7	0.0	0.0	0.2	5.7
Thimphu	2.7	0.8	0.1	0.0	0.0	1.2	4.8
Trashigang	4.5	0.3	0.8	..	0.0	0.1	5.7
Trashi Yangtse	2.7	0.1	0.3	..	0.0	0.4	3.6
Trongsa	3.9	0.2	0.3	0.0	0.0	0.1	4.5
Tsirang	1.2	0.0	0.3	0.0	0.0	0.0	1.6
Wangdue Phodrang	7.4	0.4	0.2	0.0	0.0	2.1	10.1
Zhemgang	4.6	0.0	0.6	0.0	0.0	0.1	5.3
Bhutan	72.5	3.9	7.7	0.0	0.0	15.7	100.0

Source: PPD, Ministry of Agriculture, Thimphu.

TABLE 5.3
ALTITUDE ZONES OF DZONGKHAGS AS PERCENTAGE OF THEIR TOTAL AREA, BHUTAN, 1995

Dzongkhag	Altitude at Dzongkhag Centre (metres)	Altitude zones (metres) 0-600	600-1200	1200-1800	1800-2400	2400-3000	3000-3600	Total 0-3600
Bumthang	2,690	0.0	0.0	0.0	0.4	10.6	26.2	37
Chhukha	2,220	7.7	17.2	20.8	20.4	18.7	11.8	97
Dagana	1,520	4.0	15.7	22.0	24.3	20.7	8.7	95
Gasa	3,659	0.0	0.0	0.1	0.9	2.5	4.8	8
Haa	2,712	0.0	0.8	3.6	7.3	16.1	24.0	52
Lhuntse	1,460	0.0	0.9	6.8	14.3	19.6	17.0	59
Mongar	1,620	3.1	17.9	27.1	23.3	16.0	11.2	99
Paro	2,280	0.0	0.0	0.0	6.3	25.3	24.8	56
Pemagatshel	1,200	7.9	39.0	39.7	13.2	0.2	0.0	100
Punakha	1,220	0.0	0.0	17.8	26.5	21.8	15.5	82
Samdrup Jongkhar	160	25.6	27.6	23.1	14.4	6.5	2.4	100
Samtse	390	17.0	25.5	24.3	18.8	11.0	2.5	99
Sarpang	210	31.1	29.4	21.1	14.6	2.9	0.7	100
Thimphu	2,320	0.0	0.0	1.0	5.0	16.3	18.8	41
Trashigang	1,040	0.2	4.9	15.8	22.2	20.6	18.0	82
Trashi Yangtse	1,830	0.0	2.3	6.7	16.5	23.4	18.8	68
Trongsa	2,180	0.0	2.9	10.4	19.5	28.8	21.2	83
Tsirang	1,620	7.3	31.4	30.1	19.8	7.6	3.2	99
Wangdue Phodrang	1,260	0.1	3.0	9.0	13.5	17.8	19.2	63
Zhemgang	1,916	9.5	27.1	28.0	17.9	9.7	5.1	97

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TABLE 5.3 (contd.)
ALTITUDE ZONES OF DZONGKHAGS AS PERCENTAGE OF THEIR TOTAL AREA, BHUTAN, 1995

Dzongkhag	Altitude zones (meters)							
	0-3600	3600-4200	4200-4800	4800-5400	5400-6000	6000-6600	> 6600	Total area(%)
Bumthang	37.2	25.7	18.4	16.3	2.2	0.2	0.0	100
Chhukha	96.6	3.1	0.1	0.0	0.1	0.0	0.0	100
Dagana	95.4	3.7	1.0	0.0	0.0	0.0	0.0	100
Gasa	8.3	11.2	21.9	28.6	21.1	7.4	1.4	100
Haa	51.8	27.9	17.6	2.6	0.1	0.0	0.0	100
Lhuntse	58.6	15.7	16.7	8.4	0.5	0.0	0.0	100
Mongar	98.6	1.5	0.0	0.0	0.0	0.0	0.0	100
Paro	56.4	18.6	21.3	3.5	0.1	0.0	0.0	100
Pemagatshel	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Punakha	81.6	12.6	5.7	0.1	0.0	0.0	0.0	100
Samdrup Jongkhar	99.6	0.3	0.0	0.0	0.0	0.0	0.0	100
Samtse	99.1	0.7	0.0	0.0	0.1	0.0	0.0	100
Sarpang	99.8	0.2	0.0	0.0	0.0	0.0	0.0	100
Thimphu	41.1	18.6	27.3	10.9	1.4	0.5	0.1	100
Trashigang	81.7	16.0	2.3	0.0	0.0	0.0	0.0	100
Trashi Yangtse	67.7	15.5	13.4	3.2	0.2	0.0	0.0	100
Trongsa	82.8	12.4	4.7	0.1	0.0	0.0	0.0	100
Tsirang	99.4	0.5	0.0	0.0	0.0	0.0	0.0	100
Wangdue Phodrang	62.6	12.7	12.5	11.1	1.1	0.0	0.0	100
Zhemgang	97.3	2.1	0.5	0.0	0.0	0.0	0.0	100

Source: PPD, Ministry of Agriculture, Thimphu.

TABLE 5.4
PERCENTAGE OF TOTAL AREA OF BHUTAN BY DZONGKHAG BY ALTITUDE ZONES, 1995

Dzongkhag	Area	Altitude zones (metres)						Total
		0-600	600-1200	1200-1800	800-24000	2400-3000	3000-3600	0-3600
Bumthang	6.8	0.0	0.0	0.0	0.0	0.7	1.8	2.5
Chhukha	4.5	0.3	0.8	0.9	0.9	0.8	0.5	4.3
Dagana	3.5	0.1	0.5	0.8	0.8	0.7	0.3	3.3
Gasa	11.0	0.0	0.0	0.0	0.1	0.3	0.5	0.9
Haa	4.3	0.0	0.0	0.2	0.3	0.7	1.0	2.2
Lhuntse	7.2	0.0	0.1	0.5	1.0	1.4	1.2	4.2
Mongar	4.9	0.2	0.9	1.3	1.1	0.8	0.5	4.8
Punakha	2.4	0.0	0.0	0.4	0.6	0.5	0.4	2.0
Paro	3.2	0.0	0.0	0.0	0.2	0.8	0.8	1.8
Pemagatshel	1.3	0.1	0.5	0.5	0.2	0.0	0.0	1.3
Samdrup Jongkhar	5.8	1.5	1.6	1.3	0.8	0.4	0.1	5.7
Samtse	3.9	0.7	1.0	1.0	0.7	0.4	0.1	3.9
Sarpang	5.7	1.8	1.7	1.2	0.8	0.2	0.0	5.7
Thimphu	4.8	0.0	0.0	0.0	0.2	0.8	0.9	2.0
Trashigang	5.7	0.0	0.3	0.9	1.3	1.2	1.0	4.7
Trashi Yangtse	3.6	0.0	0.1	0.2	0.6	0.8	0.7	2.4
Trongsa	4.5	0.0	0.1	0.5	0.9	1.3	1.0	3.7
Tsirang	1.6	0.1	0.5	0.5	0.3	0.1	0.1	1.6
Wangdue Phodrang	10.1	0.0	0.3	0.9	1.4	1.8	1.9	6.3
Zhemgang	5.3	0.5	1.4	1.5	0.9	0.5	0.3	5.2
Bhutan	100.0	5.3	9.8	12.6	13.4	14.3	13.2	68.6

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TABLE 5.4 (contd.)
PERCENTAGE OF TOTAL AREA OF BHUTAN BY DZONGKHAG BY ALTITUDE ZONES, 1995

Dzongkhag	Area	Altitude zones (metres)							Total area (%)
		0-3600	3600-4200	4200-4800	4800-5400	5400-6000	6000-6600	>6600	
Bumthang	6.8	2.5	1.7	1.2	1.1	0.1	0.0	0.0	6.8
Chhukha	4.5	4.3	0.1	0.0	0.0	0.0	0.0	0.0	4.5
Dagana	3.5	3.3	0.1	0.0	0.0	0.0	0.0	0.0	3.4
Gasa	11.0	0.9	1.2	2.4	3.1	2.3	0.8	0.2	11.0
Haa	4.3	2.2	1.2	0.7	0.1	0.0	0.0	0.0	4.3
Lhuntse	7.2	4.2	1.1	1.2	0.6	0.0	0.0	0.0	7.2
Mongar	4.9	4.8	0.1	0.0	0.0	0.0	0.0	0.0	4.9
Punakha	2.4	2.0	0.3	0.1	0.0	0.0	0.0	0.0	2.4
Paro	3.2	1.8	0.6	0.7	0.1	0.0	0.0	0.0	3.2
Pemagatshel	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3
Samdrup Jongkhar	5.8	5.7	0.0	0.0	0.0	0.0	0.0	0.0	5.8
Samtse	3.9	3.9	0.0	0.0	0.0	0.0	0.0	0.0	3.9
Sarpang	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	5.7
Thimphu	4.8	2.0	0.9	1.3	0.5	0.1	0.0	0.0	4.8
Trashigang	5.7	4.7	0.9	0.1	0.0	0.0	0.0	0.0	5.7
Trashi Yangtse	3.6	2.4	0.6	0.5	0.1	0.0	0.0	0.0	3.6
Trongsa	4.5	3.7	0.6	0.2	0.0	0.0	0.0	0.0	4.5
Tsirang	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Wangdue Phodrang	10.1	6.3	1.3	1.3	1.1	0.1	0.0	0.0	10.1
Zhemgang	5.3	5.2	0.1	0.0	0.0	0.0	0.0	0.0	5.3
Bhutan	100.0	68.6	10.9	9.9	6.8	2.7	0.9	0.2	99.9

Source: PPD, Ministry of Agriculture, Thimphu.

TABLE 5.5
AVERAGE TEMPERATURE (DEGREE CENTIGRADE) RECORDS FROM 1985 TO 2004

(Degree Celsius)

Dzongkhag	Temperature	Month											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bumthang	Maximum	11	12	15	18	20	21	22	22	21	19	16	13
	Minimum	-2	0	3	5	9	13	14	14	12	8	2	-1
	Average	5	6	9	12	14	17	18	18	17	13	9	6
Chhukha	Maximum	14	15	17	20	22	24	23	23	23	21	19	15
	Minimum	6	7	9	12	14	16	15	15	14	12	10	7
	Average	10	11	13	16	18	20	19	19	19	17	15	11
Dagana	Maximum	12	13	17	20	22	24	24	23	23	21	18	15
	Minimum	7	7	10	13	15	17	18	17	17	15	12	9
	Average	9	10	13	16	18	20	21	20	20	18	15	12
Gasa	Maximum	10	9	13	15	17	20	21	21	20	18	16	14
	Minimum	-1	0	3	6	8	11	13	13	12	9	5	0
	Average	4	5	8	10	13	15	17	17	16	14	10	7
Haa	Maximum	10	11	13	15	17	19	20	20	18	17	14	12
	Minimum	-4	-2	1	4	9	13	14	14	12	7	1	-3
	Average	3	4	7	10	13	16	17	17	15	12	7	5
Lhuntse	Maximum	16	17	21	24	26	27	28	28	27	25	21	18
	Minimum	4	6	9	10	12	16	17	17	16	12	8	5
	Average	10	12	15	17	19	21	22	22	22	19	15	12
Mongar	Maximum	16	19	22	24	26	27	26	27	27	24	21	18
	Minimum	6	8	11	14	16	18	19	19	18	15	11	8
	Average	11	13	16	19	21	23	23	23	22	20	16	13
Punakha	Maximum	18	20	22	25	27	29	29	29	28	27	23	20
	Minimum	6	8	11	14	17	19	20	19	19	18	12	8
	Average	12	14	16	19	22	24	24	24	24	22	18	14
Paro	Maximum	12	14	17	20	23	24	25	25	23	20	16	13
	Minimum	2	3	6	10	13	15	17	16	15	11	6	3
	Average	7	9	12	15	18	20	21	21	19	15	11	8
Pemagatshel	Maximum	16	17	20	22	24	25	26	26	25	24	22	18
	Minimum	6	7	10	12	13	16	17	17	15	13	10	7
	Average	11	12	15	17	19	21	22	21	20	19	16	13
Samdrup Jongkhar	Maximum	23	24	27	29	30	31	31	32	30	29	28	24
	Minimum	14	16	18	20	22	24	25	24	24	22	19	16
	Average	18	20	22	24	26	27	28	28	27	25	23	20

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TABLE 5.5(contd.)
AVERAGE TEMPERATURE (DEGREE CENTIGRADE) RECORDS FROM 1985 TO 2004

(Degree Celsius)

Dzongkhag	Temperature	Month											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Samtse	Max	21	23	26	28	29	29	28	29	28	27	26	23
	Min	14	16	18	21	22	24	23	24	23	22	19	16
	Ave	17	19	22	25	25	27	26	26	26	24	22	19
Sarpang	Max	23	23	26	29	29	30	30	31	30	29	27	24
	Min	12	14	17	20	21	22	24	24	23	21	18	14
	Ave	18	18	21	24	25	26	27	27	26	25	23	19
Thimphu	Max	14	16	19	22	24	26	27	28	26	24	20	16
	Min	0	2	5	9	12	16	17	17	16	11	5	1
	Ave	7	9	12	15	18	21	22	22	21	18	13	9
Trashigang	Max	16	19	23	25	26	27	28	27	27	26	23	20
	Min	5	7	11	13	16	18	19	18	18	15	11	7
	Ave	11	13	17	19	21	23	23	23	22	20	17	14
Tashi Yangtse	Max	13	15	17	20	22	24	24	25	24	22	19	15
	Min	4	6	8	11	14	17	19	18	17	13	9	5
	Ave	9	10	13	16	18	21	22	21	21	17	14	10
Trongsa	Max	15	16	19	21	22	24	25	25	24	22	19	17
	Min	3	4	8	10	12	15	16	16	16	12	8	4
	Ave	9	10	13	16	17	20	21	21	20	17	13	11
Tsirang	Max	14	15	18	20	22	23	23	24	23	22	20	16
	Min	5	6	10	13	16	18	18	18	17	14	10	7
	Ave	9	11	14	17	19	20	21	21	20	18	15	11
Wangduephodrang	Max	17	19	22	25	27	29	28	28	27	26	23	20
	Min	5	8	11	14	17	20	20	20	19	16	10	6
	Ave	11	13	17	20	22	24	24	24	23	21	16	13
Zhemgang	Max	12	13	15	18	20	21	22	22	21	20	17	14
	Min	5	6	9	12	15	17	18	18	17	14	10	7
	Ave	8	9	12	15	17	19	20	20	19	17	13	10

Source: Council for Renewal Natural Research of Bhutan, MoA, Thimphu.

TABLE 5.6
TOTAL MONTHLY RAINFALL AT EXISTING STATIONS IN EACH DZONGKHAG, BHUTAN, 2004

(Millimeter)

Dzongkhag and Station	Month												Total rain fall
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Bumthang													
Chamkhar	25.5	0.0	7.0	130.4	85.6	156.6	137.5	117.5	63.1	190.8	0.0	0.0	914.0
Gyetsa	8.0	0.0	12.4	86.7	101.5	166.7	177.2	79.2	26.3	86.9	4.0	0.0	748.9
Chhukha													
Chhukha	64.8	32.9	38.6	143.8	195.6	192.8	369.1	144.2	112.8	87.9	2.5	0.0	1,385.0
Gedu	57.5	84.4	129.4	348.8	1,093.2	407.6	1,304.6	298.8	223.4	237.3	0.0	8.0	4,193.0
Phuentsholing	30.0	73.2	38.2	279.8	697.5	1,215.0	1,364.3	559.2	407.6	342.8	0.0	27.2	5,034.8
Tala	20.0	8.5	81.0	327.4	657.1	344.8	879.4	282.0	365.4	190.4	0.0	0.0	3,156.0
Dagana													
Dagadzong	26.6	9.5	56.8	74.2	56.8	192.2	299.6	91.7	91.8	136.3	6.5	0.0	1,042.0
Drujeygang	39.1	2.1	25.2	104.4	147.9	326.1	499.0	25.8	152.7	215.2	0.0	0.0	1,537.5
Tashithang	42.0	0.0	49.0	95.0	135.0	271.0	455.0	116.0	219.0	126.0	0.0	0.0	1,508.0
Gasa													
Gasa	32.0	65.8	56.1	55.4	185.8	320.2	425.2	367.0	85.0	90.2	14.4	25.9	1,723.0
Haa													
Namjeyling	31.4	2.8	27.4	45.9	35.6	131.8	142.3	143.9	79.0	88.4	0.0	0.0	728.5
Lhuntse													
Khomachu	10.2	3.8	15.6	144.0	46.6	88.4	108.0	71.6	61.4	95.4	7.0	0.0	652.0
Autsho	24.3	3.8	25.2	85.2	76.8	165.2	195.0	97.6	117.0	147.0	8.0	0.0	945.0
Dungkhar	13.2	12.8	53.3	133.5	55.6	156.1	156.7	132.7	168.7	160.5	0.0	0.0	1,043.1
Tangmachu	19.0	10.8	36.3	148.9	44.7	85.3	145.7	100.4	83.4	149.0	0.0	0.0	823.5
Mongar													
Mongar	9.8	0.0	18.4	79.6	103.2	73.6	336.9	6.4	29.2	115.1	2.6	0.0	774.8
Lingmethang	12.6	1.0	23.2	113.6	92.8	218.4	329.8	20.4	52.0	154.6	3.6	0.0	1,022.0
Yadi	18.7	1.6	22.7	158.7	103.1	195.6	345.0	38.0	96.7	185.5	0.1	0.0	1,165.7
Paro													
Paro (DSC)	0.0	42.0	14.9	23.3	48.4	59.4	126.2	103.7	67.1	58.7	0.0	0.0	543.7
Betikha	30.6	58.0	112.3	646.0	428.0	466.0	686.0	360.0	77.0	430.0	0.0	0.0	3,293.9
Drugyal Dzong	0.0	0.0	0.0	33.0	42.0	153.8	146.5	215.0	104.5	77.0	0.0	0.0	771.8
Pemagatshel													
Pemagatshel	12.2	14.4	98.5	277.2	304.1	470.5	717.5	73.2	133.4	199.3	1.8	3.0	23.5
Dungmain	0.0	67.3	113.0	388.3	332.8	717.5	1,363.0	124.1	176.0	172.0	1.0	2.0	3,457.0
Yurung	-	-	103.0	311.0	493.3	428.8	1,223.0	76.9	168.0	264.4	0.0	3.0	3,071.4
Punakha													
Punakha	10.7	2.0	19.3	23.5	97.5	113.8	74.4	67.8	63.3	56.8	1.1	0.0	530.2
Shelgana	16.7	2.0	17.0	118.1	174.8	201.0	229.2	246.2	77.7	106.2	0.0	0.0	1,188.9
Samdrup Jongkhar													
Airong	13.1	103.4	249.2	404.4	560.6	916.4	1,887.2	493.1	451.8	225.6	3.4	1.2	5,309.4
Dechenling	20.0	59.0	149.5	283.0	500.0	731.0	1,412.9	321.6	478.2	208.3	0.0	3.6	4,167.1
Deothang	12.1	43.3	186.8	425.3	694.4	926.7	1646.2	323.5	487.5	360.8	0.0	17.6	5,124.2
Samtse													
Tendu	82.0	40.2	94.2	173.2	239.5	402.2	785.3	522.0	273.6	106.9	1.4	0.0	2,720.5
NIE	30.4	10.6	56.8	189.4	573.6	963.8	1,251.0	800.0	602.4	323.6	43.8	25.2	4,870.6
Sipsu	54.6	12.8	81.6	419.4	344.8	881.2	1550.6	890.6	341.3	236.1	13	0	4,826.0

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TABLE 5.6 (contd.)
TOTAL MONTHLY RAINFALL AT EXISTING STATIONS IN EACH DZONGKHAG, BHUTAN, 2004

(Millimeters)

Dzongkhag and Station	Month												Total rain fall
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thimphu													
Gidakom	23.8	0.0	10.9	40.7	20.8	67.4	99.5	98.6	35.8	35.8	0.0	0.0	433.3
Simtokha	21.5	6.5	6.4	30.0	38.0	116.2	114.6	142.5	18.8	48.3	0.0	0.0	542.8
Dochula	35.0	10.5	34.4	37.8	146.0	353.8	392.2	256.9	137.8	102.5	3.7	0.0	1,510.6
Sarpang													
Bhur	16.4	198.8	309.6	494.5	765.3	1,278.5	1,972.7	833.7	983.8	304.6	0.0	1.9	7,159.8
Sarpang	15.6	33.7	118.1	386.7	901.9	1,237.7	1,764.8	543.0	688.8	379.9	9.1	2.3	6,081.6
Trashigang													
Kanglung	13.5	2.0	22.4	185.9	129.4	214.9	516.0	91.3	104.5	202.2	0.0	0.0	1,482.1
Khaling	25.0	22.0	62.2	355.9	308.2	268.5	666.0	132.5	138.4	212.9	6.0	8.0	2,205.6
Radhi	0.0	0.0	21.5	217.8	134.9	230.0	414.0	275.4	125.6	184.0	0.0	0.0	1,603.2
Thrimshing	18.8	33.0	48.3	316.1	382.4	264.0	785.1	133.6	90.1	183.6	7.8	1.8	2,264.6
Wamrong	7.3	6.8	59.9	216.4	357.2	281.1	1,545.9	182.2	273.4	347.6	0.0	3.4	3,281.2
Tashi Yangtse													
Tashi Yangtse	14.8	6.8	16.2	125.6	85.4	193.0	273.1	183.2	99.4	139.6	0.0	0.0	1,137.1
Yallang	30.5	3.4	44.0	363.3	134.1	220.4	360.4	218.0	85.4	190.2	6.6	0.0	1,137.1
Trongsa													
Kuengarabten	17.5	2.5	4.0	53.1	105.4	193.6	232.3	215.7	200.0	40.5	0.0	0.0	1,064.6
Langthel	20.0	0.0	3.2	42.0	51.0	52.0	112.2	62.0	56.0	6.3	0.0	0.0	404.7
Trongsa	25.4	8.2	45.8	164.2	145.3	193.0	280.4	256.6	121.7	170.0	6.5	1.2	1,418.3
Tsirang													
Damphu	16.4	7.8	39.9	147.3	112.5	421.4	458.6	117.3	105.3	159.0	0.0	0.5	1,586.0
Sunkosh Dobani	36.8	4.0	19.8	130.5	91.0	262.4	392.8	91.1	30.7	140.7	0.0	0.0	1,199.8
Wangdue													
Nobding	13.2	10.5	13.8	59.3	102.2	202.1	182.0	216.7	118.6	75.4	6.8	0.0	1,000.6
Phobjikha	10.4	4.6	27.8	89.3	79.1	145.3	236.4	177.5	94.4	121.6	7.4	0.8	994.6
Samtengang	18.0	4.3	17.4	133.0	95.4	73.7	220.6	105.6	48.2	90.6	0.8	0.0	807.6
Wangdue CARD	0.0	5.6	8.7	27.3	52.4	77.6	121.4	86.2	78.8	79.2	0.0	0.0	537.2
Zhemgang													
Buli	22.3	15.5	23.6	261.5	239.1	432.8	803.2	231.5	108.1	209.6	0.0	0.0	2,347.2
Yebilaptsa	27.4	5.8	20.2	194.6	208.8	416.6	727.0	95.4	150.0	192.6	0.0	0.0	2,038.4
Zhemgang	27.4	6.4	33.4	153.1	212.3	335.8	430.0	98.4	176.2	123.6	0.8	0.0	1597.4

Source: Meteorology Section, DoE, M TI

TABLE 5.7
NUMBER OF AGRICULTURE RESEARCH AND EXTENSION FACILITIES, BHUTAN 2004

Infrastructure	Numbers
RNR (Common services)	
National Resourse Training Institute (NRTI)	1
RNR Extension Centres	85
RNR Research Centres	4
RNR Research sub-stations	6
Soil and Plant Analytical Laboratory	1
Agriculture	
Agriculture Extension Centres	65 (m)
Agriculture Seed Production Farms	10
Farm Mechanization Centres	3
Farm Mechanization Training Centres	1
National Mashroom Centres	1
Plant Protection Centres	1
Animal Husbendry	
Livestock Extension Centres	58 (n)
Regional Veterinary Laboratories	4
Satellite Veterinary Laboratories	3
Veterinary Hospital (including Thimphu Hospital)	20
Livestock Farms	
Fodder Seed Production Centres	11
National Artificial Insemination programme	1
Pheasant Rearing Centre	1
Royal Veterinary Epidemiology Centre	..
Sub-Tropical Fodder Seed Production sub-centres	1
Vaccine Production Centres	1
Forestry	
Beat Offices	76
Forest Training Institute	1
Nature Study Centre	1
Range Offices	36
Territorial Division HQs(DFO)	12

Source: PPD, Ministry of Agriculture, Thimphu.

TABLE 5.8
IRRIGATION CHANNEL CONSTRUCTED IN DZONGKHAGS FROM 2001/02 TO 2004/05

Dzongkhag	New Construction Year (Km)				Total Km	Renovation Year (Km)				Total Km
	2001/02	2002/03	2003/04	2004/05		2001/02	2002/03	2003/04	2004/05	
Bumthang	4.72	0.00	3.00	0.00	7.72	0.00	0.00	0.00	4.00	4.00
Chhukha	1.50	0.00	1.84	0.00	3.34	3.78	0.00	4.10	3.94	11.82
Dagana	0.00	0.00	4.00	4.00	8.00	2.20	0.00	0.00	0.00	2.20
Gasa	1.60	0.00	0.00	0.00	1.60	0.00	0.00	0.00	16.00	16.00
Haa	0.00	0.73	1.00	0.00	1.73	4.95	0.00	3.00	2.60	10.55
Lhuntse	4.25	0.00	9.80	4.30	18.35	6.00	0.00	16.87	24.00	46.87
Mongar	0.00	2.10	0.00	5.10	7.20	0.00	0.64	4.45	12.32	17.41
Paro	2.00	2.00	3.00	4.50	11.50	0.00	3.50	15.50	19.88	38.88
Pemagatshel	0.00	0.00	0.00	1.50	1.50	0.00	0.00	0.00	7.00	7.00
Punakha	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.75	34.59	70.34
Samdrup Jongkhar	0.00	0.00	0.00	0.00	0.00	13.19	11.52	18.01	4.71	47.43
Samtse	0.00	0.00	4.70	10.00	14.70	0.00	0.00	11.00	10.00	21.00
Sarpang	0.00	0.00	13.70	9.00	22.70	12.20	3.50	18.50	19.50	53.70
Thimphu	3.00	2.00	0.00	3.00	8.00	11.00	6.50	4.00	7.00	28.50
Trashigang	0.00	0.00	0.00	14.50	14.50	18.71	4.80	1.50	2.60	27.61
Trashi Yangtse	4.00	4.03	5.04	1.00	14.07	17.30	0.00	5.30	13.50	36.10
Trongsa	0.00	0.00	0.00	12.50	12.50	0.00	0.00	12.00	12.00	24.00
Tsirang	0.00	0.00	0.00	0.00	0.00	1.20	0.00	3.75	12.88	17.83
Wangdue Phodrang	0.00	0.00	0.00	0.00	0.00	6.00	0.00	33.00	15.05	54.05
Zhemgang	2.92	3.77	0.00	3.00	8.77	8.60	0.00	7.00	12.80	28.40
Bhutan	23.99	14.63	46.08	72.40	156.18	105.13	30.46	193.73	234.37	563.69

Source: Department of Agriculture, MoA, Thimphu.

TABLE 5.9
QUANTITY OF PESTICIDES SUPPLIED TO FARMERS, BHUTAN 2000/01 TO 2004/05

(Kilogram or Litre)

Period	Insect-icides	Fungi-cides	Herbi-cides	Acari-cides	Rodenti-cides	Others (Non-toxic)	Total
2000/01	2,775.4	1,713.2	1,829.0	5.3	31.0	8,044.0	14,397.9
2001/02	3,714.0	1,858.9	807.0	2.0	70.5	9,073.0	15,525.4
2002/03	5,543.8	1,933.6	689.0	17.0	56.4	9,342.7	17,582.5
2003/04	13,074.3	2,888.3	874.0	9.0	64.7	10,052.4	26,962.7
2004/05	2,600.0	2,460.0	850.0	50.0	10.0	10,505.0	16,475.0

Note:
Others inlude Tree spray oil, Linseed oil, protein Hydruolysate, Sandovit

Source: Department of Agriculture, MoA, Thimphu.

TABLE 5.10
LAND UNDER AGRICULTURAL USE BY DZONGKHAG, BHUTAN, 1995

('000 Acres)

Dzongkhag	Wet land	Dry land	Tsheri pangshing	Orchard & plantation	Mixed plantation	Total area
Bumthang	0.20	13.63	0.05	0.02	0.05	13.96
Chhukha	3.80	14.05	4.50	1.04	18.97	42.36
Dagana	5.24	11.81	11.53	3.78	14.94	47.30
Gasa	0.37	0.37	0.32	..	0.82	..
Haa	0.25	5.51	1.95	0.27	0.20	8.18
Lhuntse	2.32	5.51	8.13	..	15.31	..
Mongar	1.56	17.49	14.57	..	13.36	..
Paro	5.80	9.04	0.07	1.28	3.14	19.34
Pemagatshel	..	7.85	49.25	0.02	0.74	..
Punakha	8.03	1.04	0.02	0.07	2.27	11.44
Samdrup Jongkhar	5.41	33.37	47.52	0.25	17.71	104.26
Samtse	15.51	17.54	6.64	3.43	21.71	64.84
Sarpang	11.19	17.12	8.72	1.43	30.78	69.23
Thimphu	3.98	2.82	..	1.63	2.42	..
Trashigang	4.10	39.99	23.24	..	12.67	..
Trashi Yangtse	4.99	11.51	2.89	..	8.35	..
Trongsa	4.87	4.72	9.04	0.57	7.19	26.38
Tsirang	5.66	10.65	4.62	0.17	13.41	34.51
Wangdue Phodrang	9.76	8.55	0.20	0.02	4.00	22.53
Zhemgang	2.74	8.47	24.87	0.07	19.54	55.70
Bhutan	95.76	241.02	218.15	14.08	207.58	776.59

Source: PPD, MoA, Thimphu

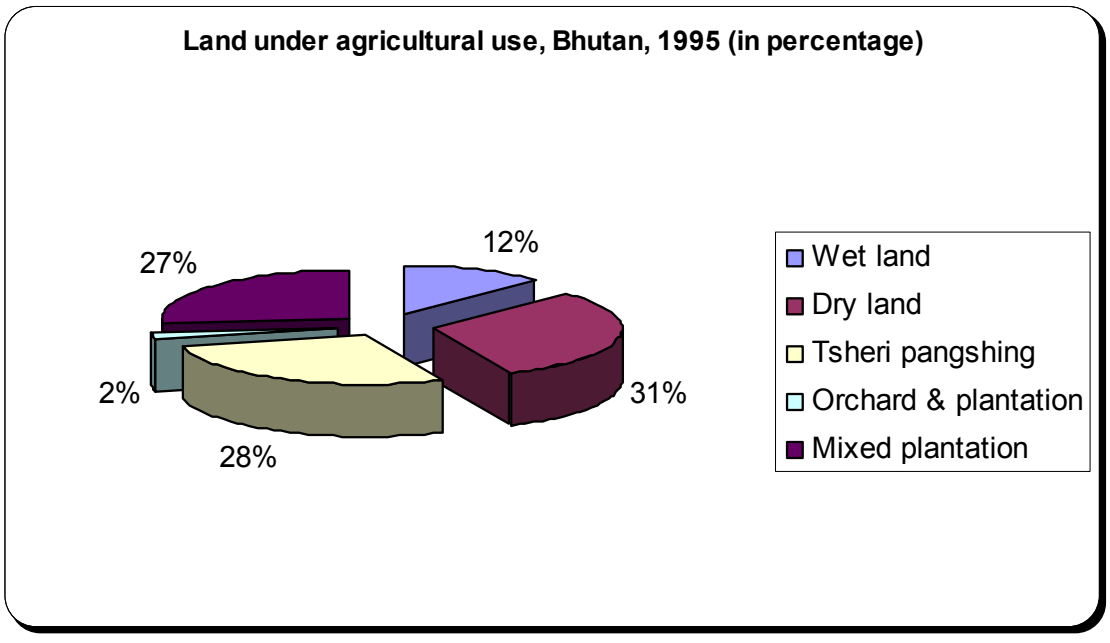

TABLE 5.11
CULTIVATED AREA, PRODUCTION AND YIELD OF MAJOR CROPS BY DZONGKHAG, BHUTAN, 2003

Dzongkhag	Wheat			Barley		
	Area (acre)	Production (Kg)	Yield (Kg/acre)	Area (acre)	Production. (Kg)	Yield (Kg/acre)
Bumthang	614	297,591	484	57	31,091	547
Chhukha	804	540,118	672	55	55,726	1017
Dagana	42	10,452	247	24	17,559	730
Gasa	85	58,744	687	101	80,970	800
Haa	771	419,109	544	10	17,491	1755
Lhuntse	52	24,285	466	-	-	-
Mongar	335	222,691	665	412	288,483	700
Paro	1,052	593,715	564	48	44,436	929
Pemagatshel	83	31,815	382	21	13,029	631
Punakha	920	653,578	710	21	20565	967
Samdrup Jongkhar	203	87,299	430	34	22,955	666
Samtse	391	185,653	475	79	74,249	938
Sarpang	22	23,795	1091	39	16,039	409
Thimphu	489	246,669	505	8	5,871	750
Trashigang	189	51,840	275	80	64,041	798
Trashi Yangtse	455	375,220	825	187	140,458	750
Trongsa	154	89,944	585	19	32816	1741
Tsirang	1,393	737,377	529	130	84,117	650
Wangdue Phodrang	20	18,838	937	10	5,189	520
Zhemgang	191	94,673	497	-	-	-
Bhutan	8,265	4,763,406	11570	1,335	1,015,085	15298

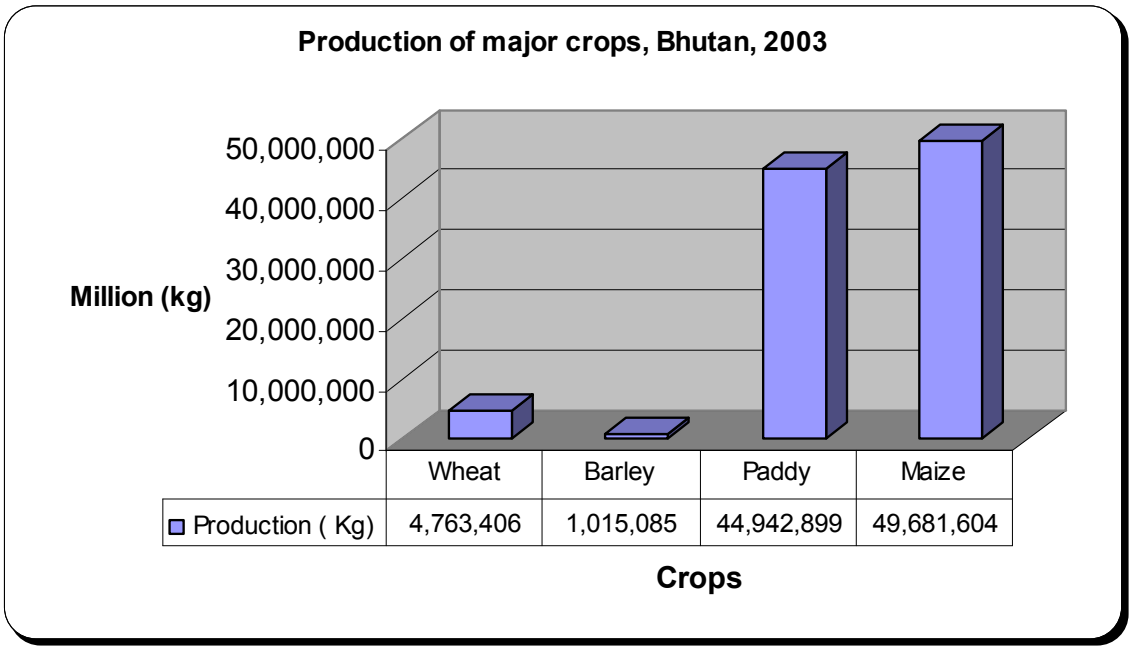

TABLE 5.11 (contd.)
CULTIVATED AREA, PRODUCTION AND YIELD OF MAJOR CROPS BY DZONGKHAG, BHUTAN, 2003

Dzongkhag	Paddy			Maize		
	Area (acre)	Production. (Kg)	Yield (Kg/acre)	Area (acre)	Production. (Kg)	Yield (Kg/acre)
Bumthang	204	71,968	352	75	29,486	391
Chhukha	2,164	1,765,180	816	4,878	3,543,479	726
Dagana	2,991	2,153,568	720	4,631	2,764,234	597
Gasa	248	215,959	871	10	5507	534
Haa	180	151,496	843	138	73,310	531
Lhuntse	1,501	1,801,922	1200	2,038	2,163,956	1,062
Mongar	1,348	1,396,422	1036	6,802	7,953,421	1,169
Paro	2,950	3,860,969	1,309	14	13,237	962
Pemagatshel	60	35,361	587	2,395	1,939,432	810
Punakha	4,594	5,395,794	1,175	235	241,323	1,028
Samdrup Jongkhar	2,233	1,582,432	709	12,178	4,483,844	368
Samtse	7,267	4,772,358	657	9,723	4,780,299	492
Sarpang	5,695	4,675,935	821	6,771	3,784,790	559
Thimphu	1632	1,904,105	1,167	147	48,738	331
Trashigang	2,851	3,224,347	1,131	8,708	8,913,451	1,024
Trashi Yangtse	1,710	1,436,317	840	865	944,712	1,092
Trongsa	4,158	3,331,304	801	4,634	3,311,072	715
Tsirang	3,790	3,817,846	1,007	150	118,803	791
Wangdue Phodrang	1,832	2,017,277	1,101	2,560	2,685,704	1,049
Zhemgang	1,264	1,332,339	1,054	2,493	1,882,806	755
Bhutan	48,672	44,942,899	18,197	69,445	49,681,604	14,986

Source: PPD, MoA

TABLE 5.12
QUANTITY OF POTATO SEED PLANTED AND PRODUCTION BY VARIETY AND REGION, 1992/93 TO 1994/95

(Metric ton)

Location/region	Desiree			K. Jyoti			Yusikap		
	1992-1993	1993-1994	1994-1995	1992-1993	1993-1994	1994-1995	1992-1993	1993-1994	1994-1995
Quantity planted	161.1	156.4	156.1	95.2	82.5	75.4	90.7	86.3	86.0
Phujikha farm	8.2	6.7	6.7	4.4	4.7	1.3	4.7	4.8	4.8
Trashigang	18.4	20.3	20.2	35.0	34.5	33.3	45.5	35.2	35.1
Pemagatshel	4.0	4.0	4.0	14.0	14.0	13.8	10.0	10.0	10.0
Bumthang	32.6	31.7	31.7	22.0	18.9	17.0	21.4	20.0	20.0
Phubjikha	98.0	93.7	93.5	19.9	10.5	10.2	9.2	16.4	16.2
Quantity produced	414.2	414.9	447.0	216.7	188.8	156.6	238.0	237.9	240.7
Phujikha farm	33.5	33.5	36.0	11.4	11.4	15.8	34.0	34.0	28.3
Trashigang	15.7	15.7	41.6	42.9	42.9	67.7	95.4	95.3	93.1
Pemagatshel	10.7	10.7	8.2	28.7	28.7	30.9	22.1	22.1	21.0
Bumthang	74.1	74.1	86.1	84.9	57.1	13.3	53.2	53.2	56.6
Phubjikha	280.2	281.0	275.3	48.8	48.8	29.0	33.4	33.4	41.9
Seed to production ratio	2.6	2.7	2.9	2.3	2.3	2.1	2.6	2.8	2.8
Phujikha farm	4.1	5.0	5.3	2.6	2.4	12.4	7.2	7.1	5.9
Trashigang	0.9	0.8	2.1	1.2	1.2	2.0	2.1	2.7	2.7
Pemagatshel	2.7	2.7	2.0	2.1	2.1	2.2	2.2	2.2	2.1
Bumthang	2.3	2.3	2.7	3.9	3.0	0.8	2.5	2.7	2.8
Phubjikha	2.9	3.0	2.9	2.5	4.7	2.9	3.6	2.0	2.6

Note:
The data remains the same for the year 2004 as they have not yet compiled the information for 2004. from RNR

Source: PPD, MoA, Thimphu

TABLE 5.13
NUMBER OF LIVESTOCK BY TYPE AND DZONGKHAG, BHUTAN, 2004

Dzongkhag	Local Cattle	Jersey	Yak	Horses	Brown Swiss	Sheep	Pigs	Poultry
Thimphu	4,523	1,129	4,136	466	*	<100	410	729
Paro	9,092	3,559	694	836	<100	*	2,294	5,485
Ha	7,373	1,862	1,402	647	<100	*	195	675
Chhukha	22,065	2,651	<100	242	<100	214	2,344	3,358
Samtse	30,694	1,514	*	160	<100	589	1,109	3,468
Punakha	9,086	1,356	*	187	<100	*	989	1,964
Gasa	812	137	2,889	677	<100	<100	<100	550
Wangdue	15,440	1,499	622	425	1,269	617	1,408	1,593
Tsirang	11,073	3,492	*	<100	<100	248	1,112	3,800
Dagana	13,317	2,060	*	<100	<100	<100	1,489	2,769
Bumthang	5,866	829	1,444	396	2,274	1,013	*	1,121
Trongsa	10,790	1,048	*	304	445	248	121	980
Zhamgang	9,021	977	*	291	*	*	584	887
Sarpang	27,070	2,485	*	<100	<100	186	1,091	5,156
Lhuentse	11,699	2,261	*	507	566	205	1,162	3,096
Mongar	22,846	3,868	*	1,088	344	155	2,393	3,854
Trashigang	22,840	2,800	7,832	772	<100	1,583	1,334	2,745
Yangtse	10,922	1,268	*	283	*	*	490	742
Pemagatshel	4,568	1,681	*	<100	*	*	149	1,118
S/Jongkhar	19,543	3,012	*	898	*	<100	920	1,115
Bhutan	268,641	39,489	19,100	8,479	5,219	5,304	19,622	45,204

Note:
* Represents either no data or not applicable. The figures represented by < 100 are added to the Bhutan figures.

Source: PPD,MoA, Thimphu

TABLE 5.14
NUMBER OF SELECTED LIVESTOCK BY BREED, BHUTAN, 2000 TO 2004

Type of livestock	2000	2004
Cattle	320,509.0	268641.0
Horse	23,329.0	8479.0
Sheep	22,880.0	5304.0
Pig	41,401.0	19622.0
Poultry	230,723.0	45204.0
Yak	34,928.0	19100.0
Buffalo	1,800.0	n.a
Goat	31,328.0	n.a

Source: PPD,MoA, Thimphu

TABLE 5.15
IMPORTS AND DISTRIBUTION OF FOOD ITEMS BY FOOD CORPORATION OF BHUTAN, 2001 TO 2004

Commodity	2001	2002	2003	2004
Imports				
Rice	6,599.0	7,434.0	18,262.3	7,187.9
Wheat	1,371.4	2,310.0	2,625.6	2,500.0
Sugar	3,154.7	1,924.5	1,180.0	1,966.0
Salt	0.0	162.9	694.5	140.0
Oil	162.2	379.9	558.7	198.1
Pulse	-	-	-	231.5
Maida	-	-	-	19.9
Sales				
Rice	5,877.8	8,059.6	8,984.6	15,985.1
Wheat	846.8	1,174.6	1,647.0	987.5
Sugar	3,266.0	2,332.0	1,148.0	2,106.2
Salt	45.6	122.5	353.9	401.8
Oil	200.5	377.5	421.5	458.6
Pulse	-	-	-	710.8
Maida	-	-	-	265.0

Source: Food Corporation of Bhutan, Phuentsholing.

TABLE 5.16

QUANTITY OF AGRICULTURAL PRODUCE HANDLED BY FOOD CORPORATION OF BHUTAN, 2001 TO 2004

Commodity	2001	2002	2003	2004
Potatoes	2,545.5	23,035.6	20,335.4	22834.9
Vegetables	1,654.2	2,227.4	1,783.1	1994.3
Apples	491.7	465.0	348.6	147.3
Oranges	4,639.8	2,065.3	2,878.1	2218.1
Cardamom	0.0	0.1	0.0	0.0
Ginger	479.5	514.5	265.9	156.4
Garlic	0.0	0.2	0.3	0.1
Arecanut	63.1	86.4	149.7	114.6
Supari(dried doma)	0.0	0.0	0.0	0.0
Dry chilli	4.4	12.2	5.9	4.2
Kidney bean(rajma)	0.0	50.2	23.1	48.7
Soya bean	169.8	17.3	31.7	60.9
Pulses	0.0	3.4	0.9	0.0
Mustard	0.0	0.0	0.0	0.0
Pipla (wild)	0.0	1.0	0.3	0
Chirota (wild)	1.2	0.0	0.0	0.0
Leshi	0.0	0.0	0.0	0.1
Lemon	3.2	1.1	0.0	0.0
Apricot	0.0	0.0	0.0	0.0
Peach	3.2	2.1	1.2	0.8
Plum	2.2	0.6	0.6	0.3
Pear	0.4	0.3	0.1	0.8
Dry bean	n.a	n.a	0.0	0

Note:

Source: Food Corporation of Bhutan, Phuentsholing.

TABLE 5. 17

QUANTITY AND VALUE OF FOREST PRODUCTS SUPPLIED BY TYPE AND USERS BHUTAN, 2002/03 TP 2004/05

User and product type	2002/03		2003/04		2004/05	
	Quantity	Value (Nu.)	Quantity	Value (Nu.)	Quantity	Value (Nu)
Rural population						
Trees (numbers)	31235.00	1249400.00	250857.00	10034280.00	3699.00	59470115 (a)
Poles (numbers)	70859.00	850308.00	2797443.00	6129122.00	2698.00	102524 (b)
Logged timber (cubic metre)	11229.27	68501.68	30148.04	4959194.00	10074.22	80983376.43 (c)
Firewood (cubic metre)	537288.00	202327.36	657643.50	6320338.00	40.44	20979.18 (d)
Charcoal (kg)	119489.00	155335.70	150.00	30.00	91846.00	440860.8 (e)
Bamboos (numbers)	3050.00	610.00	379564.00	493433.20	450277.00	20262465 (f)
Urban population						
Trees (number)	180.00	57600.00	190.00	275500.00	0.00	0.00
Poles (number)	7118.00	92534.00	24296.00	315848.00	0.00	0.00
Logged timber (cubic metre)	49175.00	786800.00	97499.34	1559989.44	51484.48	413866981.7 (g)
Firewood (cubic metre)	1082.00	16230.00	17723.00	265845.00	10489.03	5441184.31 (h)
Charcoal (kg)	9825.00	1965.00	10000.00	4000.00	0.00	0.00
Bamboos (numbers)	670349.00	871454.00	333433.00	26674.64	0.00	0.00
Government agencies						
Trees (numbers)	4005.00	1281600.00	6293.00	2013760.00	8579.66	137938189.80
Poles (numbers)	37368.00	298944.00	48593.00	631709.00	21101.00	801838.00
Logged timber (cubic metre)	2137.09	34193.58	9136.00	146176.00	17265.13	138788762
Firewood (cubic metre)	27088.94	406334.00	192061.30	2880919.50	17694.68	9179113.04
Charcoal (kg)					0.00	0.00
Bamboos (number)					0.00	0.00
Free of Royalty						
Trees (number)	1437.00		8086.00	..	2038.00	32765637.67
Poles (number)	403.00		9690.00	..	1599.00	60762.00
Logged timber (cubic metre)	181.65		3764.85	..	28.18	226521.70
Firewood (cubic metre)	669.31		5104.00	..	20485.08	10626632.68
Charcoal (kg)	..		..	..	0.00	0.00
Bamboos (number)	..		21600.00	..	200.00	9000.00
Bhutan						
Trees (number)	36857.00	2588600.00	265426.00	12323540.00	14316.66	230173942.20
Poles (number)	115748.00	1241786.00	2880022.00	7076679.00	25398.00	965124.00
Logged timber (cubic metre)	62723.02	889495.26	140548.23	6665359.44	78852.01	633865641.80
Firewood (cubic metre)	566128.25	624891.46	872531.80	9467102.50	27822.78	14433067.53
Charcoal (kg)	129314.00	157300.70	10150.00	4030.00	91846.00	440860.80
Bamboos (number)	673399.00	872064.00	734597.00	520107.84	450477.00	20271465.00

Note:

(a) Considering average selling price of Nu. 227.66/cft from sawmills

(b) Considering an average price of Nu. 38/piece

(c) Including timber supplied by FDCL

(d) Considering average selling price of Nu. 227.66/cft from sawmills

(e) Considering 4.80/kg of BCCL price

(f) Considering Market Value of 45/piece at an average

(g) Including timber supplied by FDCL

(h) Including timber supplied by FDCL

Source: Deptt. Of Forest, Ministry of Agriculture, Thimphu.

TABLE 5.18
DETAILS OF PROTECTED AREAS IN BHUTAN, BY YEAR OF ESTABLISHMENT AND AREA, 2004

Name of Area	Establishment year	Area (sq.Km)	Percent of total area
Existing Protected Areas			
Torsa Strict Nature Reserve	1993	651	5.62
Jigme Dorji National Park	1974	4,350	37.57
Jigme Singye Wangchuck National Park*	1993	1,730	14.94
Thrumshingla National Park	1993	905	7.82
Royal Manas National Park	1966	1,023	8.83
Sakteng Wildlife Sanctuary	1993	755	6.52
Bomdeling Wildlife Sanctuary	1993	1,504	13.51
Phibsoo Wildlife Sanctuary	1993	266	2.30
Khaling Wildlife Sanctuary	1993	334	2.88
Total		11578	
Biological Corridors	1999	3665	n.a

Note: * Previously known as Black Mountain National Park

Source: NCD, DoF, MoA, Thimphu.

TABLE 5.19
PRODUCTION OF LOGWOOD, 2000 TO 2002

Item	Units	2000	2002
Logwood	cft	48,205.7	2,443,720.0
Commercial logwood	cft	n.a	2,409,802.2
Construction and other uses	cft	43,592.4	n.a
Rural construction	cft	4,593.8	1,496,015.5
Urban construction	cft	19.5	154,857.8
Government construction	cft	n.a	126,587.6
Others	cft	n.a	273,899.7
Firewood	cft	n.a	2,339,923.1
Total		48,205.7	9,244,805.9

Notes:
1. Figures exclude collection of firewood by individuals
2. Production declined mainly because of road blokage during monsoon and shortage of labourers
3. Unit of measurement is in thousand of cubic feet

Source: Department of Forest, MoA, Thimphu.

CHAPTER 6

INDUSTRIES

The subject 'Industries' covers the whole range of industrial activities carried out by businesses in all fields including mining, manufacturing, wholesale and retail trade, and other service industries. In Bhutan, the industrial sector has until recently played a relatively small role in the economy of the kingdom.

The mining industry in Bhutan is as yet relatively undeveloped. The kingdom has significant deposits of a number of mineral resources, including limestone, coal, graphite, gypsum, slate and dolomite. Most mining activities are limited to relatively small operations, mainly involved in the mining of dolomite, gypsum, limestone, slate, coal, marbles, quartzite and talc.

The manufacturing industry is dominated by a small number of major operators such as the Penden Cement Plant, the Bhutan Board Products Ltd., the first chemical plant, Bhutan Carbide and Chemicals Ltd. established during 1988, the Bhutan Ferro Alloys Ltd.; and Bhutan Agro Industries Ltd. Besides these, there are a number of other small manufacturing plants concentrated in the food processing. Cottage industry also plays a prominent role with its good timber resources and favorable agricultural conditions. There is lot of scope for expansion of the manufacturing sector particularly in these areas.

As the industrial sector grows in Bhutan, statistics on industry will become increasingly important. The Department of Trade keeps a record of all industrial licenses and activities. Besides, Censuses of Manufacturing Industries conducted at regular intervals viz. Industrial Census of 1998 and 2001 have been the source of important information on Industries. For example, information on the number of industries in operation, types of industries, and employment in industries etc. presented in this chapter is the results from those Censuses.

According to the information collected in 2003, the number of industrial license holders increased from 523 to 730 in 2003, with more than 90% of the establishments operated by the private sectors. Most of the existing industrial establishments are small scale or cottage industries.

TABLE 6.1
NUMBER OF INDUSTRIAL ESTABLISHMENTS BY SECTOR, 2000 TO 2004

Sector	2000	2001	2002	2003	2004
Production & manufacturing	523	569	586	730	874
New registration	33	37	18	20	73
Existing establishments	490	532	568	710	801
Services	3,281	3,773	4,272	4478	5,468
New registration	303	422	430	288	662
Existing establishments	2,978	3,351	3,842	4,190	4,806
Contract	5,212	8,536	9,050	9,102	9,212
New registration	1,091	2,564	480	59	131
Existing establishments	4,121	5,972	8,570	9,043	9,081
All sectors	9,016	12,878	13,908	14,310	15,554

Source: Department of Industry, MTI, Thimphu.

TABLE 6.2
NUMBER OF LICENSED FIRMS IN MANUFACTURING AND MINING INDUSTRIES BY SECTOR, BHUTAN 2003 TO 2004

Industry	2003				2004			
	Public	Joint	Private	Total	Public	Joint	Private	Total
Mining	0	0	12	12	0	0	17	17
Manufacturing	..	..	..	..	..	..	..	..
Food processing/milling	4	1	150	155	4	1	157	162
Textiles and Clothing	0	0	1	1	..		1	1
Wood and Paper Products	2	2	337	341	2	2	364	368
Chemical Products	..	..	..	..	..	..	..	..
Mineral Products	0	2	41	43	0	2	47	49
Other	4	0	244	248	5	0	272	277
Total mining & manufacturing	10	5	785	800	11	5	858	874

Source: Department of Industry, MTI, Thimphu.

TABLE 6.3
NUMBER OF INDUSTRIES BY SECTOR, SIZE AND TYPE, BHUTAN, 2000 TO 2004

Industrial establishments	2000	2001	2002	2003	2004
Sector					
Private	8,959	12,807	13,833	14,627	15,489
Joint	23	24	24	15	15
Public	34	47	51	50	50
Size					
Large scale	39	41	44	43	47
Medium scale	43	44	50	36	43
Small scale	409	473	467	588	628
Cottage scale	878	3,784	4,277	4,945	5,624
Mini scale	2,435				
Other (Contract)	5,212	8,536	9,050	9,080	9,212
Type					
Production & Manufacturing	523	569	586	800	874
Agro based	109	116	121	155	162
Forest based	288	317	324	341	368
Mineral based	42	46	46	55	66
Others	84	90	95	249	278
Contract	5,212	8,536	9,050	9,080	9,212
Services	3281	3,773	4,272	4,812	5,468
All industries	9,016	12,878	13,908	14,692	15,554

Notes:
Mini scale classifaction discontinued and indutries falling under the scale are clubbed under cottage scale

Source: Department of Industry, MTI, Thimphu.

TABLE 6.4
NUMBER OF CONTRACT FIRMS BY TYPE, BY DZONGKHAG, BHUTAN, 2003

Dzongkhag	Class of contract firm				Total
	A	B	C	Petty	
Bumthang	1	3	4	210	218
Chhukha	38	19	122	508	687
Dagana	0	0	11	261	272
Gasa	0	0	0	30	30
Haa	0	5	43	150	198
Lhuntse	0	0	28	91	119
Mongar	3	0	75	274	352
Paro	0	10	64	327	401
Pemagatshel	0	4	17	156	177
Punakha	0	2	9	251	262
Samdrup Jongkhar	17	6	85	245	353
Samtse	0	1	44	205	250
Sarpang	7	3	31	380	421
Thimphu	127	90	511	2,857	3,585
Trashigang	15	16	78	344	453
Trashi Yangtse	1	0	44	90	135
Trongsa	0	0	35	135	170
Tsirang	0	0	5	115	120
Wangdue Phodrang	0	0	18	598	616
Zhemgang	0	0	2	259	261
Bhutan	209	159	1,226	7,486	9,080

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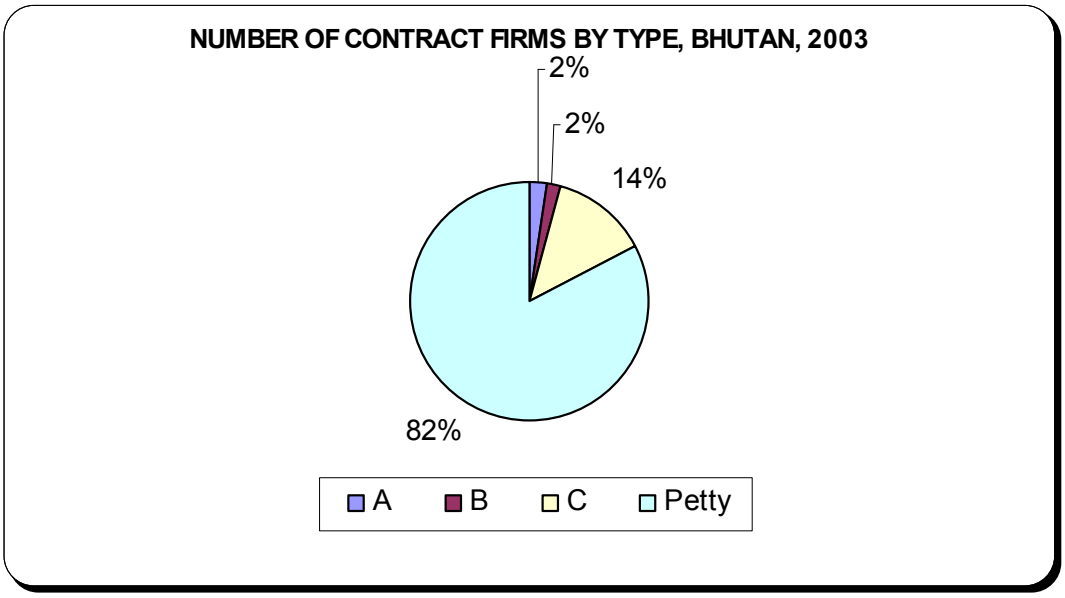


TABLE 6.4(contd.)

NUMBER OF CONTRACT FIRMS, BY TYPE, BY DZONGKHAG, BHUTAN, 2003

Dzongkhag	Scale of industry				Total
	Small	Medium	Large	Cottage	
Bumthang	1	3	5	214	223
Chhukha	38	19	122	517	696
Dagana	0	0	11	261	272
Gasa	0	0	0	30	30
Haa	0	5	43	163	211
Lhuntse	0	0	28	91	119
Mongar	3	0	75	276	354
Paro	0	10	64	331	405
Pemagatshel	1	4	18	162	185
Punakha	1	2	9	257	269
Samdrup Jongkhar	17	6	85	247	355
Samtse	0	1	44	205	250
Sarpang	7	3	31	381	422
Thimphu	127	90	512	2,924	3,653
Trashigang	15	16	78	346	455
Trashi Yangtse	1	0	44	92	137
Trongsa	0	0	35	138	173
Tsirang	0	0	5	116	121
Wangdue Phodrang	0	0	19	601	620
Zhemgang	0	0	2	260	262
Bhutan	211	159	1,230	7,612	9,212

Notes:

Sizes of establishments are determined by their input capitals. Cottage with Nu.1 or less Small is Nu. 1

Source: Department of Industry, MTI, Thimphu.

TABLE 6.5(a)
NUMBER OF INDUSTRIES BY TYPE, BY DZONGKHAG, BHUTAN, 2003

Dzongkhag	Agro based	Forest based	Mineral based	Services	Contract	Others	All types
Bumthang	8	18	0	133	218	8	385
Chhukha	26	33	7	662	687	44	1,459
Dagana	0	0	0	54	272	0	326
Gasa	0	0	0	1	30	0	31
Haa	1	13	0	71	198	0	283
Lhuntse	0	3	0	19	119	0	141
Mongar	6	18	1	135	352	2	514
Paro	7	39	4	255	401	12	718
Pemagatshel	2	7	9	42	177	0	237
Punakha	1	3	0	76	262	0	342
Samdrup Jongkhar	15	19	3	291	353	12	693
Samtse	13	8	10	229	250	9	519
Sarpang	37	15	4	278	421	5	760
Thimphu	22	113	12	1,993	3585	153	5,878
Trashigang	2	19	0	184	453	2	660
Trashi Yangtse	1	6	0	35	135	0	177
Trongsa	1	5	1	66	170	0	243
Tsirang	8	1	0	91	120	0	220
Wangdue Phodrang	2	9	4	140	616	1	772
Zhemgang	3	12	0	57	261	1	334
Bhutan	155	341	55	4,812	9080	249	14,692

.

Source: Department of Industry, MTI, Thimphu

TABLE 6.5(b)
NUMBER OF INDUSTRIES BY TYPE BY DZONGKHAG, BHUTAN, 2004

Dzongkhag	Agro based	Forest based	Mineral based	Services	Contract	Others	All types
Bumthang	9	19	0	153	223	8	412
Chhukha	28	34	9	688	696	48	1,503
Dagana	0	0	0	58	272	0	330
Gasa	0	0	0	1	30	0	31
Haa	1	19	0	81	211	0	312
Lhuntse	0	3	0	24	119	0	146
Mongar	7	19	1	189	354	2	572
Paro	7	49	5	329	405	13	808
Pemagatshel	2	7	10	53	185	0	257
Punakha	1	3	1	89	269	0	363
Samdrup Jongkhar	15	19	4	307	355	12	712
Samtse	14	8	12	240	250	9	533
Sarpang	37	17	4	299	422	5	784
Thimphu	24	117	15	2,310	3,653	176	6,295
Trashigang	2	19	0	202	455	2	680
Trashi Yangtse	1	6	0	41	137	0	185
Trongsa	1	6	0	80	173	0	260
Tsirang	8	1	0	99	121	0	229
Wangdue Phodrang	2	10	5	163	620	2	802
Zhemgang	3	12	0	62	262	1	340
Bhutan	162	368	66	5,468	9,212	278	15,554

Source: Department of Industry, MTI, Thimphu.

TABLE 6.6
PRODUCTION OF MINES AND MINERALS, BHUTAN, 2001 TO 2004

Minerals	2001	2002	2003	2004
Dolomite ('000 tonnes or mt)	338,846	388,056	367,402	452,336
Lime stone ('000 tonnes or mt)	514,976	506,268	551,525	560,807
Gypsum ('000 tonnes or mt)	100,907	105,658	122,829	131,236
Slate ('000 square feet)	0	6,100	57,970	126,789
Coal mines ('000 tonnes or mt)	84,596	88,567	66,324	29,631
Marble ('000 square feet)	4,993	3,207	6,228	3,385
Quartzite ('000 tonnes or mt)	47,511	47,464	52,058	42,599
Talc ('000 tonnes or mt)	13,528	23,118	23,101	39,797
Iron Ore ('000 mt)	0	0	0	-
Shale ('000 mt)	136	937	0	-
Const. Material ('000 mt)	10,375	319,702	316,068	250,632
Granite ('000 Square feet)	0	5559	11579	2151.73

Note:

Source: Department of Geology and Mines, MTI, Thimphu.

TABLE 6.7
PRODUCTION AND USE OF MINES AND MINERALS, BHUTAN, 2003 TO 2004

Minerals	2003			2004		
	Export	Domestic use	Total	Export	Domestic use	Total
Dolomite ('000 tonnes)	367402	0.00	367402	452273.43	63.00	452336.43
Lime stone ('000 tonnes)	26448	525076	551524	33759.4	527047.57	560806.97
Gypsum ('000 tonnes)	91932	30897	122829	103257.65	27978.76	131236.41
Coal mines ('000 tonnes)	24606	41718	66324	20361.86	9268.76	29630.62
Marble ('000 square feet)	0.00	6228	6228	1810.54	1574.39	3384.93
Slate ('000 square feet)	0.00	57970	57970	0.00	126788.72	126788.72
Quartzite ('000 tonnes)	3230	48827	52057	7223.04	35375.72	42598.76
Talc (tonnes)	23101	0.00	23101	39796.77	0.00	39796.77
Iron Ore ('000 mt)	0.00	0.00	0.00	0.00	0.00	0.00
Shale ('000 mt)	0.00	0.00	0.00	0.00	0.00	0.00
Stone - Const. Material ('000 mt)	42711	273356	316067	15986.19	234646.13	250632.32
Granite ('000 Square feet)	0.00	11579	11579	0.00	2151.73	2151.73

Source: Department of Gelogy and Mines, MTI, Thimphu.

TABLE 6.8
NUMBER OF ESTABLISHMENT BY TYPE OF INDUSTRY AND SECTOR, BHUTAN,

Type of Industry	Sole/proprietorship/ partnership	Private Company	Joint Venture	Government Company	All Sectors
Forest based industry	107	6	3	5	121
Agrobased industry	68	1	1	8	78
Mineralbased industry	15	10	3	2	30
Other based industry	62	2	1	5	70
All industries	252	19	8	20	299

Source:" Census of Manufacturing Industries 2001"

TABLE 6.9
DISTRIBUTION OF ESTABLISHMENT BY DZONGKHAGS, BHUTAN, 2000

Dzongkhag	Number of establishment	Percentage
Bumthang	16	5.4
Chukha	62	20.7
Dagana	n.a	n.a
Gasa	n.a	n.a
Haa	4	1.3
Lhuentse	1	0.3
Mongar	9	3.0
Paro	23	7.7
Pemagatshel	5	1.7
Punakha	2	0.7
Samdrup Jongkhar	13	4.3
Samtse	25	8.4
Sarpang	15	5.0
Thimphu	87	29.1
Trashigang	6	2.0
Trashi Yangtse	11	3.7
Trongsa	3	1.0
Tsirang	6	2.0
Wangdue Phodrang	7	2.3
Zhemgang	4	1.3
Bhutan	299	100

Source:" Census of Manufacturing Industries 2001"

TABLE 6.10

NUMBER OF ESTABLISHMENT BY SECTOR & SIZE OF EMPLOYMENT, BHUTAN, 2000

Legal status by industry	Total persons engaged				
	1-5	6-10	11-20	21-30	31-40
Sole proprietorship/partners	87	59	45	23	10
Forest-based industry	31	24	30	9	5
Agro-based industry	36	15	6	5	1
Mineral-based industry	1	1	3	3	-
Other based industry	19	19	6	6	4
Private Company	2	2	0	1	2
Forest-based industry	1	-	-	-	1
Agro-based industry	1	-	-	-	-
Mineral-based industry	-	1	-	1	1
Other based industry	-	1	-	-	-
Joint Venture	1	0	1	0	0
Forest based industry	-	-	-	-	-
Agro-based industry	1	-	-	-	-
Mineral-based industry	-	-	-	-	-
Other based industry	-	-	1	-	-
Government company	1	2	0	4	1
Forest-based industry	1	-	-	1	-
Agro-based industry	-	2	-	1	-
Mineral based industry	-	-	-	1	-
Other based industry	-	-	-	1	1
Total	91	63	46	28	13

Contd…

TABLE 6.10 (contd.)
NUMBER OF ESTABLISHMENT BY SECTOR & SIZE OF EMPLOYMENT, BHUTAN, 2000

Legal status by industry	Total persons engaged					
	41-50	51-100	101-200	201-300	300+	Total
Sole proprietorship/partners	6	12	7	3	0	252
Forest-based industry	1	5	1	1	-	107
Agro-based industry	2	1	2	-	-	68
Mineral-based industry	1	4	1	1	-	15
Other based industry	2	2	3	1	-	62
Private Company	1	3	2	3	3	19
Forest-based industry	-	2	-	2	-	6
Agro-based industry	-	-	-	-	-	1
Mineral-based industry	1	1	2	1	2	10
Other based industry	-	-	-	-	1	2
Joint Venture	0	2	0	1	3	8
Forest based industry	-	1	-	-	2	3
Agro-based industry	-	-	-	-	-	1
Mineral-based industry	-	1	-	1	1	3
Other based industry	-	-	-	-	-	1
Government Company	0	4	2	3	3	20
Forest-based industry	-	2	-	1	-	5
Agro-based industry	-	-	1	2	1	7
Mineral based industry	-	-	-	-	1	2
Other based industry	-	2	1	-	1	6
Total	7	21	11	10	9	299

Source:" Census of Manufacturing Industries 2001"

TABLE 6.11
NUMBER OF PERSONS ENGAGED IN INDUSTRIES BY EMPLOYMENT STATUS AND SEX, 2000

(Persons)

Type of industry	Male					
	All male	Proprietor	Employee	Casual	Skilled	Un-skilled
Forest based industry	3,877	78	1,512	812	943	532
Agrobased industry	1,327	58	324	320	332	293
Mineralbased industry	5,385	17	1,357	1,935	673	1,403
Other based industry	3,573	37	1,409	553	909	665
All activities	14,162	190	4,602	3,620	2,857	2,893

contd…

TABLE 6.11 (contd..)

NUMBER OF PERSONS ENGAGED IN INDUSTRIES BY EMPLOYMENT STATUS AND SEX, 2000

Type of industry	Female					
	All female	Proprietor	Employee	Casual	Skilled	Un-skilled
Forest based industry	551	18	185	138	70	140
Agrobased industry	854	22	59	366	52	355
Mineralbased industry	459	4	74	217	55	109
Other based industry	888	22	205	281	221	159
All activities	2,752	66	523	1,002	398	763

Source:" Census of Manufacturing Industries 2001"

TABLE 6.12

NUMBER OF PERSON ENGAGED IN INDUSTRIAL SECTORS BY EMPLOYMENTSTATUS AND SEX, BHUTAN 2000

Sector	Male					
	All male	Proprietor	Employee	Casual	Skilled	Unskilled
Sole proprietor	4,282	180	1,315	1,174	906	707
Private Company	2,406	7	601	648	707	443
Joint sector	3,842	3	1,079	1,232	455	1073
Government company	3,632	0	1,607	566	789	670
All Sectors	14,162	190	4,602	3,620	2857	2893

Contd...

TABLE 6.12(contd.)

NUMBER OF PERSON ENGAGED IN INDUSTRIAL SECTORS BY EMPLOYMENT STATUS AND SEX, BHUTAN 2000

Sector	Female					
	All female	Proprietor	Employee	Casual	Skilled	Unskilled
Sole proprietor	905	66	166	359	199	115
Private company	341	-	40	149	83	69
Joint sector	412	-	116	111	28	157
Government company	1,094	-	201	383	88	422
All Sectors	2,752	66	523	1,002	398	763

Source:" Census of Manufacturing Industries 2001"

CHAPTER 7

TRANSPORT AND COMMUNICATIONS

About two and half decades back, Bhutan had fragmented transport and communications network. An efficient road system for a landlocked country assumes paramount importance as it plays a crucial role in supporting all development activities and in stimulating domestic and international trade. The first appearance of motor vehicle was in 1962 and surface transport continues to be the main means of transport. The Bhutan Government Transport Service (BGTS) originally entrusted with goods transportation was restructured to concentrate on passenger transport. In 1985 the gradual privatization of the public transport services was achieved in 1990 with 21 operators managing a fleet of more than 100 buses on 73 routes. As of December 2004, there were 26,760 registered vehicles in Bhutan.

The Government in order to promote and develop the surface transport, with emphasis on safety, formulated the Roads Safety and Transport Act, which became operational since October 1997. In the last 25 years, tremendous achievements were made in establishing 4152.9 kilometers of motorable roads and several motorable bridges. In the difficult areas where the construction of motorable road has not yet begun, suspension bridges provide the vital transport links. Today the Department of Roads is responsible for the design and planning of roads and in setting standards for quality.

Druk Air, the national airline commenced providing services since February 1983 and was commercialized in 1985. Bhutan established its international air links first with Kolkata, India and today it flies to seven destinations in the region. The Division of Civil Aviation was established in 1986 to provide infrastructure and services and to regulate the airline industry. The Civil Aviation Act was enacted in 1990 and the Division of Civil Aviation became the member of ICAO (International Civil Aviation Organization. The Paro International Airport was inaugurated on 10 April 1999 and has taken the air transport sectors further ahead in providing the reliable, safe and comfortable travel services.

Within the last two and half decades, telecommunication network has changed from physical wire network to a national digital network. Telecommunication has been accorded high priority in Bhutan's development plans. Bhutan's first satellite international link was established in 1990 with the installation of the Earth satellite station and an international gateway switch in Thimphu. In September 1993 the telecommunication link between Thimphu and Tsirang was established and in March 1999 all the 20 district headquarters had access to telecommunication services. Within the period 1992-1999 the number of telephones per 100 people increased from 0.08 to 1.12.

Following the formulation and implementation of Bhutan Postal Act of 1996, Division of Post was incorporated under Bhutan Companies Act. In 1993, Bhutan Post introduced International Express Mail Service and after a year Domestic Express Servics and Fax Mail Services were introduced. Fax Money Order Service started in 1996 followed by Post Overnight Courier and Bhutan Post Express Passengers Services in 1997. Within a short period, Bhutan Post increased the types of services from 4 to 13. There are now 110 postal services, where on an average one Post Office caters to around 6,843 Bhutanese People.

The recently completed national telecommunication network opened the path to global information network. On 2nd June 1999, the country established the first television network and also started the Internet Services. Since then, the information and communication technology such as Internet provides access to global information and plays an important role in the every day affairs. As of December 2004, there were 3,036 Internet and 30,285 telephone connections.

Yet another breakthrough was the launch of cellular mobile (B Mobile) services in the Kingdom. Coinciding with the His Majesty's Birthday, 11 November 2003, the Bhutan Telecom Authority has connected the three regions: Thimphu, Paro and Phuntsholing, in its first phase and Wangdue Phodrang, Punakha, Gelephug and Samdrup Jongkhar in the second phase.

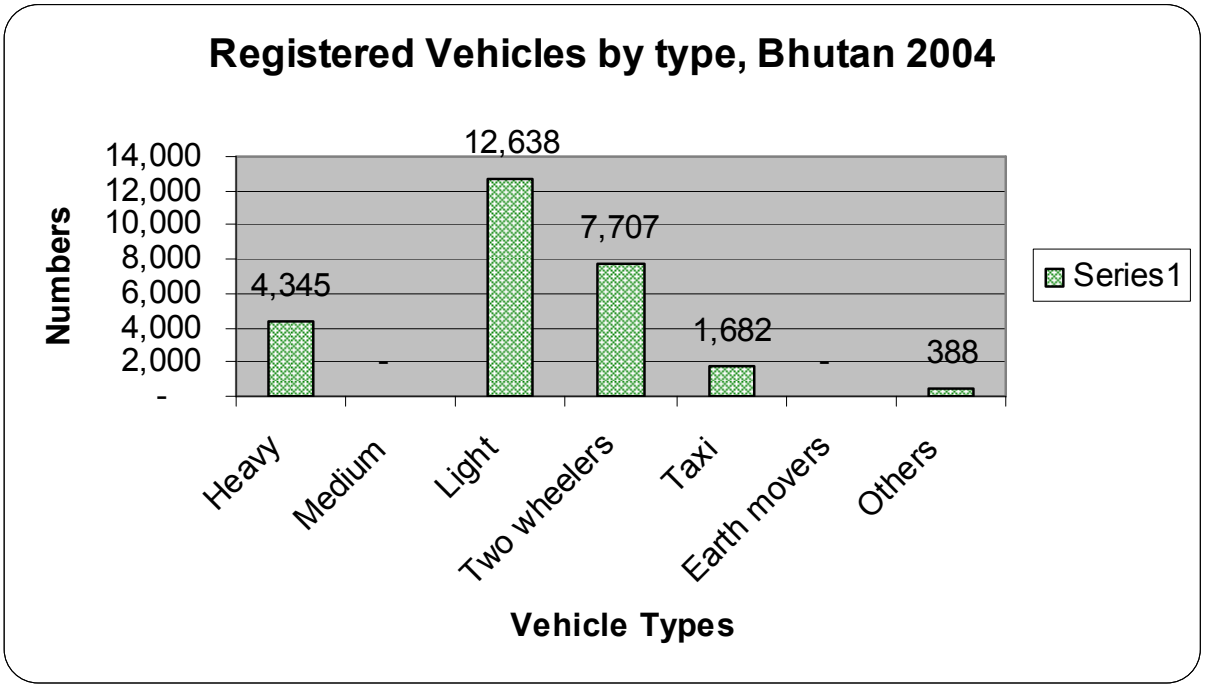


TABLE 7.1
LENGTH OF ROADS BY TYPE, BHUTAN, 2001 TO 2004

(Length in Km.)

Type of road	National highway	District road	Feeder road	Urban road	Farm road	Forest road	All road
2001	1,558.0	476.0	1,092.9	87.7	..	..	3,745.8
Black topped	..	..	..	..		..	2,334.4
Non-black topped	..	..	..	..		..	1,411.1
2003	1,578.1	459.0	1,327.2	91.7	..	555.1	4,007.1
Black topped	1,559.1	360.0	401.4	91.1	..	7.0	2,418.5
Non-black topped	19.0	99.0	925.8	0.6	..	544.1	1,588.6
2004*	1,577.2	459.0	1,226.5	109.2	251.5	529.5	4,152.9
Black topped	1,559.1	360.0	417.1	102.1	4.8	7.4	2,450.5
Non-black topped	18.2	99.0	809.4	7.1	246.4	522.1	1,702.2

Note:
Source: Department of Roads, MoWHS, Thimphu.

TABLE 7.2
LENGTH OF ROADS BY TYPE AND DZONGKHAG, BHUTAN, AS ON JUNE 2005

(Length in Km.)

Dzongkhag	National highway	District road	Feeder road	Urban road	Farm Road	Forest road	Total	Percen-tage
Bumthang	122.00	0.00	54.02	0.00	31.20	47.60	254.82	5.8%
Chhukha	231.04	0.00	197.79	15.70	8.28	30.93	483.734	11.0%
Dagana	0.00	87.00	32.06	1.50	16.00	0.00	136.56	3.1%
Gasa	0.00	0.00	25.45	0.00	0.00	0.00	25.45	0.6%
Haa	16.00	25.60	33.04	2.23	7.00	43.00	126.87	2.9%
Lhuntse	0.00	45.00	43.90	0.77	11.20	14.00	114.87	2.6%
Mongar	177.00	20.00	68.07	2.21	17.20	44.80	329.28	7.5%
Paro	103.00	36.40	57.03	0.00	54.54	5.19	256.16	5.8%
Pemagatshel	0.00	23.00	40.81	0.00	16.65	17.60	98.06	2.2%
Punakha	9.00	0.00	99.22	0.00	10.52	59.00	177.74	4.0%
Samdrup Jongkhar	73.80	50.00	52.62	7.16	19.00	0.00	202.58	4.6%
Samtse	0.00	89.00	25.35	8.98	0.50	7.00	130.83	3.0%
Sarpang	123.40	0.00	42.60	0.00	39.50	93.25	298.75	6.8%
Thimphu	111.00	0.00	90.56	71.00	18.85	103.86	395.27	9.0%
Trashigang	128.00	5.00	130.35	4.00	58.92	8.50	334.77	7.6%
Trashi Yangtse	0.00	40.00	38.16	5.17	13.10	10.48	106.91	2.4%
Trongsa	168.00	0.00	33.87	0.00	14.00	10.71	226.58	5.2%
Tsirang	62.00	0.00	28.20	1.50	22.10	6.48	120.28	2.7%
Wangdue Phodrang	150.80	0.00	106.48	3.00	24.12	26.60	310.96	7.1%
Zhemgang	104.00	38.00	70.68	1.89	5.86	41.60	262.03	6.0%
Bhutan	1,579.00	459.00	1,270.26	125.11	388.54	570.60	4,392.50	100.0%

Source: Department of Roads, MoWHS, Thimphu.

TABLE 7.3
NUMBER AND LENGTH OF BRIDGES BY TYPE, BHUTAN, 2004

(Length in m.)

Type of bridges	Number	Length	Percent
RCT Beam	46	846.80	14
RC Slab	17	299.35	5
Prestressed concrete	6	331.00	5
Bailey bridge	94	2496.35	40
Bailey Suspension Bridge	5	475.80	8
Hemilton and steel	6	187.60	3
Composite bridge	23	335.56	5
Wooden	2	27.00	1
Submersible	7	193.50	3
Arch-RCC	1	120.00	2
Steel Pony Truss	4	190.00	3
Steel Truss/Grider	9	560.00	9
Steel Langer Arch	1	95.00	2
Multi Cell Box Culvert	1	24.00	0
All bridges	222	6181.96	100

Source: Bridge Division, DoR , MoWHS, Thimphu.

TABLE 7.4
NUMBER OF SUPENSION BRIDGES COMPLETED DURING I TO IX FIVE YEAR PLAN PERIODS BY DZONGKHAG

Dzongkhag	Plan periods						All plans	%
	I - IV	V	VI	VII	VIII	IX	(I - IX)	(I - IX)
Bumthang	1	7	3	4	2	1	18	5
Chhukha	3	5	1	3	2	2	16	4
Dagana	2	2	2	3	4	1	14	4
Gasa			2	2	2		6	2
Haa	3	6	1	3	2		15	4
Lhuntse	3	4	2	3	5		17	4
Monggar	9	5	2	5	6	1	28	7
Paro	3	8	3	2	1	1	18	5
Pemagatshel	2	7	2	3	4		18	5
Punakha	3	4	1	0	2	1	11	3
Samdrup Jongkhar	10	13	6	2	6	1	38	10
Samtse	9	15	2	1	2		29	7
Sarpang	9	8	5	0	5	1	28	7
Thimphu		1	3	3	1		8	2
Trashigang	7	12	2	3	8	1	33	8
Trashi Yangtse	3	6	4	3	3	1	20	5
Trongsa	4	6	3	3	2		18	5
Tsirang	6	4	1	2	2	1	16	4
Wangdue Phodrang	2	10	5	3	3		23	6

TABLE 7.5
NUMBER OF REGISTERED VEHICLES BY TYPE AND REGION, 2000 TO 2004

Region	Heavy	Medium	Light	Two-Wheeler	Taxi	Earth mover	Others	All Types
2000	2,062	n.a.	7,438	7,793	770	n.a.	1,400	19,463
Thimphu	410	n.a.	4,865	4,599	548	n.a.	537	10,463
Gelephu	102	n.a.	274	604	11	n.a.	108	1,099
Phuntsholing	1,348	n.a.	1,971	1,894	210	n.a.	633	6,056
Samdrup Jongkhar	202	n.a.	328	696	1	n.a.	122	1,349
2001	2,853	697	8,905	8,165	1,188	408	268	22,294
Thimphu	472	389	5,821	4,789	810	109	145	12,535
Gelephu	100	33	359	631	17	14	70	1,244
Phuntsholing	2,068	241	2,399	2,003	356	244	..	7,311
Samdrup Jongkhar	213	24	326	742	5	41	53	1,204
2002	2,747	770	10,071	8,371	1,423	464	614	24,430
Thimphu	553	411	6,691	5,160	1,013	135	427	14,360
Gelephu	96	46	383	627	18	14	89	1,273
Phuntsholing	1,923	261	2,653	1,837	379	267	17	7,337
Samdrup Jongkhar	175	52	344	747	13	48	81	1,460
2003	4,841	308	11,428	7,507	1,560	321	388	25,003
Thimphu*	2,654	0	7,586	4,540	1,079	0	134	14,643
Gelephu	85	49	332	628	441	10	138	1,263
Phuntsholing	1,915	230	3,144	1,608	21	272	17	7,627
Samdrup Jongkhar	187	29	366	731	39	39	99	1,470
2004	4,345	n.a	12,638	7,707	1,682	n.a	388	26,760
Thimphu	1,386	n.a	8,424	4,660	1,171	n.a	134	15,775
Gelephu	149	n.a	380	639	24	n.a	138	1,330
Phuntsholing	2,524	n.a	3,438	1,657	468	n.a	17	8,104
Samdrup Jongkhar	286	n.a	396	751	19	n.a	99	1,551

Notes:

1. Excludes vehicles of armed forces.

2."Others" include bull dozers, road rollers, pay loaders, excavators, cranes, tractors, power tillers, etc.

3. For the year 2003, Medium-category vehilces are included in the Heavey category for Thimphu region.

4.For 2004, medium category vehicles are included in the heavy category, earth movers under others all

Source: Road Safety and Transport Authority, MoIC, Thimphu.

TABLE 7.6

NUMBER OF DRIVING LICENCES ISSUED BY REGION, 2004

Region	No. of Licenses
Thimphu	19,355
Phuentsholing	4,069
Gelephu	2,679
Samdrupjongkhar	2,191
Total	28,294

Source: Road Safety and Transport Authority, MoIC, Thimphu

TABLE 7.7

NUMBERS OF PASSENGERS CARRIED & REVENUE EARNED BY DRUK AIR FLIGHTS BY SECTOR, 2000 TO 2004

Sector	2000	2001	2002	2003	2004
Paro to Kolkata	2,600	2,400	3,156	3,592	5,164
Kolkata to Paro	2,470	2,394	2,585	3,116	4,542
Paro to Bangkok	6,556	7,578	9,007	8,431	11,636
Bangkok to Paro	6,623	8,292	8,874	8,269	11,838
Paro to Dhaka	363	233	142	462	0
Dhaka to Paro	332	200	90	471	0
Paro to Delhi	3,713	3,417	3,185	3,393	4,864
Delhi to Paro	3,728	3,604	3,296	3,469	4,769
Paro to Kathmandu	3,793	3,753	3,193	2,881	4,457
Kathmandu to Paro	3,722	3,677	3,229	2,953	4,294
Kathmandu to Delhi	563	217	427	2,121	2,725
Delhi to Kathmandu	221	62	81	1,046	1029
Kolkata to Bangkok	2,208	1,880	1,568	2,059	2,721
Bangkok to Kolkata	1,313	1,076	1,406	1,991	2,478
Dhaka to Bangkok	427	115	184	1279	0
Bangkok to Dhaka	321	111	157	558	0
Paro to Yangon	-	-	42	82	171
Yangon to Paro	-	-	1	82	137
Paro to Gaya	-	-	0	106	424
Gaya to Paro	-	-	0	58	281
Yangon to Bangkok	-	-	139	615	1212
Bangkok to Yangon	-	-	18	169	411
Yangon to Kolkata	-	-	-	-	19
Kolkata to Yangon	-	-	-	-	14
Total passengers (a)	38,953	39,009	40,780	47,203	63,186
Revenue (Nu.in millions)	208	351	424.5	451.3	609.8
During fiscal/calendar year	1999/00	2000/01	2001/02	2002/03	Dec.31,04

Note:

Source:Policy & Planning Division, MoIC, Thimphu.

TABLE 7.8

NUMBER OF FLIGHTS MADE BY DRUK AIR BY SECTOR, 2001 TO 2004

Sector	2001	2002	2003	2004
Paro to Calcutta	120	189	156	258
Calcutta to Paro	125	167	157	248
Paro to Bangkok	175	211	258	261
Bangkok to Paro	172	205	261	261
Paro to Dhaka	39	27	103	0
Dhaka to Paro	34	29	104	0
Paro to Delhi	102	104	106	136
Delhi to Paro	102	105	104	
Paro to Kathmandu	121	105	104	134
Kathmandu to Paro	120	105	103	136
Paro to Yangon	n.a	16	104	92
Yangon to Paro	n.a	17	104	101
Paro to Gaya	n.a	n.a	7	9
Gaya to Paro	n.a	n.a	7	9
All sectors	1,110	1,280	1,678	1,645

Source: Druk Air Corporation, Thimphu.

TABLE 7.9
TELEPHONE CONNECTION CAPACITY BY EXCHANGE, 2000 TO 2004

Exchange (Switch type)	2000	2001	2002	2003	2004
Dagana(DRMASS)	64	63	128	128	128
Damphu(RLU)	272	205	388	636	636
Dechencholing (ELU)	0	0	720	720	720
Gelephu(LS)	688	497	1104	1572	1572
Haa(DRMASS)	176	174	249	249	532
Jakar(RLU)	344	331	487	892	892
Kanglung(DRMASS)	128	83	128	540	540
Lhuntse(DRMASS)	60	60	64	128	123
Mongar(RLU)	420	182	548	540	832
Paro(LS)	1,344	806	1,588	1,784	1,784
Pemagatshel(RLU)	140	105	376	376	376
Phuentsholing(LS)	2,344	1,976	3448	3832	3832
Punakha(RLU)	312	273	504	504	632
Samdrupjongkha(LS)	664	509	856	968	968
Samtse(LS)	448	418	848	884	892
Sarpang(DRMASS)	122	120	181	256	256
Simtokha	0	0	720	720	720
Thimphu (corDECT)	0	0	0	0	1000
Thimphu (LS/INTS)	6,208	5,926	8688	15448	15464
Trashigang (TS/LS)	724	286	924	1180	1180
Trashiyangtse(DRMASS)	128	83	128	128	128
Trongsa (TS/LS)	280	205	590	628	636
Tsimakothi(DRMASS)	220	216	556	604	620
Wangduephodrang(RLU)	392	366	636	636	764
Zhemgang (corDECT)	0	0	0	0	1000
Zhemgang(RLU)	200	147	256	376	376
Total capacity	15,678	13,031	24,115	33,729	36,603

Notes:
LS stands for local switch, TS for toll switch, MS for tandem switch, INTS for international switch, RLU for remote line unit, DRMASS for digital radio multiple access system and SxS for step switch.

Source: Operation Division, Bhutan Telecom, Thimphu.

TABLE 7.10
NUMBER OF TELEPHONE TRUNK CIRCUITS, BHUTAN, JAN TILL DEC 2004

Sector	Type of connection	Existing circuits
Thimphu - London (BT)	Voice (channel)	14
Thimphu - Singapore (ST)	Voice (channel)	12
Thimphu - Japan (KDD)	Voice (channel)	14
Thimphu - Telco214(USA)	Voice (channel)	46
Thimphu - Intel.Gateway Switch	Voice (channel)	90
Thimphu - India	Voice (channel)	91
Thimphu - Phuentsholing	Voice (channel)	147
Thimphu - Phuntsholing	DATA (2Mbps)	2
Thimphu - Phuntsholing	DATA (2Mbps)	1
Thimphu - Trongsa	Voice (channel)	60
Thimphu - Trongsa	DATA (2Mbps)	2
Thimphu - Gelephu	Voice (channel)	60
Thimphu - Gelephu	DATA (2Mbps)	2
Thimphu - Trashigang	Voice (channel)	60
Thimphu - Trashigang	DATA (2Mbps)	2
Thimphu - Samdrup Jongkhar	Voice (channel)	60
Thimphu - Samdrup Jongkhar	DATA (2Mbps)	2
Thimphu - Paro	Voice (channel)	90
Thimphu - Paro	DATA (2Mbps)	2
Thimphu - Paro	DATA (2Mbps)	1
Thimphu - Wangdue Phodrang	Voice (channel)	60
Thimphu - Wangdue Phodrang	DATA (2Mbps)	1
Thimphu - Punakha	Voice (channel)	60
Thimphu - Decholing	Voice (channel)	180
Thimphu - Basochu	Voice (channel)	15
Thimphu - Kasa Dapchu	Voice (channel)	90
Thimphu - Yoesepang	Voice (channel)	15
Thimphu - Lobesa	Voice (channel)	15
Thimphu - VOIP	Voice / DATA	60
Thimphu - Gasa	Voice (channel)	15
Thimphu - Damjee (Gasa)	Voice (channel)	15
Thimphu - Simtokha	Voice (channel)	180
Thimphu - Simtokha	DATA (2Mbps)	1
Thimphu DAMA	Voice (channel)	24
Lingshi DAMA	Voice (channel)	4
Trongsa - Jakar	Voice (channel)	60
Trongsa - Jakar	DATA (64 Kbps)	1
Trongsa - Zhemgang	Voice (channel)	60
Trongsa - Zhemgang	DATA (2Mbps)	1
Trongsa - Tshangkha	Voice (channel)	15
Trongsa - Bubja	Voice (channel)	15
Trongsa - Chumey	Voice (channel)	15
Trongsa - Gelephu	Voice (channel)	60
Trongsa - Trashigang	Voice (channel)	60
Trongsa - S/Jongkhar	Voice (channel)	60
Trongsa DAMA	Voice (channel)	6
Trashigang - Mongar	Voice (channel)	90

contd

TABLE 7.10 (contd…)
NUMBER OF TELEPHONE TRUNK CIRCUITS, BHUTAN, JAN TILL DEC 2004

Sector	Type of connection	Existing circuits
Trashigang - Mongar	DATA (2Mbps)	1
Trashigang - Tashi Yangtse	Voice (channel)	15
Trashigang - Yonphula	Voice (channel)	15
Trashigang - Khaling	Voice (channel)	15
Trashigang - Wamrong	Voice (channel)	15
Trashigang - Sengkharla	Voice (channel)	15
Trashigang - Rangjung	Voice (channel)	15
Trashigang - Dremtse	Voice (channel)	15
Trashigang - Bartsham	Voice (channel)	15
Trashigang - Kanglung	Voice (channel)	60
Trashigang - Yadi	Voice (channel)	15
Trashigang DAMA	Voice (channel)	6
Sakten DAMA	Voice (channel)	4
Mongar - Luntse	Voice (channel)	15
Mongar - Tangmachu	Voice (channel)	15
Mongar - Gelpoishing	Voice (channel)	15
S/Jongkhar - Pemagatshel	Voice (channel)	60
S/Jongkhar - Pemagatshel	DATA (2Mbps)	1
S/Jongkhar - Deothang	Voice (channel)	15
S/Jongkhar - Trashigang	Voice (channel)	60
S/Jongkhar DAMA	Voice (channel)	12
Jomoitshangkha DAMA	Voice (channel)	4
Nanglam DAMA	Voice (channel)	4
Bangtar DAMA	Voice (channel)	4
Gelephu - DAMA	Voice (channel)	12
Gelephu - Sarpang	Voice (channel)	15
Gelephu - Tsirang	Voice (channel)	60
Gelephu - Tsirang	DATA (2Mbps)	1
Gelephu - Surey	Voice (channel)	15
Panbang DAMA	Voice (channel)	4
Tsirang - Dagana	Voice (channel)	15
Tsirang - Dagapela	Voice (channel)	15
Tsirang - Drukjegang	Voice (channel)	15
Phuntsholing - Samtse	Voice (channel)	60
Phuntsholing - Samtse	DATA (2Mbps)	1
Phuntsholing - Gedu	Voice (channel)	15
Phuntsholing - Pasakha	Voice (channel)	15
Phuntsholing - Remetey	Voice (channel)	15
Phuntsholing - Paro	Voice (channel)	60
Paro - Tsimatsham	Voice (channel)	90
Pare - Haa	Voice (channel)	60
Paro - Chapcha	Voice (channel)	15
Paro - Haa Damthang	Voice (channel)	15
Paro - Haa Jengkhana	Voice (channel)	15
Thimphu B-Mobile MSC -PSTN switch	Voice (channel)	245
Thimphu B-Mobile MSC -PSTN Intl gateway switch	Voice (channel)	60
Thimphu B-Mobile network	Voice (channel)	510

Source: Bhutan Telecom, Thimphu.

TABLE 7.11
NUMBER OF TRUNK LINES, CONNECTION CAPACITIES & SETS IN USE, 2001 TO 2004

Details	2001	2002	2003	2004
Trunk lines	..	691	713	2699
Satellite Communications	106	106	128	164
International Lines	28	28	50	86
Domestic (DAMA)	78	78	78	78
Digital Microwave	480	480	480	480
Digital Radio Concentrator System	15	15	15	15
DRMASS	60	60	60	120
VOIP	n.a	30	30	30
SDH	n.a	n.a	n.a	1890
Connection capacity	21,879	21,879	34,120	39,036
Telephone sets in use	17,730	20,168	23,657	30,285
Cellular Mobile Subscribers	-	-	7,736	18,995

Note:
1. Trunk Lines consist of Satellite, Microwave, DRCS, DRMASS and VOIP and SDH.
2. Satellite communication includes International lines and DAMA

Source: Bhutan Telecom, Thimphu.

TABLE 7.12
NUMBER OF TELEPHONE TRUNK CALLS BY TYPE, 2001 TO 2004

Type of call	2001	2002	2003	2004
Domestic calls	8,212.00	10,285.00	13,684,113.00	17,626,815.00
International calls	187.00	220.00	273,431.00	1,860,705.00
India	1,227	1,387.00	1,710,548.00	1,578,465.00
Other	n.a	n.a	n.a	282,240.00
All calls	9,628	11,893	15,668,092.00	19,487,520.00

Source: Bhutan Telecom, Thimphu.

TABLE 7.13
TELECOMMUNICATION TRAFFIC IN MINUTES AND REVENUE EARNINGS, BHUTAN, 2001 TO 2004

Details	2001	2002	2003	2004
Type of calls				
Domestic calls (minutes)	19,617,143	24,704,092	34,210,284	38,394,147
International calls (minutes)	4,227,729	4,824,491	4,959,950	5,509,120
India	3,510,283	4,099,185	4,276,372	4,605,610
Other countries	717,446	725,306	683,578	903,510
Total calls (Domestic + International)	23,844,872	29,528,583	39,170,234	43,903,267
Revenue earnings				
(Nu. in Million)	337	376	419	594

Source: Bhutan Telecom, Thimphu.

TABLE 7.14
NUMBER OF COMMUNICATION FACILITIES, 2001 TO 2004

Postal infrastructure	2001	2002	2003	2004
General Post Offices	2	2	2	2
Post Offices	9	9	9	10
Branch Post Offices	n.a	n.a	n.a	n.a
Agency Post Offices	33	33	33	33
Community Mail Offices	66	66	66	65
Telegraph or Fax Offices	n.a	n.a	n.a	n.a
Wireless Stations(a)	n.a	n.a	n.a	n.a

Note:
WT. Stations are merged with Telecommunication Division since July 1995
(a) Includes 3 stations installed at New Delhi, Dhaka and Kalimpong.

Source: Bhutan Post, Thimphu.

TABLE 7.15
VOLUME OF POSTAL MAIL TRAFFIC BY DESTINATION, 2001 TO 2004

Type of service	2001	2002	2003	2004
Domestic	1,117,047	1,278,831	1,062,100	846,150
International	683,789	658,701	590,400	602,655
Dispatch	265,886	246,845	204,900	179,515
Receipt	417,903	411,856	385,500	428,200
Total mail items	1,800,836	1,937,532	1,652,500	2,056,520

Source: Bhutan Post, Thimphu

TABLE 7.16
VOLUME OF MAIL, BY TYPE OF ARTICLE AND DESTINATION, 2004

Type of mail	Actual Volume	International		
	Total Domestic	Total	Inward	Outward
Letter-post items				
Ordinary letter	718,600	175,380	348,800	140,500
Registered items	104,000	110,915	72,330	38,585
Parcels	955	2,490	2,010	480
Express mail service (EMS)	22,595	8,065	5,060	3,005
Electronic mail:	-	-	-	-
Facsimile message	-	-	-	-
All mail items	846,150	296,850	428,200	182,570

Note:
- Letter post items include letters, postcards, aerogrammes, printed matters, packets, book post. Mails are of two categories.i.e. Ordinary or registered
- Our post doesnot provide telegraph service and wireless service since 1993.
- Volume of mail in above is shown in actual figures and not im million.

TABLE 7.17
NUMBER AND VALUE OF MONEY ORDER BY TYPE, BHUTAN, 2001 TO 2004

Type	2001	2002	2003	2004
Total money orders				
Number of orders ('000)	47,365	27,659	38,780	n.a
Amount of orders ('000 Nu.)	169,444,915	64,011,289	67,981,300	n.a
Domestic money order				
Number of orders ('000)	34,810	12,071	23,000	23,140
Amount of orders ('000 Nu.)	134,956,960	30,157,172	36,021,200	49,602,026
International money order				
Dispatched				
Number of orders ('000)	12,360	15,458	15,700	9916**
Amount of orders ('000 Nu.)	33,356,490	33,703,539	31,844,200	32,435,814
Receipts				
Number of orders ('000)	195	130	80	325
Amount of orders ('000 Nu.)	1,131,465	150,678	115,900	258,566

Note:

** Number of money order for 2004 is less even though the amount is higher due to removal of limit of amount being sent in a single Money order form.

Source: Bhutan Post, Thimphu

CHAPTER 8 ENERGY

The major source of energy in Bhutan has traditionally been firewood, and still represents the major source of energy consumption. Electricity generation, though still relatively small in comparison with the rest of the world is growing in importance. Up until recently, electricity generation was based on small diesel generating and micro hydro stations, providing limited supply of electricity, which was supplemented by imports from India. With the commissioning of the first two units of Chukha Hydel Projects in 1986, and the other two units in 1998 Bhutan substantially increased its electricity generation and became a significant exporter of electricity to India. In 2004, the total electricity generation was 2,492 Million KWh.

The Kurichu Hydro power with a capacity of 60W and Bashocu Hydro Power with 24MW generated 341MKWh and 182MKWh respectively in 2004.With the commissioning of mega "Tala Hydel Power Project" in 2006, it will substantially improve the energy generation in the country.

Domestic consumption of electricity has been marginal but should increase with the ongoing emphasis on Rural Electrification Programs. Other forms of energy as the solar, wind and biomass energy are being explored. Number of villages electrified increased from 331 in 1995/96 to 1,064 villages as of December 2004. This trend is a positive indication of the prospective reduction of dependence on fuel wood as a source of energy, in the near future.

Studies have reported that Bhutan has one of the highest per capita consumption of firewood. However, this will slowly changed with the government's policy of duty-free import of wood saving electrical gadgets.

TABLE 8.1
ELECTRICITY GENERATING STATIONS AND THEIR CAPACITIES, BHUTAN, FY 2003/04

Generating stations (Dzongkhag)	Installed capacity (No. x MW)	Generating capacity (MW)	Peak generation (MW)	Energy generated (MU)
Hydro stations (a)				
Chhukha	4 X 84.000	336.000	360.000	2038.385
Chumey (Bumthang)	3 X 0.500	1.190	1.190	3.764
Gidakom (Thimphu)	5 X 0.250	0.816	0.970	5.182
Jushina (Thimphu)	4 X 0.090	0.360	0.274	1.728
Kurichu (Mongar)	4 X 15.000	60.000	60.000	332.889
Basochu(W/phodrang)	2 X 12.000	24.000	24.440	131.844
Rangjung (Trashigang)	2 X 1.100	2.200	1.980	6.354
Chenari (Trashigang)	3 X 0.250	0.750	0.340	0.582
Khaling (Trashigang)	3 X 0.200	0.400	0.319	0.614
Khalanzi (Mongar)	3 X 0.130	0.290	0.250	0.307
Wangduephodrang	3 X 0.100	0.300	0.090	0.556
Micro hydels				
Lhuntse (Lhuntse)	2 X 0.060	0.120	-	0.206435
Rukubji (W/phodrang)	1 X 0.040	0.040	-	0.068300
Tangsibi (Trongsa)	1 X 0.030	0.030	-	0.030760
Trongsa (Trongsa)	1 X 0.050	0.050	-	0.122047
Bubja (Trongsa)	1 X 0.030	0.030	-	0.113499
Tamshing (Bjakar)	1 X 0.030	0.030	-	0.082278
Ura (Bjakar)	1 X 0.050	0.050	-	0.137131
Yadi (Mongar)	1 X 0.030	0.030	-	0.031624
Kekhar (Zhemgang)	1 X 0.020	0.020	-	-
Surey (Sarpang)	1 X 0.070	0.070	-	0.003791
Damphu (Tsirang)	2 X 0.100	0.200	0.140	1.152931
Tingtibi (Zhemgang)	2 X 0.100	0.200	0.120	0.647320
Dagana (Dagana)	2 X 0.100	0.200	0.150	1.195760
Lingzhi (Thimphu)	1 X 0.008	0.008	-	-
Rongchu (Lhuentse)	2 X 0.100	0.200	0.230	0.582140

contd.

TABLE 8.1(contd.)
ELECTRICITY GENERATING STATIONS AND THEIR CAPACITIES, BHUTAN, FY 2003/04

Generating stations (Dzongkhag)	Number of machines	Generating capacity	Peak generation	Energy generated
		(MW)	(MW)	(MU)
Diesel generation stations				
Thimphu	7	-	-	0.001
Paro	1	-	-	0.000
Phuentsholing	3	0.000	-	0.442
Damphu	3	-	-	0.044
Trongsa	2	-	-	0.300
Gelephu	2	0.692	-	0.020
Sarpang	2	0.505	-	0.008
Kalikhola	2	0.000	-	0.442
Zhemgang	3	-	-	0.004
Dagana	2	-	-	0.005
Trashigang	4	-	-	0.000
Bjakar	4	-	-	0.556
Mongar	1	-	-	0.002
Samdrup Jongkhar	2	-	-	0.017
Trashi Yangtse	1	-	-	0.021
Pema Gatshel	1	-	-	0.013
Samtse	1	-	-	0.000
Other diesel stations				
Penden Cement Authority Ltd.	4	3.600	-	0.004
Bhutan Board Products Ltd.	2	0.458	-	-
Chhukha Hydro Power Corp.	5	1.949	-	0.015
Bhutan Carbide & Chemical Ltd.	2	0.225	-	0.003
Bhutan Ferro Alloys Ltd.	1	0.288	-	0.136
Kurichu Project Authority	2	0.563	-	0.067
Basochu Project Authority	1	0.090	-	0.000

Note: The given energy generation are annual energy generation during the year 2003/04.

Source: Department of Energy.MTI

TABLE 8.2
TOTAL ELECTRICITY GENERATION AND SUPPLY, BHUTAN, 2000/01 TO 2003/04

Details	2000/01	2001/02	2002/03	2003/04
Installed capacity (MW)	368.65	422.82	437.82	437.82
Chhukha hydro power	336.00	336.00	336.00	336.00
Kurichu hydro power	15.00	45.00	60.00	60.00
Basochu hydro power	..	24.00	24.00	24.00
Other hydro power	8.46	8.63	8.63	8.63
All diesel generators	9.19	9.19	9.19	9.19
Electricity generation (MU)	1,805.29	2,059.40	2200.17	2528.46
Chhukha hydro power	1,791.65	1,861.75	1815.36	2038.39
Kurichu hydro power	..	126.30	255.77	332.89
Basochu hydro power	..	55.13	109.28	131.84
Other hydro power	13.38	15.77	19.14	23.46
All diesel generators	0.27	0.45	0.61	1.87
Exports (MU)	1,380.15	1,477.69	1560.44	1844.50
Imports (MU)	9.93	6.90	24.30	18.72
Total energy requirement (MU)	441.24	578.51	664.33	702.90
Total energy sales (MU)	401.90	510.45	571.27	580.19
Energy losses (MU)	39.14	68.06	93.05	122.72
Percentage losses (%)	8.87	11.77	14.00	17.00
Peak system demand (MW)	92.00	92.63	105.33	112.00
Length of HT lines (33/11 KV)				
Overhead lines (km)	1,258.39	1,369.74	1712.53	1995.57
Underground lines (km)	20.43	26.02	27.23	28.11
Length of LT lines				
Overhead lines (km)	1,267.84	1,358.35	1802.39	1918.57
Underground lines (km)	45.34	57.86	63.06	65.79

Note: The Imports data from 2002/03 onwards unlike in the past include import at CHPC from PGCIL (16.015 MU) and import at KHPC from PGCIL (0.441 MU) Similarly total energy requirement and losses includes that of CHPC, KHPC BHPC. The HT overhead till 2001/02 past was only 11 KV lines, from 2002/03 onwards figures have been changed to include 33 KV also.

Source: Department of Energy, MTI, Thimphu.

TABLE 8.3
MAJOR TRANSMISSION LINES FOR EVACUATING HYDRO POWER FROM CHHUKHA POWER PLANT, 2004

Stations		220 KV	132 KV	66 KV
		line(Km)	line(Km)	line (Km)
Chhukha	- Birpara	71.280	-	-
Chhukha	- Singhigoan	33.320	-	-
Chhukha	- Simtokha	54.367	-	-
Indian Border	- Singhigaon	2.500	-	-
Rurichu	- Simtokha	34.430	-	-
Gelephug	- Indian border	-	0.300	-
Gyleposhing	- kilikhar	-	10.214	-
Kilikhar	- Kanglung	-	29.807	-
Kilikhar	- Lhuentse		43.100	-
Nangkor	- Deothang	-	23.668	-
Gyleposhing	- Nangkor	-	33.700	-
Nangkor	- Nganglam	-	34.300	-
Nganglam	- Tingtibi	-	83.200	-
Tingtibi	- Gelephug	-	46.000	-
Chhukha	- Gedu	-	-	20.100
Gedu	- Phuntsholing	-	-	17.700
Chhukha	- Confluence	-	-	36.700
Confluence	- Simtokha	-	-	18.300
Confluence	- Haa	-	-	33.522
Confluence	- Paro	-	-	24.022
Simtokha	- W/phodrang	-	-	26.023
Lobeysa	- Basochhu	-	-	23.023
Phuntsholing	- Gomtu	-	-	27.002
Phuntsholing	- Singhigoan	-	-	8.380
Phuntsholing	- Birpara	-	-	Redundant
Total		1.28(D/C)::87.687(S/C)	304.289	234.772

Note: D/C stands for double circuit and S/C for single circuit.

Source: Department of Energy, MTI, Thimphu.

TABLE 8.4
DETAILS OF DOMESTIC ELECTRICAL ENERGY CONSUMPTION, 2000/01 TO 2003/04

Details	2000/01	2001/02	2002/03	2003/04
Towns electrified (numbers)	40.0	40.0	40.0	40
Villages electrified (numbers)	646.0	690.0	819.0	1064
Consumers ('000)	35.9	38.7	44.7	52.9
Sales of energy (million Nu.)	268.7	381.1	468.2	539.0
Per capita energy consumption (Units)	632.2	808.0	927.3	957.2

Note:

The Per capita Energy consumption has increased in 2002/03 partly because of change in format which started including generation of CHPC, BHPC and KHPC

Source: Department of Energy,MTI, Thimphu.

TABLE 8.5
MONTHLY REVENUE FROM SALE OF ENERGY FROM CHHUKHA HYDROPOWER, 2003 TO 2004

Month	2003			2004		
	Export	Internal	Total	Export	Internal	Total
January	30.31	13.97	44.28	50.19	14.49	64.69
February	19.97	13.04	33.01	28.77	13.61	42.38
March	21.87	13.90	35.77	49.36	13.85	63.21
April	109.8	12.71	122.51	101.61	13.12	114.73
May	116.21	12.77	128.97	165.03	12.71	177.74
June	260.74	11.13	271.88	284.56	12.25	296.82
July	342.98	12.10	355.07	331.37	12.74	344.12
August	347.47	11.74	359.21	323.23	12.91	336.14
September	335.65	11.55	347.20	346.96	12.64	359.60
October	325.81	12.12	337.93	318.73	13.31	332.04
November	185.35	12.26	197.60	136.76	13.03	149.79
December	89.81	14.00	103.81	66.77	13.75	80.52
Total	2185.97	151.29	2337.26	2203.34	158.43	2361.77

Source: Selected Economic Indicators, DoE, Thimphu.

TABLE 8.6
CONSUMPTION OF ELECTRICITY BY TYPE OF CONSUMER, 2000/01 TO 2003/04

Type of consumer	2000/01	2001/02	2002/03	2003/04
Total consumption (MU)	383.99	489.26	550.64	560.782
Domestic	52.54	63.670	72.12	76.717
Commercial & Government Offices	57.58	32.24	44.97	48.568
Industries	267.11	343.73	365.76	372.557
Bulk supply	6.38	49.20	66.85	62.112
Public lighting	0.37	0.42	0.95	0.828
Consumption as percentage	100.00	100.00	100.00	100.000
Domestic	13.68	13.01	13.10	13.680
Commercial & Government Offices	14.99	6.59	8.17	8.661
Industries	69.56	70.26	66.42	66.435
Bulk supply	1.66	10.06	12.14	11.076
Public lighting	0.10	0.09	0.17	0.148

Source: Department of Energy.

CHAPTER 9

TOURISM

The tourism industry has been an important source of hard currency to Bhutan since the country was first opened to tourism in 1974. The potential as far as foreign exchange earnings are concerned are very high, though the Government has followed a strategy regulating the number of tourists coming into Bhutan.

The main statistics of interest in the field of tourism relate to the characteristics of visitors and the details of existing tourist facilities, interest centers and visitor arrivals, where they come from, when they come and the purpose of their visit. Earning of foreign exchange from the overseas visitors is another important aspect.

There has been a steady rise of tourist arrivals in the country during the 1990s through 2000, while in 2002 there was a comparative decrease in tourist arrivals owing to the terrorism and outbreak of SARS. In 2004, there were 9,249 tourists compared to 6,261 in 2003. The largest numbers of tourist arrivals have been originating from the United States of America, Japan and the United Kingdom.

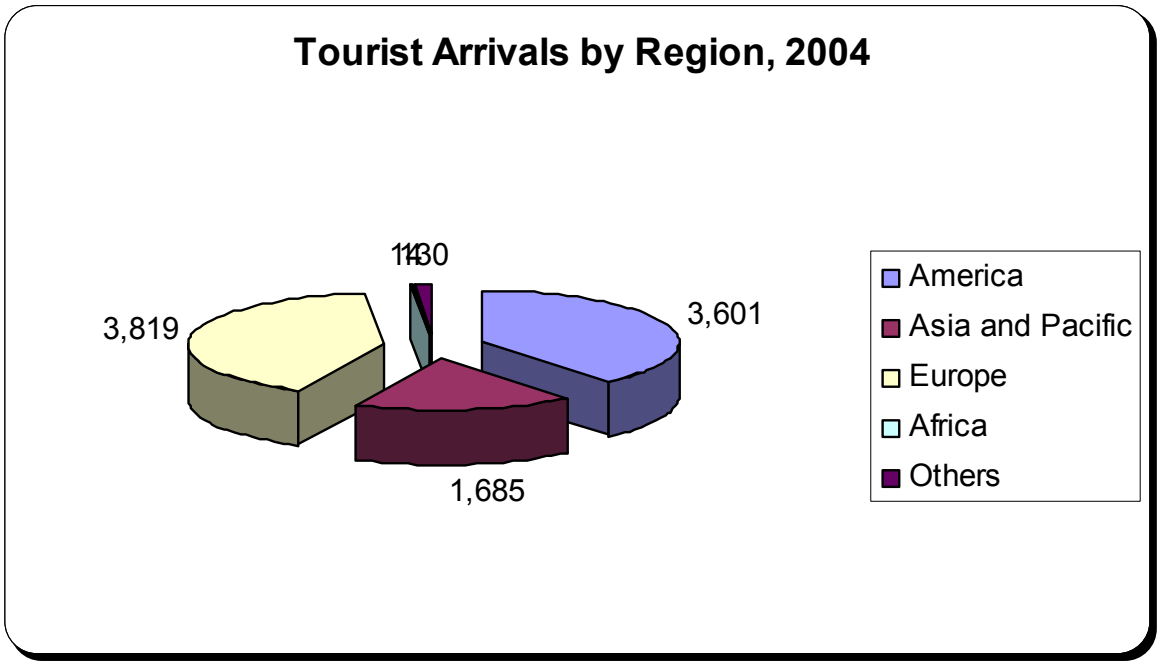


TABLE 9.1
ANNUAL TOURIST ARRIVALS BY COUNTRY, BHUTAN, 2001 TO 2004

Country	2001	2002	2003	2004
Africa	27	17	14	14
South Africa	27	17	14	14
Asia & Pacific	1,346	1,281	1411	
Australia	138	214	165	315
China	27	25	19	78
Japan	1,038	892	952	1087
Korea	34	44	13	10
Malaysia	3	2	28	17
Nepal	14	16	13	15
New Zealand	25	32	37	50
Phillipines	8	8	8	21
Singapore	15	8	20	16
Taiwan	44	40	90	46
Thailand	36	46	66	30
America	2,367	2,142	2025	
Argentina	4	4	7	7
Brazil	10	21	19	60
Canada	197	166	121	257
Mexico	7	38	72	34
USA	2,149	1,913	1806	3243
Europe	1,342	1,067	2671	
Austria	128	92	152	223
Belgium	76	22	104	124
Czech	2	5	11	17
Denmark	22	10	55	85
Finland	17	14	14	11
France	287	192	288	434
Germany	414	346	496	671
Greece	11	4	3	18
Ireland	9	7	14	24
Italy	192	177	331	462
Luxemburg	4	1	7	5
Netherlands	180	197	179	163

TABLE 9.1(contd.)
ANNUAL TOURIST ARRIVALS BY COUBTRY, BHUTAN 2001 TO 2004

Country	2001	2002	2003	2004
Norway	19	25	9	10
Poland	39	41	11	47
Portugal	43	4	25	21
Russia	27	25	56	63
Spain	73	68	77	198
Sweden	28	41	48	61
Switzerland	170	164	177	173
Turkey	30	61	9	55
United Kingdom	681	519	605	954
Middle East	165	98	47	130
Israel	78	5	47	37
Others	87	93	93	93
Total arrivals	6,393	5,599	6,261	9,249
Trekkers	468	357	438	507
Cultural	5,925	5,242	5,823	8,742

Source: Department of Tourism, MTI, Thimphu.

TABLE 9.2
TOURIST ARRIVALS BY COUNTRY OF RESIDENCE AND REVENUE RECEIPTS, BHUTAN, 2001 TO 2004

Region	2001	2002	2003	2004
America	2,367	2,142	2025	3,601
Asia and Pacific	1,462	1,332	1411	1,685
Europe	2,450	2,015	2671	3,819
Africa	27	17	14	14
Others	87	93	140	130
All regions(persons)	6,393	5,599	6261	9,249
Tourism revenue receipts				
US Dollars(million)	9.2	7.9	8.32	13

Source: Department of Tourism, MTI, Thimphu.

TABLE 9.3
NUMBER OF TOURIST ARRIVALS BY SEASON AND MONTH, BHUTAN, 2001 TO 2004

Season & Month	2001	2002	2003	2004
Winter	874	849	1,343	1,742
November	517	643	862	1,198
December	172	151	289	455
January	185	55	192	89
Spring	2,540	1,814	1,967	2,493
February	355	269	98	358
March	553	862	654	831
April	1,632	683	1215	1,304
Summer	551	489	685	1,037
May	276	296	397	448
June	146	79	176	313
July	129	114	112	276
Autumn	2,428	2,447	2266	3,977
August	252	213	198	476
September	868	760	612	1,248
October	1,308	1,474	1456	2,253
Total Arrival	6,393	5,599	6,261	9,249

Source: Department of Tourism, MTI, Thimphu.

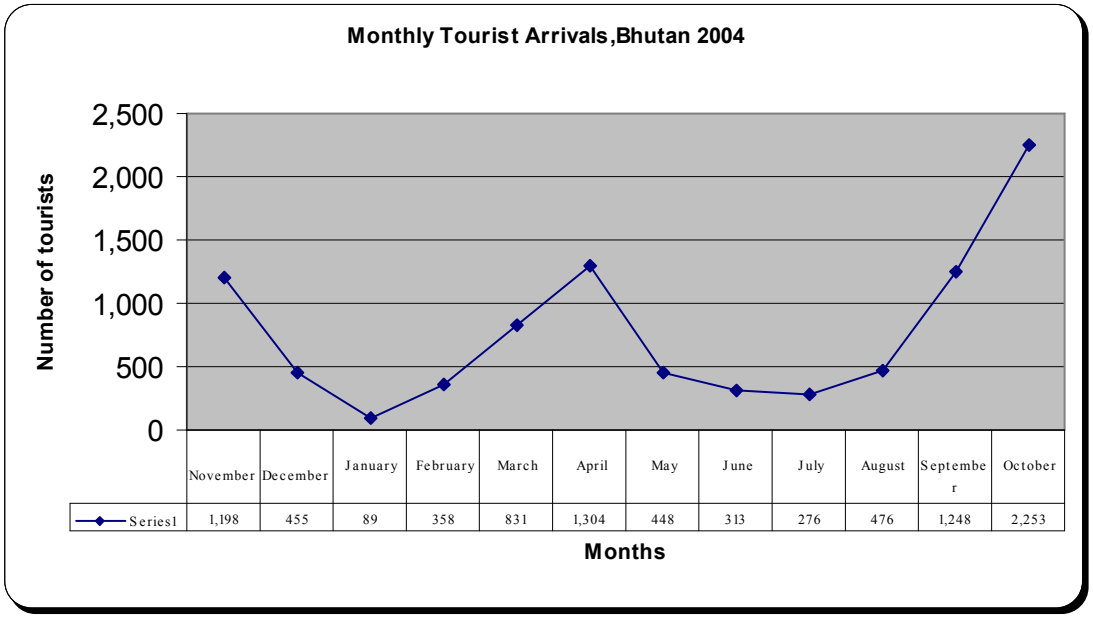


TABLE 9.4
NUMBER OF TOURIST ARRIVALS BY PURPOSE OF VISIT, BHUTAN, 2001 TO 2004

Purpose	2001	2002	2003	2004*
Tour, holidays & recreation	5,925	5,242	5,823	8,742
Trekking & mountaineering	468	357	438	507
Total tourists	6,393	5,599	6,261	9,249

Source: Department of Tourism, MTI, Thimphu

TABLE 9.5
NUMBER OF TOURIST ARRIVALS BY MODE OF TRANSPORT, BHUTAN, 2001 TO 2004

Mode of transport	2001	2002	2003	2004
By Air	5,544	4,062	5,134	6,666
By Road	849	1,537	1,127	2,583
Total arrivals	6,393	5,599	6,261	9,249

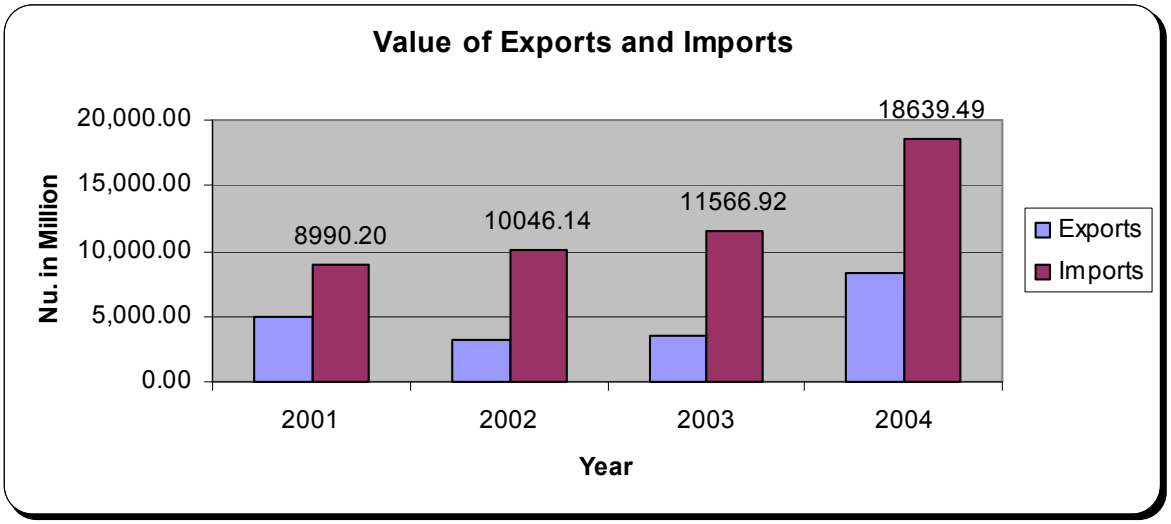
Source: Department of Tourism, MTI, Thimphu.

CHAPTER 10 FOREIGN TRADE AND BALANCE OF PAYMENT

Bhutan's economy is closely linked with India, though efforts towards diversification of products and markets are actively pursued. While economy links with other countries are limited, significant amount of aid have been received in recent years and this has enabled substantial increases in imports from third countries. Exports to third countries continue to be very low against higher imports, so reliance has to be placed on inflows of aid for the financing of imports.

Balance of Payments statistics are designed to show the difference between the total payments made to foreign countries and the total receipts from foreign countries. Payments and receipts include imports and exports of merchandise; services and transfers (such as freight and insurance charges); expenditure by travelers; and capital movements (such as loans and investments). The trade balance measures the balance between imports and exports. Including services and transfers to provide a measure of the current account balance obtain a more comprehensive picture of the balance of payments situations.

The balance of payments statements also show how any negative current account balance is financed. In the case of Bhutan this is achieved through foreign aid. Any surplus of foreign aid over and above current account deficits means an increase in the foreign currency reserves of the country. Balance of payments statistics in Bhutan are compiled by the Royal Monetary Authority based on information from its own accounts and those of the Banks, together with information on imports and exports.



BLE 10.1
OVERALL BALANCE OF PAYMENTS ESTIMATES, BHUTAN, FY 2000/01 TO 2003/04

Item	2000/01	2001/02	2002/03	2003/04
A.Current Account	(1,223.5)	(2,701.3)	(3,383.7)	(2419.9)
Exports, fob	4615.8	4,994.8	5405.9	7157.5
Imports, cif	(7,875.0)	(8,990.2)	(9086.9)	(11123.5)
Trade balance	(3,259.1)	(3,995.5)	(3681.0)	(3966.0)
Services*1	(184.5)	(218.0)	(801.5)	(365.4)
Credit	1,444.3	1,416.6	1194.0	1421.1
Debit	(1,628.7)	(1,634.6)	(1995.5)	(1786.5)
Income	119.3	(139.8)	(598.8)	(740.1)
Credit	803.8	523.1	561.4	436.3
Debit	(684.4)	(662.9)	(1160.3)	(1176.5)
Current Transfers	2,100.8	1,651.9	1697.6	2651.6
Credit	4,046.3	3,939.1	3959.5	5035.2
Debit	(1,945.4)	(2,287.30)	(2261.9)	(2383.6)
B.Capital and Financial Account	2,969.7	4,968.8	10464.5	8664.8
Capital Transfers	1,541.1	2,021.3	5819.0	4666.8
Foreign Direct Investment	..	101.2	117.9	157.0
Portfolio Investment	(881.4)	..	..	..
Foreign Aid (Loans net)*2	2,310.0	2,846.2	4527.5	4934.6
Other loans	..	..	..	363.3
Other Investment	..	..	..	(1456.9)
C.Net Errors and Omissions	(1,510.0)	(1,024.80)	(4479.3)	(5871.8)
D.Overall balance*3	236.20	1,242.70	2601.4	373.0

Notes:
Figures within bracket indicate deficit (-).
*1 In all prior BOP publications (data till 2000/01), Services, Income and Transfer Receipts and Payments (also known as "Invisibles") were grouped as Servicematch Transfer Receipts and Service Transfer payments. This format has now been altered to match IMF BOP standards. Therefore, from 199/00 Invisibles are therafter classifed under Net Services.
*2 As above, in all prior Bop publications (dat till 2000/01), the Grant Net component was included in the Capital and Financial Account under Foreign Aid. From 1999/00 onwards, as IMF Standards, Grants are treated as Current Transfer Receipts.
*3 Overall balance is the Change in Reserves.
The past figures have also changed.
Source : Royal Monetary Authority of Bhutan, Thimphu

TABLE 10.2
VALUE OF EXPORTS AND IMPORTS, BHUTAN, 2001 TO 2004

Trade	2001	2002	2003	2004
Exports	4,994.75	3131.18	3586.63	8271.15
India	4,700.47	2789.64	3322.40	7761.56
Third Countries	294.28	341.54	264.23	509.59
Imports	8990.20	10046.14	11566.92	18639.49
India	6988.78	7573.57	10228.52	10193.90
Third Countries	2001.42	2472.57	1338.40	8445.59
Balance of trade	(3,995.45)	(6914.96)	(7980.29)	(10368.34)
India	(2288.31)	(4783.93)	(6906.12)	(2432.34)
Third Countries	(1,707.14)	(2131.03)	(1074.17)	(7936)

Note:
Figures within bracket indicate deficit (-).

Source: Department of Revenue & Customs, Ministry of Financ, Thimphu.

TABLE 10.3(a)
TOP TEN COMMODITIES OF EXPORTS, BHUTAN, 2004

Commodity	Million Nu.	Share	Rank
	Nu.	%	
Electrical energy	2,711.75	41.44	1
Ferro-silicon	748.41	11.44	2
Of calcium	706.10	10.79	3
Stranded wire, cables, plaited bands and the like, of copper, not electrically insulated.	525.91	8.04	4
Ingots	438.69	6.70	5
portland cement	357.37	5.46	6
Of polyesters	327.18	5.00	7
Mineral & areated water (with suger & flavour)	262.24	4.01	8
Partical board	246.86	3.77	9
Oranges	220.04	3.36	10
Total	6,544.55	100.00	

TABLE 10.3(b)
TOP TEN COMMODITIES OF IMPORTS, BHUTAN, 2004

Commodity	Million Nu.	Share %	Rank
Aeroplanes and other aircraft, of an unladen weigh	18,639.49	50.59	1
High Speed Diesel (HSD)	11,267.32	30.58	2
Of polyesters, pertially oriented	4,107.45	11.15	3
Petrol	1,008.59	2.74	4
Other	354.28	0.96	5
Rice	339.93	0.92	6
Beer made from malt.	334.79	0.91	7
Cars, petrol below 1000 cc	317.76	0.86	8
Telephone or telegraphic switching apparatus	248.15	0.67	9
Other	229.02	0.62	10
Total	36,846.78	100.00	
	73693.56	200.00	

Source: Department of Revenue & Customs, Ministry of Finance, Thimphu

TABLE 10.4
VALUE AND ITS PERCENTAGE SHARE OF IMPORTS FROM TOP TEN SELECTED COUNTRIES, BHUTAN 2004

Country	2004		
	Millilion. Nu	Share (%)	Rank
India	10193.90	95.87	1
Japan	4248.35	24.36	2
Singapore	598.24	3.43	3
Thailand	501.78	2.88	4
Korea South	420.09	2.41	5
Denmark	411.87	2.36	6
Germany	349.56	2.00	7
Italy	275.29	1.58	8
Sweden	235.59	1.35	9
Bangladesh	205.29	1.18	10

'Note

Source: Department of Revenue & Customs, Ministry of Finance, Thimphu.

TABLE 10.5
VALUE AND ITS PERCENTAGE SHARE OF EXPORTS FROM TOP TEN SELECTED COUNTRIES, BHUTAN 2004

Country	2004		
	Millilion Nu	Share (%)	Rank
India	7761.56	94.30	1
Bangladesh	410.68	4.97	2
Nepal	24.44	0.30	3
Swaziland	17.67	0.21	4
Japan	13.81	0.17	5
United States of America	11.65	0.14	6
United Kingdom	6.48	0.08	7
Netherlands	5.58	0.07	8
Singapore	4.81	0.06	9
Canada	4.34	0.05	10

Note:

Source: Department of Revenue & Customs, Ministry of Finance, Thimphu.

TABLE 10.6
GROSS INTERNATIONAL RESERVES, BHUTAN, 2000/01 TO 2004/05

Millions of Indian Rupees

Money reserves	2000/01	2001/02	2002/03	2003/04	2004/05
1.Rupee reserves	3,567.3	3,663.9	3,330.2	4362.8	3490.0
Royal Monetary Authority	89.4	635.7	863.6	1822.4	1981.4
Bank of Bhutan	2,149.7	1,964.7	1,734.4	1988.3	1079.4
Bhutan National Bank	1,328.3	1,063.6	732.1	552.1	429.1
2.Convertible currency	217.2	240.5	301.7	287.2	284.4
Royal Monetary Authority (a)	186.1	202.6	244.4	248.9	253.5
Royal Government	..	..	..	..	
Bank of Bhutan	16.3	18.4	39.6	31.3	21.0
Bhutan National Bank	14.8	19.5	17.7	7.0	9.9
Royal Insurance Corporation of Bhutan	0.00	0.1	0.2	0.0	0.0
3.Total reserves (1+2)	293.1	315.4	373.2	383.1	364.5
4.Total reserves	18.16	20.61	23.00	18.8	17.1
Rupee reserves	5.74	6.29	4.90	5.3	4.3
Convertible currecny reserves	74.54	70.61	192.30	115.1	109.0

Note:

(a) Includes reserve tranche position in the fund.

The defination of Bhutan's gorss international reserves was revised in early 2004 to exclude reserves of the RICBL and the cash in hand of commercial banks. Historical data have also been adjusted

Source: Royal Monetary Authority of Bhutan, Thimphu.

TABLE 10.7
MONTHLY AVERAGE EXCHANGE RATES, NGULTRUMS PER US $, 2000 TO 2004

Month	2000	2001	2002	2003	2004
January	43.55	46.54	48.34	47.93	45.45
February	43.61	46.52	48.69	47.74	45.27
March	43.59	46.62	48.74	47.65	45.02
April	43.64	46.79	48.92	47.38	43.93
May	43.97	46.92	49.00	47.08	45.25
June	44.69	47.01	48.96	46.72	45.51
July	44.78	47.14	48.76	46.23	46.04
August	45.69	47.13	48.59	45.94	46.34
September	45.89	47.65	48.44	45.85	46.1
October	46.35	48.02	48.37	45.39	46.78
November	46.78	48.00	48.38	45.47	45.13
December	46.75	47.92	48.14	45.59	43.98
Calendar year average	44.94	47.19	48.61	46.58	45.32
Fiscal year average	1999/00	2000/01	2001/02	2002/03	2003/04
	43.64	46.39	48.21	47.93	45.41

Source: "Selected Economic Indicators June 2003", Royal Monetary Authority, Thimphu.

CHAPTER 11 MONEY, BANKING AND FINANCE

Until recent times most economic transactions in Bhutan were carried out on the basis of barter arrangements. The widespread use of money commenced during the 1960s with the expansion of trade with India and the inflow of development assistance. The Indian Rupee was used till 1974 when the Royal Government issued its first currency notes the Ngultrum. Since then, the monetary section has grown rapidly resulting in the dramatic economic development and improvement in transport and communication, planned urbanization in spite of the fact that barter economy still remains in some part of the country. The monetary sector in Bhutan comprises the Royal Monetary Authority, Bhutan's Central Bank; the Bank Of Bhutan and the Bhutan National Bank. The non-bank financial institutions are the Royal Insurance Corporation of Bhutan and the Bhutan Development Finance Corporation which was established during 1988 to provide long-term loans for development purposes.

The Royal Monetary Authority has developed a comprehensive statistical system for the money, banking and finance sector. Important economic indicators are available in the regular quarterly bulletins “Selected Economic Indicators”. The main element of the system is the monetary survey, which is a consolidation of the accounts of the Royal Monetary Authority and other Banks and Financial Institutions showing the financial relationship between these institutions and other sectors of the economy. Items covered include foreign assets and domestic credit, together with information on the money supply. In addition, financial statements are also available for the two non-bank financial institution.

TABLE 11.1
MONETARY SURVEY, ROYAL MONETARY AUTHORITY, BHUTAN NATIONAL BANK

(Nu. in Million)

Item	2001	2002	2003	2004
Assets total	16,271.0	20,252.8	20,233.9	23,045.4
Reserves	14,835.4	17,303.7	16,766.2	17,327.3
Foreign Assets	14,835.4	17,303.7	16,766.2	17,327.3
Rupee	3,405.1	4,567.0	3,575.9	5,446.6
Others	11,430.3	12,736.7	13,190.3	11,880.8
Domestic Credit	1,435.6	2,949.0	3,467.7	5,718.0
Claims on Government. (Net)	(1,309.5)	(455.9)	(1,038.5)	(576.7)
Claims on Government Corps	315.2	252.0	252.0	233.2
Claims on Joint Corps.	117.4	117.8	126.8	101.7
Claims on private sector	2,308.7	3,031.5	4,123.8	5,956.1
Claims on NMFIs(1)	3.7	3.7	3.7	3.7
Liabilities total	16,271.0	20,252.8	20,233.9	23,045.4
Broad money (M2)	10,715.7	13,857.4	13,846.0	16,599.5
Narrow Money (M1)	4,848.1	7,125.1	6,769.9	8,053.8
Nu. Outside Banks	1,609.9	1,648.3	1,802.3	2,070.7
Demand Deposits	3,238.2	5,322.8	4,967.5	5,983.1
Quasi Money (2)	0.0	0.0	0.0	0.0
	5,867.6	6,732.3	7,076.1	8,545.7
Capital accounts	1,150.5	1,472.1	1,909.0	2,054.5
Other items(net)	5,550.2	6,366.0	6,300.5	6,444.1

Notes:

Broad money (M2)=M=Narrow Money+Quasi Money

Narrow Money (M1) =Nu. Outside banks+Demand deposits+NMFIs Deposits

(1)NFIs stand for Non Monetary Financial Institutions.

(2)Quasi Money stands for time deposits plus foreign currency deposits.

Source: Royal Monetary Authority of Bhutan, Thimphu.

TABLE 11.2

FINANCIAL DETAILS OF ROYAL INSURANCE CORPORATION OF BHUTAN, 2001 TO 2004

(Nu. in Million)

Item	2001	2002	2003	2004
Assets total	1,077.4	1,259.1	1,468.7	1428.4
Reserves	30.6	44.2	131.7	47.6
Foreign Assets	55.4	8.7	4.9	3.6
Rupee	50.0	2.7	0.1	0.1
Others	5.4	6.0	4.8	3.5
Domestic Credit	991.3	1,156.2	1,262.1	1377.2
Claims on Government (Net)	-	-	-	0.0
Claims on Government Corps.	17.3	18.2	25.1	25.1
Claims on Joint Corps.	-	-	-	0.0
Claims on private sector	974.0	1,138.0	1,237.0	1352.1
Claims on NFIs	0.0	0.0	0.0	0.0
Real estate	0.0	0.0	0.0	0.0
Liabilities total	1,077.4	1,259.1	1,468.7	1428.4
General Insurance reserve funds	0.0	0.0	0.0	0.0
Life fund	44.1	55.8	71.6	87.2
Government employee provident funds	360.2	47.8	65.9	73.8
Group Insurance Fund	153.3	168.0	188.6	210.7
Credit from DMB	595.0	673.6	186.3	94.5
Unit Trust of Bhutan fund	0.0	0.0	0.0	0.0
Capital accounts	156.8	193.6	269.4	316.1
Other items (net)	-232.0	120.0	236.9	246.1

Notes:

(1) NFIs stands for Non Monetary Financial Institutions. (a)Including Bhutan National bank.

Domestic credit excluding the claims on DMBs

Source: Royal Monetary Authority of Bhutan, Thimphu.

TABLE 11.3
FINANCIAL DETAILS OF BHUTAN NATIONAL BANK, 2001 TO 2004

(Nu. in Million)

Item	2001	2002	2003	2004
Assets total	3,979.7	4,854.7	5,361.7	6519.1
Reserves with RMA	195.4	1,917.8	1,441.8	1221.9
Foreign Assets	2,053.6	1,115.2	966.0	773.9
Rupee	1,088.3	651.0	609.8	540.4
Others	965.3	464.3	356.2	233.5
Domestic Credit	1,345.0	1,821.7	2,953.9	4523.3
Claims on Government	120.0	120.0	541.6	647.0
Claims on Government Corps	-	-	-	0.0
Claims on Joint Sector	7.4	7.6	7.6	7.6
Claims on private sector	1,213.9	1,690.4	2,401.0	3864.9
Claims on NBFIs	3.7	3.7	3.7	3.7
Liabilities total	3,979.7	4,854.7	5,361.7	6519.1
Demand Deposits (Current and saving Deposits)	683.4	650.4	873.8	1008.4
Time Deposits	2,220.6	3,057.6	2,510.0	3730.9
Foreign currency Deposits	30.0	29.6	44.3	81.1
Central Govt. Deposits	556.2	640.0	375.0	840.7
Credit from RMA (b)	0.0	0.0	0.0	0.0
Capital accounts	334.9	328.5	700.0	742.6
Other items (net)	154.7	148.6	207.6	115.5

Note:
(a) RICB stands for Royal Insurance Corporation of Bhutan Limited; (b) RMA stands for Royal Monetary Authority.

Source: Royal Monetary Authority and Bank of Bhutan, Thimphu.

TABLE 11.4

MONEY AND BANKING DATAILS OF BHUTANDEVELOPMENT FINANCE CORPORATION, 2001 TO 2004

(Nu. in Million)

Item	2001	2002	2003	2004
Assets total	789.6	959.9	1,223.9	1,256.0
Reserves	39.3	47.0	93.1	93.2
Foreign assets	0.0	0.0	0.0	0.0
Rupees	0.0	0.0	0.0	0.0
Others	0.0	0.0	0.0	0.0
Domestic Credit**	644.3	909.9	1115.8	1,152.9
Claims on Government	0.0	0.0	0.0	0.0
Claims on Government Corporations	0.9	0.9	0.9	0.9
Claims on joint Corporations	0.0	0.0	0.0	0.0
Claims on private sector	643.4	909.0	1,114.9	1,152.0
Claims on DMBs(a)	106.0	3.0	15.0	10.0
Claims on other NMFIs(b)	0.0	0.0	0.0	0.0
Liabilities total	789.6	959.9	1,223.9	1,256.0
Foreign liabilities	267.4	349.2	342.8	320.3
Credit from RMA	0.0	0.0	0.0	0.0
Credit from DMB(a)	0.0	0.0	100.0	89.9
Credit from other NMFIs	0.0	0.0	100.0	90.0
Grants	50.0	50.0	50.0	50.0
Capital account	346.2	395.8	438.8	508.3
Other items net	126.0	164.8	192.3	197.6

Notes:

The summary exclude Agriculture Credit Program

(a) Represents deposits other than demand deposit (b) represents purchase of unit shares of UTB

**Domestic Credit excluding claims on DMBs and NMFIs

Source: Royal Monetary Authority of Bhutan, Thimphu.

TABLE 11.5

MONEY AND BANKING OF ROYAL MONETARY AUTHORITY OF BHUTAN, 2001 TO 2004

(Nu. in Million)

(End of the period)

Item	2001	2002	2003	2004
Assets total	11,023.3	12,339.8	12,260.2	13,933.6
Foreign assets	10,728.2	12,016.6	11,899.0	13,000.5
Indian rupee	1,215.5	913.4	987.3	2,709.6
Convertible Foreign Currency (Including Gold)	9,512.7	11,103.2	10,911.7	10,290.9
Claims on deposit money banks	293.2	194.3	303.5	895.4
Claims on Government	0.0	127.0	56.0	37.0
Claims of private sector	1.9	1.9	1.8	0.7
Claims on NMFIs	0.0	0.0	0.0	0.0
Liabilities total	11,023.3	12,339.8	12,260.2	13,933.6
Reserve money	6,074.3	6,809.8	8,281.0	9,222.6
Currency outside banks	1,609.9	1,648.3	1,802.3	2,070.7
Foreign Liabilities	0.0	0.0	0.0	0.0
Rupee	0.0	0.0	0.0	0.0
Others	0.0	0.0	0.0	0.0
Government deposits	391.7	216.2	462.0	1,087.6
RMA Bills Outstanding	410.0	1,100.0	0.0	200.0
Capital Account	161.0	277.8	174.3	205.8
Other items (net)	3,486.3	3,936.0	3,342.9	3,217.6

Note:

The Government Foreign Currency deposits previously taken as part of Reserve money and have now been correctly classified as part of Govt. Deposits.

Source: Royal Monetary Authority of Bhutan, Thimphu.

TABLE 11.6
MONEY AND BANKING, BANK OF BHUTAN, 2001 TO 2004

Item	2001	2002	2003	2004
Assets total	9,137.7	11,300.5	11,602.3	13,013.2
Reserve with RMA	3,083.8	4,555.6	4,900.7	5,386.2
Foreign assets	3,027.0	4,189.8	3,937.9	3,552.9
Rupee	2,074.7	3,002.6	1,978.8	2,196.6
Other	952.3	1,187.2	1,959.1	1,356.4
Claims on Government	250.0	853.8	671.6	1,656.4
Claims on Government's corpns.	315.2	252.0	252.0	233.2
Claims on joint's Corporations	110.0	110.2	119.2	94.1
Claims on private sector	1,093.0	1,339.2	1,721.0	2,090.5
Liabilities total	8,531.5	11,300.5	11,602.3	1,3013.2
Demand deposit (a)	2,554.8	4,672.4	4,093.8	4,974.7
Time deposit	3,407.8	3,203.2	3,519.8	4,226.2
Foreign currency deposits	209.3	441.9	1,002.1	507.6
Foreign liabilities	973.4	0.0	0.0	0.0
Rupee	973.4	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0
Government deposits	731.6	775.5	924.9	988.8
Credit from RMA	0.0	0.0	0.0	0.0
Capital accounts	654.7	865.8	1,034.7	1,106.1
Other items (net)	606.2	1,341.8	1,027.1	1,209.9

Notes:
In 1997 the Bhutan National Bank included with Bank of Bhutan. (a) Saving deposits included in demand deposits.

Source: Royal Monetary Authority of Bhutan, Thimphu.

TABLE 11.7

INVESTMENTS OF FINANCIAL INSTITUTIONS BY INDUSTRY, AMOUNTS OUTSTANDING , 2001 TO 2004

In Million Nu.

Industry	2001	2002	2003	2004
Agriculture	192.1	214.5	220.7	201.8
Bank of Bhutan	4.8	6.3	6.7	1.5
RICB	0.4	0.3	0.1	1.8
BDFC	186.9	208.1	214.0	198.6
Bhutan National Bank	0.0	0.0	0.0	0.0
Service and Tourism**	536.6	1,140.4	734.3	1,776.0
Bank of Bhutan	308.7	852.0	346.1	1,188.9
RICB	0.0	0.0	0.0	144.3
BDFC	175.1	214.9	269.1	307.2
Bhutan National Bank	52.8	73.6	119.1	135.6
Industry, Manufacturing**	821.1	1100.5	1,422.1	2,100.7
Bank of Bhutan	239.6	305.4	431.6	462.6
RICB	221.7	283.7	226.3	118.7
BDFC	143.2	186.2	243.9	217.5
Bhutan National Bank	216.6	325.2	520.4	1,301.8
Building and construction	900.2	1348.3	1,878.2	2,653.9
Bank of Bhutan	184.3	286.7	350.2	542.5
RICB	322.9	360.9	350.2	553.5
BDFC	68.1	196.2	456.9	364.5
Bhutan National Bank	324.9	504.5	336.3	1,193.4
Trade and commerce	658.3	822.2	734.8	1,276.2
Bank of Bhutan	303.4	354.0	1,025.2	480.3
RICB	117.8	165.6	393.8	364.4
BDFC	47.1	67.4	326.8	48.6
Bhutan National Bank	190.0	235.1	36.6	382.8
Transport	711.8	743.3	267.9	796.0
Bank of Bhutan	400.3	416.3	794.8	441.4
RICB	155.7	139.2	452.2	81.2
BDFC	24.0	12.5	107.0	11.7
Bhutan National Bank	131.8	175.4	10.8	261.8
Personal and other loans	525.3	631.3	224.9	853.0
Bank of Bhutan	90.2	89.7	697.5	191.1
RICB	137.3	163.0	104.0	63.9
BDFC	5.5	4.0	54.6	3.0
Bhutan National Bank	292.3	374.6	535.5	595.0
Total	4,345.3	6000.4	6772.8	9,657.5

Note:

Loan availed by Ministry of Finance has been reported under Service and Tourism in case of BoB and Manufacturing and Industry in case of BNB.

Source: Royal Monetary Authority of Bhutan, Thimphu.

TABLE 11.8
INTEREST RATES FOR DEPOSITS IN FINANCIAL INSTITUTIONS, 2000 TO 2004

Type of deposit	2000	2001	2002	2003	2004
Savings	5.0%	5.0%	5.0%	5.0%	4.5%
Fixed deposit					
a) 3 months to less than 1year	5.5%	5.5%	4.0%	5.5%	4.5%
b) 1 year to less than 1 year	7.0%	7.0%	5.5%	7.5%	6.0%
c) 2 years to less than 3 years	9.0%	9.0%	7.5%	7.5%	6.0%
d) More than 3 years	10.0%	10.0%	8.5%	8.5%	7.0%

Source: Bank of Bhutan, Thimphu.

TABLE 11.9
INTEREST RATES AND REPAYMENT PERIOD BY SECTOR AND TYPE OF LOAN, FINANCIAL INSTITUTIONS (a), BHUTAN, 2002 TO 2004

	2002		2003		2004	
Sector	Interest Rate (% p.a)	Repayment period (Years)	Interest Rate (% p.a)	Repayment period (Years)	Interest Rate (% p.a)	Repayment period (Years)
Export finance (convertible currency areas)	13-15.5	1	13-15	0.5	13-15	0.5
General trade	15-15.5	3	15	1	15	1
Buses and trucks	13-16	5	13.0	5	13	5
Other passanger vehicles	15.5-16	5	15.0	5	15	5
Agriculture and Livestock	13.0	10	13.0	10	13	10
Manufacturing Industry	13.0	10	12-13	10	12-13	10
Service Industries(b)	13.0	5	12-13	5	12-13	5
Personal loans	15-16	5	15.0	3	15	3
Equity finance	13-14	5	13.0	5	13	5
Working capital	13-15.5	..	13-15	-	13-15	-
Housing	14.0	20	14.0	20	10	20

Notes:
(a)Rates applicable since August 22, 1994.
(b) Includes tourism, contract services, and other service activities.

Source: Bank of Bhutan, Thimphu.

TABLE 11.10
ROYAL SECURITIES EXCHANGE OF BHUTAN LTD
NUMBER OF SHAREHOLDERS, BHUTAN, 2001 TO 2004

Company	2001	2002	2003	2004
Bhutan Beverages & Company Ltd.	..	4820.0	4443.0	4407.0
Bhutan Board Products Ltd.	489.0	489.0	489.0	489.0
Bhutan Carbide & Chemical Ltd.	266.0	267.0	267.0	270.0
Bhutan Dairy Ltd.	96.0	96.0	96.0	96.0
Bhutan Ferro Alloys Ltd.	37.0	37.0	40.0	50.0
Bhutan National Bank Ltd.	405.0	409.0	5,451.0	4656.0
Bhutan Polimers Company Ltd.	78.0	95.0	104.0	102.0
Bhutan Tourism Corpn. Ltd	89.0	83.0	83.0	161.0
Druk Petroleum Corpn. Ltd.	80.0	80.0	79.0	71.0
Druk plaster & Chemicals Ltd.	203.0	203.0	203.0	203.0
Druk Satair Corporation Ltd.	1,201.0	1,200.0	1,186.0	1264.0
Druk Stone & Minerals Export Co. Ltd.	64.0	64.0	64.0	69.0
Penden Cement Authority Ltd.	1,616.0	1,620.0	1,520.0	1477.0
Royal Insurance Corpn. of Bhutan	2,056.0	1,871.0	1,715.0	1670.0
State Trading Corpn. of Bhutan Ltd.	133.0	127.0	127.0	125.0
Total	6,813.0	11,461.0	15,867.0	15110.0

Source: Royal Securities Exchange of Bhutan Ltd, Thimphu.

TABLE 11.11
ROYAL SECURITIES EXCHANGE OF BHUTAN LTD
MARKET INFORMATION AT THE END OF DECEMBER 2004

Company	Price per share (Nu)	Paid-up Shares	Market Capitalization (Nu)
Bhutan Beverages Company Ltd.	245	1,150,000	281,750,000
Bhutan Board Products Ltd.	90	1,400,014	126,001,260
Bhutan Carbide Chemicals Ltd.	5,000	100,000	50,000,000
Bhutan Dairy Ltd.	100	25,000	2,500,000
Bhutan Ferro Alloys Ltd.	510	1,500,000	765,000,000
Bhutan National Bank Ltd.	650	1,190,080	773,552,000
Bhutan Polimers Company Ltd.	240	249,334	59,840,160
Bhutan Tourism Corpn. Ltd.	1,701	20,940	35,618,940
Druk Petroleum Corpn. Ltd.	120	62,370	7,484,400
Druk plaster & Chemicals Ltd.	100	100,000	10,000,000
Druk Satair Corpn. Ltd.	350	304,032	106,411,200
Druk Stone & Minerals Export Co. Ltd.	300	37,702	11,310,600
Penden Cement Authority Ltd.	5,500	226,667	1,246,668,500
Royal Insurance Corpn. of Bhutan Ltd.	3,500	96,000	336,000,000
State Trading Corpn. of Bhutan Ltd.	190	200,000	38,000,000
Total	18,596	6,662,139	4,300,137,060

Source: Royal Securities Eexchange of Bhutan Ltd, Thimphu.

TABLE 11.12
ROYAL SECURITIES EXCHANGE OF BHUTAN LTD.
VOLUME TRADED, BHUTAN, 2001 TO 2004

Company	2001	2002	2003	2004
Bhutan Beverages Company Ltd.	..	1160153	27,346	3,912
Bhutan Board Products Ltd.	..	230	..	5,000
Bhutan Carbide & Chemicals Ltd.	58	..	6	..
Bhutan Dairy Ltd.	..	..	..	..
Bhutan Ferro Alloys Ltd.	24,750	..	..	100
Bhutan National Bank Ltd.	124,119	2,898	607,369	51,106
Bhutan Polimers Company Ltd.	..	57,185	1,100	720
Bhutan Tourism Corpn. Ltd	..	20	17	1,497
Druk Petroleum Corpn. Ltd.	..	..	..	61,437
Druk plaster & Chemicals Ltd.	30,000	..	..	..
Druk Satair Corpn. Ltd.	304,032	..	27	120,941
Druk Stone & Minerals Ltd.	4,800	..	..	38,130
Penden Cement Authority Ltd.	1,393	2,974	679	176
Royal Insurance Corpn. of Bhutan Ltd.	2,021	1,583	82,012	686
State Trading Corpn. of Bhutan	10	..	..	370
Total	491,183	1,225,043	718,556	284,075

Source: Royal Securities Exchange of Bhutan Ltd.

TABLE 11.13

ROYAL SECURITIES EXCHANGE OF BHUTAN LTD.

TRADED VALUES, BHUTAN, 2000 TO 2004

(Nu.in Million)

Company	Sector	2000	2001	2002	2003	2004
Bhutan Beverages Company Ltd.	Primary	..	..	115.000	..	..
	Secondary	..	..	1.020	6.740	1.040
Bhutan Board Products Ltd.	Primary	..	..	..	..	..
	Secondary	0.520	..	0.023	..	0.450
Bhutan Carbide & Chemicals Ltd.	Primary	..	..	..	..	..
	Secondary	0.016	0.286	..	0.030	..
Bhutan Dairy Ltd.	Primary	..	..	..	..	..
	Secondary	..	..	..	..	..
Bhutan Ferro-Alloys Ltd.	Primary	..	..	..	..	..
	Secondary	..	3.470	..	..	0.050
Bhutan National Bank	Primary	..	..	..	327.270	..
	Secondary	2.060	60.160	3.830	6.930	34.360
Bhutan Polimers Company Ltd.	Primary	5.870	..	..	..	..
	Secondary	..	..	..	0.330	0.170
Bhutan Tourism Corpn. Ltd	Primary	..	..	..	..	..
	Secondary	0.470	..	0.030	0.020	2.490
Druk Petroleum Corpn. Ltd.	Primary	..	..	..	..	..
	Secondary	..	..	..	..	6.310
Druk plaster & Chemicals Ltd.	Primary	..	3.000	..	..	..
	Secondary	..	..	..	..	..
Druk Satair Corpn. Ltd.	Primary	..	30.400	..	..	..
	Secondary	0.002	..	..	..	47.860
Druk Stones & Minerals Export Co. Ltd.	Primary	..	..	..	..	..
	Secondary	..	0.480	..	..	12.680
Penden Cement Authority Ltd.	Primary	..	..	..	..	..
	Secondary	13.960	5.880	13.650	3.400	0.940
Royal Insurance Corpn. of Bhutan Ltd.	Primary	24.540	..	..	81.360	..
	Secondary	7.140	8.290	6.620	2.580	2.400
State Trading Corpn. of Bhutan	Primary	..	..	..	.. ..	
	Secondary	..	..	..	..	0.060
Total		54.578	111.966	153.453	428.660	108.810

Source: Royal Securities Exchange of Bhutan Ltd.

CHAPTER 12

PUBLIC FINANCE

The system of modern public finance in Bhutan is of very recent origin. Traditionally taxes were being collected in kind; the levy on agricultural produce being on an average one fourth of the production of each farming family and labour contribution amounting to about two months labour for every adult. By 1960, as the government began to grow, institutionalization of public finance became a necessity.

In 1963, the position of a Finance Secretary was created in the Royal Secretariat and in 1968 the Ministry of Finance; one of the first few Ministries was formed. In 1970, the system of payment of taxes in kind was largely dispensed with so as to be taken up by the system of cash taxes based on the type of land holding.

The Ministry of Finance presented the first budget on modern lines in 1971. It was called the Civil Budget as it covered the needs of the Ministry of Finance, Home affairs and Foreign Affairs. The requirements of development oriented Ministries like Communication and Tourism, Trade and Industry, Forest and Development were provided under a separate development budget administered first by the Development Secretariat and then by its successor, the Planning Commission. With the commencement of the Fifth Five Year Plan the classification of the government budget into Civil and Development was replaced by the concept of Maintenance and Development Expenditures. Maintenance or Current Expenditures reflected mostly the current or consumption expenditures of the government while development expenditures were identified largely with the expenditures of the government on fixed capital formation.

TABLE 12.1
CURRENT BUDGETARY EXPENDITURE OF THE GOVERNMENT BY MINISTRY/ AGENCY, BHUTAN, 2000/01 TO 2004/05

(Nu. in Million)

Ministry/Non-ministerial Organization	2000/01 (actual)	2001/02 (actual)	2002/03 (actual)	2003/2004 (actual)
Ministry	2,293.8	2,800.7	2,769.5	3,245.0
Agriculture	395.3	420.9	455.3	533.7
Education	..	..	..	405.8
Finance	207.7	551.9	624.8	802.3
Foreign Affairs	191.2	196.8	215.4	196.94
Health	..	..	..	431.8
Home Affairs	376.9	399.7	424.3	414.9
Information & communications				58.3
Labour & Human Resources	..	..	..	82.8
Planning(a)	10.9	..	..	..
Trade and Industry	304.0	363.7	106.3	102.2
Works & Human Settlement	..	..	..	216.2
Non Ministerial organization				
His Majesty's Secretariat	11.4	12.4	12.2	13.3
National Assembly	12.2	13.4	19.0	20.5
Royal Advisory Council	8.2	9.8	7.9	7.3
Cabinet Secretarait	n.a	2.7	5.8	5.4
Royal Civil Service Commission	10.5	10.0	13.3	10.5
Judiciary	53.0	62.6	60.1	63.3
Royal Audit Authority	27.4	29.9	31.1	37.2
Bhutan Olympic Committee	20.5	23.2	10.7	7.4
Centre for Bhutan Studies	n.a	4.3	4.6	8.4
Council for Religious Affairs	n.a	118.8	133.4	150.9
Office of legal Affairs	n.a	6.8	8.5	8.5
Druk Air Corporation	29.0	n.a	n.a	na
Dzongkhag Development Commission	10.2	10.0	7.7	na
National Commission for Cultural affaris	n.a	30.9	32.5	34.5
National Employment Board	n.a	6.4	n.a	na
National Environment Commission	n.a	10.0	11.6	12.1
National Technical Traning Authority	n.a	51.0	60.8	na
National Women's Association	0.4	n.a	n.a	na
Planning Commission Secretarait	n.a	12.3	17.5	na
Royal Institute of Management	n.a	23.1	21.3	21.8
Royal University of Bhutan	n.a	n.a	n.a	3.4
Special Commission	31.4	n.a	n.a	na
Tourism Corporation	5.0	n.a	n.a	na
Urban Development Corporation	n.a	n.a	n.a	na

Contd…

TABLE 12.1(contd..)
CURRENT BUDGETARY EXPENDITURE OF THE GOVERNMENT BY MINISTRY/ AGENCY, BHUTAN, 2000/01 TO 2004/05

(Nu. in Million)

Ministry/Non-ministerial Organization	2000/01 (actual)	2001/02 (actual)	2002/03 (actual)	2003/04 (actual)
Punakha Dzong Renovation Project	n.a	n.a	3.6	2.1
Dzongkhags Administration	n.a	1,229.7	1,318.7	1,450.3
Total current expenditure	4,435.6	4,467.9	4,580.9	5,149.2

Notes:
(a) Erstwhile ministries
Source: Department of Budget &Accounts, MoF

TABLE 12.2
BUDGETARY DEVELOPMENT EXPENDITURE OF THE GOVERNMENT BY MINISTRY/AGENCY, 2000/01 TO 2003/04

Ministerial/Non-Ministerial Organization	2000/01 (actual)	2001/02 (actual)	2002/03 (actual)	2003/2004 (actual)
Ministry	n.a	4,350.37	2,885.61	3,870.30
Agriculture	319.33	423.73	658.45	605.27
Education	n.a	n.a	n.a	342.23
Finance	207.67	472.53	943.30	318.51
Foreign Affairs	258.50	29.37	141.81	72.35
Health	n.a	n.a	n.a	255.80
Home Affairs	86.39	71.74	97.30	109.77
Information & Communications	n.a	n.a	n.a	33.61
Labour & Human Resources	n.a	n.a	n.a	100.28
Trade and Industry	3,118.08	1,534.43	1,044.75	827.37
Works & Human Settlement	n.a	n.a	n.a	1,205.11
Non ministerial organization				
His Majesty's Secretariat	n.a	0.69	0.82	1.03
National Assembly	3.13	5.24	1.48	11.43
Royal Advisory Council	0.05	1.92	0.64	0.33
Cabinet Secretarait	n.a	0.09	0.29	1.65
Royal Civil Service Commission	101.33	120.28	141.30	86.45
Judiciary	34.47	15.53	17.74	13.21
Royal Audit Authority	11.90	9.91	18.63	9.75
Bhutan Olympic Committee	2.16	2.97	0.05	0.10
Centre for Bhutan Studies	n.a	1.18	0.66	1.03
Coucil for Religious Affairs	n.a	14.68	24.51	35.67
Office of Legal Affairs	n.a	5.29	2.01	7.10
Dzongkha Dev. Commission	14.061	13.91	2.46	n.a
Nataional Women's Association	1.34	n.a	n.a	n.a
National Commission for Cultural Affairs	n.a	19.28	12.48	18.48
National Employment Board	n.a	1.51	n.a	n.a
National Environment Commission	n.a	14.31	15.25	16.09
National Technical Training Authority	n.a	34.45	60.09	n.a
Planning Commission Secretarait	n.a	9.76	16.53	n.a

contd

TABLE 12.2 (contd.)
BUDGETARY DEVELOPMENT EXPENDITURE OF THE GOVERNMENT BY MINISTRY/ AGENCY, BHUTAN, 2000/01 TO 2004/05

Ministry/Non-ministerial Organization	2000/01 (actual)	2001/02 (actual)	2002/03 (actual)	2003/04 (revised)
Royal Institute of Management	n.a	6.09	11.77	20.34
Royal University of Bhutan	n.a	n.a	n.a	2.96
SAARC Conference complex	n.a	n.a	7,759.88	n.a
Social and Culture Division	13.90	n.a	n.a	n.a
Special Commission	13.90	n.a	n.a	n.a
Punakha Dz. Renovation Project	67.97	81.01	126.62	11.03
Dzongkhags Administration	n.a	604.09	375.08	434.71
Total development expenses		5,312.55	5,309.58	4,653.05

Source: Department of Budget & Accounts, MoF, Thimphu

TABLE 12.3
BUDGETARY RECEIPTS OF THE GOVERNMENT BY SOURCE, BHUTAN, 2000/01 TO 2003/04

Source of revenue	2000/01 (actual)	2001/02 (actual)	2002/03 (actual)	2003/04 (revised)
Tax revenue	92.17	2,675.55	2,928.30	3350.31
Direct tax	1,524.65	1,626.11	1,616.25	1936.52
Business Income Tax	1,257.67	317.20	350.20	377.75
Corporate Income Tax	919.54	987.83	922.49	1150.82
Rural tax	10.26	9.59	1.51	..
Health Contribution	22.21	23.44	26.85	30.51
Individual & trading units	338.13	..	..	..
Royalties	275.26	214.26	214.74	257.84
Tax on payroll/PIT	65.83	73.78	100.46	119.64
Indirect tax	667.52	1,049.40	1,312.05	1413.80
Bhutan Sales Tax	342.71	393.50	435.02	648.38
Export Tax		12.29	0.76	0.80
Motor Vehicle Tax	60.22	66.40	62.60	82.14
Business & Prof. Licences	18.53	20.68	18.75	25.05
Excise Duty	130.27	444.90	657.83	524.70
Import duty	78.29	94.52	115.16	112.63
Tax on Goods & Services	533.20	..	..	..
Other Taxes	24.35	17.15	21.92	20.05
Non tax revenue	2,754.60	2,424.47	1,856.96	1864.45
Fees, Dividends, Profits	..	2,389.81	1,831.95	..
Administrative Fees & Charges	80.71	90.30	162.75	111.79
Dividends	1,296.09	1,426.83	1,288.09	1417.82
Revenue from Govt. Departments	310.52	499.98	34.14	56.89
Sale of Government Properties	76.06	..	..	..
Transfer of Profits	714.29	363.75	317.19	225.68
Other Non-Tax revenue	1.68	8.95	29.78	8.93
Capital Revenue	76.06	34.66	25.01	43.34
Total revenue	4,671.52	5,100.03	4,785.26	5214.76

Source: Department of Budget and Accounts, MoF, Thimphu

TABLE 12.4
SUMMARY OF BUDGETARY OPERATIONS, BHUTAN, 2000/01 TO 2003/04

Item	2000/01 (actual)	2001/02 (actual)	2002/2003 (actual)	2003/04 (revised)
Revenue and Grants	8,382.5	8,826.7	7054.35	9670.93
Revenue	4,671.5	5,100.0	4785.26	5214.76
Tax revenue	2,192.2	2,675.6	2928.3	3350.31
Non-tax revenue	2,754.6	2,376.1	1856.96	1864.45
Other*	275.3	48.3	..	..
Other Receipts(+)/Payments(-)	..	(21.8)	..	947.58
External Grants	1.0	3,748.5	2269.086	4456.168
India	2,551.2	2,531.8	..	2287.209
Other	1,159.8	1,216.7	..	2168.959
Expenditure	10,716.5	10,052.1	9945.32	12479.638
Current	4,435.6	4,467.9	4580.91	5569.1
Capital	6,280.9	5,312.6	5309.58	6332.08
	-50.9	..	..	103.03
Increase in Advance	..	141.8	89.21	..
Lending Minus Recoveries	..	129.8	-48.38	..
Repayment				475.42
Overall surplus/deficit	-2,490.7	-1,225.4	-10028.08	-2808.708

Note:
For the year 2001/02, other* includes Interest on Loans.

Source: Department of Budget and Accounts, MoF, Thimphu

CHAPTER 13 PLAN OUTLAYS

Development planning in Bhutan can be tracked back to the year 1961 when the first Five Year Plan (1961/62 to 1965/66) was drawn up. Initially, self-contained development secretariat was established to implement the plan. At the time of preparation of the third plan in 1971, the Planning Commission (now, the Department of Planning) was established headed by the His Majesty the King. In the absence of basic economic information and skilled manpower, the formulation of the third plan, like earlier ones was relatively simple. Major developments in regard to the consolidation of the planning process took place in the fourth plan period, when the Dzongkhags were involved in the development process.

Until 1981 to 1982 the responsibility for making plan allocations, rising internal resources, and negotiations, foreign assistance etc. lay with the Planning Commission. In 1981 to 1982, a large part of the financial responsibilities of the Commission was transferred to the responsibilities for formulation of development plans and allocations of investments resources.

A substantial infrastructure for development of the economy had been built up in the first four plans so that by the end of the fourth plan, the planning process had gained a good deal of comprehensiveness and sophistication. These two factors enabled the economy to develop the capacity of absorbing much higher volumes of investment resources for development in the later five-year plans.

The Eighth Five Year Plan (1997 to 2002) laid emphasis towards attaining the objective of economic self-reliance, higher growth and greater distributional equity, the preservation and promotion of traditional values and ideals, and promotion of privatization. The Ninth Five Year Plan began in July 2002 will pursue maximization of Gross National Happiness as Development Goal and an Objective. Recognizing the wide ranges of factors that contribute to human well-being and happiness, four major areas are being identified as the pillars of Gross National Happiness. These are economic growth and development, preservation and promotion of cultural heritage, preservation and sustainable use of the environment, and good governance.

TABLE 13.1

NINTH PLAN BUDGETARY OUTLAY AND ALLOCATION, BHUTAN, 2002-2007

(Nu. in Million)

Organization	Recurrent	Capital	Total	Percent
Autonomous Agency/Non-ministerail org.	4,649.25	4,972.52	9,621.77	13.7
His Majesty's Secretariat	77.17	3.95	81.12	0.1
National Assembly Secretariat	83.06	6.72	89.78	0.1
Royal Advisory Council	52.18	1.30	53.48	0.1
Cabinet Secretariat	16.28	1.30	17.58	0.0
Royal Civil Service Commission	64.08	3,000.00	3,064.08	4.4
Judiciary	193.97	215.83	409.81	0.7
Royal Audit Authority	190.58	24.50	215.08	0.3
Bhutan Broadcasting Service	0.00	348.00	348.00	0.5
Bhutan Olympic Committee	166.48	43.72	210.20	0.3
Centre for Bhutan Studies	5.37	15.24	20.61	0.0
Council for Ecclesiasstical Affairs	719.93	77.66	797.58	1.1
Dzongkha Development Commision	48.46	10.00	58.46	0.1
National commission for Cultural Affairs	193.97	77.66	797.58	0.6
National Environment Commission	29.24	31.73	60.97	0.1
National Technical Traning Authority	335.93	500.00	835.93	1.2
Office of the Legal Affairs	17.71	17.60	35.30	0.1
Planning Commission Secretariat	63.96	45.00	108.96	0.2
Police, Jail & Fire Services	2,064.35	355.01	2,419.36	3.5
Royal Institute of Management	156.35	149.00	305.35	0.4
Ministry of Agriculture	2,548.36	2,000.00	4,548.36	6.5
Secretariat	435.06		435.06	0.6
RNR	2,113.30	2,000.00	4,113.30	5.9
Ministry of Communication	1,710.62	8,672.52	10,383.13	14.8
Secretariat	111.27	38.11	149.38	0.2
Department of Urban Development & Housing	187.38	2,400.00	2,587.38	3.7
Department of Roads	1,136.17	5,524.09	6,660.26	9.5
Department of Civil Aviation	127.21	403.92	531.13	0.8
Standard and Quality Control Division	21.49	45.10	66.59	0.1
Road Safety and Transport Authority	89.67	162.11	251.78	0.4
Bhutan Telecom Authority	17.65	21.05	38.70	0.1
Division of Information Technology	19.80	60.00	79.80	0.1
Construction Development Board		18.13	18.13	0.0

Contd..

TABLE 13.1(contd.)

NINTH PLAN BUDGETARY OUTLAY AND ALLOCATION, BHUTAN, 2002-2007

(Nu. in Million)

Organization	Recurrent	Capital	Total	Percent
Ministry of Finance	1,257.25	354.87	1,612.12	2.3
Secretariat	675.89	27.50	703.39	1.0
Department of Budget and Accounts	44.26	17.80	62.06	1.0
Department of National Properties	150.99	25.33	176.32	0.3
Department of Revenue and customs	357.35	257.54	614.88	0.9
Department of Aid and Debt Management	28.76	26.70	55.46	0.1
Department of Aid and Debt Management	28.76	26.70	55.46	0.1
Ministry of Foreign Affairs	1,278.69	176.21	1,454.90	2.1
Ministry of Health and Education	4,581.09	2,893.41	7,474.50	10.7
Secretariat	129.08	0.00	129.08	0.2
Department of Health	2,802.43	1,703.41	4,505.84	6.4
Department of Education	1,598.49	998.48	2,596.96	3.7
Department of Employment & Labour	51.11	191.52	242.63	0.4
Ministry of Home Affairs	486.38	130.57	616.85	0.9
Secretariat	230.47	30.66	261.13	0.4
Department of Survey and Land Records	183.65	22.85	206.49	0.3
Deparment of Registration	72.27	77.06	149.33	0.2
Ministry of Trade and Industry	2,210.43	6,351.08	8,561.52	12.2
Secretariat	112.07	371.32	483.39	0.7
Department of Trade	73.13	384.25	457.38	0.7
Department of Industry	110.28	900.00	1,010.28	1.4
Department of Power	1,717.95	4,500.00	6,217.95	8.9
Department of Geology & Mines	138.85	70.00	208.85	0.3
Department of Tourism	58.16	125.51	183.67	0.3
Others	5,156.92	3,449.05	8,605.97	12.3
Debt Servicing	393.24	3,449.05	3,842.29	5.5
Common Public Expenditure	2,009.80	0.00	2,009.80	2.9
Contingency for Renumeration	2,753.88	0.00	2,753.88	3.9
Total(Central, Autonomous and Others)	23.879.003	29,000.21	52,879.22	75.5
Dzongkhags	7,655.28	7,224.73	14,880.02	21.3
Gewogs	147.18	2,093.59	2,240.77	3.2
Total(Dzongkhags and Gewogs)	7,802.46	9,318.32	17,120.79	24.5
Total outlay	31,681.47	38,318.53	70,000.00	100.0

Source: "Ninth Plan Document 2002-2007", Planning Commision, Thimphu.

TABLE 13.2

OUTLAYS OF DEVELOPMENT PLANS, PERCENTAGE BY CATEGORY, FIFTH PLAN T NINTH PLAN, BHUTAN

(Nu.in Million)

Organization	Fifth Plan	Sixth Plan	Seventh Plan	Eighth Plan	Ninth Plan
Autonomous Agency/Non-ministerail or	..	..	..	..	13.7
His Majesty's Secretariat	n.a	n.a	n.a	0.1	0.1
National Assembly	n.a	n.a	n.a	0.1	0.1
Royal Advisory Council	n.a	n.a	n.a	0.1	0.9
Cabinet Secretariat	n.a	n.a	n.a	n.a	13.7
Royal Civil Service Commission	n.a	n.a	n.a	5.1	4.4
Judiciary	n.a	n.a	n.a	0.7	0.7
Royal Audit Authority	n.a	n.a	n.a	0.3	0.3
Bhutan Broadcasting Service	n.a	n.a	n.a	n.a	0.5
Bhutan Olympic Committee	n.a	n.a	n.a	0.2	0.3
Centre for Bhutan Studies	n.a	n.a	n.a	n.a	0.0
Council for Ecclesiastical Affairs	n.a	n.a	n.a	1.0	1.1
Dzongkha Development Commission	n.a	n.a	n.a	0.1	0.1
National Commission for Cultural Affa	n.a	n.a	n.a	0.8	0.6
National Environment Commission	n.a	n.a	n.a	0.3	0.1
National Technical Training Authority	n.a	n.a	n.a	n.a	1.2
Office of Legal Affairs	n.a	n.a	n.a	n.a	0.1
Planning Commission Secretariat	n.a	n.a	n.a	n.a	0.2
Police, Jail & Fire Services	n.a	n.a	n.a	n.a	3.5
Royal Instt. of Management	n.a	n.a	n.a	0.5	0.4
Ministry of Agriculture	9.0	9.2	4.5	3.06	6.5
Secretariat	..	..	..	..	0.6
Animal Husbandry	3.5	3.5	2.1	1.78	..
Area Dvelopment	n.a	n.a	n.a	4.07	..
Forestry	4.9	4.4	3.1	3.1	..
Renewal Natural Resources	..	..	..	..	5.9
Ministry of Communication					14.8
Secretariat	n.a	n.a	n.a	0.2	0.2
Civil Aviation	0.6	0.5	0.6	0.2	0.8
Construction Development Board	..	..	..	..	0.4
Division of Information Technology	..	..	..	..	0.1
Post Services	1.4	0.7	1.1	0.4	..
Road Services	16.9	9.3	7.8	13.1	9.5
Standard Quality and Control Division	..	..	..	..	0.1

Contd..

TABLE 13.2(contd.)

OUTLAYS OF DEVELOPMENT PLANS, PERCENTAGE BY CATEGORY, FIFTH PLAN T NINTH PLAN, BHUTAN

(Nu.in Million)

Organization	Fifth plan	Sixth Plan	Seventh Plan	Eighth Plan	Ninth Plan
Surface Transport	n.a	n.a	n.a	0.2	0.4
Telecommunications	0.7	1.4	7.0	4.1	0.1
Thimphu City Corporation	n.a	n.a	n.a	0.5	..
Work & Housing Services	n.a	n.a	n.a	3.1	3.7
Ministry of Finance	..	..	..	..	2.3
Secretariat	n.a	n.a	n.a	2.85	1.0
Deaprt of Budget and Accounts	n.a	n.a	n.a	n.a	0.1
Department of National Properties	n.a	n.a	n.a	2.85	0.3
Depart of Revenue and customs	n.a	n.a	n.a	2.85	0.9
Department of Aid and Debt managemen	n.a	n.a	n.a	2.9	0.1
Ministry of Foreign Affairs	n.a	n.a	n.a	2.5	2.1
Ministry of Health & Education	n.a	n.a	n.a	n.a	10.7
Secretariat	n.a	n.a	n.a	0.2	0.2
Department of Employment and Labour	n.a	n.a	n.a	n.a	0.4
Education	11.2	8.1	11.1	9.9	3.7
Health	5.1	4.2	6.6	8.5	6.4
Ministry of Home Affairs					0.9
Secretariat	..	..	..	1.0	0.4
Department of Registration	..	..	..	0.1	0.2
Department of Survey & Land Records	..	..	..	0.4	0.3
Ministry of Trade & Industry					12.2
Secretariat				0.1	0.7
Geological Survey	..	0.4	1.0	0.3	0.3
Power	7.3	13.1	2.5	11.3	8.9
Tourism	0.6	..	..	0.1	0.3
Trade and Industry	7.0	13.3	5.4	0.6	2.1
Debt Servicings	n.a	n.a	n.a	7.2	5.5
Common Public Expenditure	n.a	n.a	n.a	2.1	2.9
Reserve for pay Revision	n.a	n.a	n.a	7.5	..
General Government	24.0	20.6	39.7	n.a	n.a
Dzongkhags	..	2.5	23.0	2.3	21.3
Gewogs	..	2.5	23.0	2.3	3.2
Other	..	..	..	n.a	3.9
Total outlay	100.0	91.2	100.0	103.1	100.0

Source:: "Ninth Plan Main Document 2002-2007", Planning Commission, Thimphu.

TABLE 13.3

FINANCIAL OUTLAYS DURING NINTH PLAN BY SECTOR, BHUTAN, 2002-2007

(Nu. in Million)

Organization	Recurrent	Capital	Total	Percent
Autonomous Agencies	4,649.25	4,972.52	9,621.77	13.70
His Majesty's Secretariat	77.17	3.95	81.12	0.10
National Assembly Secretariat	83.06	6.72	89.78	0.10
Royal Advisory Council	52.18	1.30	53.48	0.10
Cabinet Secretariat	16.23	1.30	17.58	..
Royal Civil Service Commisssion	64.08	3,000.00	3,064.08	4.40
Judiciary	364.16	125.97	490.13	0.70
Royal Audit Authority	190.58	24.50	215.08	0.30
Bhutan Broadcasting Service	..	348.00	348.00	0.50
Bhutan Olympic Committee	166.48	43.72	210.20	0.30
Centre of Bhutan Studies	5.37	15.24	20.61	..
Council of Ecclesiasticl Affairs	719.93	77.66	797.58	1.10
Dzonkhag Development Commission	48.46	10.00	58.46	0.10
National Envirnment Commission	29.24	31.73	60.97	0.10
National Technical Training Authority	335.93	500.00	835.93	1.20
Office of the Legal Affairs	17.71	17.60	35.30	0.10
Planning Commission Secretariat	63.96	45.00	108.96	0.20
Police, Jail & Fire Service	2,064.35	355.01	2,419.36	3.50
Royal Institute of Management	156.35	149.00	305.35	0.40
Special Commission for Cultural Affairs	193.97	215.83	409.81	0.60
Ministry of Agriculture	2,548.36	2,000.00	4,548.36	6.50
Secretariat	435.06	..	4,113.30	0.60
Renewal Natural Resources	2,113.30	2,000.00	4,113.30	5.90
Ministry of Communication	1,710.62	8,672.52	10,383.13	14.80
Secretariat	111.27	38.11	149.38	0.20
Deaprtment of Urban Development	187.38	2,400.00	2,587.38	3.70
Department of Roads	1,136.17	5,524.09	6,660.26	9.50
Department of Civil Aviation	127.21	403.92	531.13	0.80
Standard Quality & Control Division	21.49	45.10	66.59	0.10
Road Safety & Transport Authority	89.67	162.11	251.78	0.40
Bhutan Telecom Authority	17.65	21.05	38.70	0.10
Division of InformationTechnology	19.80	60.00	79.80	0.10
Construction Development Board	..	18.13	18.13	..

Contd…

TABLE 13.3(contd)

FINANCIAL OUTLAYS DURING NINTH PLAN BY SECTOR, BHUTAN, 2002-2007

(Nu.in Million)

Organization	Recurrent	Capital	Total	Percent
Ministry of Finance	1,257.25	354.87	1,612.12	2.30
Secretariat	675.89	27.50	703.39	1.00
Department of Budget and Accounts	44.26	17.80	62.06	0.10
Department of National Properties	150.99	25.33	176.32	0.30
Department of revenue and customs	357.35	257.54	614.88	0.90
Department of Aid and Debt management	28.76	26.70	55.46	0.10
Ministry of Foreign Affairs	1,278.69	176.21	1,454.90	2.10
Ministry of Health & Education	4,581.09	2,893.41	7,474.50	10.70
Secretariat	129.08	0.00	129.08	0.20
Department of Health	2,802.43	1,703.41	4,505.84	6.40
Department of Education	1,598.49	998.48	2,596.96	3.70
Department of Employment and Labour	51.11	191.52	242.63	0.30
Ministry of Home affairs	486.38	130.57	616.95	0.90
Secretariat	230.47	30.66	261.13	0.40
Department of Survey and Land records	183.65	22.85	206.94	0.30
Department of Registration	72.27	77.06	149.33	0.20
Ministry of Trade & Industry	2,210.43	6,351.08	8,561.52	12.20
Secretariat	112.07	371.32	483.39	0.70
Department of Trade	73.13	384.25	457.38	0.70
Department of Industry	110.28	900.00	1,010.28	1.40
Department of Power	1,717.95	4,500.00	6,217.95	8.90
Department of Geology and Mines	138.85	70.00	208.85	0.30
Department of Tourism	58.16	125.51	183.67	0.30
Others	5,156.92	3,449.05	8,605.97	12.30
Debt Servicing	393.24	3,449.05	3,842.29	5.50
Common Public Expenditure	2,009.80	0.00	2,009.80	2.90
Contingency for Renumeration	2,753.88	0.00	2,753.88	3.90
Total (Central,Autonomous and Others)	23,879.00	29,000.21	52,879.22	75.50
Dzongkhags	7,655.28	7,224.73	14,880.02	21.30
Gewogs	147.18	2,093.59	2,240.77	3.20
Total (Dzongkhags and Gewogs)	7,802.46	9,318.32	17,120.79	24.50
Total Plan Outlay	31,681.47	38,318.53	70,000.00	100.00

Source:"Nith Plan Main Document 2002-2007",Planning Commission, Thimphu.

TABLE 13.4

DZONGKHAG WISE EIGHTH FIVE YEAR PLAN OUTLAY, BHUTAN

(Nu.in Million)

Dzongkhag	Current	Capital	Total
Bumthang	251.1	495.2	746.3
Chukha	391.3	2,148.7	2,540.0
Dagana	115.9	200.6	316.5
Gasa	57.0	169.3	226.3
Haa	99.3	157.1	256.4
Lhuntse	167.0	399.0	566.0
Monggar	369.3	884.1	1,253.4
Paro	306.8	336.5	643.3
Pema Gatshel	154.5	275.8	430.3
Punakha	219.7	225.7	445.4
Samdrup Jongkhar	428.8	616.3	1,045.1
Samtse	293.6	274.8	568.4
Sarpang	278.2	381.2	659.4
Thimphu	995.5	1,787.8	2,783.3
Trashi Yangtse	161.6	234.9	396.5
Trashigang	579.6	759.5	1,339.1
Trongsa	141.1	387.2	528.3
Tsirang	130.4	338.5	468.9
Wangdue Phodrang	283.4	529.2	812.6
Zhemgang	232.4	538.0	770.3
Total	5,656.5	11,139.4	16,795.8

Note:

Budget allocation for central programmes have been included under current expenditure in case of Agriculture and Livestock sector.

Source: "Ninth Plan Main Document 2002-2007", Planning Commission, Thimphu.

TABLE 13.5

DZONGKHAG WISE NINTH FIVE YEAR PLAN OUTLAY, BHUTAN, 2(

(Nu.in Million)

Dzongkhag	Current	Capital	Total
Bumthang	274.96	198.8	473.8
Chhukha	647.6	797.9	1,445.5
Dagana	197.2	315.1	512.3
Gasa	98.9	145.8	244.7
Haa	252.7	290.1	542.8
Lhuntse	269.1	617.3	886.3
Monggar	496.6	651.5	1,148.1
Paro	487.7	602.5	1,090.1
Pema Gatshel	309.3	444.5	753.8
Punakha	355.9	303.0	658.9
Samdrup Jongkhar	523.5	645.2	1,168.7
Samtse	327.7	592.9	920.6
Sarpang	503.9	490.4	994.2
Thimphu	740.4	677.8	1,418.2
Trashi Yangtse	298.5	357.1	655.6
Trashigang	671.5	781.3	1,452.8
Trongsa	255.9	309.4	565.3
Tsirang	210.1	316.6	526.7
Wangdue Phodrang	414.9	355.8	770.7
Zhemgang	466.2	425.4	891.6
Total	7,802.5	9,318.3	17,120.8

Source: Department of Planning, MoF, Thimphu.

CHAPTER 14

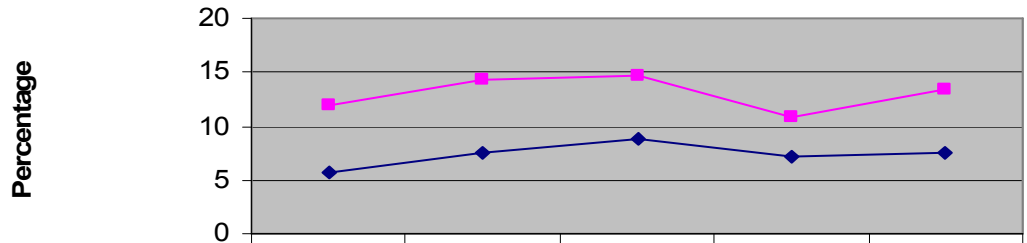
GROSS DOMESTIC PRODUCT

Human activities can be classified broadly into economic activities and non-economic activities. Economic activities are those, which are devoted to making use of the scarce resources (including time and labor) in the production and distribution of economic goods i.e. goods and services (needed to satisfy human wants), which are scarce in relation to demand and are transferable. Economic goods command a price on the market for their being scarce and transferable.

The end result of all the economic activities that has taken place in an economy during an accounting period is reflected in gross domestic product (GDP). GDP represents the money value of all the goods and services that have been produced within the territorial limits of the country and are available for final uses like consumption, gross capital formation and net exports.

GDP can be measured both at current and constant prices. When expressed at current prices it reflects the money value of the goods and services produced in an accounting year measured in the prices of that year. On the other hand GDP expressed at constant prices reflects the money value of such goods and services for all the years measured in one year's (base year) prices. In this case the base year prices are kept constant for evaluation purposes for all the year under review, for measuring the performance of the economy with regard to the production of the goods and services in real terms over a period constant price estimates of GDP have to be taken into account. Current price estimate of GDP give a view of the levels of production performances of the economy for all the years under review at changing current prices.

GDP Growth rate at Constant and Current Prices



	2000	2001	2002	2003	2004
constant	5.6	7.5	8.8	7.1	7.5
current	12	14.3	14.6	10.9	13.4

Years

TABLE 14.1
GROSS DOMESTIC PRODUCT AT FACTOR COST BY KIND OF ACTIVITY AT CURRENT PRICES

Sectors	2000	2001	2002	2003	2004
Agriculture					
Livestock & forestry	5568.7	6050.8	7016.8	7528.0	8174.7
Agriculture proper	2516.1	2682.0	3000.7	3196.2	3483.2
Livestock	1747.5	1930.1	2031.7	2224.1	2440.0
Forestry & logging	1305.1	1438.7	1984.5	2107.7	2251.4
Mining and quarrying	301.4	343.6	439.5	580.5	431.8
Manufacturing	1658.6	1897.4	1936.7	2121.6	2442.3
Electricity and water	2255.3	2392.1	2631.2	2813.1	2863.0
Construction	2673.0	3822.5	4788.3	5277.7	6282.7
Wholesale & Retail Trade	1040.6	1232.0	1364.7	1728.3	2482.0
Hotels & Restaurants	90.1	116.9	123.1	138.5	188.0
Transport, storage & Communication	1881.1	2261.2	2559.0	2818.4	3445.1
Financing, insurance & real estate	1373.9	1450.8	1368.0	1672.2	1858.0
Finance and Insurance	742.8	805.5	651.7	750.3	856.7
Real Estate & dwellings	631.1	645.3	716.3	921.9	1001.3
Community, Social services	2813.8	3037.3	3342.0	3663.6	3822.9
Public administration	2640.1	2861.1	3143.5	3449.3	3596.7
Education and Health	173.7	176.2	198.5	214.3	226.2
Private social, personal & recreation	96.2	99.3	108.3	118.6	136.3
Plus: taxes net of subsidies	491.4	550.7	878.1	1067.9	1392.6
Less: Imputed bank service charge	159.4	297.8	241.4	347.4	415.2
Gross domestic product	20084.6	22956.8	26314.4	29181.0	33104.1
Growth rate of GDP in %	12.0	14.3	14.6	10.9	13.4

Source: National Accounts Division, NSB, Thimphu.

TABLE 14.2
GROSS DOMESTIC PRODUCT AT FACTOR COST BY KIND OF ACTIVITY IN 2000 PRICES

Sectors	2000	2001	2002	2003	2004
Agriculture	5568.7	5849.5	6033.1	6198.4	6351.3
Agriculture	2516.1	2617.0	2689.6	2769.8	2826.2
Livestock	1747.5	1887.8	1942.6	1982.2	2017.3
Forestry & logging	1305.1	1344.6	1400.9	1446.4	1507.8
Mining & quarrying	301.4	352.4	389.1	411.7	375.8
Manufacturing	1659.0	1697.7	1731.5	1848.8	1933.0
Electricity, gas & water	2255.3	2294.0	2535.5	2520.7	2770.6
Construction	2673.0	3471.1	4408.8	4643.0	5036.0
Wholesale & Retail trade	1040.6	1190.8	1285.6	1592.8	1895.7
Hotel & restaurants	90.1	115.2	118.7	132.1	175.4
Transport, storage & Communication	1881.1	2019.5	2111.7	2209.6	2626.8
Financing	1373.9	1391.8	1226.8	1479.8	1564.0
Finance	742.8	794.6	677.9	789.0	864.6
Real estate	631.1	597.2	548.9	690.8	699.4
Community, social services	2813.8	2865.6	3156.0	3392.2	3399.2
Public	2640.1	2697.4	2966.4	3188.3	3178.6
Education	173.7	168.2	189.6	203.9	220.6
Private Social, personal & recreation	96.2	97.2	100.3	109.5	119.9
Plus: Indirect	491.4	532.6	648.0	987.1	1230.8
Less: Imputed	159.4	293.8	251.2	365.3	419.0
Gross Domestic Product	20085.0	21583.6	23493.9	25160.4	27059.4
Growth of GDP in %	5.6	7.5	8.9	7.1	7.5

Source: National Accounts Division, NSB, Thimphu.

TABLE 14.3
SHARE OF GROSS DOMESTIC PRODUCT IN CURRENT PRICES

Sectors	2000	2001	2002	2003	2004
Agriculture, livestock & forestry	27.7	26.4	26.7	25.8	24.7
Agriculture proper	12.5	11.7	11.4	11.0	10.5
Livestock	8.7	8.4	7.7	7.6	7.4
Forestry & logging	6.5	6.3	7.5	7.2	6.8
Mining & quarrying	1.5	1.5	1.7	2.0	1.3
Manufacturing	8.3	8.3	7.4	7.3	7.4
Electricity and water	11.2	10.4	10.0	9.6	8.7
Construction	13.3	16.7	18.2	18.1	19.0
Wholesale & Retail Trade	5.2	5.4	5.2	5.9	7.5
Hotels & restaurants	0.5	0.5	0.5	0.5	0.6
Transport, storage & Communication	9.4	9.9	9.7	9.7	10.4
Financingn insurance & real estate	6.8	6.3	5.2	5.7	5.6
Finance & Insurance	3.7	3.5	2.5	2.6	2.6
Real estate & dewllings	3.1	2.8	2.7	3.2	3.0
Community, Social services	14.0	13.2	12.7	12.6	11.6
Public administration	13.1	12.5	12.0	11.8	10.9
Education & health	0.9	0.8	0.8	0.7	0.7
Private social, personal & recreational services	0.5	0.4	0.4	0.4	0.4
Plus: taxes net of subsidies	2.5	2.4	3.3	3.7	4.2
Less: Imputed bank service charge	0.8	1.3	0.9	1.2	1.3
Gross Domestic Product	100.0	100.0	100.0	100.0	100.0

Source: National Accounts Division, NSB, Thimphu.

TABLE 14.4
GROSS DOMESTIC PRODUCT GROWTH RATES OVER THE PRECEEDING YEARS IN 2000 PRICES

Sectors	2000	2001	2002	2003	2004
Agriculture, livestock & forestry	4.6	5.0	3.1	2.7	2.5
Agriculture proper	4.7	4.0	2.8	3.0	2.0
Livestock production	5.1	8.0	2.9	2.0	1.8
Forestry & logging	3.9	3.0	4.2	3.3	4.3
Mining & quarrying	-2.8	16.9	10.4	5.8	-8.7
Manufacturing	4.3	2.3	2.0	6.8	4.6
Electricity gas and water	-9.8	1.7	10.5	-0.6	9.9
Construction	24.4	29.9	27.0	5.3	8.5
Wholesale & Retail Trade	15.7	14.4	8.0	23.9	19.0
Hotels & restaurants	1.8	27.9	3.0	11.3	32.8
Transport, storage & Communication	6.0	7.4	4.6	4.6	18.9
Financingn insurance & real estate	18.5	1.3	11.9	20.6	5.7
Finance	17.5	7.0	14.7	16.4	9.6
Real estate	19.8	-5.4	-8.1	25.9	1.2
Community, Social & personal services	1.6	1.8	10.1	7.5	0.2
Public administration	1.6	2.2	10.0	7.5	-0.3
Education & health	1.6	-3.2	12.7	7.5	8.2
Private social, personal & recreational services		1.0	3.2	9.2	9.5
Less: Imputed bank service	-18.7	84.3	-14.5	45.4	14.7
Gross Domestic Product	5.6	7.5	8.9	7.1	7.6

Source: National Accounts Division, NSB, Thimphu.

TABLE 14.5
GROSS DOMESTIC PRODUCT BY MAJOR SECTORS IN CURRENT PRICES

Sector	2000	2001	2002	2003	2004
Primary	5870.1	6394.4	7456.3	8108.5	8606.5
Secondary	6586.9	8112.0	9356.2	10212.4	11588.0
Tertiary	7787.0	8748.2	9743.2	11207.5	13324.9
Less: Imputed bank services	-159.4	-297.8	-241.4	-347.4	-415.2
Gross Domestic Product	20084.6	22956.8	26314.4	29181.0	33104.1

Source: National Accounts Division, NSB, Thimphu.

TABLE 14.6
GROWTH RATE OF THE MAJOR SECTORS IN CURRENT PRICES

Sector	2000	2001	2002	2003	2004
Primary	8.6	8.9	16.6	8.8	6.1
Secondary	11.2	23.2	15.3	9.2	13.5
Tertiary	14.8	12.3	11.4	15.0	18.9
Gross Domestic Product	12.0	14.3	14.6	10.9	13.4

Source: National AccountsDivision, NSB, Thimphu.

TABLE 14.7
SECTORAL SHARE TO GROSS DOMESTIC PRODUCT IN CURRENT PRICES

Sector	2000	2001	2002	2003	2004
Primary	29.2	27.9	28.3	27.8	26.0
Secondary	32.8	35.3	35.6	35.0	35.0
Tertiary	38.8	38.1	37.0	38.4	40.3
Less: Imputed bank services	-0.8	-1.3	-0.9	-1.2	-1.3
Gross Domestic Product	100	100	100	100	100

Source: National Accounts Division, NSB, Thimphu.

TABLE 14.8
GROSS DOMESTIC CAPITAL FORMATION IN CURRENT AND CONSTANT 2OOO PRICES

In current prices	2000	2001	2002	2003	2004
Machinary and Equipment	3030.5	3640.4	3679.6	3690.8	4539.0
Govt.	972.5	1034.7	1367.9	654.7	813.3
Private	2057.9	2605.7	2311.7	3036.2	3726.6
Construction	6846.8	9674.5	12097.5	13406.1	15699.9
Govt.	2119.2	2494.0	2706.4	2187.2	2385.7
Private	4727.6	7180.5	9391.1	11218.9	13314.2
Gross fixed capital formation	9877.2	13314.8	15777.1	17096.9	20239.8
Change in stock	-353.5	192.8	-160.3	-210.7	-47.7
Gross Domestic capital formation	9523.7	13507.6	15616.9	16886.2	20192.1
In constant 2000 prices					
Machinary and Equipment	3030.5	3568.9	3536.0	3512.9	4159.8
Govt.	972.5	1014.4	1315.3	623.5	745.3
Private	2058.0	2554.4	2220.7	2889.5	3414.5
Construction	6846.8	8579.3	10681.8	10639.7	11327.5
Govt.	2119.2	2211.7	2389.7	1735.6	1721.3
Private	4727.6	6367.6	8292.1	8903.9	9606.2
Gross fixed capital formation	9877.3	12148.1	14217.8	14152.7	15487.3
Change in stock	-353.5	186.3	-151.8	-195.3	-42.9
Gross Domestic capital formation	9523.8	12334.4	14065.9	13957.3	15444.4

Source: National Accounts Division, NSB, Thimphu.

TABLE 14.9
EXPENDITURES ON GROSS DOMESTIC PRODUCT AT CURRENT PRICES

Expenditures	2000	2001	2002	2003	2004
Final consumption expenditure	13667.5	14707.5	15507.2	17298.8	18414.0
Household and NPISH	9416.0	9962.2	10236.0	11464.1	11869.8
General Government	4251.6	4745.3	5271.1	5834.8	6544.7
Gross domestic capital formation	9523.8	13507.8	15617.1	16885.9	20191.9
Construction	6846.8	9674.5	12097.5	13406.1	15699.9
Machinery and equipment	3030.5	3640.4	3679.6	3690.8	4540.0
Change in inventory	-353.5	193.0	-160.0	-211.0	-48.0
Net export of goods & services	-3514.6	-3828.5	-4347.9	-4429.1	-4416.6
Export of goods & services	5910.0	6235.7	6505.6	7589.3	9330.8
Imports of goods & services	9424.6	10064.2	10853.6	12018.3	13747.5
Total Expenditure on GDP	19676.7	24386.8	26776.4	29755.7	34189.7
FISIM on PCE	40.0	127.4	62.1	147.9	93.1
Total GDP by expenditure	19716.6	24514.2	26838.4	29903.6	34282.8
GDP by production	20084.6	22956.8	26341.4	29181.0	33104.1

Source: National Accounts Division, NSB, Thimphu.

TABLE 14.10
EXPENDITURES ON GROSS DOMESTIC PRODUCT AT CONSTANT 2000 PRICES

Expenditure	2000	2001	2002	2003	2004
Final consumption expenditure	13667.5	14209.8	14635.7	16006.6	16740.4
Household and NPISH	9416.0	9625.1	9660.8	10607.6	10790.7
General Government	4251.6	4584.7	4974.9	5398.9	5949.7
CPI all items 2000=100	1.0	1.0	1.1	1.1	1.1
Gross domestic capital formation	9523.8	12316.3	14089.7	13957.7	15444.9
Construction	6846.8	8561.5	10705.8	10639.7	11328.0
Machinery and equipment	3030.5	3568.9	3536.0	3512.9	4159.9
Change in inventory	-353.5	186.0	-152.0	-195.0	-43.0
Net export of goods and services	-3514.6	-3702.3	-4103.0	-4094.0	-3903.2
Export of goods nad services	5910.0	6030.1	6139.1	7015.1	8246.2
Imports of goods and services	9424.6	9732.3	10242.1	11109.0	12149.4
Total expenditure on GDP	19676.7	22823.9	24622.4	25870.2	28282.0
FISIM of HH	40.0	125.7	64.6	155.6	93.9
Adjusted Expenditure on GDP	19716.6	22949.6	24687.0	26025.8	28375.9
GDP by production	20085.0	21583.6	23493.9	25160.4	27059.5
Statistical Discrepancy	368.4	-1366.0	-1193.1	-865.4	-1316.4

Source: National Accounts Division, NSB, Thimphu.

CHAPTER 15

PRICES

The only price statistics currently compiled in Bhutan relate to Consumer Price Indices, often referred to as the CPI. Since 1979, the CPI had been produced by the NSB twice a year till 2003. From 3rd quarter 2003, it has been producing quarterly. In addition, a food price index for Thimphu has been produced each quarter since September 1987.

The purpose of the CPI is to provide a general indicator of the rate of price change for consumer goods and services. The CPI is important monitoring overall price development and assessing changes in the living standard of the population.

The CPI is formed by measuring the change in the cost of purchasing a basket of consumer goods and services where items in the basket are weighted according to their relative importance in the total spending of consumers. The baskets include food items (i.e. rice, other cereals, vegetables, oils and fats, and spices) together with non-food items such as clothing, fuel, furniture and other personal items. Items such as cereals are weighted more heavily than say furniture, because they represent a larger proportion of consumer expenditure. A price change in cereals will therefore have greater effect on the CPI than a price change for furniture.

Bhutan's CPI had 1979 as base year. Undoubtedly, substantial changes had taken place since then – economically, socially and technologically. A number of new products had likewise emerged. These factors contributed to the change in households' tastes and preferences thereby causing the fixed market basket of goods and services to become outmoded. To capture such changes for a more meaningful price comparison, it was necessary to re - base the CPI. This entailed the revision of or updating the base year, the weights, the fixed market basket and the sample outlets.

The year 2003 is chosen as the new base year since it was the year when the Bhutan Living Standard Survey was conducted. The Household Income Expenditure Survey or Living Standard Survey is the usual source of weights and the basis for drawing up the market basket.

The CPI is presented as Index Numbers, where the indices are measured in relative to the base of 3rd quarter 2003 = 100.00; price change is estimated by measuring change in the Index numbers.

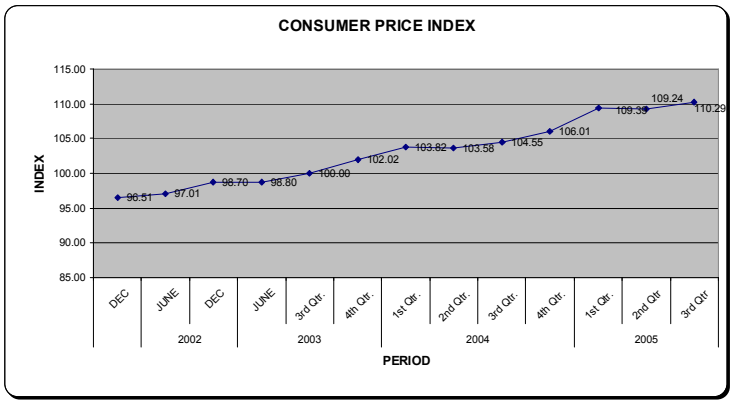


TABLE 15.1
CONSUMER PRICE INDEXES FOR FOOD AND NON-FOOD COMPONENTS, BHUTAN JUNE 2003 TO DEC. 2004

3rd Qtr. 2003=100

Item	Weight	2003			2004			
	(%)	June	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Index								
Food	31.67	99.78	100.00	101.40	101.86	101.07	102.85	104.17
Non-Food	68.33	97.37	100.00	102.31	104.73	104.74	105.34	106.87
Total	100	98.80	100.00	102.02	103.82	103.58	104.55	106.01
PERCENTAGE CHANGE YEAR ON YEAR								
Food	31.67	1.44	0.00	1.49	0.00	1.29	2.85	2.73
Non-Food	68.33	2	0.00	5.49	0.00	7.57	5.34	4.46
Total	100	1.84	0.00	3.36	0.00	4.84	4.55	3.91
PERCENTAGE CHANGE PERIOD TO PERIOD								
Food	31.67	-0.13	0.22	1.40	0.45	-0.78	1.76	1.28
Non-Food	68.33	0.39	2.70	2.31	2.37	0.01	0.57	1.45
Total	100	0.09	1.22	2.02	1.76	-0.23	0.94	1.40
PURCHASING POWER OF NGULTRUM (PPN)								
	1.00	1.01	1.00	0.98	0.96	0.97	0.96	0.94

Source: National Statistical Bureau, Thimphu

TABLE 15.2
CONSUMER PRICE INDEXES FOR MAJOR COMPONENTS, BHUTAN JUNE 2003 TO DEC 2004

3rd Qtr.2003=100

Item	Weight	2003			2004			
	(%)	Jun	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Food and Non-Alcoholic Beverages	29.44	100.45	100.00	101.42	101.95	101.13	102.91	104.15
Alcoholic Beverages, Tobacco & Narcotics	2.23	90.31	100.00	101.12	100.62	100.22	102.02	104.44
Clothing And Footwear	10.49	98.38	100.00	104.91	104.54	103.48	105.23	107.65
Housing, water, electricity, gas & other fuels	25.68	0.00	100.00	100.80	107.39	107.43	107.29	107.76
Furnishing, household equipment & routine household maintenance	5.68	97.49	100.00	103.35	104.15	103.59	103.56	105.99
Health	2.94	89.92	100.00	100.40	102.30	100.26	101.43	106.37
Transport	7.06	0.00	100.00	107.04	107.17	106.68	110.74	109.67
Communication	4.10	0.00	100.00	100.63	100.82	100.10	98.25	100.00
Recreation and Culture	2.62	0.00	100.00	104.44	99.57	103.12	103.97	105.21
Education	4.04	0.00	100.00	100.00	99.95	100.00	100.00	100.00

TABLE 15.3
CONSUMER PRICE INDEXES - MAJOR COMPONENTS, BHUTAN JUNE 2003 TO DEC 2004
YEAR ON YEAR GROWTH RATE (%) 3rd Qtr. 2003=100

Item	Weight	2003			2004			
	(%)	Jun	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Food and Non-Alcoholic Beverages	29.44	1.87	0.00	1.26	0.00	0.68	2.91	2.69
Alcoholic Beverages, Tobacco & Narcotics	2.23	-4.96	0.00	4.90	0.00	10.98	2.02	3.28
Clothing And Footwear	10.49	1.52	0.00	6.95	0.00	5.18	5.23	2.61
Housing, water,electricity, gas & other fuels	25.68	0.00	0.00	0.00	0.00	0.00	7.29	6.90
Furnishing, household equipment & routine household maintenance	5.68	6.90	0.00	6.78	0.00	6.26	3.56	2.55
Health	2.94	-0.18	0.00	11.47	0.00	11.50	1.43	5.95
Transport	7.06	0.00	0.00	0.00	0.00	0.00	10.74	2.46
Communication	4.10	0.00	0.00	0.00	0.00	0.00	-1.75	-0.63
Recreation and Culture	2.62	0.00	0.00	0.00	0.00	0.00	3.97	0.74
Education	4.04	0.00	0.00	0.00	0.00	0.00	0.00	0
Restaurants and Hotels	3.01	0.00	0.00	0.00	0.00	0.00	6.60	15.51
Miscellaneous Goods & Services	2.72	1.41	0.00	2.54	0.00	0.00	-0.13	14.99
Total	100.00	1.84	0.00	3.36	0.00	0.00	0.70	3.91

Source: National Statistical Bureau, Thimphu

TABLE 15.4
CONSUMER PRICE INDEXES - MAJOR COMPONENTS, BHUTAN, JUNE 2003 TO DEC 2004
PERIOD-TO-PERIOD GROWTH (%) 3rd Qtr. 2003=100

Item	Weight	2003			2004			
	(%)	Jun	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Food and Non-Alcoholic Beverages	29.44	0.29	-0.45	1.42	0.52	-0.80	1.76	1.20
Alcoholic Beverages, Tobacco & Narcotics	2.23	-6.32	10.74	1.12	-0.49	-0.40	1.80	2.37
Clothing And Footwear	10.49	0.30	1.64	4.91	-0.35	-1.01	1.69	2.30
Housing, water, electricity, gas & other fuels	25.68	0.00	0.00	0.80	6.54	0.04	-0.13	0.44
Furnishing, household equipment & routine household maintenance	5.68	0.72	0.00	3.35	0.77	-0.54	-0.03	2.35
Health	2.94	-1.17	2.57	0.40	1.89	-1.99	1.17	4.87
Transport	7.06	0.00	11.21	7.04	0.12	-0.46	3.81	-0.97
Communication	4.10	0.00	0.00	0.63	0.19	-0.71	-1.85	1.78
Recreation and Culture	2.62	0.00	0.00	4.44	-4.66	3.57	0.82	1.19
Education	4.04	0.00	0.00	0.00	-0.05	0.05	0.00	0.00
Restaurants and Hotels	3.01	0.00	0.00	-0.65	-0.01	1.76	5.45	7.65
Miscellaneous Goods & Services	2.72	1.26	-0.11	1.37	0.32	4.25	-5.79	16.72
Total	100.00	0.09	1.22	2.02	1.76	-0.23	0.94	1.40

Source: National Statistical Bureau, Thimphu

TABLE 15.5
CONSUMER PRICE INDEXES FOR FOOD ITEMS, SUB - COMPONENTS, BHUTAN JUNE 2003 TO DEC 2004
PERIOD TO PERIOD GROWTH RATE

Item	Weight	2003			2004			
	(%)	Jun	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Food	27.69	100.47	100.00	101.42	101.94	101.20	103.07	104.24
Bread	7.93	102.57	100.00	102.28	101.34	101.15	102.39	103.26
Meat	3.27	99.94	100.00	100.92	101.05	101.03	102.93	103.92
Fish	1.03	0.00	100.00	101.05	101.46	102.13	100.38	102.02
Milk, cheese & Eggs	5.16	99.17	100.00	101.25	100.42	100.58	101.00	103.33
Oils and Fats	3.41	100.31	100.00	102.45	101.70	101.63	103.05	104.08
Fruits	1.35	93.67	100.00	100.78	111.59	100.61	102.85	108.35
Vegetables	4.12	92.00	100.00	99.62	103.07	99.95	107.79	106.14
Sugar, Jam & Etc	0.56	94.97	100.00	101.50	100.53	99.29	101.35	101.73
Food Products n.e.c (ND)	0.87	100.17	100.00	102.44	101.83	111.17	104.33	109.28
Non - Alcoholic Beverages	1.74	99.91	100.00	101.39	102.18	100.03	100.40	102.80
Alcoholic Beverages	1.22	93.15	100.00	100.00	99.79	98.70	102.77	102.98
Tobacco	0.33	87.58	100.00	104.17	101.22	103.14	101.29	111.31
Narcotics (ND)	0.69	0.00	100.00	101.66	101.82	101.55	101.03	103.77
Clothing	7.87	98.38	100.00	105.02	104.64	103.43	105.01	108.08
Actual Rentals for Housing	18.77	0.00	100.00	101.05	110.12	109.67	109.55	109.70
Electricity, gas&other fuels	6.04	90.23	100.00	100.11	99.84	101.50	101.07	102.48
Fules & Lubricants	3.20	0.00	100.00	100.90	101.48	100.80	101.13	102.36
Education	4.04	0.00	100.00	100.00	99.95	100.00	100.00	100.00
Personal Care	2.72	0.00	100.00	101.37	101.69	106.01	99.87	104.07
Total	100.00	98.79	100.00	102.02	103.82	103.58	104.55	106.01

Source: National Statistical Bureau, Thimphu

TABLE 15.6
CONSUMER PRICE INDEXES FOR FOOD ITEMS, SUB - COMPONENTS, BHUTAN JUNE 2003 TO DEC 2004
PERIOD TO PERIOD GROWTH RATE

Item	Weight	2003			2004			
	(%)	Jun	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Food	27.69	0.29	-0.47	1.42	0.51	-0.73	1.85	1.14
Bread	7.93	0.14	-2.50	2.28	-0.92	-0.19	1.23	0.85
Meat	3.27	1.14	0.06	0.92	0.13	-0.02	1.88	0.96
Fish	1.03	0.00	0.00	1.05	0.41	0.66	-1.71	1.63
Milk,cheese & Eggs	5.16	0.03	0.84	1.25	-0.82	0.16	0.42	2.31
Oils and Fats	3.41	2.46	-0.31	2.45	-0.73	-0.07	1.40	1.00
Fruits	1.35	-4.33	6.76	0.78	10.73	-9.84	2.23	5.35
Vegetables	4.12	-1.53	8.69	-0.38	3.46	-3.03	7.84	-1.53
Sugar, Jam & Etc	0.56	-2.67	5.29	1.50	-0.96	-1.23	2.07	0.37
Food Products n.e.c (ND)	0.87	0.66	-0.17	2.44	-0.60	9.17	-6.15	4.74
Non - Alcoholic Beverages	1.74	0.57	0.09	1.39	0.78	-2.10	0.37	2.39
Alcoholic Beverages	1.22	0.00	7.35	0.00	-0.21	-1.09	4.12	0.20
Tobacco	0.33	-11.99	14.19	4.17	-2.83	1.90	-1.79	9.89
Narcotics (ND)	0.69	0.00	0.00	1.66	0.16	-0.27	-0.51	2.71
Clothing	7.87	0.30	1.64	5.02	-0.36	-1.16	1.53	2.92
Actual Rentals for Housing	18.77	0.00	0.00	1.05	8.98	-0.41	0.11	0.14
Electricity,gas&other fuels	6.04	1.67	10.83	0.11	-0.27	1.66	-0.42	1.40
Fules & Lubricants	3.20	0.00	0.00	0.90	0.57	-0.67	0.33	1.22
Education	4.04	0.00	0.00	0.00	-0.05	0.05	0.00	0.00
Personal Care	2.72	0.00	0.00	1.37	0.32	4.25	-5.79	
Total	100.00	0.09	1.22	2.02	1.76	-0.23	0.94	1.40

Source: National Statistical Bureau, Thimphu

TABLE 15.7

CONSUMER PRICE INDEXES, SUB-COMPONENTS, BHUTAN, JUNE 2003 TO DEC 2004

YEAR ON YEAR GROWTH RATE

Item	Weight	2003			2004			
	(%)	Jun	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Food	27.69	1.91	0.00	1.24	0.00	0.73	3.07	2.78
Bread	7.39	1.55	0.00	-0.14	0.00	-1.38	2.39	0.96
Meat	3.27	2.93	0.00	2.13	0.00	1.09	2.93	2.97
Fish	1.03	0.00	0.00	0.00	0.00	0.00	0.38	0.96
Milk, cheese & Eggs	5.16	0.05	0.00	2.13	0.00	1.42	1.00	2.05
Oils and Fats	3.41	3.82	0.00	4.64	0.00	1.32	3.05	1.59
Fruits	1.35	-19.02	0.00	2.93	0.00	7.41	2.85	7.51
Vegetables	4.12	7.63	0.00	6.63	0.00	8.64	7.79	6.54
Sugar, Jam & Etc	0.56	1.46	0.00	4.02	0.00	4.54	1.35	0.23
Food Products n.e.c (ND)	0.87	0.66	0.00	2.94	0.00	10.98	4.33	6.68
Non - Alcoholic Beverages	1.74	0.54	0.00	2.07	0.00	0.12	0.40	1.39
Alcoholic Beverages	1.22	1.42	0.00	7.35	0.00	5.96	2.77	2.98
Tobacco	0.33	-10.69	0.00	4.69	0.00	17.77	1.29	6.85
Narcotics (ND)	0.69	0.00	0.00	0.00	0.00	0.00	1.03	2.08
Clothing	7.87	1.52	0.00	7.06	0.00	5.13	5.01	2.91
Actual Rentals for Housing	18.77	0.00	0.00	0.00	0.00	0.00	9.55	8.56
Electricity,gas&other fuels	6.04	8.12	0.00	12.80	0.00	12.49	1.07	2.37
Fules & Lubricants	3.20	0.00	0.00	0.00	0.00	0.00	1.13	1.45
Education	4.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Personal Care	2.72	0.00	0.00	0.00	0.00	0.00	-0.13	2.66
Total	100.00	1.84	0.00	3.36	0.00	4.84	4.55	3.91

Source: National Statistical Bureau, Thimphu

TABLE 15.8

QUATERLY PRICE INDICES FOR FOOD ITEMS, THIMPHU TOWN, 2003 TILL DEC. 2004

(Base: December 1979 = 100.0)

Period	Cereal & its products	Vegetables, Fruits and Pulses	Edible Oil and Fats	Milk, Cheese and Eggs	Meat and Fish	Other Food	Non-Alcoholic Beverages	Total Index
Quarter ending								
2003								
March	99.48	98.75				100.08		99.6
June	100.03	100.86				100.01		100.2
September	100	100.00	100.00	100.00	100.00	100.00	100.00	100.00
December	102.21	99.98	99.30	102.91	99.99	102.71	105.49	101.45
2004								
March	102.89	100.00	99.32	100.33	99.58	103.71	102.74	101.03
June	101.80	99.60	100.00	100.4	100.40	103.30	101.20	100.77
September	107.82	110.90	93.92	98.39	113.89	109.98	102.63	106.03
December	107.59	113.65	100.81	109.81	109.62	101.85	100.92	108.03

Source: National Statistical Bureau, Thimphu

TABLE 15.9

QUATERLY PRICE INDICES FOR FOOD ITEMS, THIMPHU TOWN AND PURCHASING POWER OF NGULTRUM, 2003 TILL DEC. 2004

Period	2003				2004			
	March	June	Sept.	Dec.	March	June	Sept.	Dec.
Cereals & its products (%)	-0.28	0.6	-0.03	2.21	0.67	-1.06	5.91	-0.21
Vegetables, fruits & pulses (%)	-0.67	2.14	-0.86	-0.02	0.02	-0.40	11.35	2.48
Edible Oil and fats (%)				-0.70	0.02	0.68	-6.08	7.34
Milk, Cheese & eggs (%)				2.91	-2.51	0.07	-2.00	11.61
Meat & fish (%)				-0.01	-0.41	0.82	13.44	-3.75
Other food (p%)	0.50	-0.60	-0.01	2.71	0.97	-0.40	6.47	-7.39
Non-Alcoholic Beverages (%)				5.49	-2.61	-1.50	1.41	-1.68
Total Index (%)	-0.07	0.61	-0.17	1.45	-0.41	-0.26	5.22	1.89
Purchasing Power of Nu.	1.00	0.99	0.00	0.98	0.98	0.99	0.94	0.92

Soource: National Statistical Bureau, Thimphu.

CHAPTER 16

CRIME

CHAPTER 16

This Chapter presents statistics on cases known to police and those cases registered with the Royal Bhutan Police. The statistics presented here are those compiled by the Police Headquarters.

This chapter presents the details of crime statistics by nature of crime categorized by the Police, namely the crime against human body, sexual offences, crime against property, motor vehicle, antiques, forest offences and fire incidents, motor vehicle accidents etc. The nature and type of crime reported here reflects on peace and security of the community. The content and coverage of this chapter will be improved in our subsequent issues.

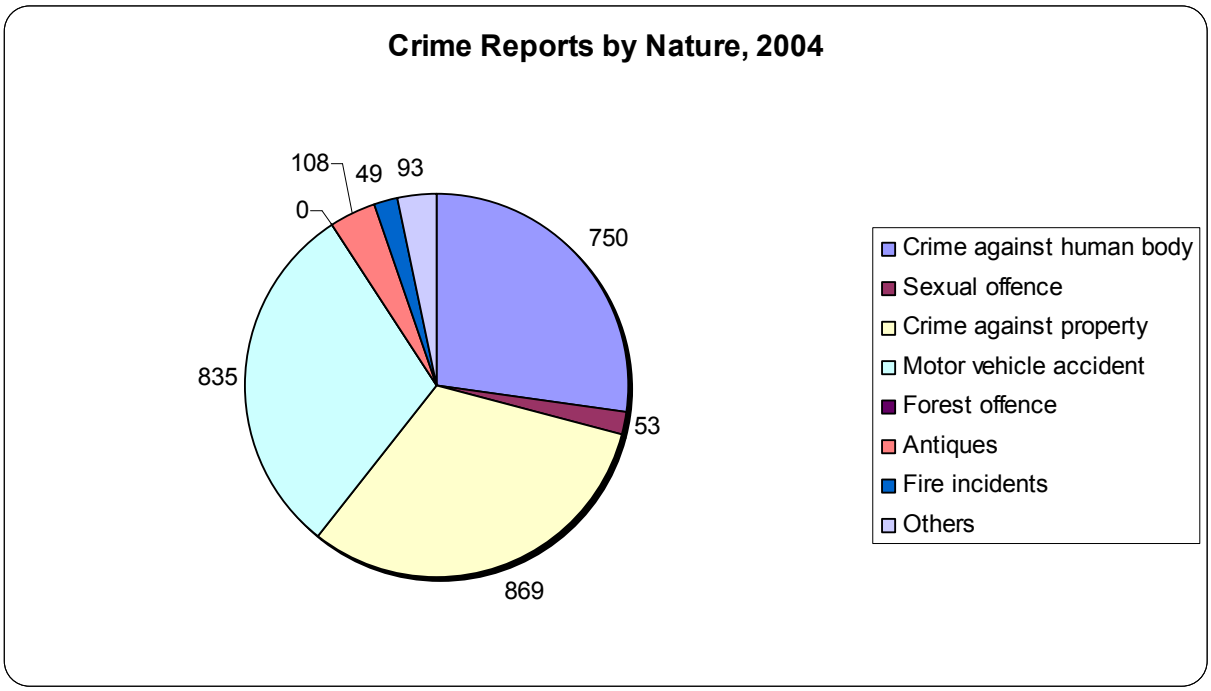


TABLE 16.1
CRIME REPORTS BY NATURE OF CRIME, BHUTAN, 2000 TO 2004

(Incident)

Nature of crime	2000	2001	2002	2003	2004
Crime against human body	627	677	584	672	750
Sexual offence	71	84	52	51	53
Crime against property	731	623	583	643	869
Motor vehicle accident	266	298	344	318	835
Forest offence	4	10	12	4	-
Antiques	98	104	68	95	108
Fire incidents	30	36	34	42	49
Others	38	36	32	28	93
All crimes	1865	1868	1709	1853	2757

Source: Crime & Operations, Royal Bhutan Police (HQ), Thimphu.

TABLE 16.2
DETAILS OF CRIME AGAINST HUMAN BODY, BHUTAN, 2000 TO 2004

(Incident)

Details	2000	2001	2002	2003	2004
Murder	18	19	19	5	15
Attempted murder	2	5	5	7	10
Rape Cum murder	-	1	-	1	2
RobbeRy cum murder	1	-	-	-	-
Unnatural death	30	24	24	26	78
Accidental death	43	45	49	31	-
Drowning	27	20	15	25	26
Suicide	41	58	49	41	49
Attempted suicide	14	8	13	12	14
Assault	367	418	369	478	477
Abduction	1	-	1	-	2
Kidnapping	1	-	-	2	2
Poisoning	1	1	2	2	4
Drugs(Nurcotics)	25	23	18	25	36
Obstruction of lawful authority	3	2	1	-	-
Wrongful confinement	-	-	-	-	1
Affray -		4	-	-	2
Accidental injury	6	9	3	4	8
Black magic	1	-	-	-	-
Defamation	5	6	2	3	3
Grevious hurt	3	3	-	1	2
Missing of Person	38	31	-	9	19
Total	627	677	570	672	750

Source: Crime & Operations, Royal Bhutan Police (HQ), Thimphu

TABLE 16.3
DETAILS OF SEXUAL OFFENCES, BHUTAN, 2000 TO 2004

(Incident)

Details	2000	2001	2002	2003	2004
Rape	16	16	13	15	18
Attempted rape	15	8	12	10	13
Adultry	14	19	10	5	5
Incest	2	5	-	1	-
Molestation	-	5	1	2	4
Elopment	23	23	14	15	7
Eve teasing	-	-	-	-	-
Un-natural offence	-	3	-	-	3
Prostitution	-	2	2	2	3
Robery Cum repe	-	1	-	1	-
Dacoity Cum Rape	1	2	-	-	-
Beastility	-	-	-	-	-
Total	71	84	52	51	53

Source: Crime & Operations, Royal Bhutan Police (HQ), Thimphu

TABLE 16.4
DETAILS OF CRIME AGAINST PROPERTY, BHUTAN, 2000 TO 2004

(Incident)

Details	2000	2001	2002	2003	2004
Theft	390	306	267	326	462
Burglary	132	129	140	134	186
House Breaking	12	3	10	7	7
Robbery	10	16	9	7	10
Dacoity	18	11	8	5	6
Pick pocketing	1	5	6	6	8
Cheating	31	30	34	30	30
Loss of Property	14	13	4	6	11
Forgery	9	9	4	10	6
Criminal breach of trust	9	15	4	9	6
Embezzlement	6	5	8	3	3
Counterfeit of coin/notes	8	3	2	7	4
Misappropriation	4	-	2	4	5
Cattle Lifting	22	20	19	13	37
Mischief	39	39	36	49	54
Extortion	1	2	2	-	2
Scooter lifting	-	2	1	-	-
Bike Lifting1	-	-	-	-	-
Hijacking	4	-	-	-	-
Bribery	1	-	-	-	-
Impersonation	-	-	5	2	3
Money laundaring	1	-	-	-	-
Attempted Robery	-	-	-	-	-
Illegal Tresspass	2	-	1	-	1
Attempted Theft	-	8	7	17	18
Snactching	-	-	-	-	-
House Tresspass	4	1	-	-	3
Explosive	-	-	-	1	2
Criminal Tresspass	2	2	-	2	1
Smuggling	4	4	5	2	3
Conspiracy	-	-	-	-	-
Illegal collection of donation	1	-	-	-	-
Sabotage	6	-	9	1	1
Weight and Measurement	-	-	-	1	-
Food Adultration	-	-	-	1	-
Total	731	623	583	643	869

Source: Crime & Operations, Royal Bhutan Police (HQ), Thimphu

TABLE 16.5
DETAILS OF MOTOR VEHICLE, ANTIQUES, FOREST OFFENCES AND FIRE INCIDENTS, BHUTAN 2000 TO 2004

(Incident)

Details	2000	2001	2002	2003	2004
Motor Vehicles Offence	266	298	344	318	818
Cycle accidents	1	-	1	-	1
Traffic voilation	3	-	1	2	3
Hit and run	3	11	10	17	44
Motor vehicle accident	245	270	319	284	740
Motor vehicle accident (fatal)	14	17	13	15	30
Forest Offence	4	10	12	4	-
Illegal sale of musk	-	-	-	-	-
Poaching	2	3	5	1	-
Illegal fishing	2	7	3	1	-
Theft of forest product	-	-	4	2	-
Antiques	98	104	68	95	108
Theft of antique	5	12	6	3	9
Chhoten vandalism	77	78	59	90	94
Smuggling of antique	4	8	1	1	2
Theft from Lhakhang	12	6	2	1	3
Fire accident	29	36	34	42	49
Fire accident	24	27	31	35	46
Arson	5	9	3	7	3
Others	25	0	32	28	93
Natural calamaties	10	-	4	3	70
Fire arms	3	-	10	1	1
Miscellaneous	9	-	14	13	5
Public Nuisance	2	-	2	-	2
Threat intimadation	1	-	-	7	5
Jail break	-	-	2	-	-
Aiding militant	-	-	-	4	10

Source: Crime & Operations, Royal Bhutan Police (HQ), Thimphu

TABLE 16.4
DETAILS OF CRIME AGAINST PROPERTY, BHUTAN, 2000 TO 2004

(Incident)

Details	2000	2001	2002	2003	2004
Theft	390	306	267	326	462
Burglary	132	129	140	134	186
House Breaking	12	3	10	7	7
Robbery	10	16	9	7	10
Dacoity	18	11	8	5	6
Pick pocketing	1	5	6	6	8
Cheating	31	30	34	30	30
Loss of Property	14	13	4	6	11
Forgery	9	9	4	10	6
Criminal breach of trust	9	15	4	9	6
Embezzlement	6	5	8	3	3
Counterfeit of coin/notes	8	3	2	7	4
Misappropriation	4	-	2	4	5
Cattle Lifting	22	20	19	13	37
Mischief	39	39	36	49	54
Extortion	1	2	2	-	2
Scooter lifting	-	2	1	-	-
Bike Lifting1	-	-	-	-	-
Hijacking	4	-	-	-	-
Bribery	1	-	-	-	-
Impersonation	-	-	5	2	3
Money laundaring	1	-	-	-	-
Attempted Robery	-	-	-	-	-
Illegal Tresspass	2	-	1	-	1
Attempted Theft	-	8	7	17	18
Snactching	-	-	-	-	-
House Tresspass	4	1	-	-	3
Explosive	-	-	-	1	2
Criminal Tresspass	2	2	-	2	1
Smuggling	4	4	5	2	3
Conspiracy	-	-	-	-	-
Illegal collection of donation	1	-	-	-	-
Sabotage	6	-	9	1	1
Weight and Measurement	-	-	-	1	-
Food Adultration	-	-	-	1	-
Total	731	623	583	643	869

Source: Crime & Operations, Royal Bhutan Police (HQ), Thimphu

TABLE 16.5

DETAILS OF MOTOR VEHICLE, ANTIQUES, FOREST OFFENCES AND FIRE INCIDENTS, BHUTAN 2000 TO 2004

(Incident)

Details	2000	2001	2002	2003	2004
Motor Vehicles Offence	266	298	344	318	818
Cycle accidents	1	-	1	-	1
Traffic voilation	3	-	1	2	3
Hit and run	3	11	10	17	44
Motor vehicle accident	245	270	319	284	740
Motor vehicle accident (fatal)	14	17	13	15	30
Forest Offence	4	10	12	4	-
Illegal sale of musk	-	-	-	-	-
Poaching	2	3	5	1	-
Illegal fishing	2	7	3	1	-
Theft of forest product	-	-	4	2	-
Antiques	98	104	68	95	108
Theft of antique	5	12	6	3	9
Chhoten vandalism	77	78	59	90	94
Smuggling of antique	4	8	1	1	2
Theft from Lhakhang	12	6	2	1	3
Fire accident	29	36	34	42	49
Fire accident	24	27	31	35	46
Arson	5	9	3	7	3
Others	25	0	32	28	93
Natural calamaties	10	-	4	3	70
Fire arms	3	-	10	1	1
Miscellaneous	9	-	14	13	5
Public Nuisance	2	-	2	-	2
Threat intimadation	1	-	-	7	5
Jail break	-	-	2	-	-
Aiding militant	-	-	-	4	10

Source: Crime & Operations, Royal Bhutan Police (HQ), Thimphu

TABLE 16.6

MONTHLY MOTOR VEHICLE ACCIDENTS BY TRAFFIC DIVISION, BHUTAN, 2004

(Incident)

Traffic Division	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Gelephu	-	1	-	-	-	1	-	-	1	-	1	1	5
Mongar	1	2	2	-	-	-	-	-	1	3	-	-	9
Paro	1	-	1	4	1	-	2	1	2	-	1	4	17
Phuntsholing	-	6	3	-	1	-	3	3	3	1	7	8	35
Punakha	1	-	1	-	2	1	1	1	1	3	1	-	12
Samdrup Jongkhar	-	-	-	-	-	1	1	-	1	1	-	-	4
Samtse	-	-	-	-	-	-	-	-	-	-	-	-	
Thimphu	38	35	43	28	44	35	53	38	48	17	28	40	447
Trashigang	-	-	-	-	3	3	-	-	-	-	1	-	7
Trongsa	-	-	-	-	2	1	1	1	2	-	-	-	7
Tsirang	1	1	1	2	4	1	1	-	-	-	1	1	13
Total	42	45	51	34	57	43	62	44	59	25	40	54	556

Source: Crime & Operations, Royal Bhutan Police (HQ), Thimphu

TABLE 16.7
CAUSES OF MOTOR VEHICLE ACCIDENTS BY TRAFFIC DIVISION, BHUTAN, 2004

(Incident)

Traffic division/ Type of Vehicle	Mechanical fault	Drunk driving	Bad weather	Without licence	Unknown causes	Other causes	All causes
Gelephu							
Trucks	1	1	-	-	-	1	-
Buses	-	-	-	-	-	-	-
Light Vehicle	-	-	1	-	-	1	-
Two Wheeler	-	-	-	-	-	-	-
Mongar							
Trucks	2	-	-	-	-	1	-
Buses	-	-	1	-	-	-	-
Light Vehicle	2	-	1	-	-	1	-
Two Wheeler	-	-	-	1	-	-	-
Paro							
Trucks	1	-	-	-	-	-	1
Buses	-	-	-	-	-	-	-
Light Vehicle	2	1	-	2	-	7	-
Two Wheeler	-	1	-	1	-	1	-
Phuntsholing							
Trucks	4	1	3	-	-	3	3
Buses	-	-	-	-	-	1	-
Light Vehicle	5	-	2	-	-	5	6
Two Wheeler	-	-	-	-	-	-	2
Punakha							
Trucks	-	-	1	-	-	2	-
Buses	-	-	-	-	-	-	-
Light Vehicle	2	-	-	2	-	-	4
Two Wheeler	-	-	-	-	-	1	-
Thimphu							
Trucks	8	-	7	15	83	-	-
Buses	-	-	1	-	2	-	-
Light Vehicle	12	23	18	51	172	-	-
Two Wheeler	1	3	1	18	23	-	-
Samdrup Jongkhar							
Trucks	-	-	1	-	-	-	-
Buses	-	-	-	-	-	-	-
Light Vehicle	1	-	1	-	-	1	-
Two Wheeler	-	-	-	-	-	-	-
Samtse							
Trucks	-	-	-	-	-	-	-
Buses	-	-	-	-	-	-	-
Light Vehicle	-	-	-	-	-	-	-
Two Wheeler	-	-	-	-	-	-	-

contd..

TABLE 16.7(contd.)
CAUSES OF MOTOR VEHICLE ACCIDENTS BY TRAFFIC DIVISION, BHUTAN, 2004

(Incident)

Traffic division/ Type of Vehicle	Mechanical fault	Drunk driving	Bad weather	Without licence	Unknown causes	Other causes	All causes
Trongsa							
Trucks	1	-	1	-	-	1	-
Buses	1	-	-	-	-	1	-
Light Vehicle	-	-	2	-	-	-	-
Two Wheeler	-	-	-	-	-	-	-
Trashigang							
Trucks	-	-	-	-	-	2	-
Buses	1	-	-	-	-	-	-
Light Vehicle	-	-	-	-	-	4	-
Two Wheeler	-	-	-	-	-	-	-
Tsirang							
Trucks	1	-	-	-	-	2	-
Buses	-	-	-	-	-	1	-
Light Vehicle	3	-	-	1	-	5	-
Two Wheeler	-	-	-	-	-	-	-
Bhutan	48	30	41	91	280	41	16

Source: Crime & Operations, Royal Bhutan Police (HQ), Thimphu

ANNEX I

ADMINISTRATIVE UNITS WITH THEIR STANDARD SPELLINGS

I. BUMTHANG DZONGKHAG

Gewogs

1. Chhokhor
2. Chumey
3. Tang
4. Ura

II. CHUKHA DZONGKHAG

Gewogs

1. Sampheling
2. Bjachho
3. Bongo
4. Chapcha
5. Dala
6. Dungna
7. Getana
8. Geling
9. Logchina
10. Metakha
11. Phuentsholing

III. DAGANA DZONGKHAG

Gewogs

1. Tsheza
2. Kana
3. Gozhi
4. Tsendagang
5. Tashiding
6. Gesarling
7. Dorona
8. Khibisa
9. Lajab
10. Tsangkha
11. Drujeygang

IV. GASA DZONGKHAG

Gewogs

1. Lunana
2. Laya
3. Khatoe
4. Khamey

V. HAA DZONGKHAG

Gewogs

1. Bjee
2. Katsho
3. Samar
4. Eusu
5. Sombaykha

VI. LHUNTSE DZONGKHAG

Gewogs

1. Kurtoe
2. Menjey
3. Jarey
4. Khoma
5. Menbi
7. Tshengkhar
8. Metsho
9. Gangzur

VII. MONGGAR DZONGKHAG

Gewogs

1. Balam
2. Chali
3. Chaskhar
4. Dramitse
5. Drepong
6. Gongdue
7. Jurmey
8. Kengkhar
9. Monggar
10. Ngatsang
11. Saling
12. Chermung
13. Salambi
14. Thangrong
15. Tsakaling
16. Tsamang

VIII. PARO DZONGKHAG

Gewogs:

1. Doteng
2. Wangchang
3. Hungrel
4. Dogar
5. Shaba
6. Shari
7. Tsento
8. Lango
9. Naja
10. Lungney

IX. PEMA GATSHEL DZONGKHAG

Gewogs

1. Shumar
2. Zobel
3. Chongshing
4. Chimong
5. Yurung
6. Khar
7. Dungmin

X. PUNAKHA DZONGKHAG

Gewogs

1. Goenshari
2. Kabji
3. Guma
4. Talo
5. Limbu
6. Zomi
7. Chubu
8. Tewang
9. Shenga Bjemi

XI. SAMTSE DZONGKHAG

Gewogs:

1. Bara
2. Tendu
3. Sipsu
4. Biru
5. Lehereni
6. Charghary
7. Yoeseltse
8. Ugentse
9. Chengmari
10. Samtse
11. Pugli
12. Tading
13. Dorokha
14. Denchukha
15. Mayona
16. Dungtoe

XII. SAMDRUP JONGKHAR DZONGKHAG

Gewogs

1. Orong
2. Gomdar
3. Matshala
4. Phunsthothang
5. Pemathang
6. Decheling
7. Norbugang
8. Langchenphu
9. Sethig
10. Lauri
11. Samrang

XIII. SARPANG DZONGKHAG

Gewogs

1. Shompangkha
2. Hilley
3. Singye
4. Dekiling
5. Dovan
6. Gelephu
7. Bhur
8. Jigmecholing
9. Chuzargang
10. Umling
11. Sershong
12. Lhamoy Zingkha
13. Nichula
14. Deorali
15. Taklai

XIV. THIMPHU DZONGKHAG

Gewogs

1. Chang
2. Kawang
3. Mewang
4. Geney
5. Dagala
6. Toep
7. Barp
8. Lingzhi
9. Soe
10. Naro

XV. TSIRANG

Gewogs

1. Beteni
2. Rangthangling
3. Dunglagang
4. Semjong
5. Tsirang toe
6. Phuntenchu
7. Kikhorthang
8. Pataley
9. Tsholingkhar
10. Barshong
11. Mendrelgang
12. Gossaling

XVI. TRASHIGANG DZONGKHAG

1. Merak
2. Sakteng
3. Kangpara
4. Thrimshing
5. Lumang
6. Yangnyer
7. Uzorong
8. Kanglung
9. Samkhar
10. Shongphu
11. Radhi
12. Phongmey
13. Bidung
14. Bartsham
15. Nanong
16. Khaling

XVII. TRONGSA DZONGKHAG

1. Tangsibji
2. Nubi
3. Drakteng
4. Lanthel
5. Korphu

XVIII. TRASHIYANGTSE DZONGKHAG

Gewogs

1. Jamkhar
2. Tongzhang
3. Yangtse
4. Bumdeling
5. Khamdang
6. Thetsho
7. Yalang
8. Ramjar

XIX. WANGDUE PHODRANG DZONGKHAG

Gewogs

1. Kazhi
2. Dhangchu
3. Sephu
4. Phobji
5. Gangtey
6. Gase Tshogom
7. Nisho
8. Daga
9. Gase Tshoyom
10. Nahi
11. Athang
12. Phangyul
13. Thetsho
14. Rubesa
15. Bjena

XX. ZHEMGANG DZONGKHAG

Gewogs

1. Trong
2. Nangkor
3. Bardo
4. Shingkhar
5. Bjoka
6. Phangkhar
7. Goshing
8. Nganglha

TOTAL DZONGKHAGS: 20
TOTAL GEWOGS: 201

Source: PPD, Ministry of Home & Cultural Affairs, Thimphu.