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February 2005

# Statistical Yearbook of Bhutan

## 2004

National Statistical Bureau
ROYAL GOVERNMENT OF BHUTAN

Catalogue No. 101

## Chart 1: THE BHUTANESE SYSTEM OF GOVERNANCE

His Majesty
*THE KING*

**EXECUTIVE**
Head of the Government
CABINET

**LEGISLATIVE**
Speaker
NATIONAL ASSEMBLY

**JUDICIARY**
Chief justice
HIGH COURT

MINISTRIES:
- Agriculture
- Education
- Finance
- Foreign Affairs
- Health
- Home & Cultural Affairs
- Information & Communications
- Labor & Human Resources
- Trade & Industry
- Works & Human Settlement

CONSTITUTIONAL/STATUTORY AGENCIES
- Royal Advisory Council
- Royal Audit Authority
- Royal Civil Service Commission
- National Environment Commission
- Royal Monetary Authority
- Office of Legal Affairs
- National Statistical Bureau
- National Commission for Women & Children
- Royal University Bhutan
- Royal Institute of Management
- Center for Bhutan Studies
- Bhutan Olympic Committee

Chief of Operation
NATIONAL SECURITY

DZONGKHAG

Chairman

Drangpon

SECTORS:
- Renewable Natural Resources
- Education
- Health
- Engineering Cell
- Administration & Finance
- Planning & Programming
- Land records
- Power
- Immigration & Census
- Revenue

Line of reporting
Responsibility/ Approval
Advisory
Line of appeal of cases

DUNGKHAG

Drangpon
DUNGTHRIM

Gup

Chairman
GYT

*Gup*
Geog

Source : *Royal Civil Service Commission*

# PREFACE

Statistical Yearbook of Bhutan 2004 is the twenty-second in the series of annual statistical publications issued by the National Statistical Bureau, erstwhile the Central Statistical Office, Thimphu.

The purpose of the publication is to provide a summary of the more important statistics of Bhutan. Statistics have been presented under a number of subject headings corresponding to the major areas of statistical interest. For each subject, a short introductory text has been written providing a brief description of the statistics, as how they were obtained and if there were any existing shortcomings. Some of the more interesting features of the statistics have also been highlighted.

In preparing the publication, attempts have been made to assess the quality of each data source and wherever necessary, appropriate tables have been footnoted to highlight any shortcomings in the data.

Every endeavor has been made to ensure that the information given in the publication meets acceptable statistical standards. Though, the necessity has been felt to place strong reliance on existing data collections, it was not always possible for us to undertake the detailed assessment of any data available, as it would have been preferred. This was however, due to the wide range of data sources used and also because of the lack of detailed background information on the data collected. As a result, some shortcomings in the data presented are inevitable, although it has been considered and kept to a minimal. The NSB has always maintained continuous and close contact with all the relevant data providing sectors until the compilation was finalized for publication.

t's our responsibility to upgrade the range and the quality of statistics available on Bhutan. The improvement would be reflected and upgraded in our subsequent annual publications.

**ational Statistical Bureau**
**oyal Government of Bhutan**
**himphu**

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# BHUTAN

## I. Location and Extent

Bhutan is one of the Asia's smallest nations, and locked 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 areas 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 HHC are separated from the Tibetan series by the South Tibetan Detachment System (STD). 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 Gamrich about 2km below Rolong. From there it goes along the east side of the Kurichu valley until crosses the river, about 10 km below Lhuntse; from there it crosses back along the west side the Kurichu valley and recrosses the road between Monggar and Sengor. It continue northwesterly through Bhutan, Sikkim, Nepal, Ladakh, Kashmir and into Pakistan. To the ea it continues through the Northern Frontier of India.

### 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 the border with China; the second highest peak, Jhomo Lhari, overlooking the Chumbi Valley the west, is 7,314 meters above sea level; nineteen other peaks exceed 7,000meter

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

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

In the south, the Southern Hills, or Siwalik Hills, the foothills of the Himalayas, are cover with dense deciduous forest, alluvial lowland river valleys, and mountains that reach to arou 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 particular affected by monsoons that bring between 60 and 90 percent of the region's rainfall. The clima is humid and subtropical in the southern plains and foothills, temperate in the inner Himalaya valleys of the southern and central regions, and cold in the north, with year-round snow on th main Himalayan summits.

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

Annual precipitation ranges widely in various parts of the country. In the severe climate of th north, there is only about forty millimeters of annual precipitation—primarily snow. In th temperate central regions, a yearly average of around 1,000 millimeters is more common, an 7,800 millimeters per year has been registered at some locations in the humid, subtropic south, ensuring the thick tropical forest. Thimphu experiences dry winter months (Decemb through February) and almost no precipitation until March, when rainfall averages 20 millimete



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 Kin was enthroned. The most momentous change in the structure of the government came in 199 after the devolution of the executive power by His Majesty the King to the Council of Minister The change set off a process of adaptation in the relationship between the various branches the government, as shown in **chart 1** it reflects the logical delineation in the separation powers along with the establishment of elected Council of Ministers with full executive power It shows the apparatus of all the important aspects of the Bhutanese system of governance lik 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 b governed primarily through the Cabinet. The Cabinet Ministers are the heads of ministries, wh will oversee that policies are formulated and programmes are carried out. The autonomou bodies have interactions primarily with the ministers, and this is denoted as such in th organogram.

## VII. The National Assembly

The Tshogdu (The National Assembly) consists of 154 members; 106 are the elected representatives of the people, 10 are from the Dratshang (Clergy) and 35 are nominate representatives of the Government. The National Assembly as the legislativ body an independent institute, which elects Cabinet Ministers, approves annual budget and legislate acts governing the country, and discusses national issues. The people's representatives ar directly elected by the people of their respective constituencies through secret ballot. While th clergy representatives are elected by the Zhung Dratshang (Central Monastic Body) and th concerned Rabdeys (District Monastic Bodies). From among the senior civil servants, His Majes the King nominates the representatives of the government. All the members serve for a term three years. The Speaker and the Deputy Speaker are elected by the National Assembly fro among its members. The National Assembly used to meet once a year. Starting from 2005, it wi meet twice a year with shorter durations. The assembly enacts legislation and advises th government on all matters of national importance. Decisions are passed by a simple majority. secret ballot is taken on all matters of national importance. Any Bhutanese over 25 years of ag 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 Counc will continue to be consultative and advisory body. The Royal Advisory Council, as stipulated i its chatrim, will ensure the observance of the decisions made during the National Assembly an the Cabinet meetings. Therefore, it will have links with both the Cabinet and the Nationa Assembly. It consists of nine members. There are six representatives of the public (Meese Thuepoens) who serve for a term of three years. They are elected by the National Assembl through secret ballot from among the representatives of the Dzongkhags. Each Dzongkha (district) deputes one representative who is elected through secret ballot from among the publi Two members represent the Monastic Body, one each from the Central Monastic Body and th Rabdeys who serve a term of one year. The chairman (Zhung Kalyon) is nominated by the kin

## 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 registere gelongs (monks) and is financed by an annual subsidy from the Royal Governmen Punakha and Thimphu Dratshang having strength of 1,600 constitute the Central Monasti Body. The Monastic Body is the sole arbiter on religious matters. The Je Khempo who is chose from among high-ranking gelongs is the head of the Body. He is assisted by four high-rankin 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 or districts each under the charge of a dzongkhag administrator or dzongda responsible for civil administration and development activities. Each dzongda is assisted by a dzongrab who is responsible for planning and 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 gups. As the final arbiter of law, the judiciary has been independent from other branches of the government since its inception.

## GENERAL INFORMATION

### EXPLANATION OF SYMBOLS USED IN THE YEARBOOK

| | |
|---|---|
| n.a | Stands for "not available" or "not applicable". |
| .. | Stands for "nil" or "rounded to zero". |
| * | Stands for "sampling error" too high for accurate estimation or estimates less than one percent. |
| ( ) | Stands for negative numbers. |
| CY | Stands for calendar year, period from January to December. |
| FY | Stands for fiscal year, period from April to March up to 1985/86 and from July to June since 1986/87 unless other wise specified. |

### EXPLANATORY NOTES

1. In some cases, minor discrepancies may occur between sums of component items and totals because of rounding.
2. Dzongkhags given in some tables differ from those given in Annex I. This is because of changes following the creation of new Dzongkhags.
3. Names of Ministries/agencies both in tables and footnotes may differ. This is also because of changes following the creation of new Ministries/agencies.
4. Totals of items may not add up slightly due to rounding.
5. Mostly singular term is used to represent plural term, example: agency for agencies.

### SOME UNITS OF MEASUREMENT

**Numbering (UK)**

| | |
|---|---|
| Hundred | $= 10^2$ |
| Thousand | $= 10^3$ |
| Million | $= 10^6$ |
| Billion | $= 10^{12}$ |
| Trillion | $= 10^{18}$ |

**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 |

**Abbreviations**

| | |
|---|---|
| mm | = millimeter |
| cm | = centimeter |
| m | = meter |
| m | = 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 |
| 10 hg | = 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, 2003 | 29 |
| Doctors, 2003 | 140 |
| Civil servants, June 2004 | 15,649 |
| Schools, Institutes & NFE centers, 2004 | 902 |
| Teachers (including in institutes & NFE), 2004 | 5,216 |
| Students (including in institutes & NFE), 2004 | 155,235 |
| 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 | 26,740 |
| Electricity generation, 2004 | 2,492.3 Mn KWh |
| Electricity exports, 2004 | 2,272.9 Mn KWh |
| Tourist arrivals, 2003 | 6,261 |
| Revenue earned from tourism, 2003 | 8.32 Mn US $ |
| Total establishments, June 2003 | 14,310 |
| 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, 2003 | 834 US $ |
| Average inflation rate, 2004 | 4.43 % |
| Purchasing Power of Nu., 2004 (base year =2003) | 0.96 Nu. |



# 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 | | |
|---|---|---|---|---|---|---|
| | Female | Male | Total | Female | Male | 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 rate 2.5% derived from the 2000 National Health Survey.

*Source: National Statistical Bureau, Thimphu.*

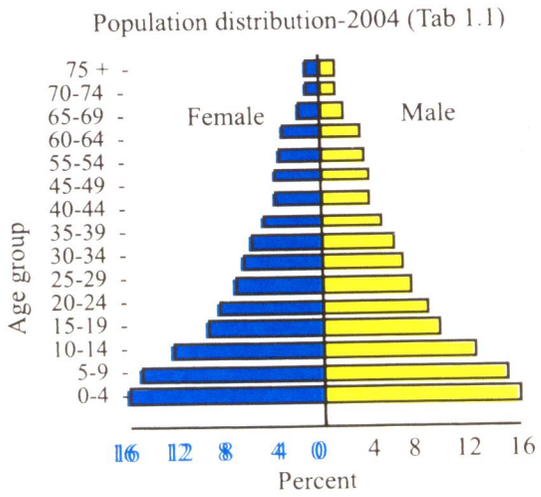





TABLE 1.2
POPULATION ESTIMATES BY YEAR AND SEX, BHUTAN,1994 TO 2004

| 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 |

*Source: National Statistical Bureau, Thimphu*

TABLE 1.4
PERCENTAGE OF POPULATION BY MARITAL STATUS, BY AGE AND SEX, BHUTAN, 2003

| 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 | 3.33 |
| 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.*

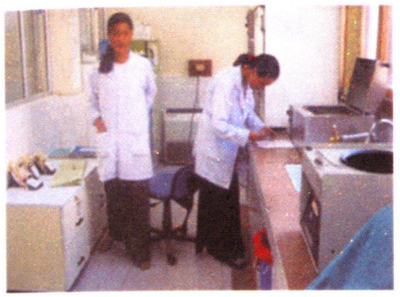
TABLE 1.5
SUMMARY OF DEMOGRAPHIC INDICATORS, BHUTAN, 1984, 1994 AND 2000

| Indicator | 1984 | 1994 | 2000 |
|---|---|---|---|
| Fertility | | | |
| Crude birth rate | 39.1 | 39.9 | 34.1 |
| General fertility rate (Per 1000 Women, 15-49 years) | 169.6 | 172.7 | 142.7 |
| Total fertility rate (per Women of 15-49 years) | 5.9 | 5.6 | 4.7 |
| Gross reproduction rate | 2.9 | n.a | n.a |
| Net reproduction rate | 1.9 | n.a | n.a |
| Rate of natural increase (%) | 2.0 | 3.1 | n.a |
| Mortality | | | |
| Crude death rate | 19.3 | 9.0 | 8.6 |
| Infant mortality rate | 142.0 | 70.7 | 60.5 |
| Maternal mortality rate (per 1000 live births) | .. | 3.8 | 2.6 |
| Under age 5 mortality rate (per 1000 live births) | .. | 96.9 | 84.0 |
| Life expectancy at birth (years) | 47.5 | 66.1 | .. |
| Male | 45.8 | 66.0 | .. |
| Female | 49.1 | 66.2 | .. |

Note:
For explanation of demographic indicators, refer introduction to this chapter.
*Source: 1984 Demographic Sample Survey, and 2000 National Health Survey.*



## 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 2003, there were 29 hospitals, 172 BHUs and over 440 Outreach Clinics manned by over 2209 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.

TABLE 2.1
SUMMARY OF THE HEALTH FACILITIES AND PERSONNEL, BHUTAN,2002 TO 2003

| Facility | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|
| Number of hospitals | 29 | 29 | 29 | 29 |
| Number of basic health units | 160 | 168 | 166 | 172 |
| Number of dispensaries/outreach clinic | n.a | 461 | 455 | 440 |
| Number of indigenous hospitals | 1 | 1 | 1 | 1 |
| Number of indigenous dispensaries | 18 | 19 | 19 | 19 |
| Number of doctors | 109 | 114 | 122 | 140 |
| Persons per doctor | 6,220 | 7,476 | 5,872 | 5,245 |
| Number of hospital beds | 1,023 | 1,023 | 1,023 | 1,093 |
| Persons per hospital bed | 663 | 683 | 700 | 672 |
| Doctors per 10,000 persons | 1.6 | 1.3 | 1.7 | 1.9 |
| Hospital bed per 10,000 persons | 15 | 15 | 14 | 15 |
| Population covered by health care (%) | 90 | 90 | 90 | 90 |
| Population access to safe drinking water (%) | 78 | 68 | n.a | 71 |
| Women attended by trained personnel during child birth (%) | 24 | n.a | 24 | 47 |

Note:
Includes doctors in adminstrative services, non-nationals and expatriates.
*Source: Information Section, Department of Health, MoH, Thimphu.*



TABLE 2.2
TYPE OF HEALTH FACILITIES IN DZONGKHAGS, BHUTAN,2003

**(Number)**

| Dzongkhag | Hospital | Basic health unit | Outreach clinic |
|---|---|---|---|
| Bumthang | 1 | 2 | 4 |
| Chukha | 3 | 8 | 42 |
| Dagana | 0 | 7 | 12 |
| Gasa | 0 | 4 | 8 |
| Haa | 1 | 4 | 12 |
| Lhuntse | 1 | 11 | 33 |
| Monggar | 1 | 19 | 35 |
| Paro | 1 | 3 | 24 |
| Pema Gyetshel | 1 | 4 | 24 |
| Punakha | 1 | 5 | 7 |
| Samtse | 3 | 12 | 8 |
| Samdrup Jongkhar | 3 | 13 | 28 |
| Sarpang | 2 | 12 | 12 |
| Thimphu | 4 | 6 | 23 |
| Trashigang | 3 | 20 | 60 |
| Trashi Yangtse | 1 | 6 | 22 |
| Trongsa | 1 | 6 | 23 |
| Tsirang | 1 | 6 | 5 |
| Wangdue Phodrang | 1 | 10 | 25 |
| Zhemgang | 1 | 13 | 33 |
| Bhutan | 29 | 172 | 440 |

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, 2000 TO 2003

(Number)

| Health personnel | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|
| Doctor | 109 | 114 | 122 | 140 |
| District Health Supervisory Officer(DHSO) | n.a | 23 | 27 | 24 |
| Health Assistant | 148 | 163 | 173 | 144 |
| Basic health worker | 178 | 176 | 175 | 172 |
| Sister and nurse | 443 | 569 | 500 | 501 |
| B.Sc Nurse | n.a | n.a | 5 | 8 |
| General Nurse Midwife/Staff Nurse(GNM) | n.a | n.a | 174 | 173 |
| Auxiliary Nurse Midwife(ANM) | n.a | n.a | 145 | 144 |
| Assistant Nurse | n.a | n.a | 176 | 176 |
| Other technician | 244 | 259 | 252 | 29 |
| Indigenous physician | 31 | 31 | 32 | 29 |
| Indigenous compounder/Menpa | 17 | 23 | 23 | 26 |
| Malaria worker | n.a | 59 | 66 | 47 |
| Village Health worker (VHW) | 1327 | n.a | n.a | 1,097 |

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



TABLE 2.4
MORBIDITY CASES REPORTED FROM BASIC HEALTH UNITS, BHUTAN, 2003

| Disease Name/Infection | Under 5 years | | 5 years & Older | | Total |
|---|---|---|---|---|---|
| | Male | Female | Male | Female | |
| Cholera | 6 | 7 | 4 | 1 | 18 |
| Typhoid | 40 | 31 | 203 | 220 | 494 |
| Diarrhoea | 5,794 | 5,554 | 12,761 | 11,629 | 35,738 |
| Dysentery | 2,771 | 2,838 | 6,817 | 6,113 | 18,539 |
| Tetanus | 2 | 1 | 8 | 7 | 18 |
| Diphtheria | 4 | 6 | 9 | 4 | 23 |
| Pertussis | 0 | 1 | 3 | 5 | 9 |
| Early Syphilis | 0 | 0 | 42 | 20 | 62 |
| Sexually Transmitted Disease, excluding HIV/AIDS | 6 | 4 | 561 | 478 | 1,049 |
| Polio | 0 | 0 | 0 | 1 | 1 |
| Rabies | 0 | 0 | 7 | 5 | 12 |
| Viral, Protozoal & Helminthic disease | | | | | |
| Measels | 0 | 1 | 2 | 1 | 4 |
| Viral Hepatitis | 21 | 13 | 82 | 83 | 199 |
| Plasmodium falciparum malaria | 12 | 14 | 281 | 212 | 519 |
| Other malaria | 25 | 34 | 340 | 272 | 671 |
| Intestinal Worms | 2,009 | 2,163 | 5,580 | 6,499 | 16,251 |
| Scabies | 540 | 665 | 2,237 | 1,849 | 5,291 |
| Other Infections (excluding ear, brain, STI) | 382 | 424 | 1,539 | 2,012 | 4,357 |
| Blood diseases | | | | | |
| Nutritional Anaemia | 101 | 128 | 1,251 | 3,391 | 4,871 |
| Blood & Immune Disorders | 23 | 19 | 74 | 196 | 312 |
| Endocrine, Metabolic & Nutritional | | | | | |
| Malnutrition (exclude child clinic attendance) | 145 | 180 | 203 | 280 | 808 |
| Mental disorders | | | | | |
| Other Mental Disorders | 15 | 17 | 182 | 170 | 384 |
| Meningitis/Encephalitis | 0 | 3 | 11 | 14 | 28 |
| Other Nervous including Peripheral Disorders | 96 | 111 | 2,122 | 3,001 | 5,330 |
| Eye & Ear Diseses | | | | | |
| Conjunctivities | 2,043 | 2,184 | 11,907 | 14,087 | 30,221 |
| Disorders | 559 | 616 | 3,886 | 5,053 | 10,114 |
| Otitis Media | 1,479 | 1,475 | 3,107 | 3,182 | 9,243 |
| Other Ear Disorders | 553 | 642 | 1,705 | 1,911 | 4,811 |
| Disease of Circulatory System | | | | | |
| Hypertension | 0 | 0 | 1,951 | 2,519 | 4,470 |
| Other Circulatory Diseases | 27 | 9 | 419 | 496 | 951 |

Contd...

TABLE 2.4[Contd...]
MORBIDITY CASES REPORTED FROM BASIC HEALTH UNITS, BHUTAN, 2003

| Disease Name/Infection | Under 5 years | | 5 years & Older | | Total |
|---|---|---|---|---|---|
| | Male | Female | Male | Female | |
| Respiratory diseases | | | | | |
| Common Cold | 12,782 | 13,548 | 54,699 | 65,974 | 147,003 |
| Acute Pharyngitis/Tonsilitis | 961 | 1,014 | 4,969 | 5,769 | 12,713 |
| Pneumonia | 2,355 | 2,377 | 1,463 | 1,560 | 7,755 |
| Other Respiratory & Nose Disesses | 507 | 521 | 3,287 | 4,035 | 8,350 |
| Cholera | 6 | 7 | 4 | 1 | 18 |
| Typhoid | 40 | 31 | 203 | 220 | 494 |
| Diarrhoea | 5,794 | 5,554 | 12,761 | 11,629 | 35,738 |
| Dysentery | 2,771 | 2,838 | 6,817 | 6,113 | 18,539 |
| Tetanus | 2 | 1 | 8 | 7 | 18 |
| Diphtheria | 4 | 6 | 9 | 4 | 23 |
| Pertussis | 0 | 1 | 3 | 5 | 9 |
| Early Syphilis | 0 | 0 | 42 | 20 | 62 |
| Sexually Transmitted Disease, excluding HIV/AIDS | 6 | 4 | 561 | 478 | 1,049 |
| Polio | 0 | 0 | 0 | 1 | 1 |
| Rabies | 0 | 0 | 7 | 5 | 12 |
| Viral, Protozoal & Helminthic disease | | | | | |
| Measels | 0 | 1 | 2 | 1 | 4 |
| Viral Hepatitis | 21 | 13 | 82 | 83 | 199 |
| Plasmodium falciparum malaria | 12 | 14 | 281 | 212 | 519 |
| Other malaria | 25 | 34 | 340 | 272 | 671 |
| Intestinal Worms | 2,009 | 2,163 | 5,580 | 6,499 | 16,251 |
| Scabies | 540 | 665 | 2,237 | 1,849 | 5,291 |
| Other Infections (excluding ear, brain, STI) | 382 | 424 | 1,539 | 2,012 | 4,357 |
| Blood diseases | | | | | |
| Nutritional Anaemia | 101 | 128 | 1,251 | 3,391 | 4,871 |
| Blood & Immune Disorders | 23 | 19 | 74 | 196 | 312 |
| Endocrine, Metabolic & Nutritional | | | | | |
| Malnutrition (exclude child clinic attendance) | 145 | 180 | 203 | 280 | 808 |
| Mental disorders | | | | | |
| Other Mental Disorders | 15 | 17 | 182 | 170 | 384 |
| Disease of Nervous syatem | | | | | |
| Meningitis/Encephalitis | 0 | 3 | 11 | 14 | 28 |
| Other Nervous including Peripheral Disorders | 96 | 111 | 2,122 | 3,001 | 5,330 |
| Eye & Ear Diseses | | | | | |

Contd....



TABLE 2.4[Contd...]
MORBIDITY CASES REPORTED FROM BASIC HEALTH UNITS, BHUTAN, 2003

| Disease Name/Infection | Under 5 years | | 5 years & Older | | Total |
|---|---|---|---|---|---|
| | Male | Female | Male | Female | |
| Conjunctivities | 2,043 | 2,184 | 11,907 | 14,087 | 30,221 |
| Other Eye Disorders | 559 | 616 | 3,886 | 5,053 | 10,114 |
| Otitis Media | 1,479 | 1,475 | 3,107 | 3,182 | 9,243 |
| Other Ear Disorders | 553 | 642 | 1,705 | 1,911 | 4,811 |
| Disease of Circulatory System | | | | | |
| Hypertension | 0 | 0 | 1,951 | 2,519 | 4,470 |
| Other Circulatory Diseases | 27 | 9 | 419 | 496 | 951 |
| Respiratory diseases | | | | | |
| Common Cold | 12,782 | 13,548 | 54,699 | 65,974 | 147,003 |
| Acute Pharyngitis/Tonsilitis | 961 | 1,014 | 4,969 | 5,769 | 12,713 |
| Pneumonia | 2,355 | 2,377 | 1,463 | 1,560 | 7,755 |
| Other Respiratory & Nose Disesses | 507 | 521 | 3,287 | 4,035 | 8,350 |
| Disease of the Digestive system | | | | | |
| Dental Caries | 163 | 208 | 2,554 | 3,046 | 5,971 |
| Diseases of Teeth & Gums | 326 | 372 | 3,600 | 4,310 | 8,608 |
| Peptic Ulcer Syndrome | 57 | 141 | 11,186 | 16,266 | 27,650 |
| Alcohol Liver Diseases | 0 | 0 | 118 | 92 | 210 |
| Other Diseases of the Digestive System | 368 | 398 | 2,255 | 2,612 | 5,633 |
| Skin Diseases | | | | | |
| Skin Infections | 4,761 | 5,018 | 19,523 | 18,241 | 47,543 |
| Other Disorders of Skin & Subcutaneous | 1,052 | 1,051 | 5,259 | 4,914 | 12,276 |
| Arthritis & Arthrosis | 32 | 129 | 2,223 | 2,407 | 4,79 |
| Other Musculo-skeletal disorders | 78 | 97 | 4,374 | 4,423 | 8,972 |
| Genito-Urinary diseases | | | | | |
| Infection of Breasts including Puerperium | 7 | 5 | 53 | 404 | 469 |
| Other Disease of the Breast | 1 | 0 | 10 | 362 | 373 |
| Menstrual Distrubances | 0 | 0 | 0 | 1,103 | 1,103 |
| Other Kidney, UT/Genital Disorders | 54 | 74 | 897 | 1,614 | 2,639 |
| Pregnancy, Childbirth and Puerperium | | | | | |
| Abortions | 0 | 0 | 0 | 90 | 90 |
| Pregnancy Included Hypertension | 0 | 0 | 0 | 66 | 66 |
| Ante-Partum Haemorrhage & Placenta Previa | 0 | 0 | 0 | 62 | 62 |
| Malpresentation | 0 | 0 | 0 | 38 | 38 |
| Prolonged Labour | 0 | 0 | 0 | 68 | 68 |
| Obstructed Labour | 0 | 0 | 0 | 19 | 19 |
| Post Partum Haemorrhage | 0 | 0 | 0 | 77 | 77 |

Contd...

TABLE 2.4[Contd...]
MORBIDITY CASES REPORTED FROM BASIC HEALTH UNITS, BHUTAN, 2003

| Disease Name/Infection | Under 5 years | | 5 years & Older | | Total Retained |
|---|---|---|---|---|---|
| | Male | Female | Male | Female | |
| Placenta | 0 | 0 | 0 | 138 | 138 |
| Puerperal Sepsis | 0 | 0 | 0 | 20 | 20 |
| Other complications of pregnancy | 0 | 0 | 0 | 184 | 184 |
| Perinatal Conditions | | | | | |
| Low Birth Weight | 24 | 30 | 0 | 0 | 54 |
| Foetal Death & Stillbirth | 11 | 13 | 0 | 0 | 24 |
| Noenatal Death | 6 | 6 | 0 | 0 | 12 |
| Conditions Orginating in the Perinatal Period | 1 | 7 | 0 | 0 | 8 |
| Malformations | | | | | |
| Malformations | 1 | 1 | 7 | 6 | 15 |
| Injuries & Trauma | | | | | |
| Burns & Corrosions | 284 | 289 | 503 | 372 | 1,448 |
| Injuries & Poisoning | 683 | 711 | 6,662 | 2,965 | 11,021 |
| Transport Accidents | 26 | 50 | 314 | 196 | 586 |
| Bites & Stings | 275 | 308 | 1,451 | 1,095 | 3,129 |
| Other External cause of Injury | 389 | 438 | 3,818 | 2,244 | 6,889 |
| Work related injuries | 132 | 130 | 3,537 | 1,623 | 5,422 |
| Complications of Health Care | 160 | 110 | 885 | 1,015 | 2,170 |
| ANC, Immunisation & Other counselling | 1,540 | 1,814 | 7,141 | 14,169 | 24,664 |
| Total | 43,689 | 46,000 | 198,082 | 225,290 | 513,061 |

*Source: Information Section /Annual Health Bulletin 2003, Ministry of Health, Thimphu.*



TABLE 2.5
HOSPITAL MORBIDITY CASES REPORTED, BHUTAN, 2003

| Disease Name/Infection | Under 5 years | | 5 years & older | | Total |
|---|---|---|---|---|---|
| | Male | Female | Male | Female | |
| Cholera | 0 | 0 | 1 | 0 | 1 |
| Typhoid | 20 | 15 | 272 | 280 | 587 |
| Diarrhoea | 6,121 | 5,553 | 12,148 | 8,993 | 32,815 |
| Dysentery | 2,606 | 2,518 | 6,288 | 4,349 | 15,761 |
| Tuberclosis+ | 4 | 3 | 71 | 59 | 137 |
| Tetanus | 0 | 0 | 0 | 1 | 1 |
| Diphtheria | 0 | 0 | 0 | 0 | 0 |
| Pertussis | 0 | 0 | 0 | 0 | 0 |
| Early Syphilis | 0 | 0 | 10 | 6 | 16 |
| Sexually Transmitted Disease, excluding HIV/AIDS | 5 | 3 | 667 | 537 | 1,212 |
| Polio | 0 | 0 | 3 | 1 | 4 |
| Rabies | 4 | 3 | 10 | 5 | 22 |
| Viral, Protozoal & Helminthic disease | | | | | |
| Measels | 7 | 2 | 9 | 5 | 23 |
| Viral Hepatitis | 62 | 43 | 215 | 153 | 473 |
| Plasmodium falciparum malaria | 67 | 64 | 501 | 336 | 968 |
| Other malaria | 82 | 74 | 790 | 630 | 1,576 |
| Intestinal Worms | 1,101 | 1,123 | 2,824 | 2,207 | 7,255 |
| Scabies | 400 | 521 | 1,899 | 1,360 | 4,180 |
| Other Infections (excluding ear, brain, STI) | 436 | 489 | 2,159 | 1,617 | 4,701 |
| Neoplasm | | | | | |
| Cervical Cancer | 0 | 0 | 0 | 0 | 0 |
| Other Cancers | 0 | 0 | 0 | 0 | 0 |
| Neoplasm (benign + CIS) | 0 | 0 | 0 | 0 | 0 |

Contd.....

TABLE 2.5[Contd...]
HOSPITAL MORBIDITY CASES REPORTED, BHUTAN, 2003

| Disease Name/Infection | Under 5 years | | 5 years & older | | Total |
|---|---|---|---|---|---|
| | Male | Female | Male | Female | |
| Blood diseases | | | | | |
| Nutritional Anaemia | 54 | 78 | 1,171 | 2,783 | 4,086 |
| Blood & Immune Disorders | 4 | 6 | 53 | 74 | 137 |
| Endocrine, Metabolic & Nutritional | | | | | |
| Diabetes | 0 | 5 | 197 | 118 | 320 |
| Malnutrition (exclude child clinic attendance) | 62 | 91 | 238 | 156 | 547 |
| Other Nutritional & Metabolic Disorders | 249 | 248 | 914 | 956 | 2,367 |
| Mental Disorders | | | | | |
| Psychosis | 0 | 0 | 62 | 48 | 110 |
| Depression | 0 | 0 | 91 | 131 | 222 |
| Anxiety | 0 | 0 | 76 | 99 | 175 |
| Other Mental Disorders | 1 | 0 | 105 | 78 | 184 |
| Disease of Nervous system | | | | | |
| Meningitis/Encephalitis | 1 | 0 | 25 | 29 | 55 |
| Epilepsy | 4 | 15 | 326 | 235 | 580 |
| Other Nervous including Peripheral Disorders | 30 | 63 | 502 | 433 | 1,028 |
| Eye & Ear Diseases | | | | | |
| Conjunctivities | 2,590 | 2,179 | 10,855 | 8,322 | 23,946 |
| Cataract | 6 | 11 | 235 | 168 | 420 |
| Other Eye Disorders | 489 | 647 | 5,628 | 5,017 | 11,781 |
| Otitis Media | 1,367 | 1,452 | 3,790 | 3,171 | 9,780 |
| Other Ear Disorders | 406 | 509 | 2,076 | 1,745 | 4,736 |
| Diseases of Circulatory System | | | | | |
| Rheumatic Heart Diseases | 7 | 12 | 301 | 361 | 681 |
| Hypertension | 0 | 0 | 3,464 | 4,066 | 7,530 |

Contd...



TABLE 2.5[Contd...]
HOSPITAL MORBIDITY CASES REPORTED, BHUTAN, 2003

| Disease Name/Infection | Under 5 years | | 5 years & older | | Total |
|---|---|---|---|---|---|
| | Male | Female | Male | Female | |
| Ischaemic Heart Diseases | 0 | 0 | 62 | 54 | 116 |
| Cerebro-vascular Diseases | 0 | 0 | 34 | 22 | 56 |
| Other Circulatory Diseases | 34 | 33 | 464 | 407 | 938 |
| Respiratory diseases | | | | | |
| Common Cold | 14,878 | 14,980 | 47,829 | 43,125 | 120,812 |
| Acute Pharyngitis/Tonsilitis | 977 | 1,021 | 5,572 | 5,382 | 12,952 |
| Pneumonia | 1,834 | 1,764 | 1,007 | 914 | 5,519 |
| Other Respiratory & Nose Disesses | 2,216 | 2,193 | 8,618 | 8,566 | 21,593 |
| Disease of the Digestive system | | | | | |
| Dental Caries | 551 | 650 | 8,943 | 8,526 | 18,670 |
| Diseases of Teeth & Gums | 493 | 585 | 4,550 | 3,908 | 9,536 |
| Peptic Ulcer Syndrome | 241 | 392 | 12,842 | 14,686 | 28,161 |
| Acute Appendicitis | 0 | 0 | 41 | 27 | 68 |
| Alcohol Liver Diseases | | 0 | 129 | 99 | 228 |
| Gall Bladder Diseases | 0 | 9 | 220 | 281 | 517 |
| Other Diseases of the Digestive system | 750 | 770 | 6,179 | 6,156 | 13,855 |
| Skin Diseases | | | | | |
| Skin Infections | 4,711 | 4,913 | 18,759 | 13,463 | 41,846 |
| Other Disorders of Skin & Subcutaneous | 1,653 | 1,717 | 7,841 | 6,180 | 17,391 |
| Diseases of Musculo-skeletal system & Cogenital deformities | | | | | |
| Arthritis & Arthrosis | 3 | 23 | 1,482 | 1,212 | 2,720 |
| Other Musculo-skeletal disorders | 621 | 631 | 11,253 | 8,358 | 20,863 |
| Genito-Urinary Diseases | | | | | |
| Cystitis | 7 | 20 | 460 | 901 | 1,388 |
| Infection of Breasts, including Puerperium | 0 | 0 | 0 | 186 | 186 |

Contd.....

TABLE 2.5[Contd...]
HOSPITAL MORBIDITY CASES REPORTED, BHUTAN, 2003

| Disease Name/Infection | Under 5 years | | 5 years & older | | Total |
|---|---|---|---|---|---|
| | Male | Female | Male | Female | |
| Other Disease of the Breast | 2 | 5 | 11 | 741 | 759 |
| Pelvic Inflammatory Disease | 0 | 0 | 0 | 930 | 930 |
| Menstrual Disturbances | 0 | 0 | 0 | 1,314 | 1,314 |
| Other Kidney, UT/Genital Disorders | 36 | 153 | 2,435 | 4,656 | 7,380 |
| Pregnancy, Childbirth and Puerperium | | | | | |
| Abortions | 0 | 0 | 0 | 74 | 74 |
| Pregnancy Included Hypertension | 0 | 0 | 0 | 32 | 32 |
| Ante-Partum Haemorrhage & Placenta Previa | 0 | 0 | 0 | 9 | 9 |
| Malpresentation | 0 | 0 | 0 | 18 | 18 |
| Prolonged Labour | 0 | 0 | 0 | 26 | 26 |
| Obstructed Labour | 0 | 0 | 0 | 20 | 20 |
| Post Partum Haemorrhage | 0 | 0 | 0 | 21 | 21 |
| Retained Placenta | 0 | 0 | 0 | 31 | 31 |
| Puerperal Sepsis | 0 | 0 | 0 | 7 | 7 |
| Other complications of pregnancy | 0 | 0 | 0 | 75 | 75 |
| Perinatal Conditions | | | | | |
| Low Birth Weight | 15 | 6 | 0 | 0 | 21 |
| Foetal Death & Stillbirth | 6 | 5 | 0 | 0 | 11 |
| Noenatal Death | 0 | 0 | 0 | 0 | 0 |
| Conditions originating in the Perinatal Period | 0 | 3 | 0 | 0 | 3 |
| Malformations | | | | | |
| Malformations | 0 | 1 | 0 | 1 | 2 |
| Injuries & Trauma | | | | | |
| Burns & Corrosions | 215 | 180 | 558 | 376 | 1,329 |

Contd.....



TABLE 2.5[Contd...]
HOSPITAL MORBIDITY CASES REPORTED, BHUTAN, 2003

| Disease Name/Infection | Under 5 years | | 5 years & older | | Total |
|---|---|---|---|---|---|
| | Male | Female | Male | Female | |
| Injuries & Poisoning | 623 | 548 | 5,832 | 2,503 | 9,506 |
| Transport Accidents | 47 | 41 | 494 | 174 | 756 |
| Bites & Stings | 241 | 192 | 1,304 | 882 | 2,619 |
| Other External cause of Injury | 255 | 235 | 3,910 | 1,644 | 6,044 |
| Work related injuries | 104 | 118 | 2,232 | 908 | 3,362 |
| Complications of Health Care | 91 | 66 | 947 | 1,019 | 2,123 |
| ANC, Immunisation & Other counselling | 1,241 | 1,407 | 5,980 | 7,971 | 16,599 |
| Total | 48,137 | 48,388 | 217,964 | 194,414 | 508,903 |

*Source: Information Section and "Annual Health Bulletin 2003", MoH, Thimphu*

TABLE 2.6
HOSPITAL INDOOR MORBIDITY REPORT, BHUTAN, 2003

| Disease Name/Infection | Under 5 years | | 5 years & older | | Total | Refferals | | Deaths |
|---|---|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | | In | Out | |
| Cholera | 4 | 0 | 4 | 2 | 10 | 0 | 0 | 0 |
| Typhoid | 18 | 6 | 195 | 191 | 410 | 21 | 10 | 3 |
| Diarrhoea | 343 | 243 | 501 | 505 | 1,592 | 19 | 4 | 12 |
| Dysentery | 98 | 109 | 283 | 228 | 718 | 17 | 7 | 0 |
| Tuberculosis | 14 | 15 | 429 | 322 | 780 | 134 | 41 | 25 |
| Tetanus | 0 | 0 | 2 | 3 | 5 | 1 | 1 | 0 |
| Diphtheria | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pertussis | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Early Syphilis | 3 | 2 | 0 | 1 | 6 | 0 | 0 | 0 |
| Sexually Transmitted Disease, excluding HIV/AIDS | 0 | 1 | 20 | 8 | 29 | 1 | 1 | 0 |
| Polio | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rabies | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| Viral, Protozoal & Helminthic disease | | | | | | | | |
| Measels | 4 | 1 | 1 | 1 | 7 | 0 | 0 | 0 |
| Viral Hepatitis | 41 | 46 | 119 | 92 | 298 | 29 | 14 | 8 |
| Plasmodium falciparum malaria | 33 | 21 | 367 | 222 | 643 | 12 | 5 | 12 |
| Other malaria | 37 | 29 | 278 | 140 | 484 | 7 | 2 | 2 |
| Intestinal Worms | 9 | 21 | 35 | 35 | 100 | 1 | 0 | 0 |
| Scabies | 11 | 12 | 30 | 28 | 81 | 0 | 2 | 0 |
| Other Infections (excluding ear, brain, STI) | 6 | 17 | 98 | 56 | 177 | 11 | 7 | 4 |
| Neoplasm | | | | | | | | |
| Cervical Cancer | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 |
| Other Cancers | 1 | 1 | 264 | 179 | 445 | 128 | 19 | 26 |
| Neoplasm (benign+CIS) | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 |
| Blood diseases | | | | | | | | |
| Nutritional Anaemia | 21 | 16 | 118 | 239 | 394 | 41 | 10 | 8 |
| Blood & Immune Disorders | 14 | 9 | 33 | 24 | 80 | 10 | 3 | 13 |
| Endocrine, Metabolic & Nutritional | | | | | | | | |
| Diabetes | 1 | 0 | 87 | 34 | 122 | 28 | 11 | 6 |
| Malnutrition (exclude child clinic attendance) | 33 | 25 | 12 | 3 | 73 | 4 | 3 | 6 |
| Other Nutritional & Metabolic Disorders | 11 | 15 | 65 | 76 | 167 | 3 | 3 | 3 |
| Mental Disorders | | | | | | | | |
| Psychosis | 0 | 0 | 26 | 21 | 47 | 14 | 6 | 0 |
| Depression | 0 | 0 | 29 | 38 | 67 | 7 | 2 | 0 |
| Anxiety | 0 | 0 | 17 | 20 | 37 | 2 | 0 | 0 |
| Other Mental Disorders | 1 | 2 | 37 | 42 | 82 | 13 | 3 | 0 |
| Disease of Nervous syatem | | | | | | | | |
| Meningitis/Encephalitis | 10 | 8 | 27 | 26 | 71 | 20 | 15 | 8 |
| Epilepsy | 26 | 17 | 89 | 50 | 182 | 15 | 6 | 6 |
| Other Nervous including Peripheral Disorders | 20 | 15 | 138 | 102 | 275 | 32 | 22 | 2 |
| Eye & Ear Diseses | | | | | | | | |
| Conjunctivities | 81 | 57 | 194 | 136 | 468 | 3 | 2 | 0 |
| Cataract | 1 | 2 | 137 | 101 | 241 | 7 | 1 | 0 |
| Other Eye Disorders | 11 | 22 | 216 | 165 | 414 | 17 | 4 | 1 |
| Otitis Media | 37 | 80 | 124 | 90 | 331 | 3 | 1 | 0 |
| Other Ear Disorders | 13 | 20 | 130 | 43 | 206 | 3 | 5 | 0 |
| Diseases of Circulatory System | | | | | | | | |
| Rheumatic Heart Diseases | 5 | 6 | 98 | 127 | 236 | 40 | 20 | 11 |

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

Contd.....



TABLE 2.6[Contd...]
HOSPITAL INDOOR MORBIDITY REPORT, BHUTAN, 2003

| Disease Name/Infection | Under 5 years | | 5 years & older | | Total | Refferals | | Deaths |
|---|---|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | | In | Out | |
| Hypertension | 0 | 0 | 350 | 366 | 716 | 62 | 26 | 17 |
| Ischaemic Heart Diseases | 0 | 0 | 56 | 51 | 107 | 13 | 4 | 10 |
| Cerebro-vascular Diseases | 0 | 3 | 94 | 62 | 159 | 32 | 14 | 32 |
| Other Circulatory Diseases | 0 | 16 | 149 | 96 | 278 | 21 | 19 | 28 |
| Respiratory diseases | | | | | | | | |
| Common Cold | 361 | 413 | 1,004 | 966 | 2,744 | 15 | 4 | 0 |
| Acute Pharyngitis/Tonsilitis | 27 | 14 | 174 | 197 | 412 | 11 | 3 | 0 |
| Pneumonia | 709 | 609 | 293 | 327 | 1,938 | 67 | 29 | 40 |
| Other Respiratory & Nose Disesses | 458 | 368 | 820 | 853 | 2,499 | 90 | 45 | 37 |
| Disease of the Digestive system | | | | | | | | |
| Dental Caries | 41 | 44 | 1,107 | 1,334 | 2,526 | 0 | 1 | 0 |
| Diseases of Teeth & Gums | 119 | 148 | 4,719 | 4,932 | 9,918 | 0 | 6 | 0 |
| Peptic Ulcer Syndrome | 2 | 9 | 606 | 667 | 1,284 | 22 | 25 | 2 |
| Acute Appendicitis | 0 | 1 | 194 | 173 | 368 | 57 | 38 | 1 |
| Alcohol Liver Diseases | 0 | 0 | 275 | 224 | 499 | 68 | 27 | 68 |
| Gall Bladder Diseases | 2 | 6 | 177 | 335 | 520 | 46 | 13 | 5 |
| Other Diseases of the Digestive system | 80 | 63 | 607 | 482 | 1,232 | 129 | 75 | 25 |
| Skin Diseases | | | | | | | | |
| Skin Infections | 76 | 84 | 362 | 308 | 830 | 32 | 9 | 1 |
| Other Disorders of Skin & Subcutaneous | 116 | 87 | 537 | 365 | 1,105 | 43 | 28 | 6 |
| Diseases of Musculo-skeletal system & Cogenital deformities | | | | | | | | |
| Arthritis & Arthrosis | 6 | 1 | 89 | 52 | 148 | 23 | 6 | 1 |
| Other Musculo-skeletal disorders | 9 | 13 | 673 | 315 | 1,020 | 215 | 41 | 1 |
| Genito-Urinary Diseases | | | | | | | | |
| Cystitis | 1 | 2 | 21 | 21 | 45 | 4 | 3 | 0 |
| Infection of Breasts, including Puerperium | 0 | 0 | 0 | 20 | 20 | 1 | 0 | 0 |
| Other Disease of the Breast | 0 | 1 | 0 | 78 | 79 | 4 | 2 | 0 |
| Pelvic Inflammatory Disease | 0 | 0 | 0 | 301 | 301 | 53 | 8 | 0 |
| Menstrual Disturbances | 0 | 0 | 0 | 59 | 59 | 0 | 3 | 0 |
| Other Kidney, UT/Genital Disorders | 34 | 20 | 479 | 608 | 1,141 | 118 | 69 | 19 |
| Pregnancy, Childbirth and Puerperium | | | | | | | | |
| Abortions | 0 | 0 | 0 | 302 | 302 | 26 | 20 | 12 |
| Pregnancy Included Hypertension | 0 | 0 | 0 | 161 | 161 | 8 | 30 | 0 |
| Ante-Partum Haemorrhage & Placenta Previa | 0 | 0 | 0 | 42 | 42 | 5 | 11 | 0 |
| Malpresentation | 0 | 0 | 0 | 46 | 46 | 3 | 22 | 0 |
| Prolonged Labour | 0 | 0 | 0 | 111 | 111 | 16 | 47 | 0 |
| Obstructed Labour | 0 | 0 | 0 | 43 | 43 | 6 | 22 | 0 |
| Post Partum Haemorrhage | 0 | 0 | 0 | 51 | 51 | 6 | 3 | 0 |
| Retained Placenta | 0 | 0 | 0 | 80 | 80 | 15 | 14 | 0 |
| Puerperal Sepsis | 0 | 0 | 0 | 33 | 33 | 6 | 4 | 1 |
| Other complications of pregnancy | 0 | 0 | 0 | 447 | 447 | 59 | 85 | 1 |
| Perinatal Conditions | | | | | | | | |
| Low Birth Weight | 99 | 44 | 0 | 0 | 143 | 2 | 0 | 1 |
| Foetal Death & Stillbirth | 30 | 13 | 0 | 0 | 43 | 4 | 0 | 0 |
| Noenatal Death | 6 | 5 | 0 | 0 | 11 | 0 | 0 | 20 |
| Conditions Orginating in the Perinatal Period | 90 | 52 | 0 | 0 | 142 | 4 | 2 | 4 |

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

Contd.....

TABLE 2.6
HOSPITAL INDOOR MORBIDITY REPORT, BHUTAN, 2003

| Disease Name/Infection | Under 5 years | | 5 years & older | | Total | Refferals | | Deaths |
|---|---|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | | In | Out | |
| Malformations | | | | | | | | |
| Malformations | 8 | 7 | 17 | 14 | 46 | 1 | 1 | 0 |
| Injuries & Trauma | | | | | | | | |
| Burns & Corrosions | 38 | 38 | 86 | 46 | 208 | 16 | 8 | 2 |
| Injuries & Poisoning | 30 | 30 | 379 | 166 | 605 | 39 | 90 | 2 |
| Transport Accidents | 10 | 12 | 257 | 80 | 359 | 45 | 42 | 6 |
| Bites & Stings | 17 | 27 | 109 | 48 | 201 | 24 | 5 | 1 |
| Other External cause of Injury | 22 | 23 | 323 | 147 | 515 | ? | | |
| Work related injuries | 25 | 34 | 397 | 127 | 583 | 44 | 55 | 1 |
| Complication of Helth Care | 0 | 1 | 14 | 6 | 21 | 2 | 1 | 0 |
| ANC Immunisation & other counceling | 68 | 62 | 297 | 773 | 1,200 | 2 | 3 | 2 |
| Total | 3,418 | 3,068 | 18,870 | 19,279 | 44,635 | 2,212 | 1,255 | 513 |

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



TABLE 2.7
NUMBER OF PATIENTS REPORTED IN DIFFERENT HOSPITALS, BHUTAN, 2000 TO 2003

| Hospital | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|
| Government hospitals | 385.0 | 521.4 | 274.9 | 293.7 |
| Bumthang | 9.2 | 12.5 | 14.6 | 19.9 |
| Gelephu | 45.9 | 59.8 | 26.9 | 23.9 |
| Lhuntse | n.a | 10.3 | 10.7 | 8.8 |
| Monggar | n.a | 23.2 | 16.0 | 14.1 |
| Paro | 21.1 | 25.8 | 24.9 | 24.3 |
| Pema Gatshel | 12.0 | 15.6 | 10.6 | 17.1 |
| Phuntsholing | 58.2 | 60.0 | 26.1 | 28.1 |
| Punakha | n.a | 43.7 | 29.1 | 24.3 |
| Samdrup Jongkhar | 16.8 | 18.4 | 13.6 | 17.2 |
| Samtse | 19.3 | 35.9 | 17.3 | 16.8 |
| Sarpang | 15.4 | 27.8 | 16.0 | 21.4 |
| Sibsoo | 8.6 | 11.7 | 12.3 | 10.6 |
| Tashiyangtse | n.a | 11.6 | 7.5 | 8.0 |
| Thimphu | 125.3 | 78.2 | n.a | n.a |
| Trashigang | 10.7 | 23.4 | 9.9 | 12.7 |
| Trongsa | 8.7 | 14.1 | 10.8 | 12.8 |
| Tshimalakha | 15.9 | 21.4 | 13.2 | 16.4 |
| Tsirang | 17.9 | 28.0 | 15.4 | 17.3 |

Contd...

TABLE 2.7(contd..)
NUMBER OF PATIENTS REPORTED IN DIFFERENT HOSPITALS, BHUTAN, 2000 TO 2003

| Hospital | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|
| Leprosy mission hospital | 47.1 | 52.9 | 53.5 | 44.6 |
| Gidakom | 9.6 | 5.2 | 9.2 | 7.9 |
| Lhuntshi | 8.1 | 10.3 | 10.7 | 8.8 |
| Monggar | 18.5 | 23.2 | 16.0 | 14.1 |
| Riserboo | 1.9 | 3.6 | 7.7 | 6.2 |
| Yebilaptsa(Zhemgang) | 9.0 | 10.6 | 9.9 | 7.6 |
| Army hospital | 14.5 | 16.7 | 47.6 | 5.8 |
| Lungtenphug | n.a | n.a | n.a | n.a |
| Wangdi Phodrang | 14.5 | 16.7 | 19.4 | n.a |
| Yonphula | n.a | n.a | 12.3 | 5.8 |
| Imtrat (Haa) | n.a | n.a | 15.9 | n.a |
| Others | n.a | 18.3 | 48.1 | 12.8 |
| Dantak (Deothang) | n.a | 18.3 | 11.6 | 12.8 |
| IBFH (Thimphu) | n.a | n.a | 36.5 | n.a |
| Project hospital | 25.7 | 30.4 | 25.2 | 28.1 |
| Gomtu | 25.7 | 30.4 | 25.2 | 28.1 |
| Indigenous hospital | n.a | 35.6 | n.a | n.a |
| Indigenous dispensary | n.a | 62.5 | n.a | n.a |
| All hospitals | 472.3 | 737.8 | 449.3 | 385 |

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



TABLE 2.8
EPI COVERAGE IN PERCENTAGE BY DZONGKHAG, BHUTAN, 2003

| Dzongkhag | BCG | MEASLES | DPT3 | OPV3 | HEPB3 |
|---|---|---|---|---|---|
| Bumthang | 285 | 270 | 284 | 303 | 293 |
| Chukha | 1,633 | 1,676 | 1,841 | 1,842 | 1,803 |
| Dagana | 366 | 360 | 461 | 461 | 458 |
| Gasa | 36 | 30 | 32 | 31 | 32 |
| Haa | 172 | 179 | 204 | 209 | 191 |
| Lhuntse | 358 | 313 | 342 | 345 | 342 |
| Monggar | 896 | 789 | 812 | 829 | 788 |
| Paro | 445 | 516 | 572 | 572 | 573 |
| Pema Gatshel | 306 | 321 | 305 | 305 | 306 |
| Punakha | 370 | 338 | 399 | 394 | 381 |
| Samdrup Jongkhar | 915 | 818 | 868 | 874 | 872 |
| Samtse | 1,209 | 1,134 | 1,263 | 1,260 | 1,254 |
| Sarpang | 972 | 863 | 962 | 964 | 949 |
| Tashiyangtse | 373 | 375 | 388 | 385 | 386 |
| Thimphu | 2,851 | 1,893 | 1,872 | 2,048 | 1,620 |
| Trashigang | 958 | 865 | 955 | 956 | 958 |
| Trongsa | 253 | 272 | 261 | 269 | 256 |
| Tsirang | 350 | 358 | 401 | 401 | 401 |
| Wangdue Phodrang | 566 | 656 | 736 | 728 | 714 |
| Zhemgang | 406 | 408 | 405 | 395 | 399 |
| Bhutan | 13,720 | 12,434 | 13,363 | 13,571 | 12,976 |

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

TABLE 2.9
DETAILS OF CHILD GROWTH MONITORING IN IMMUNIZATION CLINICS, BHUTAN, 2000 TO 2003

| Detail | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|
| Children weighed(nos) | 87,390 | 27,068 | 122,753 | 128,083 |
| Child malnutrition(nos) | 3,021 | 4,192 | 116,016 | 11,153 |
| Degree I | 2,336 | 2,261 | 106,141 | 9,253 |
| Degree II | 553 | 1,746 | 8,155 | 1,601 |
| Degree III | 132 | 185 | 1,720 | 299 |
| Child malnutrition( % ) | 4 | 13.4 | .. | .. |

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

TABLE 2.10
DETAILS OF MATERNAL AND CHILD HEALTH CARE SERVICES, BHUTAN, 2000 TO 2003

| Type of care | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|
| Maternal health care attendence(a) | 66,626 | 68,719 | 39,190 | 50,073 |
| Antenatal | 44,166 | 47,351 | 39,190 | 50,073 |
| Postnatal | 22,460 | 21,368 | n.a | n.a |
| Deliveries attended | 7,040 | 6,028 | 3,826 | 6,174 |
| Home | 941 | n.a | n.a | 2,291 |
| Hospital/Basic Health Unit | 6,099 | 6,028 | 3,826 | 3,883 |
| Child health care attendance | n.a | 122,987 | 264,824 | 130,711 |
| First visit | n.a | 107,211 | 39,359 | 15,114 |
| Re-visit | n.a | 15,776 | 225,465 | 115,597 |
| Malnourished children(b) | 3,153 | 4,377 | 404 | 11,452 |
| All malnourished | 3,021 | 4,192 | n.a | 11,153 |
| Third degree (c) | 132 | 185 | 404 | 299 |

Notes:
(a) Refers to total attendance, not comprehensive cases.
(b) Children attending health units are classified according to three degrees of malnourishment;
(c) Third degree malnourishment refers to the most severe cases.
*Source: Information Section, Department of Health, MoH, Thimphu.*



TABLE 2.11(contd..)
DETAILS OF MATERNAL HEALTH CARE ACTIVITIES BY DZONGKHAG,BHUTAN, 2003

| **Dzongkhag** | **2003** |
|---|---|
| Paro | |
| Antenatal | 2,117 |
| Postnatal | .. |
| Reported deliveries | 375 |
| Trained deliveries | 233 |
| Pema Gatshel | |
| Antenatal | 699 |
| Postnatal | .. |
| Reported deliveries | 278 |
| Trained deliveries | 47 |
| Punakha | |
| Antenatal | 1,326 |
| Postnatal | .. |
| Reported deliveries | 386 |
| Trained deliveries | 65 |
| Samdrup Jongkhar | |
| Antenatal | 2,869 |
| Postnatal | .. |
| Reported deliveries | 740 |
| Trained deliveries | 351 |
| Samtse | |
| Antenatal | 342 |
| Postnatal | .. |
| Reported deliveries | 1,318 |
| Trained deliveries | 18 |
| Sarpang | |
| Antenatal | 3,714 |
| Postnatal | .. |
| Reported deliveries | 993 |
| Trained deliveries | 580 |
| Thimphu | |
| Antenatal | 14,358 |
| Postnatal | .. |
| Reported deliveries | 437 |
| Trained deliveries | 1,737 |

Contd...

TABLE 2.11 (contd.)
DETAILS OF MATERNAL HEALTH CARE ACTIVITIES BY DZONGKHAG, BHUTAN, 2003

| Dzongkhag | 2003 |
|---|---|
| Trashigang | |
| Antenatal | 2,830 |
| Postnatal | .. |
| Reported deliveries | 974 |
| Trained deliveries | 346 |
| Trashiyangtse | |
| Antenatal | 765 |
| Postnatal | .. |
| Reported deliveries | 480 |
| Trained deliveries | 92 |
| Trongsa | |
| Antenatal | 873 |
| Postnatal | .. |
| Reported deliveries | 275 |
| Trained deliveries | 126 |
| Tsirang | |
| Antenatal | 1,129 |
| Postnatal | .. |
| Reported deliveries | 417 |
| Trained deliveries | 162 |
| Wangdue Phodrang | |
| Antenatal | 1,993 |
| Postnatal | .. |
| Reported deliveries | 635 |
| Trained deliveries | 220 |
| Zhemgang | |
| Antenatal | 669 |
| Postnatal | .. |
| Reported deliveries | 340 |
| Trained deliveries | 189 |

Note:
Trained delivery refers to deliveries attended by trained health personnels in hospitals/BHUs and at home.
*Source: Information Section, Department of Health Services, MoH, Thimphu.*



TABLE 2.12
DETAILS OF COMPLICATIONS DURING PREGNANCY AND DURING LABOUR/DELIVERIES, BHUTAN, 2002 TO 2003

| Complication | 2002 | | 2003 | |
|---|---|---|---|---|
| | Numbers | Percent | Numbers | Percent |
| Pregnancy of mother | 2,577 | 100 | 1,519 | 100 |
| Abortion | 311 | 12.06 | 464 | 30.54 |
| Antepartum haemorrhage | 56 | 2.17 | 111 | 7.30 |
| P.I.H | 100 | 3.8 | 254 | 16.72 |
| Anaemia | 2,101 | 81.5 | .. | .. |
| Hepatitis | .. | .. | .. | .. |
| Malaria | .. | .. | .. | .. |
| Others | 9 | 0.34 | 690 | 10.53 |
| Labour/delivery | 783 | 100 | 782 | 100 |
| Obstructed labour | 100 | 12.7 | 80 | 11.39 |
| Mal presentation | 130 | 16.6 | 104 | 14.8 |
| Prolonged labour/Ruptured uterus | 152 | 19.4 | 204 | 29.05 |
| PPH | 113 | 14.3 | 145 | 20.65 |
| Retained Placenta | 288 | 36.78 | 249 | 35.47 |
| All complications | 3,360 | .. | 2,301 | .. |

*Source: "Annual Health Bulletin 2003", Department of Health Services, MoH, Thimphu.*

TABLE 2.13
FAMILY PLANNING ACCEPTORS BY TYPE OF METHOD, BHUTAN, 2000 TO 2003

| Method | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|
| Tubectomy | n.a | 1,941 | 320 | 1,049 |
| Vasectomy | 8,204 | 9,884 | 1,230 | 4,636 |
| Minilap | 1,510 | n.a | n.a | 1,049 |
| Intra uterine device(IUD) | 1,582 | 2,881 | 836 | 25,669 |
| Pills (OCP) | 4,227 | 6,126 | n.a | 14,403 |
| Condoms | 3,393 | 6,016 | n.a | 574,834 |
| Injection DMPA | 8,498 | 14,740 | 8,077 | 51,027 |
| All methods | 27,414 | 41,588 | 10,463 | 672,667 |

Notes:
IUD = No. of inserted, Pills = No. of cycles, DMPA = No. of Injected and Condoms = No.of pieces
*Source: "Annual Health Bulletin 2003", Department of Health Services, MoH, Thimphu.*

TABLE 2.14
NUMBER OF USERS OF FAMILY PLANNING METHODS BY TYPE, BY DZONGKHAG, BHUTA
2003

| Dzongkhag | Family planning methods | | | | | | Tota |
|---|---|---|---|---|---|---|---|
| | Vasec. | Tubec. | IUD | DMPA | Pills | Condom | |
| Bumthang | 4 | 1 | 724 | 2,684 | 604 | 252 | 4,2 |
| Chukha | 300 | 39 | 52 | 1,794 | 742 | 181,532 | 184,4 |
| Dagana | 184 | 23 | 6 | 1,476 | 972 | 273 | 2,9 |
| Gasa | 0 | 0 | 9 | 242 | 107 | 1,087 | 1,4 |
| Haa | 4 | 3 | 12 | 759 | 221 | 14,276 | 15,2 |
| Lhuntse | 31 | 0 | 8 | 456 | 112 | 13,321 | 13,9 |
| Monggar | 59 | 29 | 110 | 3,155 | 1,222 | 72,821 | 77,3 |
| Paro | 363 | 93 | 461 | 2,163 | 573 | 17,690 | 21,3 |
| Pema Gatshel | 0 | 0 | 419 | 1,636 | 442 | 6,091 | 8,5 |
| Punakha | 23 | 24 | 72 | 2,034 | 569 | 11,812 | 14,5 |
| Samdrup Jongkhar | 1,143 | 169 | 494 | 6,547 | 1,147 | 49,273 | 58,7 |
| Samtse | 265 | 34 | 230 | 3,795 | 1,961 | 26,083 | 32,3 |
| Sarpang | 1,033 | 336 | 31 | 859 | 408 | 21,508 | 24,1 |
| Thimphu | 407 | 176 | 20,929 | 9,252 | 1,529 | 40,765 | 73,0 |
| Trashi yangtse | 192 | 15 | 841 | 1,681 | 841 | 5,551 | 9,1 |
| Trashigang | 90 | 22 | 58 | 4,772 | 831 | 50,673 | 56,4 |
| Trongsa | 149 | 24 | 132 | 1,288 | 240 | 9,114 | 10,9 |
| Tsirang | 131 | 23 | 791 | 3,860 | 1,664 | 14,106 | 20,5 |
| Wangdue Phodrang | 175 | 21 | 100 | 1,689 | 537 | 4,689 | 7,2 |
| Zhemgang | 83 | 17 | 190 | 885 | 303 | 33,917 | 35,5 |
| Bhutan | 4,636 | 1,049 | 25,669 | 51,027 | 15,025 | 574,834 | 672,2 |

*Source: "Annual Health Bulletin 2003", Department of Health Services, MoH, Thimphu.*



TABLE 2.15
NUMBER OF BLOOD SLIDE EXAMINATIONS FOR MALARIA, BHUTAN, 2000 AND 2003

| Detail | 2000 | 2003 |
|---|---|---|
| Total blood films examined (numbers) | 76,445 | 61,246 |
| Blood film detected negative | n.a | n.a |
| Blood films detected positive | 5,935 | 3,806 |
| Plasmodium vivax | 3,197 | 2,126 |
| Plasmodium falciparum | 2,738 | 1,680 |
| Mixed infections | n.a | n.a |
| Deaths due to malaria (numbers) | 15 | 15 |

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

TABLE 2.16
NUMBER OF TUBERCULOSIS CASES BY TYPE, BHUTAN, 2000 TO 2003

(Person)

| Year | Cases diagnosed and treated | | | Total deaths |
|---|---|---|---|---|
| | Pulmonary | Extra Pulmonary | Total cases | |
| 2000 | 777 | 363 | 1,140 | 25 |
| 2001 | 874 | 342 | 1,216 | 51 |
| 2002 | 758 | 293 | 1,051 | 41 |
| 2003 | 682 | 344 | 1,026 | 31 |

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

TABLE 2.17
WATER AND SANITATION FACILITY TYPE BY DZONGKHAG, BHUTAN, 2003

(Number)

| Dzongkhag | Percentage Coverage | | | | |
|---|---|---|---|---|---|
| | Sanitary facility | piped water supply | Drainage & oot path | Vegetable garden | Garbage disposal bins |
| Bumthang | 92 | 95 | 72 | 91 | 89 |
| Chukha | 94 | 81 | 67 | 40 | 79 |
| Dagana | 83 | 48 | 17 | 70 | 64 |
| Gasa | 92 | 49 | 38 | 98 | 75 |
| Haa | 80 | 85 | 35 | 21 | 32 |
| Lhuntse | 69 | 71 | 44 | 71 | 44 |
| Monggar | 85 | 75 | 35 | 71 | 43 |
| Paro | 87 | 86 | 66 | 77 | 69 |
| Pema Gatshel | 83 | 81 | 32 | 73 | 40 |
| Punakha | 86 | 76 | 33 | 91 | 81 |
| Samdrup Jongkhar | 87 | 71 | 22 | 69 | 50 |
| Samtse | 44 | 37 | 10 | 39 | 24 |
| Sarpang | 89 | 79 | 33 | 49 | 65 |
| Thimphu | 86 | 85 | 52 | 73 | 65 |
| Trashigang | 85 | 78 | 31 | 76 | 34 |
| Trashiyangtse | 83 | 70 | 41 | 74 | 47 |
| Trongsa | 91 | 89 | 64 | 91 | 59 |
| Tsirang | 96 | 85 | 45 | 96 | 75 |
| Wangdue Phodrang | 95 | 86 | 72 | 74 | 88 |
| Zhemgang | 91 | 78 | 54 | 78 | 68 |
| Total coverage(%) | 80 | 71 | 39 | 63 | 54 |

*Source: "Annual Health Bulletin 2003", Department of Health Services, 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.s

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 Primary 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, 2000 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 | 135,987 | 3,381 | 139,368 |

Note:
*Excludes NFE
*Source: Policy & Planning Division, MoE, Thimphu.*



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

| Dzongkhag | CPS | PS | LSS | MSS | HSS | Inst. | NFE | Pvt. | Total |
|---|---|---|---|---|---|---|---|---|---|
| Bumthang | 11 | 1 | 2 | 1 | 1 | | 23 | 1 | 40 |
| Chukha | 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 |
| Monggar | 22 | 10 | 5 | 0 | 2 | .. | 28 | .. | 67 |
| Paro | 5 | 2 | 8 | 2 | 1 | 1 | 18 | 2 | 38 |
| Pema Gatshel | 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 |
| Trashiyangtse | 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, 2003 TO 2004

| Institution | 2003 | | | 2004 | | |
|---|---|---|---|---|---|---|
| | Bht | N/Bht | Total | Bht | N/Bht | Tota |
| Schools | 3,310 | 695 | 4,005 | 3,710 | 666 | 4,37 |
| Community Primary | 586 | 6 | 592 | 704 | 3 | 70 |
| Primary | 679 | 22 | 701 | 734 | 18 | 75 |
| Lower Secondary | 1,178 | 210 | 1,388 | 1,281 | 180 | 1,46 |
| Middle Secondary | 426 | 197 | 623 | 515 | 214 | 72 |
| Higher Secondary | 287 | 179 | 466 | 280 | 160 | 44 |
| Private School | 154 | 81 | 235 | 196 | 91 | 28 |
| Specialised/Professional Institutes | 453 | 238 | 691 | 713 | 74 | 78 |
| Sherubtse College | 23 | 39 | 62 | 26 | 44 | 7 |
| Royal Bhutan Institute of Technology | 39 | 20 | 59 | 39 | 20 | 5 |
| National Institute of Education, Paro | 25 | 7 | 32 | 5 | 1 | 5 |
| National Institute of Education, Samtse | 51 | 3 | 54 | 31 | 6 | 3 |
| Institute of Language and Cultural Affairs | 22 | 2 | 24 | 22 | 2 | 2 |
| National Institute for the Disabled (NID) | 7 | 1 | 8 | 9 | 1 | 1 |
| Dhoban Sanskrit Patshala | 1 | .. | 1 | 1 | - | |
| Surey Sanskrit Patshala | 1 | .. | 1 | 1 | - | |
| Institute for Zorig Chusum | 10 | 1 | 11 | 7 | - | |
| Rigney Institute (T/yangtse) | 11 | .. | 11 | 7 | - | |
| Non-formal Education Programme | 263 | 165 | 428 | 519 | .. | 51 |
| Bhutan | 3,763 | 933 | 4,696 | 4,423 | 740 | 5,16 |

*Source: Policy & Planning Division, MoE, Thimphu.*



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

| Dzongkhag | Educational facility | Student | | |
|---|---|---|---|---|
| | | Total | Girl | Boy |
| Bumthang | 17 | 4,001 | 1,969 | 2,032 |
| Chukha | 33 | 13,754 | 6,538 | 7,216 |
| Dagana | 16 | 3,506 | 1,668 | 1,838 |
| Gasa | 4 | 558 | 267 | 291 |
| Haa | 8 | 3,049 | 1,524 | 1,525 |
| Lhuntse | 23 | 3,547 | 1,711 | 1,836 |
| Monggar | 39 | 8,155 | 3,739 | 4,416 |
| Paro | 20 | 8,181 | 4,112 | 4,069 |
| Pemagatshel | 18 | 3,921 | 1,703 | 2,218 |
| Punakha | 13 | 5,090 | 2,546 | 2,544 |
| Samdrup Jongkhar | 24 | 8,122 | 4,346 | 3,776 |
| Samtse | 14 | 7,905 | 3,595 | 4,310 |
| Sarpang | 16 | 7,892 | 3,758 | 4,134 |
| Thimphu | 36 | 22,590 | 11,415 | 11,175 |
| Trashigang | 57 | 12,797 | 5,899 | 6,898 |
| Trashiyangtse | 22 | 4,594 | 2,155 | 2,439 |
| Trongsa | 19 | 3,268 | 1,636 | 1,632 |
| Tsirang | 7 | 3,603 | 1,686 | 1,917 |
| Wangdue Phodrang | 24 | 6,718 | 3,417 | 3,301 |
| Zhemgang | 23 | 4,737 | 2,115 | 2,622 |
| Bhutan | 433 | 135,988 | 65,799 | 70,189 |

Note:
In the above table, the Institues and NFE centres are excluded though they fall under educational facitilties
*Source: Policy & Planning Division, MoE, Thimphu.*

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

| Institution | 2002 | 2003 | 2004 |
|---|---|---|---|
| Schools | 123,283 | 129,160 | 135,988 |
| Community Primary | 20,978 | 22,502 | 24,533 |
| Primary | 28,849 | 26,168 | 26,508 |
| Lower Secondary | 41,985 | 46,856 | 48,089 |
| Middle Secondary | 19,194 | 17,735 | 20,775 |
| Higher Secondary | 8,464 | 11,268 | 10,865 |
| Private | 3,813 | 4,631 | 5,218 |
| | | | |
| Other institutions | 2,711 | 3,251 | 3,381 |
| Sherubtse college | 625 | 828 | 939 |
| Royal Bhutan Institute of Technology | 560 | 429 | 390 |
| 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 |
| National Institute for the Disabled (NID) | 37 | 35 | 38 |
| Dhoban Sanskrit patsala | 35 | 13 | 26 |
| Surey Sanskrit patshala | n.a | 30 | 26 |
| Institue of Zorigchusum (T/yangtse) | 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, Rangjung | n.a | 112 | 111 |
| Vocational Training Institue, Samthang | n.a | 99 | 68 |
| | | | |
| Non-formal Education Centres | 9,798 | 12,838 | 15,866 |

*Source: Policy & Planning Division, MoE, Thimphu.*



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

| Dzongkhag | Private School | | | School | | | Primary School | | |
|---|---|---|---|---|---|---|---|---|---|
| | Boy | Girl | Total | Boy | Girl | Total | Boy | Girl | Total |
| Bumthang | 97 | 52 | 149 | 556 | 581 | 1,137 | 59 | 65 | 124 |
| Chukha | 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 |
| Monggar | .. | .. | .. | 1,209 | 1,131 | 2,340 | 1,081 | 988 | 2,069 |
| Paro | 180 | 119 | 299 | 307 | 291 | 598 | 464 | 464 | 928 |
| Pema Gatshel | .. | .. | .. | 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 | 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 |
| Trashiyangtse | .. | .. | .. | 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...

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

| Dzongkhag | Lower Secondary | | | Middle Secondary | | |
|---|---|---|---|---|---|---|
| | Boy | Girl | Total | Boy | Girl | Tota |
| Bumthang | 739 | 735 | 1,474 | 331 | 351 | 68 |
| Chukha | 2,527 | 2,447 | 4,974 | 2,245 | 2,008 | 4,25 |
| Dagana | .. | .. | .. | 488 | 469 | 95 |
| Gasa | 112 | 114 | 226 | .. | .. | |
| Haa | 770 | 803 | 1,573 | .. | .. | |
| Lhuntse | 139 | 145 | 284 | 437 | 276 | 71 |
| Monggar | 1,224 | 1,085 | 2,309 | .. | .. | |
| Paro | 2,277 | 2,399 | 4,676 | 430 | 497 | 92 |
| Pema Gatshel | 598 | 461 | 1,059 | 438 | 399 | 83 |
| Punakha | 1,075 | 1,175 | 2,250 | .. | .. | |
| Samtse | 1,452 | 1,158 | 2,610 | 990 | 1,021 | 2,01 |
| Samdrup Jongkhar | 1,579 | 1,343 | 2,922 | 1,343 | 1,237 | 2,58 |
| Sarpang | 606 | 554 | 1,160 | 872 | 744 | 1,61 |
| Thimphu | 4,615 | 4,694 | 9,309 | 1,347 | 1,446 | 2,79 |
| Trashigang | 2,453 | 2,311 | 4,764 | 788 | 648 | 1,43 |
| Trashiyangtse | 593 | 588 | 1,181 | 532 | 364 | 89 |
| Trongsa | 519 | 542 | 1,061 | 224 | 245 | 46 |
| Tsirang | 942 | 847 | 1,789 | .. | .. | |
| Wangdue Phodrang | 1,424 | 1,483 | 2,907 | 74 | 105 | 17 |
| Zhemgang | 809 | 752 | 1,561 | 234 | 192 | 42 |
| Bhutan | 24,453 | 23,636 | 48,089 | 10,773 | 10,002 | 20,77 |

Contd..



TABLE 3.7 (Contd.....)
NUMBER OF STUDENTS IN HIGH SCHOOLS AND BELOW BY DZONGKHAG, BHUTAN, 2004

| Dzongkhag | Lower Secondary | | | Middle Secondary | | |
|---|---|---|---|---|---|---|
| | Boy | Girl | Total | Boy | Girl | Total |
| Bumthang | 250 | 185 | 435 | 2,032 | 1,969 | 4,001 |
| Chukha | 596 | 554 | 1,150 | 7,216 | 6,538 | 13,754 |
| Dagana | .. | .. | .. | 1,838 | 1,668 | 3,506 |
| Gasa | .. | .. | .. | 291 | 267 | 558 |
| Haa | 394 | 371 | 765 | 1,525 | 1,524 | 3,049 |
| Lhuntse | .. | | | 1,836 | 1,711 | 3,547 |
| Monggar | 902 | 535 | 1,437 | 4,416 | 3,739 | 8,155 |
| Paro | 411 | 342 | 753 | 4,069 | 4,112 | 8,181 |
| Pema Gatshel | 384 | 182 | 566 | 2,218 | 1,703 | 3,921 |
| Punakha | 453 | 347 | 800 | 2,544 | 2,546 | 5,090 |
| Samtse | | .. | .. | 4,310 | 3,595 | 7,905 |
| Samdrup Jongkhar | | .. | .. | 4,346 | 3,776 | 8,122 |
| Sarpang | .. | .. | .. | 4,134 | 3,758 | 7,892 |
| Thimphu | 678 | 755 | 1 ,433 | 11,175 | 11,415 | 22,590 |
| Trashigang | 730 | 493 | 1,223 | 6,898 | 5,899 | 12,797 |
| Trashiyangtse | 251 | 181 | 432 | 2,439 | 2,155 | 4,594 |
| Trongsa | .. | .. | .. | 1,632 | 1,636 | 3,268 |
| Tsirang | 341 | 247 | 588 | 1,917 | 1,686 | 3,603 |
| Wangdue Phodrang | 313 | 250 | 563 | 3,301 | 3,417 | 6,718 |
| Zhemgang | 471 | 249 | 720 | 2,622 | 2,115 | 4,737 |
| Bhutan | 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

| | Private | | | Communitry Pry. | | | Lower Secondar | | |
|---|---|---|---|---|---|---|---|---|---|
| | Boy | Girl | Total | Boy | Girl | Total | Boy | Girl | T |
| Nursery | 281 | 245 | 526 | .. | .. | .. | .. | .. | |
| Pre primary | 315 | 264 | 579 | 2,645 | 2,487 | 5,132 | 2,696 | 2,608 | 5,3 |
| I | 185 | 188 | 373 | 2,435 | 2,294 | 4,729 | 2,655 | 2,582 | 5,2 |
| II | 150 | 118 | 268 | 2,465 | 2,122 | 4,587 | 2,608 | 2,569 | 5,1 |
| III | 76 | 93 | 169 | 1,822 | 1,650 | 3,472 | 2,558 | 2,398 | 4,9 |
| IV | 62 | 69 | 131 | 1,519 | 1,358 | 2,877 | 2,806 | 2,667 | 5,4 |
| V | 57 | 61 | 118 | 1,181 | 1,027 | 2,208 | 2,475 | 2,459 | 4,9 |
| VI | 37 | 41 | 78 | 811 | 717 | 1,528 | 2,398 | 2,433 | 4,8 |
| VII | .. | .. | .. | .. | .. | .. | 3,659 | 3,473 | 7,1 |
| VIII | .. | .. | .. | .. | .. | .. | 2,598 | 2,447 | 5,0 |
| 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 |

Cont



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, BHUTAN, 2001 TO 2004

| Grade | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|
| Primary grade | 88,382 | 90,944 | 93,841 | 97,323 |
| 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 | 4,477 | 5,804 | 6,691 |
| XI | 1,631 | 2,794 | 2,991 | 3,610 |
| XII | 1,088 | 1,683 | 2,813 | 3,081 |
| Bhutan | 116,737 | 122,832 | 128,389 | 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.*

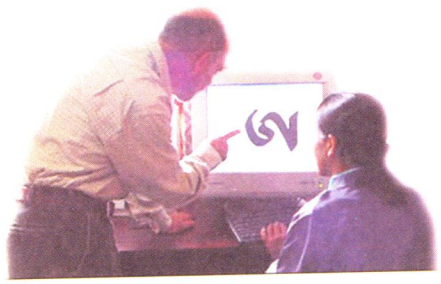


TABLE 3.10
NUMBER OF STUDENTS ENROLED,PROMOTEES,REPEATERS AND DROPOUTS BY GRADE, BHUTAN, 2004

| Dropouts | Details | Enrolment | Promotees | Repeaters |
|---|---|---|---|---|
| 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.*

## CHAPTER 4 : HUMAN RESOURCES



The economy of Bhutan is characterized by t predominance of people engaged in self- employme particularly those working on their own land. There also a good deal of small cottage industry often undertaken the home. The number of person working for wages relatively small. Statistics on human resources are design to measure the involvement of people in economic activiti Economic activities refer to the production of economic goo and services and include people who are self-employed (e farmers operating their own land) as well as persons who work for wages (i.e. employees). Broadly statistical system for human resources should cover topics such as size and characteristics of the lab force, employment, wage rate and conditions of work. Labour statistics usually presented in t chapter are from sample surveys and the national Labour Force Surveys. The National Statisti Bureau conducted the two consecutive Labor Force Surveys in 1998 and 2000. The Department Employment and Labour conducted the third round of Labor Force Survey in 2001 since its creation 2000. The fourth and fifth Labour Force Surveys were conducted by Department of Employment 2003 and 2004.

Although share of primary sector in GDP is gradually decreasing, agriculture is still the predomina sector providing employment to around 63% of the labour force. Labour force is marred by h dependency ratio.

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

As observed from the National Labour Force Survey 2004 that among the economically active labo force of 2,16,506, the urban area constituted about 23% with 98% employed. However, t unemployment rate is found comparatively higher in the urban area as increasing number of sch leavers continue to look for job opportunities. Unemployment rate in 2004 was estimated to around 2 %. 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, 2000 TO JUNE 2004

| Ministry/Agency | 2000 | 2001 | 2002* | 2003** | 2004 |
|---|---|---|---|---|---|
| All Ministries | 12,245 | 13,119 | 12,906 | 14,224 | 14,590 |
| Ministry of Agriculture | 2,457 | 2,399 | 2,445 | 2,493 | 2,264 |
| Ministry of Communications^ | 1,286 | 1,278 | 1,267 | .. | .. |
| Ministry of Education | .. | .. | .. | 5,112 | 5,267 |
| Ministry of Finance | 602 | 636 | 624 | 664 | 644 |
| Ministry of Foreign Affairs | 122 | 112 | 109 | 121 | 125 |
| Ministry of Information & communications | .. | .. | .. | 287 | 312 |
| Ministry of Health | .. | .. | .. | 1,954 | 1,981 |
| Ministry of Home & Cultural affairs | 1,143 | 1,382 | 1,498 | 1,764 | 2,095 |
| Home & Cultural Affairs | 349 | 458 | 499 | 614 | 401 |
| Dzongkhags | 794 | 924 | 999 | 1,150 | 1,694 |
| Ministry of Labour & Human Resources | .. | .. | .. | 221 | 190 |
| Ministry of Trade & Industry | 1,131 | 1,177 | 527 | 468 | 489 |
| Ministry of Works & Human Settlement | .. | .. | .. | 1,140 | 1,223 |
| Other Non-ministerial Organizations | 1,098 | 1,365 | 1,359 | 826 | 1,025 |
| His Majesty's Secreteriat | 48 | 37 | 33 | 33 | 32 |
| Dratshang Lhentshog | .. | 26 | 26 | 28 | 28 |
| National Assembly | 17 | 20 | 23 | 22 | 23 |
| Royal Advisory Council | .. | .. | 15 | 15 | 13 |
| Cabinet Secretariat | 9 | 9 | 9 | 7 | 9 |
| Royal Civil Service Commission | 48 | 45 | 44 | 39 | 46 |
| Royal Court of Justice | .. | .. | .. | 296 | 290 |
| Centre for Bhutan Studies | 8 | 8 | 10 | 11 | 14 |
| Bhutan Olympic Committ | 21 | 19 | 8 | 9 | 9 |
| Office of the Legal Affairs | .. | .. | 12 | 13 | 17 |
| National Environment Commission | 33 | 37 | 37 | 37 | 39 |
| Royal Institute of Management | 111 | 109 | 89 | 71 | 69 |
| Royal Audit Authority | 134 | 143 | 139 | 141 | 150 |
| Royal University of Bhutan | .. | .. | .. | 5 | 197 |

Contd.....

TABLE 4.1(Contd....)
EMPLOYMENT IN CIVIL SERVICE, BHUTAN, 2000 TO JUNE 2004

| Agency | 2000 | 2001 | 2002* | 2003** | Minist 2004 |
|---|---|---|---|---|---|
| National Pension and Provident Fund Bureau | .. | 1 | 1 | 1 | .. |
| Planning Commission Secretariat | 45 | 56 | 54 | .. | .. |
| Royal Advisory Council | 16 | 15 | .. | .. | .. |
| National Commission for Cultural Affairs | 128 | 104 | 108 | .. | .. |
| Other Non-ministerial Organizations | 1,098 | 1,365 | 1,359 | 826 | 1,025 |
| National Women's Association of Bhutan | .. | .. | .. | .. | .. |
| National Technical Training Authority | 161 | 178 | 191 | .. | .. |
| Judiciary | 272 | 286 | 276 | .. | .. |
| Dzongkhag Development Commission | 23 | 24 | 23 | .. | .. |
| Royal Monetary Authority | .. | 2 | .. | .. | .. |
| Department of Legal Affairs | 11 | 13 | .. | .. | .. |
| National Employment Board | 13 | 17 | 22 | .. | .. |
| National Statistical Bureau | .. | .. | .. | .. | 3 |
| Corporations | .. | .. | .. | 38 | 4 |
| Financial Institutes (Corporations) | .. | .. | .. | 3 | 3 |
| Defence | .. | .. | .. | 23 | 25 |
| Others | .. | 216 | 239 | 34 | 2 |
| All Civil Servants | 13,343 | 14,484 | 14,265 | 15,050 | 15,64 |
| Seconded to Intl., Corporations, Private Organizations | .. | .. | .. | 46 | 6 |
| GSC & ESP Personnel(Number of Approved Posts) | | | | | |
| Corporations/Agencies outside the civil service | .. | .. | .. | 2,151 | |

Note:
^Since 2003, bifuracted into MoW&HS and MoIC.
*Till September 2002
**Till September 2003
*Source: Royal Civil Service Commission, Thimphu.*



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

| Age group | Economically 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, MoL&HR, Thimphu.*

TABLE 4.1(Contd....)
EMPLOYMENT IN CIVIL SERVICE, BHUTAN, 2000 TO JUNE 2004

| Agency | 2000 | 2001 | 2002* | 2003** | Minist 2004 |
|---|---|---|---|---|---|
| National Pension and Provident Fund Bureau | .. | 1 | 1 | 1 | .. |
| Planning Commission Secretariat | 45 | 56 | 54 | .. | .. |
| Royal Advisory Council | 16 | 15 | .. | .. | .. |
| National Commission for Cultural Affairs | 128 | 104 | 108 | .. | .. |
| Other Non-ministerial Organizations | 1,098 | 1,365 | 1,359 | 826 | 1,025 |
| National Women's Association of Bhutan | .. | .. | .. | .. | .. |
| National Technical Training Authority | 161 | 178 | 191 | .. | .. |
| Judiciary | 272 | 286 | 276 | .. | .. |
| Dzongkhag Development Commission | 23 | 24 | 23 | .. | .. |
| Royal Monetary Authority | .. | 2 | .. | .. | .. |
| Department of Legal Affairs | 11 | 13 | .. | .. | .. |
| National Employment Board | 13 | 17 | 22 | .. | .. |
| National Statistical Bureau | .. | .. | .. | .. | 34 |
| Corporations | .. | .. | .. | 38 | 41 |
| Financial Institutes (Corporations) | .. | .. | .. | 3 | 3 |
| Defence | .. | .. | .. | 23 | 25 |
| Others | .. | 216 | 239 | 34 | 20 |
| All Civil Servants | 13,343 | 14,484 | 14,265 | 15,050 | 15,649 |
| Seconded to Intl., Corporations, Private Organizations | .. | .. | .. | 46 | 64 |
| GSC & ESP Personnel(Number of Approved Posts) | | | | | |
| Corporations/Agencies outside the civil service | .. | .. | .. | 2,151 | .. |

Note:
^Since 2003, bifuracted into MoW&HS and MoIC.
*Till September 2002
**Till September 2003
*Source: Royal Civil Service Commission, Thimphu.*



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

| Age group | Economically 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, MoL&HR, Thimphu.*

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

| Age group | Economicallly active population | | | | |
|---|---|---|---|---|---|
| | Total | Study | Family responsibilty | Not available/ Old age | Disabled |
| Total | 180,600 | 71,900 | 73,700 | 27,700 | 7,300 |
| 15-19 | 52,000 | 47,000 | 4,600 | 200 | 200 |
| 20-24 | 24,700 | 15,700 | 8,700 | 0 | 300 |
| 25-29 | 13,300 | 3,100 | 9,800 | 0 | 400 |
| 30-34 | 8,700 | 700 | 7,700 | 0 | 300 |
| 35-39 | 10,400 | 1,200 | 8,700 | 0 | 500 |
| 40-44 | 7,300 | 400 | 6,400 | 0 | 500 |
| 45-49 | 9,300 | 300 | 7,900 | 500 | 600 |
| 50-54 | 8,500 | 400 | 6,600 | 1,200 | 300 |
| 55-59 | 7,800 | 300 | 5,300 | 1,500 | 700 |
| 60-64 | 10,000 | 600 | 3,800 | 4,700 | 900 |
| 65+ | 28,600 | 2,200 | 4,200 | 19,600 | 2,600 |

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



BLE 4.4
OTAL EMPLOYED PERSONS BY EMPLOYMENT STATUS AND ECONOMIC ACTIVITY, BHUTAN,
04

| in economic activity | Total | EMPLOYMENT STATUS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Employer/ Owner Manager | Regular paid employee | Casual paid employe | Paidworker by piece rate | Paid non-family apprentice | Unpaid family worker | Own account worker in non-agriculture | Owner cultivator | Share cropper |
| riculture and forestry | 132800 | 0.0 | 2.0 | 3.0 | 0.6 | 0.6 | 47.1 | 0.0 | 46.1 | 0.6 |
| ining & quarrying | 100 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| anufacturing | 12600 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| lectricity, gas & ater supply | 1000 | 0.0 | 90.0 | 10.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| onstruction | 6900 | 1.4 | 42.0 | 26.1 | 13.0 | 1.4 | 11.6 | 4.3 | 0.0 | 0.0 |
| Wholesale & retail trade, epairof motor vehicles, notorcycles & personal & household goods | 4800 | 0.0 | 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 interm ediation | 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, MoL&HR, Thimphu.*

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

| Main economic activity | Total | TOTAL HOURS WORKED PER WEEK | | | | | |
|---|---|---|---|---|---|---|---|
| | | <30 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 |
| Agriculture & forestry | 100 | 9.4 | 5.3 | 21.0 | 29.6 | 19.2 | 13.7 |
| Mining & quarrying | 100 | 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 |
| Electricity,gas & water supply | 100 | 8.3 | 16.7 | 33.3 | 16.7 | 8.3 | 8.3 |
| Construction | 100 | 4.4 | 4.4 | 26.5 | 20.6 | 14.7 | 22.1 |
| 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 |
| Hotels & restuarents | 100 | 6.3 | 0.0 | 12.5 | 6.3 | 18.8 | 25.0 |
| Transport, storage & communications | 100 | 3.6 | 10.7 | 35.7 | 17.9 | 10.7 | 14.3 |
| Financial intermediation | 100 | 4.0 | 8.0 | 32.0 | 40.0 | 8.0 | 4.0 |
| Real estate, renting & business activities | 100 | 8.1 | 5.1 | 13.1 | 21.2 | 11.1 | 25.3 |
| Public administration & defence | 100 | 11.8 | 12.7 | 31.4 | 17.6 | 10.8 | 6.9 |
| Education | 100 | 7.7 | 7.7 | 46.2 | 20.5 | 5.1 | 10.3 |
| Health & Social work | 100 | 3.8 | 15.4 | 38.5 | 23.1 | 15.4 | 0.0 |
| Other community, social work & personal service | 100 | 9.1 | 9.1 | 46.9 | 14.0 | 6.3 | 10.5 |
| Private households with employed persons | 100 | 0.0 | 0.0 | 33.3 | 16.7 | 16.7 | 16.7 |
| Not elsewhere classified | 100 | 14.8 | 7.4 | 33.3 | 11.1 | 14.8 | 11.1 |
| Total | 100.0 | 9.4 | 6.2 | 23.9 | 25.6 | 16.2 | 13.9 |

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



TABLE 4.6
PERCENT OF UNEMPLOYED BY AGE AND AREA OF RESIDENCE, BHUTAN, 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, Thimphu.*

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

| Level of education | Total | Area | |
|---|---|---|---|
| | | Urban | Rural |
| Both Sexes | 5,700 | 1,400 | 4,300 |
| No education | 3,300 | 500 | 2,800 |
| 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 | 2,700 | 600 | 2,100 |
| No education | 1,700 | 100 | 1,600 |
| 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 | 3,000 | 800 | 2,200 |
| No education | 1,600 | 400 | 1,200 |
| 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 |

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

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 is to conserve the environment, enhance the rural income and attain self reliance in cereals and essential oil crops. In 2003, Agriculture contributed 26.2% 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.

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

| Land-use and vegetation type | 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 pasture | 3.9 |
| Improved pasture | 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 plantation | 0.1 |
| Cardamom plantation | 0.1 |
| Arecanut plantation | 0.0 |
| Ginger plantation | 0.0 |
| Settlement | 0.1 |
| Others | 15.7 |
| Snow/glacier | 7.5 |
| Rock outcrop | 5.0 |
| Water spread | 0.8 |
| Marshy area | 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: Policy & Planning Division, MoA, Thimphu.*



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

| 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 |
| Chukha | 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 |
| Monggar | 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 |
| Pema Gatshel | 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 |
| Trashiyangtse | 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: Policy & Planning Division, MoA, Thimphu.*

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

| Dzongkhag | Altitude at Dzongkhag centre (metre) | Altitude zone (metre) | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | 0-600 | 600-1200 | 1200-1800 | 1800-2400 | 2400-3000 | 3000-3600 | 0-3600 |
| Bumthang | 2,690 | 0.0 | 0.0 | 0.0 | 0.4 | 10.6 | 26.2 | 37 |
| Chukha | 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 |
| Monggar | 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 |
| Pema Gatshel | 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 |
| Trashiyangtse | 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 |

Contd...



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

| Dzongkhag | Altitude zones (meters) | | | | | | | Total area(%) |
|---|---|---|---|---|---|---|---|---|
| | 0-3600 | 3600-4200 | 4200-4800 | 4800-5400 | 5400-6000 | 6000-6600 | > 6600 | |
| Bumthang | 37.2 | 25.7 | 18.4 | 16.3 | 2.2 | 0.2 | 0.0 | 100 |
| Chukha | 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 |
| Monggar | 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 |
| Pema Gatshel | 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 |
| Trashiyangtse | 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: Policy & Planning Division, MoA, Thimphu.*

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

| Dzongkhag | Area | Altitude zone (metre) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 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 |
| Chukha | 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 |
| Monggar | 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 |
| Pema Gatshel | 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 |
| Trashiyangtse | 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 |

Contd..



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 |
| Chukha | 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 |
| Monggar | 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 |
| Pema Gatshel | 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 |
| Trashiyangtse | 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: Policy & Planning Division, MoA, Thimphu.*

TABLE 5.5
AVERAGE TEMPERATURE BY DZONGKHAG, BHUTAN, 1985 TO 2003

(Degree Celsius)

| Dzongkhag | Tempe- | Month | | | | | | | | | | | | Av |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | rature | Jan | Feb | Mar | Apri | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | |
| Bumthang | Max | 11 | 12 | 15 | 18 | 20 | 22 | 22 | 22 | 21 | 18 | 15 | 13 | 1 |
| | Min | -2 | 0 | 2 | 5 | 9 | 13 | 14 | 14 | 12 | 7 | 2 | -2 | |
| | Ave | 5 | 6 | 9 | 12 | 14 | 17 | 18 | 18 | 17 | 13 | 9 | 6 | 1 |
| Chukha | Max | 14 | 14 | 17 | 20 | 22 | 24 | 23 | 23 | 23 | 21 | 19 | 15 | 2 |
| | Min | 6 | 7 | 9 | 12 | 14 | 16 | 15 | 15 | 14 | 12 | 9 | 7 | 1 |
| | Ave | 10 | 11 | 13 | 16 | 18 | 20 | 19 | 19 | 19 | 17 | 14 | 11 | 1 |
| Dagana | Max | 12 | 13 | 16 | 20 | 22 | 24 | 24 | 23 | 23 | 21 | 17 | 14 | 1 |
| | Min | 7 | 7 | 10 | 13 | 15 | 16 | 17 | 17 | 17 | 15 | 11 | 9 | 1 |
| | Ave | 9 | 10 | 13 | 16 | 18 | 20 | 21 | 20 | 20 | 18 | 14 | 11 | 1 |
| Gasa | Max | 10 | 9 | 13 | 15 | 18 | 20 | 20 | 21 | 20 | 18 | 14 | 13 | 1 |
| | Min | -1 | 0 | 3 | 6 | 8 | 11 | 12 | 12 | 11 | 8 | 16 | -1 | |
| | Ave | 4 | 5 | 8 | 10 | 13 | 15 | 16 | 17 | 16 | 13 | 4 | 6 | 1 |
| Haa | Max | 10 | 11 | 12 | 15 | 18 | 19 | 20 | 20 | 18 | 16 | 14 | 12 | 1 |
| | Min | -4 | -2 | 1 | 4 | 9 | 13 | 14 | 14 | 12 | 6 | 0 | -3 | |
| | Ave | 3 | 4 | 7 | 10 | 13 | 16 | 17 | 17 | 15 | 11 | 7 | 4 | 1 |
| Lhuntse | Max | 15 | 17 | 21 | 23 | 26 | 27 | 28 | 28 | 27 | 25 | 21 | 17 | 2 |
| | Min | 5 | 6 | 9 | 10 | 13 | 16 | 17 | 17 | 16 | 11 | 7 | 5 | 1 |
| | Ave | 10 | 11 | 15 | 17 | 19 | 21 | 22 | 22 | 22 | 18 | 14 | 11 | 1 |
| Monggar | Max | 16 | 18 | 21 | 24 | 26 | 27 | 27 | 27 | 26 | 24 | 21 | 17 | 2 |
| | Min | 6 | 8 | 11 | 14 | 16 | 19 | 19 | 19 | 18 | 14 | 11 | 8 | 1 |
| | Ave | 11 | 13 | 16 | 19 | 21 | 23 | 23 | 23 | 22 | 19 | 16 | 13 | 1 |
| Punakha | Max | 18 | 19 | 21 | 26 | 27 | 29 | 29 | 29 | 28 | 26 | 22 | 19 | 2 |
| | Min | 5 | 8 | 11 | 13 | 17 | 19 | 20 | 20 | 19 | 18 | 11 | 7 | 1 |
| | Ave | 11 | 14 | 16 | 20 | 22 | 24 | 24 | 24 | 24 | 22 | 16 | 13 | 1 |
| Paro | Max | 12 | 14 | 17 | 20 | 23 | 24 | 25 | 25 | 23 | 20 | 15 | 12 | 1 |
| | Min | 1 | 3 | 6 | 9 | 12 | 14 | 17 | 16 | 14 | 10 | 5 | 2 | |
| | Ave | 7 | 9 | 11 | 15 | 18 | 19 | 21 | 20 | 18 | 15 | 10 | 7 | 1 |
| Pema Gatshel | Max | 16 | 17 | 20 | 22 | 24 | 25 | 26 | 25 | 25 | 23 | 21 | 18 | 2 |
| | Min | 6 | 7 | 10 | 12 | 14 | 16 | 17 | 17 | 16 | 13 | 10 | 7 | 1 |
| | Ave | 11 | 12 | 15 | 17 | 19 | 21 | 22 | 21 | 20 | 18 | 15 | 12 | 1 |
| Samdrup Jongkhar | Max | 23 | 24 | 27 | 29 | 30 | 30 | 31 | 31 | 30 | 28 | 27 | 24 | 2 |
| | Min | 14 | 16 | 18 | 20 | 22 | 24 | 25 | 24 | 24 | 21 | 18 | 15 | 2 |
| | Ave | 18 | 20 | 22 | 24 | 26 | 27 | 28 | 28 | 27 | 25 | 23 | 20 | 2 |

Contd...



TABLE 5.5(contd.)
AVERAGE TEMPERATURE BY DZONGKHAG, BHUTAN, 1985 TO 2003

(Degree Celsius)

| Dzongkhag | Tempe- | Month | | | | | | | | | | | | Ave |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | rature | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | |
| Samtse | Max | 21 | 23 | 26 | 29 | 29 | 29 | 28 | 29 | 28 | 27 | 26 | 23 | 26 |
| | Min | 14 | 16 | 19 | 21 | 22 | 24 | 23 | 24 | 23 | 21 | 18 | 15 | 20 |
| | Ave | 17 | 19 | 22 | 25 | 25 | 27 | 26 | 26 | 25 | 24 | 22 | 19 | 23 |
| Sarpang | Max | 23 | 23 | 26 | 29 | 30 | 30 | 30 | 30 | 30 | 29 | 27 | 24 | 28 |
| | Min | 12 | 14 | 17 | 20 | 21 | 23 | 24 | 24 | 23 | 21 | 17 | 14 | 19 |
| | Ave | 18 | 18 | 22 | 24 | 25 | 26 | 27 | 27 | 26 | 25 | 22 | 19 | 23 |
| Thimphu | Max | 14 | 15 | 18 | 21 | 23 | 25 | 25 | 25 | 24 | 22 | 19 | 16 | 20 |
| | Min | -3 | 0 | 3 | 7 | 11 | 15 | 16 | 16 | 14 | 9 | 3 | -2 | 7 |
| | Ave | 6 | 7 | 10 | 14 | 17 | 20 | 21 | 20 | 19 | 15 | 11 | 7 | 14 |
| Trashigang | Max | 16 | 19 | 23 | 25 | 26 | 28 | 28 | 27 | 27 | 25 | 23 | 19 | 24 |
| | Min | 5 | 7 | 11 | 13 | 16 | 18 | 19 | 18 | 17 | 14 | 10 | 7 | 13 |
| | Ave | 10 | 13 | 17 | 19 | 21 | 23 | 23 | 23 | 22 | 20 | 17 | 13 | 18 |
| Tashiyangtse | Max | 14 | 15 | 17 | 20 | 22 | 24 | 25 | 25 | 24 | 21 | 18 | 15 | 20 |
| | Min | 4 | 5 | 8 | 11 | 14 | 17 | 19 | 18 | 17 | 13 | 8 | 5 | 12 |
| | Ave | 9 | 10 | 13 | 16 | 18 | 21 | 22 | 21 | 20 | 17 | 13 | 10 | 16 |
| Trongsa | Max | 15 | 16 | 19 | 21 | 22 | 24 | 26 | 25 | 23 | 21 | 18 | 16 | 21 |
| | Min | 3 | 4 | 7 | 10 | 12 | 15 | 16 | 16 | 15 | 11 | 7 | 4 | 10 |
| | Ave | 9 | 10 | 13 | 16 | 17 | 19 | 21 | 20 | 19 | 16 | 13 | 10 | 15 |
| Tsirang | Max | 16 | 18 | 20 | 23 | 24 | 26 | 27 | 27 | 25 | 23 | 20 | 18 | 22 |
| | Min | 9 | 10 | 13 | 16 | 18 | 20 | 21 | 20 | 19 | 16 | 13 | 10 | 15 |
| | Ave | 12 | 14 | 17 | 20 | 21 | 23 | 24 | 23 | 22 | 19 | 17 | 14 | 19 |
| W/Phodrang | Max | 17 | 19 | 22 | 25 | 27 | 29 | 28 | 28 | 27 | 26 | 22 | 19 | 24 |
| | Min | 5 | 8 | 11 | 14 | 17 | 20 | 20 | 20 | 19 | 15 | 10 | 6 | 14 |
| | Ave | 11 | 13 | 16 | 19 | 22 | 24 | 24 | 24 | 23 | 20 | 16 | 12 | 19 |
| Zhemgang | Max | 20 | 22 | 25 | 26 | 30 | 30 | 29 | 29 | 29 | 27 | 25 | 23 | 26 |
| | Min | 8 | 9 | 12 | 14 | 18 | 22 | 22 | 22 | 20 | 16 | 12 | 8 | 15 |
| | Ave | 14 | 16 | 19 | 20 | 24 | 26 | 25 | 25 | 25 | 22 | 18 | 15 | 21 |

Source: Council for Renewal Natural Resources Recearch of Bhutan, MoA, Thimhu.

TABLE 5.6
TOTAL MONTHLY RAINFALL AT EXISTING STATIONS IN EACH DZONGKHAG, BHUTAN, 20

(Millimete

| Dzongkhag and station | Month | | | | | | | | | | | | Tota |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | |
| Bumthang | | | | | | | | | | | | | |
| Chamkhar | 0.0 | 22.0 | 16.1 | 62.4 | 42.0 | 121.1 | 100.5 | 38.1 | 179.0 | 9.1 | 0.0 | 7.2 | 597. |
| Gyetsa | 5.4 | 17.7 | 23.9 | 66.5 | 45.2 | 145.5 | 187.7 | 84.4 | 149.0 | 83.1 | 0.0 | 17.1 | 825. |
| Chukha | | | | | | | | | | | | | |
| Chukha | 30.9 | 73.8 | 63.8 | 148.6 | 81.3 | 189.8 | 419.6 | 198.4 | 146.2 | 242.7 | 1.0 | 27.8 | 1.62 |
| Gedu | 30.4 | 136.2 | 168.0 | 62.4 | 46.5 | 58.9 | 116.0 | 332.4 | 288.4 | 321.8 | 2.0 | 3.7 | 1.62 |
| Phuntsholing | 14.5 | 70.6 | 340.6 | 294.4 | 305.9 | 1.031.2 | 915.5 | 675.2 | 617.2 | 292.7 | 30.7 | 44.7 | 4.63 |
| Tala | 12.2 | 101.0 | 126.6 | 84.8 | 311.6 | 367.8 | 1.013.0 | 375.2 | 255.0 | 178.4 | 3.0 | 27.0 | 2.85 |
| Dagana | | | | | | | | | | | | | |
| Daga Dzong | 16.6 | 81.6 | 64.0 | 83.8 | 139.0 | 364.1 | 485.9 | 411.6 | 502.1 | 153.7 | 0.0 | 15.0 | 2.31 |
| Drujeygang | 12.0 | 21.0 | 61.7 | 74.7 | 37.3 | 237.9 | 581.6 | 209.7 | 108.7 | 134.4 | 0.0 | 20.7 | 1.49 |
| Tashithang | 21.0 | 43.0 | 81.0 | 10.0 | 42.0 | 199.0 | 454.0 | 170.9 | 104.0 | 162.0 | 0.0 | 23.0 | 1.30 |
| Haa | | | | | | | | | | | | | |
| Namjeyling | 23.8 | 51.7 | 5.5 | 41.0 | 53.2 | 164.8 | 187.1 | 114.7 | 185.4 | 115.7 | 0.0 | 16.5 | 95 |
| Lhuntse | | | | | | | | | | | | | |
| Khomachu | 6.6 | 22.1 | 37.4 | 143.7 | 111.7 | 107.0 | 121.2 | 27.2 | 98.9 | 55.6 | 1.4 | 13.4 | 74 |
| Autsho | 7.4 | 23.2 | 55.6 | 92.2 | 82.8 | 179.3 | 121.6 | 98.6 | 179.4 | 92.6 | 0.4 | 17.4 | 95 |
| Dungkhar | 19.1 | 29.9 | 28.1 | 109.9 | 85.6 | 156.8 | 246.7 | 164.4 | 209.8 | 57.4 | 2.2 | 17.0 | 1.12 |
| Tangmachu | 12.3 | 30.9 | 39.7 | 101.9 | 44.5 | 144.0 | 126.0 | 86.7 | 148.4 | 64.7 | 14.1 | 22.8 | 83 |
| MonGgar | | | | | | | | | | | | | |
| Mongar | 6.6 | 9.4 | 67.4 | 94.6 | 52.2 | 111.0 | 206.4 | 94.6 | 84.4 | 64.0 | 6.4 | 20.0 | 87 |
| Lingmethang | 7.0 | 11.0 | 58.4 | 89.3 | 60.0 | 173.6 | 159.4 | 63.8 | 105.0 | 102.4 | 1.4 | 22.6 | 85 |
| Yadi | 6.6 | 21.5 | 55.9 | 85.3 | 76.9 | 197.3 | 300.1 | 96.5 | 109.9 | 121.8 | 2.4 | 14.3 | 1.08 |
| Paro | | | | | | | | | | | | | |
| Paro (DSC) | 12.0 | 52.1 | 2.0 | 20.2 | 58.0 | 111.8 | 147.1 | 76.0 | 104.4 | 80.5 | 0.0 | 0.0 | 65 |
| Drugyal Dzong | 0.0 | 15.0 | 4.8 | 30.0 | 35.3 | 178.7 | 209.5 | 94.0 | 196.0 | 141.0 | 0.0 | 0.0 | 90 |
| Pema Gatshel | | | | | | | | | | | | | |
| Pema Gatshel | 10.4 | 65.6 | 165.4 | 274.0 | 79.4 | 331.0 | 616.4 | 208.5 | 112.6 | 306.0 | 0.0 | 0.0 | 2.16 |
| Dungmain | 26.0 | 122.0 | 162.5 | 246.0 | 195.2 | 899.3 | 120.3 | 137.2 | 58.7 | 62.4 | 0.0 | 18.0 | 2.06 |
| Yurung | .. | .. | .. | 190.5 | 114.9 | 326.0 | 587.0 | 70.0 | 81.9 | 28.8 | 0.0 | 12.1 | 1.45 |
| Punakha | | | | | | | | | | | | | |
| Punakha | 16.2 | 27.2 | 0.0 | 69.0 | 105.0 | 241.7 | 173.2 | 89.6 | 141.3 | 102.3 | 18.1 | 17.8 | 1.00 |
| Shelgana | 7.0 | 34.0 | 9.0 | 72.0 | 109.0 | 261.5 | 297.3 | 130.0 | 146.9 | 87.0 | 6.0 | 14.0 | 1.11 |
| Samdrup Jongkhar | | | | | | | | | | | | | |
| Airong | 7.4 | 89.8 | 106.0 | 359.4 | 241.4 | 985.6 | 1.117.2 | 338.4 | 608.4 | 245.0 | 4.2 | 73.2 | 4.17 |
| Decheling | 7.2 | 10.0 | 188.0 | 219.0 | 214.0 | 855.0 | 864.0 | 232.0 | 248.0 | 172.0 | 38.0 | 36.4 | 3.06 |
| Deothang | 6.4 | 100.4 | 116.0 | 376.5 | 324.6 | 1102.5 | 764.9 | 210.6 | 484.3 | 254.0 | 4.6 | 17.2 | 3.70 |

Con



TABLE 5.6 (contd.)
TOTAL MONTHLY RAINFALL AT EXISTING STATIONS IN EACH DZONGKHAG, BHUTAN, 2003

(Millimeters)

| Dzongkhag and station | Month | | | | | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | |
| Samtse | | | | | | | | | | | | | |
| Dorokha | 15.3 | 111.0 | 119.7 | 318.8 | 300.8 | 400.6 | 753.7 | 322.5 | 178.8 | 278.6 | 12.2 | 42.6 | 2.854.6 |
| NIE | 11.4 | 70.8 | 152.6 | 315.6 | 443.0 | 505.0 | 1.302.4 | 485.8 | 751.4 | 389.4 | 40.8 | 35.6 | 4.503.8 |
| Sipsu | 19.6 | 171.6 | 241.6 | 370.5 | 481.2 | 1097.4 | 913.4 | 913.4 | 628.5 | 360.8 | 41.6 | 49.2 | 5.288.8 |
| Thimphu | | | | | | | | | | | | | |
| Gidakom | 15.6 | 24.0 | 0.0 | 17.6 | 23.0 | 105.5 | 117.2 | 79.8 | 82.6 | 90.2 | 0.0 | 6.4 | 561.9 |
| Kawang Jangsa | 13.1 | 22.5 | 7.8 | 37.6 | 31.4 | 175.6 | 181.0 | 154.7 | 111.2 | 96.7 | 0.0 | 14.6 | 846.2 |
| Simtokha | 27.1 | 31.3 | 9.1 | 27.5 | 22.1 | 159.4 | 168.1 | 162.3 | 74.9 | 92.9 | 0.0 | 6.5 | 781.2 |
| Sarpang | | | | | | | | | | | | | |
| Sarpang | 1.4 | 48.2 | 92.0 | 195.4 | 219.9 | 712.6 | 1.405.4 | 807.5 | 624.5 | 462.3 | 10.4 | 27.3 | 4.606.8 |
| Bhur | 10.2 | 58.2 | 87.0 | 257.3 | 237.0 | 1.041.2 | 1.127.0 | 989.0 | 998.0 | 589.8 | 7.8 | 17.5 | 5.420.0 |
| Surey | 10.6 | 51.0 | 164.2 | 174.6 | 403.6 | 637.4 | 1.059.0 | 622.8 | 434.8 | 231.8 | 13.6 | 17.2 | 3.820.6 |
| Trashigang | | | | | | | | | | | | | |
| Chazam | 8.6 | 25.4 | 42.4 | 95.1 | 86.8 | 192.2 | 160.0 | 104.6 | 31.5 | 93.4 | 0.0 | 8.0 | 848.0 |
| Kanglung | 7.0 | 33.6 | 71.2 | 134.4 | 68.1 | 293.8 | 221.0 | 103.7 | 43.3 | 125.8 | 0.6 | 15.8 | 1.118.3 |
| Khaling | 14.0 | 55.0 | 63.0 | 202.0 | 99.0 | 303.0 | 249.0 | 107.8 | 161.7 | 46.1 | 0.0 | 25.0 | 1.325.6 |
| Radhi | 6.0 | 27.6 | 51.4 | 145.8 | 86.2 | 299.3 | 214.5 | 152.6 | 174.1 | 100.1 | 3.0 | 3.0 | 1.263.6 |
| hrimshing | 2.8 | 48.0 | 65.0 | 203.4 | 106.1 | 269.3 | 539.2 | 231.9 | 92.8 | 147.3 | 3.6 | 7.6 | 1.717.0 |
| Wamrong | 4.0 | 14.6 | 92.4 | 193.6 | 86.3 | 341.7 | 663.7 | 273.3 | 164.4 | 207.2 | 10.4 | 19.6 | 2.071.2 |
| Tashiyangtse | | | | | | | | | | | | | |
| Tashiyangtse | 6.5 | 12.3 | 75.8 | 122.4 | 81.0 | 309.7 | 122.4 | 108.8 | 71.2 | 94.0 | 20.0 | 11.5 | 1.035.6 |
| Yallang | 10.0 | 29.5 | 38.0 | 348.8 | 65.0 | 185.4 | 231.4 | 170.4 | 84.2 | 89.0 | 3.2 | 12.0 | 1.266.9 |
| Trongsa | | | | | | | | | | | | | |
| Trongsa | 0.0 | 0.0 | 0.0 | 7.0 | 91.9 | 235.5 | 275.7 | 67.4 | 159.0 | 84.7 | 22.5 | 14.2 | 957.9 |
| Bjizam | 9.2 | 72.1 | 29.2 | 100.5 | 96.9 | 167.2 | 220.4 | 62.3 | 170.4 | 79.2 | 12.0 | 17.1 | 1.036.5 |
| Chendebji | 6.0 | 0.0 | 41.4 | 231.5 | 120.1 | 352.6 | 196.2 | 151.9 | 254.2 | 65.3 | 0.0 | 0.0 | 1.419.2 |
| Kuengarabten | 15.5 | 3.0 | 15.9 | 69.2 | 161.2 | 194.5 | 228.0 | 261.0 | 313.5 | 51.0 | 4.0 | 4.0 | 1.320.8 |
| Langthel | 0.0 | 11.0 | 0.0 | 8.0 | 86.3 | 33.3 | 186.2 | 87.7 | 104.3 | 124.2 | 0.0 | 22.0 | 663.0 |
| Tsirang | | | | | | | | | | | | | |
| Damphu | 13.0 | 24.4 | 92.6 | 70.6 | 79.9 | 428.0 | 433.9 | 188.3 | 163.5 | 221.5 | 5.0 | 19.2 | 1.739.9 |
| Sunkosh Dobani | 10.4 | 21.5 | 39.4 | 78.0 | 81.2 | 223.0 | 422.9 | 141.6 | 103.7 | 188.1 | 0.0 | 0.0 | 1,309.8 |
| W/Phodrang | | | | | | | | | | | | | |
| Wangdue CARD | 5.0 | 33.5 | 13.6 | 52.8 | 18.2 | 167.5 | 199.5 | 82.1 | 112.5 | 76.3 | 3.4 | 0.0 | 764.4 |
| Basochhu | 18.8 | 34.3 | 110.9 | 30.3 | 13.9 | 212.0 | 55.8 | 228.7 | 194.0 | 89.7 | 0.0 | 30.3 | 1.018.7 |
| Nobding | 16.2 | 61.0 | 16.0 | 78.8 | 95.0 | 305.2 | 460.8 | 419.8 | 312.3 | 121.6 | 17.8 | 11.5 | 1.916.0 |
| Phobjikha | 3.9 | 98.9 | 23.6 | 69.2 | 66.7 | 209.3 | 233.8 | 160.6 | 136.2 | 108.6 | 4.2 | 0.0 | 1.115.0 |
| Samtengang | 6.0 | 21.2 | 10.2 | 30.2 | 45.9 | 202.0 | 284.0 | 143.0 | 91.0 | 97.2 | 2.0 | 11.0 | 943.7 |
| Zhemgang | | | | | | | | | | | | | |
| Zhemgang | 17.6 | 32.6 | 86.2 | 80.8 | 80.8 | 250.8 | 352.0 | 185.2 | 203.6 | 176.6 | 0.0 | 26.6 | 1499.8 |
| Buli | 6.0 | 46.4 | 82.2 | 68.5 | 68.5 | 173.4 | 453.8 | 213.4 | 246.9 | 163.4 | 0.0 | 12.4 | 1.582.8 |
| Yebilaptsa | 12.6 | 40.4 | 70.8 | 56.0 | 56.0 | 236.0 | 402.2 | 217.4 | 285.4 | 173.6 | 0.0 | 6.4 | 1.593.6 |

*Source: Meteorology section, Department of Energy, MTI,Thimphu*

TABLE 5.7
NUMBER OF AGRICULTURE RESEARCH AND EXTENSION FACILITIES, BHUTAN, MARCH 2003

| Infrastructure | Numbers |
|---|---|
| RNR (Common services) | 1 |
| National Resourse Training Institute (NRTI) | 85 |
| RNR centres | 4 |
| RNR Research Centre | 6 |
| RNR Research sub-station | 1 |
| Soil and Plant Analytical Laboratory | |
| Agriculture | 69 |
| Agriculture Extension Centre | - |
| Agriculture Seed Production Farm | 1 |
| Farm Mechanization Centre | 1 |
| Farm Mechanization Training Centre | 1 |
| National Mashroom Centre | 1 |
| Plant Protection Centre | |
| Animal Husbendry | 66 |
| Livestock Extension Centre | 4 |
| Regional Veterinary Laboratorie | 3 |
| Satellite Veterinary Laboratorie | 19 |
| Veterinary Hospital (including Thimphu Hospital) | |
| Livestock Farm | 1 |
| Fodder Seed Production Centre | 1 |
| National Artificial Insemination programme | .. |
| Pheasant Rearing Centre | 1 |
| Royal Veterinary Epidemiology Centre | 1 |
| Sub-Tropical Fodder Seed Production sub-centre | 1 |
| Vaccine Production Centre | |
| Forestry | 76 |
| Beat Offices | .. |
| Forest Training Institute | 1 |
| Nature Study Centre | 36 |
| Range Offices | 11 |
| Territorial Division HQs(DFO) | |

*Source: Policy & Planning Division, MoA, Thimphu.*



TABLE 5.8
IRRIGATION CHANNEL CONSTRUCTED IN DZONGKHAGS FROM 2001/02 TO 2003/04

| Dzongkhag | New Construction | | | Total | Renovation | | | Total |
|---|---|---|---|---|---|---|---|---|
| | 2001/02 Year (Km) | 2002/03 Year (Km) | 2003/04 Km | | 2001/02 Year (Km) | 2002/03 Km | 2003/04 | |
| Bumthang | 4.7 | 0.0 | 3.0 | 7.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| Chukha | 1.5 | 0.0 | 1.8 | 3.3 | 3.8 | 0.0 | 4.1 | 7.9 |
| Dagana | 0.0 | 0.0 | 4.0 | 4.0 | 2.2 | 0.0 | 0.0 | 2.2 |
| Gasa | 1.6 | 0.0 | 0.0 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| Haa | 0.0 | 0.7 | 1.0 | 1.7 | 5.0 | 0.0 | 3.0 | 8.0 |
| Lhuntse | 4.3 | 0.0 | 9.8 | 14.1 | 6.0 | 0.0 | 16.9 | 22.9 |
| Monggar | 0.0 | 2.1 | 0.0 | 2.1 | 0.0 | 0.6 | 4.5 | 5.1 |
| Paro | 2.0 | 2.0 | 3.0 | 7.0 | 0.0 | 3.5 | 15.5 | 19.0 |
| Pema Gatshel | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Punakha | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 35.8 | 35.8 |
| Samdrup Jongkhar | 0.0 | 0.0 | 0.0 | 0.0 | 13.2 | 11.5 | 18.0 | 42.7 |
| Samtse | 0.0 | 0.0 | 4.7 | 4.7 | 0.0 | 0.0 | 11.0 | 11.0 |
| Sarpang | 0.0 | 0.0 | 13.7 | 13.7 | 12.2 | 3.5 | 18.5 | 34.2 |
| Thimphu | 3.0 | 2.0 | 0.0 | 5.0 | 11.0 | 6.5 | 4.0 | 21.5 |
| Trashigang | 0.0 | 0.0 | 0.0 | 0.0 | 18.7 | 4.8 | 1.5 | 25.0 |
| Trashiyangtse | 4.0 | 4.0 | 5.0 | 13.1 | 17.3 | 0.0 | 5.3 | 22.6 |
| Trongsa | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.0 | 12.0 |
| Tsirang | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 3.8 | 5.0 |
| Wangdue Phodrang | 0.0 | 0.0 | 0.0 | 0.0 | 6.0 | 0.0 | 33.0 | 39.0 |
| Zhemgang | 2.9 | 3.8 | 0.0 | 6.7 | 8.6 | 0.0 | 7.0 | 15.6 |
| Bhutan | 24.0 | 14.6 | 46.1 | 84.7 | 105.1 | 30.5 | 193.7 | 329.3 |

*Source: Department of Agriculture, MoA, Thimphu.*

TABLE 5.9
QUANTITY OF PESTICIDES SUPPLIED TO FARMERS, BHUTAN, 2000/01 TO 2003/04

(Kilogram or Litre)

| | 2000/01 | 2001/02 | 2002/03 | 2003/04 |
|---|---|---|---|---|
| Insecticide | 2,775.4 | 3,714.0 | 5,543.8 | 13,074.3 |
| Fingicide | 1,713.2 | 1,858.9 | 1,933.6 | 2,888.3 |
| Herbicide | 1,829.0 | 807.0 | 689.0 | 874.0 |
| Acricide | 5.3 | 2.0 | 17.0 | 9.0 |
| Rodenticide | 31.0 | 70.5 | 56.4 | 64.7 |
| others | 8,044.0 | 9,073.0 | 9,342.7 | 10,052.4 |
| Total | 14,397.9 | 15,525.4 | 17,582.5 | 26,962.7 |

Note:
*Others inlude Tree spray oil, Linseed oil, Protein Hydruolysate, Sandovit.
*Source: National Plant Protection Centre, 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 |
| Chukha | 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 | .. |
| Monggar | 1.56 | 17.49 | 14.57 | .. | 13.36 | .. |
| Paro | 5.80 | 9.04 | 0.07 | 1.28 | 3.14 | 19.34 |
| Pema Gatshel | .. | 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 | .. |
| Trashiyangtse | 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: Policy & Planning Division, MoA, Thimphu.*

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

| Dzongkhag | Wheat | | | Barley | | |
|---|---|---|---|---|---|---|
| | Area (acre) | Product. (kg) | Yield (Kg/acre) | Area (acre) | Product. (kg) | Y (Kg/a |
| Bumthang | 614 | 297,591 | 484 | 57 | 31,091 | |
| Chhukha | 804 | 540,118 | 672 | 55 | 55,726 | 1 |
| Dagana | 42 | 10,452 | 247 | 24 | 17,559 | |
| Gasa | 85 | 58,744 | 687 | 101 | 80,970 | |
| Haa | 771 | 419,109 | 544 | 10 | 17,491 | 1 |
| Lhuntse | 52 | 24,285 | 466 | - | - | |
| MonGgar | 335 | 222,691 | 665 | 412 | 288,483 | |
| Paro | 1,052 | 593,715 | 564 | 48 | 44,436 | |
| Pema Gatshel | 83 | 31,815 | 382 | 21 | 13,029 | |
| Punakha | 920 | 653,578 | 710 | 21 | 20565 | |
| S/Jongkhar | 203 | 87,299 | 430 | 34 | 22,955 | |
| Samtse | 391 | 185,653 | 475 | 79 | 74,249 | |
| Sarpang | 22 | 23,795 | 1091 | 39 | 16,039 | |
| Thimphu | 489 | 246,669 | 505 | 8 | 5,871 | |
| Trashigang | 189 | 51,840 | 275 | 80 | 64,041 | |
| Trashiyangtse | 20 | 18,838 | 937 | 10 | 5,189 | |
| Trongsa | 455 | 375,220 | 825 | 187 | 140,458 | |
| Tsirang | 154 | 89,944 | 585 | 19 | 32816 | |
| W/Phodrang | 1,393 | 737,377 | 529 | 130 | 84,117 | |
| Zhemgang | 191 | 94,673 | 497 | - | - | |
| Bhutan | 8,265 | 4,763,406 | 11570 | 1,335 | 1,015,085 | 15 |

*Source: "Renewal Natural Resources Survey 2003", MoA, Thimphu*



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

| Dzongkhag | Paddy | | | Maize | | |
|---|---|---|---|---|---|---|
| | Area (acre) | Product. (kg) | Yield (Kg/acre) | Area (acre) | Product. (kg) | Yield (Kg/acre) |
| Bumthang* | 204 | 71,968 | 352 | 75 | 29,486 | 391 |
| Chukha | 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 |
| Monggar | 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 |
| Pema Gatshel | 60 | 35,361 | 587 | 2,395 | 1,939,432 | 810 |
| Punakha | 4,594 | 5,395,794 | 1,175 | 235 | 241,323 | 1,028 |
| S/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 |
| Trahiyangtse | 1,832 | 2,017,277 | 1,101 | 2,560 | 2,685,704 | 1,049 |
| Trongsa | 1,710 | 1,436,317 | 840 | 865 | 944,712 | 1,092 |
| Tsirang | 4,158 | 3,331,304 | 801 | 4,634 | 3,311,072 | 715 |
| Wangdue | 3,790 | 3,817,846 | 1,007 | 150 | 118,803 | 791 |
| 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 |

Note:
* No paddy is actually grown in Bumthang but some Bumthaps have wet land onwership in other dzongkhags.

*Source: "Renewal Natural Resources Survey 2003", MoA, Thimphu*

TABLE 5.12
QUANTITY OF POTATO SEED PLANTED AND PRODUCTION BY VARIETY AND REGION, BHUT
2001/02 TO 1994/1995

(Metric t

| Location/region | Desiree | | | K. Jyoti | | | Yusikap | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1992-1993 | 1993-1994 | 1994-1995 | 1992-1993 | 1993-1994 | 1994-1995 | 1992-1993 | 1993-1994 | 19 |
| Quantity planted | 161.1 | 156.4 | 156.1 | 95.2 | 82.5 | 75.4 | 90.7 | 86.3 | 8 |
| Phujikha farm | 8.2 | 6.7 | 6.7 | 4.4 | 4.7 | 1.3 | 4.7 | 4.8 | |
| Trashigang | 18.4 | 20.3 | 20.2 | 35.0 | 34.5 | 33.3 | 45.5 | 35.2 | 3 |
| Pemagatshel | 4.0 | 4.0 | 4.0 | 14.0 | 14.0 | 13.8 | 10.0 | 10.0 | 1 |
| Bumthang | 32.6 | 31.7 | 31.7 | 22.0 | 18.9 | 17.0 | 21.4 | 20.0 | 2 |
| Phubjikha | 98.0 | 93.7 | 93.5 | 19.9 | 10.5 | 10.2 | 9.2 | 16.4 | 1 |
| Quantity produced | 414.2 | 414.9 | 447.0 | 216.7 | 188.8 | 156.6 | 238.0 | 237.9 | 24 |
| Phujikha farm | 33.5 | 33.5 | 36.0 | 11.4 | 11.4 | 15.8 | 34.0 | 34.0 | 2 |
| Trashigang | 15.7 | 15.7 | 41.6 | 42.9 | 42.9 | 67.7 | 95.4 | 95.3 | 9 |
| Pemagatshel | 10.7 | 10.7 | 8.2 | 28.7 | 28.7 | 30.9 | 22.1 | 22.1 | 2 |
| Bumthang | 74.1 | 74.1 | 86.1 | 84.9 | 57.1 | 13.3 | 53.2 | 53.2 | 5 |
| Phubjikha | 280.2 | 281.0 | 275.3 | 48.8 | 48.8 | 29.0 | 33.4 | 33.4 | 4 |
| Seed to production ratio | 2.6 | 2.7 | 2.9 | 2.3 | 2.3 | 2.1 | 2.6 | 2.8 | 2 |
| Phujikha farm | 4.1 | 5.0 | 5.3 | 2.6 | 2.4 | 12.4 | 7.2 | 7.1 | 5 |
| Trashigang | 0.9 | 0.8 | 2.1 | 1.2 | 1.2 | 2.0 | 2.1 | 2.7 | 2 |
| Pemagatshel | 2.7 | 2.7 | 2.0 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2 |
| Bumthang | 2.3 | 2.3 | 2.7 | 3.9 | 3.0 | 0.8 | 2.5 | 2.7 | 2 |
| Phubjikha | 2.9 | 3.0 | 2.9 | 2.5 | 4.7 | 2.9 | 3.6 | 2.0 | 2 |

*Source: Policy & Planning Division, MoA, Thimphu.*



TABLE 5.13
NUMBER OF LIVESTOCK BY TYPE AND DZONGKHAG, BHUTAN, 2002

| Dzongkhag | Cattle | Yak | Horse | Pig | Poultry |
|---|---|---|---|---|---|
| Bumthang | 10,654 | 2,917 | 1,147 | n.a | 2,348 |
| Chukha | 26,816 | n.a | 645 | 4,002 | 16,323 |
| Dagana | 16,303 | 29 | 412 | 2,625 | 17,676 |
| Gasa | 917 | 3,786 | 894 | 72 | 584 |
| Haa | 9,871 | 3,320 | 1,248 | 656 | 2,941 |
| Lhuntse | 17,659 | 20 | 2,627 | 1,999 | 10,616 |
| Monggar | 27,649 | 63 | 2,708 | 4,267 | 18,224 |
| Paro | 16,637 | 4,061 | 1,509 | 2,771 | 5,120 |
| Pema Gatshel | 9,085 | 9 | 607 | 1,237 | 5,738 |
| Punakha | 10,470 | n.a | 721 | 2,833 | 4,722 |
| S/Jongkhar | 22,514 | n.a | 2,445 | 1,878 | 11,332 |
| Samtse | 29,499 | 40 | 247 | 1,570 | 21,982 |
| Sarpang | 26,762 | n.a | 447 | 1,573 | 27,537 |
| Thimphu | 6,899 | 3,698* | 436 | 909 | 3,151 |
| Trashigang | 34,480 | 11,608 | 5,769 | 5,204 | 22,929 |
| T/Yangtse | 13,733 | n.a | 2,327 | 2,654 | 6,564 |
| Trongsa | 12,215 | n.a | 421 | 222 | 3,917 |
| Tsirang | 16,978 | n.a | 363 | 1,572 | 25,863 |
| W/Phodrang | 19,652 | 2,317 | 1,424 | 4,151 | 6,179 |
| Zhemgang | 11,111 | 0 | 1,489 | 1,298 | 6,830 |
| National | 329,250 | 25,253 | 27,895 | 41493 | 218,228 |

Note:
livestock figures for Soe, Naro and Lingzhi were not included.

Source: *"Renewal Natural Resources Selected Statistics 2002", MoA, Thimphu.*

TABLE 5.14
NUMBER OF SELECTED LIVESTOCK BY BREED, BHUTAN, 1999 TO 2000

| Type of livestock | 1999 | 2000 |
|---|---|---|
| Cattle | 344,595.0 | 320,509.0 |
| Horse | 31,255.0 | 23,329.0 |
| Sheep | 24,840.0 | 22,880.0 |
| Pig | 52,264.0 | 41,401.0 |
| Poultry | 293,933.0 | 230,723.0 |
| Yak | 39,604.0 | 34,928.0 |
| Buffalo | 1,790.0 | 1,800.0 |
| Goat | 36,007.0 | 31,328.0 |

*Source: "Facts and Figures of RNR Sector 2003", PPD, MoA, Thimphu.*

TABLE 5.15
IMPORTS AND DISTRIBUTION OF FOOD ITEMS BY FOOD CORPORATION OF BHUTAN, 2000 TO JUNE 2004

| Commodity | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|
| Imports | | | | | |
| Rice | 6,302.1 | 6,599.0 | 7,434.0 | 18,262.3 | 2,285.0 |
| Wheat | 924.8 | 1,371.4 | 2,310.0 | 2,625.6 | 824.0 |
| Sugar | 3,780.0 | 3,154.7 | 1,924.5 | 1,180.0 | 749.9 |
| Salt | 0.0 | 0.0 | 162.9 | 694.5 | 41.3 |
| Oil | 185.6 | 162.2 | 379.9 | 558.7 | 41.7 |
| Sales | | | | | |
| Rice | 8,601.2 | 5,877.8 | 8,059.6 | 8,984.6 | 9,627.3 |
| Wheat | 1,456.9 | 846.8 | 1,174.6 | 1,647.0 | 326.1 |
| Sugar | 3,319.1 | 3,266.0 | 2,332.0 | 1,148.0 | 781.9 |
| Salt | 0.0 | 45.6 | 122.5 | 353.9 | 255.3 |
| Oil | 187.6 | 200.5 | 377.5 | 421.5 | 281.5 |

*Source: Food Corporation of Bhutan, Phuntsholing.*



TABLE 5.16
QUANTITY OF AGRICULTURAL PRODUCE HANDLED BY FOOD CORPORATION OF BHUTAN, 2001 TO 2004

| Commodity | 2001 | 2002 | 2003* | 2004** |
|---|---|---|---|---|
| Potato | 2,545.5 | 23,035.6 | 48.4 | 31,715.9 |
| Vegetable | 1,654.2 | 2,227.4 | 129.7 | 3,254.3 |
| Apple | 491.7 | 465.0 | 0.0 | 495.2 |
| Orange | 4,639.8 | 2,065.3 | 2,924.4 | 5,038.9 |
| Cardamom | 0.0 | 0.1 | 0.0 | 0.0 |
| Ginger | 479.5 | 514.5 | 127.5 | 355.3 |
| Garlic | 0.0 | 0.2 | 0.1 | 0.5 |
| Arecanut | 63.1 | 86.4 | 131.0 | 263.7 |
| Supari(dried doma) | 0.0 | 0.0 | 0.0 | 0.0 |
| Dry chilly | 4.4 | 12.2 | 2.1 | 10.0 |
| Kidney bean(rajma) | 0.0 | 50.2 | 17.1 | 49.9 |
| Soya bean | 169.8 | 17.3 | 16.1 | 50.1 |
| Pulse | 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 | 0.3 |
| Chirota (wild) | 1.2 | 0.0 | 0.0 | 0.0 |
| Lemon | 3.2 | 1.1 | 0.0 | 0.0 |
| Apricot | 0.0 | 0.0 | 0.0 | 0.0 |
| Peach | 3.2 | 2.1 | 0.0 | 1.9 |
| Plum | 2.2 | 0.6 | 0.0 | 0.9 |
| Pear | 0.4 | 0.3 | 0.0 | 0.9 |

Note:
*Till June 2003
** From July 2003 to June 2004

*Source: Food Corporation of Bhutan, Phuentsholing.*

TABLE 5.17
QUANTITY AND VALUE OF FOREST PRODUCTS SUPPLIED BY TYPE AND USERS, BHUTAN, 2002/03 TO 2003/04

| User and product type | 2002/03 | | 2003/04 | |
|---|---|---|---|---|
| | Quantity | Value (Nu.) | Quantity | Value (Nu.) |
| Rural population | | | | |
| Trees (number) | 31,235.0 | 1,249,400.0 | 250,857.0 | 10,034,280.0 |
| Poles (number) | 70,859.0 | 850,308.0 | 2,797,443.0 | 6,129,122.0 |
| Logged timber (cubic metre) | 11,229.3 | 68,501.7 | 30,148.0 | 4,959,194.0 |
| Firewood (cubic metre) | 537,288.0 | 202,327.4 | 657,643.5 | 6,320,338.0 |
| Charcoal (kg) | 119,489.0 | 155,335.7 | 150.0 | 30.0 |
| Bamboos (number) | 3,050.0 | 610.0 | 379,564.0 | 493,433.2 |
| Urban population | | | | |
| Trees (number) | 180.0 | 57,600.0 | 190.0 | 275,500.0 |
| Poles (number) | 7,118.0 | 92,534.0 | 24,296.0 | 315,848.0 |
| Logged timber (cubic metre) | 49,175.0 | 786,800.0 | 97,499.3 | 1,559,989.4 |
| Firewood (cubic metre) | 1,082.0 | 16,230.0 | 17,723.0 | 265,845.0 |
| Charcoal (kg) | 9,825.0 | 1,965.0 | 10,000.0 | 4,000.0 |
| Bamboos (number) | 670,349.0 | 871,454.0 | 333,433.0 | 26,674.6 |
| Government agencies | | | | |
| Trees (number) | 4,005.0 | 1,281,600.0 | 6,293.0 | 2,013,760.0 |
| Poles (number) | 37,368.0 | 298,944.0 | 48,593.0 | 631,709.0 |
| Logged timber (cubic metre) | 2,137.1 | 34,193.6 | 9,136.0 | 146,176.0 |
| Firewood (cubic metre) | 27,088.9 | 406,334.0 | 192,061.3 | 2,880,919.5 |
| Charcoal (kg) | .. | .. | .. | |
| Bamboos (number) | .. | .. | .. | |
| Free of Royalty | | | | |
| Trees (number) | 1,437.0 | .. | 8,086.0 | |
| Poles (number) | 403.0 | .. | 9,690.0 | |
| Logged timber (cubic metre) | 181.7 | .. | 3,764.9 | |
| Firewood (cubic metre) | 669.3 | .. | 5,104.0 | |
| Charcoal (kg) | .. | .. | .. | |
| Bamboos (number) | .. | .. | 21,600.0 | |
| Bhutan | | | | |
| Trees (number) | 36,857.0 | 2,588,600.0 | 265,426.0 | 12,323,540 |
| Poles (number) | 115,748.0 | 1,241,786.0 | 2,880,022.0 | 7,076,679 |
| Logged timber (cubic metre) | 62,723.0 | 889,495.3 | 140,548.2 | 6,665,359 |
| Firewood (cubic metre) | 566,128.3 | 624,891.5 | 872,531.8 | 9,467,102 |
| Charcoal (kg) | 129,314.0 | 157,300.7 | 10,150.0 | 4,030 |
| Bamboos (number) | 673,399.0 | 872,064.0 | 734,597.0 | 520,107 |

*Source: Department of Forests, MoA, Thimphu*



TABLE 5.18
DETAILS OF PROTECTED AREAS IN BHUTAN, BY YEAR OF ESTABLISHMENT AND AREA, 2003

| Name of Area | Establishment year | Area (sq.Km) | Percent of total area |
|---|---|---|---|
| Existing Protected Areas | | | |
| Torsa Strict Nature Reserve | 1993 | 644 | 1.68 |
| Jigme Dorji National Park | 1993 | 4,349 | 11.33 |
| Black Mountain National Park | 1993 | 1,723 | 4.49 |
| Thrumshingla National Park | 1993 | 768 | 2.00 |
| Royal Manas National Park | 1993 | 1,023 | 2.66 |
| Sakteng Wildlife Sanctuary | 2002 | 650 | 1.00 |
| Bomdeling Wildlife Sanctuary | 1993 | 1,487 | 3.88 |
| Phibsoo Wildlife Sanctuary | 1974 | 278 | 1.00 |
| Khaling Wildlife Sanctuary | 1974 | 273 | 1.00 |

*Source: Forestry Services Division, MoA, Thimphu.*

TABLE 5.19
PRODUCTION OF LOGWOOD, BHUTAN, 1998 TO 2000

| Item | 1998 | 1999 | 2000 |
|---|---|---|---|
| Logwood | 52,200.9 | 53,672.0 | 48,205.7 |
| Commercial logwood | n.a | n.a | n.a |
| Construction and other use | 23,663.7 | 45,546.2 | 43,592.4 |
| Rural construction | 5,058.9 | 6,858.3 | 4,593.8 |
| Urban construction | 20,691.1 | 1,267.6 | 19.5 |
| Government construction | 543.8 | n.a | n.a |
| Others | 2,243.3 | n.a | n.a |
| Firewood | n.a | n.a | n.a |
| Total | 52,200.9 | 53,672.0 | 48,205.7 |

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: Forestry Services Division, 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, 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, BHUTAN, 2000 TO JUNE 2003

| Sector | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|
| Production & manufacturing | 523 | 569 | 586 | 730 |
| New registration | 33 | 37 | 18 | 20 |
| Existing establishment | 490 | 532 | 568 | 710 |
| Services | 3,281 | 3,773 | 4,272 | 4,478 |
| New registration | 303 | 422 | 430 | 288 |
| Existing establishment | 2,978 | 3,351 | 3,842 | 4,190 |
| Contract | 5,212 | 8,536 | 9,050 | 9,102 |
| New registration | 1,091 | 2,564 | 480 | 59 |
| Existing establishment | 4,121 | 5,972 | 8,570 | 9,043 |
| All sectors | 9,016 | 12,878 | 13,908 | 14,310 |

*Source: Department of Industry, MTI, Thimphu.*

TABLE 6.2
NUMBER OF LICENSED FIRMS IN MANUFACTURING AND MINING INDUSTRIES BY SECTOR, BHUTAN, 2002 TO JUNE 2003

| Industry | 2002 | | | | 2003 | | | |
|---|---|---|---|---|---|---|---|---|
| | Public | Joint | Private | Total | Public | Joint | Private | Total |
| Mining | 0 | 0 | 6 | 6 | 0 | 0 | 6 | 6 |
| Manufacturing | .. | .. | .. | 0 | .. | .. | .. | 0 |
| Food processing/milling | 5 | 1 | 115 | 121 | 5 | 1 | 120 | 126 |
| Textiles and Clothing | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| Wood and Paper Product | 3 | 3 | 318 | 324 | 3 | 3 | 330 | 336 |
| Chemical Product | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mineral Product | 0 | 2 | 38 | 40 | 0 | 2 | 38 | 40 |
| Other | 2 | 0 | 92 | 94 | 4 | 0 | 217 | 221 |
| Total mining & manufacturing | 10 | 6 | 570 | 586 | 12 | 6 | 712 | 730 |

*Source: Department of Industry, MTI, Thimphu.*

TABLE 6.3
NUMBER OF INDUSTRIES BY SECTOR, SIZE AND TYPE, BHUTAN, 1999 TO JUNE 2003

| Industrial establishment | 1999 | 2000 | 2001 | 2002 | 200 |
|---|---|---|---|---|---|
| Sector | | | | | |
| Private | 5,678 | 8,959 | 12,807 | 13,833 | 14,2 |
| Joint | 5 | 23 | 24 | 24 | 2 |
| Public | 33 | 34 | 47 | 51 | 5 |
| Size | | | | | |
| Large scale | 38 | 39 | 41 | 44 | 4 |
| Medium scale | 39 | 43 | 44 | 50 | 5 |
| Small scale | 345 | 409 | 473 | 467 | 46 |
| Cottage scale | 832 | 878 | 3,784 | 4,277 | 4,6 |
| Mini scale | 2,154 | 2,435 | | | |
| Other (Contract) | 2,308 | 5,212 | 8,536 | 9,050 | 9,1 |
| Type | | | | | |
| Production & Manufacturing | 486 | 523 | 569 | 586 | 7 |
| Agro based | 104 | 109 | 116 | 121 | 1 |
| Forest based | 270 | 288 | 317 | 324 | 3 |
| Mineral based | 37 | 42 | 46 | 46 | 4 |
| Others | 75 | 84 | 90 | 95 | 2 |
| Contract | 2,308 | 5,212 | 8,536 | 9,050 | 9,1 |
| Services | 2,922 | 3281 | 3,773 | 4,272 | 4,4 |
| All industries | 5,716 | 9,016 | 12,878 | 13,908 | 14,3 |

Note:
Mini scale classifaction discontinued and indutries falling under the scale are clubbed un
Cottage scale.

*Source: Department of Industry, MTI, Thimphu.*



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

| Dzongkhag | Class of contract firm | | | | Total |
|---|---|---|---|---|---|
| | A | B | C | Petty | |
| Bumthang | 7 | 8 | 23 | 180 | 218 |
| Chukha | 41 | 21 | 126 | 571 | 759 |
| Dagana | 0 | 0 | 14 | 258 | 272 |
| Gasa | 0 | 0 | 0 | 30 | 30 |
| Haa | 0 | 5 | 44 | 148 | 197 |
| Lhuntse | 0 | 0 | 23 | 95 | 118 |
| Monggar | 2 | 1 | 60 | 285 | 348 |
| Paro | 0 | 16 | 73 | 309 | 398 |
| Pema Gatshel | 0 | 4 | 10 | 163 | 177 |
| Punakha | 0 | 2 | 16 | 243 | 261 |
| Samdrup Jongkhar | 15 | 9 | 71 | 251 | 346 |
| Samtse | 0 | 1 | 46 | 229 | 276 |
| Sarpang | 4 | 4 | 28 | 383 | 419 |
| Thimphu | 127 | 90 | 507 | 2,808 | 3,532 |
| Trashigang | 5 | 27 | 57 | 365 | 454 |
| Trashiyangtse | 0 | 0 | 37 | 95 | 132 |
| Trongsa | 0 | 0 | 24 | 146 | 170 |
| Tsirang | 0 | 0 | 5 | 114 | 119 |
| Wangdue Phodrang | 0 | 0 | 20 | 596 | 616 |
| Zhemgang | 0 | 0 | 32 | 228 | 260 |
| Bhutan | 201 | 188 | 1,216 | 7,497 | 9,102 |

Contd...

TABLE 6.4(contd.)
NUMBER OF CONTRACT FIRMS, BY TYPE, BY DZONGKHAG, BHUTAN, 2003

| Dzongkhag | Scale of industry | | | | Tota |
|---|---|---|---|---|---|
| | Small | Medium | Large | Cottage | |
| Bumthang | 11 | 0 | 1 | 148 | 16 |
| Chukha | 124 | 21 | 17 | 485 | 64 |
| Dagana | 1 | 0 | 0 | 46 | 4 |
| Gasa | 0 | 0 | 0 | 2 | |
| Haa | 5 | 1 | 0 | 78 | 8 |
| Lhuntse | .. | 0 | 0 | 19 | 1 |
| Monggar | 17 | 0 | 0 | 126 | 14 |
| Paro | 18 | 4 | 2 | 332 | 35 |
| Pema Gatshel | 5 | 0 | 3 | 55 | 6 |
| Punakha | 5 | 1 | 0 | 68 | 7 |
| Samdrup Jongkhar | 14 | 1 | 4 | 323 | 34 |
| Samtse | 38 | 4 | 5 | 179 | 22 |
| Sarpang | 27 | 0 | 2 | 292 | 32 |
| Thimphu | 181 | 20 | 13 | 1,916 | 2,13 |
| Trashigang | 10 | 1 | 0 | 173 | 18 |
| Trashiyangtse | 1 | 0 | 0 | 39 | 4 |
| Trongsa | 1 | 0 | 1 | 60 | 6 |
| Tsirang | 1 | 0 | 0 | 97 | 9 |
| Wangdue Phodrang | 10 | 1 | 0 | 133 | 14 |
| Zhemgang | 0 | 0 | 0 | 66 | 6 |
| Bhutan | 469 | 54 | 48 | 4,637 | 5,20 |

Notes:
Size of establishments are determined by their input capitals. Cottage with Nu. 1 or less,
Small is Nu. 1 to 10 million, medium is Nu. 10 to 100 million, Large is Nu. 100 million or mor

*Source: Department of Industry, MTI, Thimphu.*



TABLE 6.5(a)
NUMBER OF INDUSTRIES BY TYPE, BY DZONGKHAG, BHUTAN, 2002

| Dzongkhag | Agro based | Forest based | Mineral based | Services | Contract | Others | All types |
|---|---|---|---|---|---|---|---|
| Bumthang | 8 | 22 | 0 | 106 | 218 | 3 | 357 |
| Chukha | 25 | 31 | 7 | 536 | 766 | 31 | 1,396 |
| Dagana | 0 | 0 | 0 | 46 | 271 | 0 | 317 |
| Gasa | 0 | 0 | 0 | 2 | 29 | 0 | 31 |
| Haa | 1 | 12 | 0 | 64 | 195 | 0 | 272 |
| Lhuntse | 0 | 3 | 0 | 16 | 117 | 0 | 136 |
| Monggar | 6 | 17 | 2 | 108 | 344 | 0 | 477 |
| Paro | 5 | 40 | 2 | 276 | 397 | 6 | 726 |
| Pema Gatshel | 2 | 5 | 4 | 36 | 188 | 1 | 236 |
| Punakha | 1 | 2 | 0 | 65 | 261 | 0 | 329 |
| Samdrup Jongkhar | 11 | 18 | 3 | 287 | 338 | 4 | 661 |
| Samtse | 13 | 9 | 12 | 180 | 274 | 6 | 494 |
| Sarpang | 19 | 14 | 3 | 280 | 418 | 2 | 736 |
| Thimphu | 19 | 107 | 10 | 1,792 | 3495 | 37 | 5,460 |
| Trashigang | 2 | 17 | 0 | 147 | 449 | 2 | 617 |
| Trashiyangtse | 1 | 5 | 0 | 29 | 132 | 0 | 167 |
| Trongsa | 1 | 5 | 0 | 48 | 170 | 0 | 224 |
| Tsirang | 2 | 1 | 0 | 87 | 118 | 0 | 208 |
| Wangdue Phodrang | 2 | 6 | 3 | 116 | 613 | 2 | 742 |
| Zhemgang | 3 | 10 | 0 | 51 | 257 | 1 | 322 |
| Bhutan | 121 | 324 | 46 | 4,272 | 9050 | 95 | 13,908 |

*Source: Department of Industry, MTI, Thimphu.*

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

| Dzongkhag | Agro based | Forest based | Mineral based | Services | Contract | Others | All types |
|---|---|---|---|---|---|---|---|
| Bumthang | 9 | 23 | .. | 125 | 218 | 3 | 376 |
| Chukha | 25 | 33 | 7 | 545 | 759 | 37 | 1,406 |
| Dagana | .. | .. | .. | 47 | 272 | .. | 319 |
| Gasa | .. | .. | .. | 2 | 30 | .. | 32 |
| Haa | 1 | 12 | .. | 71 | 197 | .. | 281 |
| Lhuntse | .. | 3 | .. | 16 | 118 | .. | 137 |
| Monggar | 7 | 16 | 2 | 118 | 348 | .. | 491 |
| Paro | 6 | 42 | 2 | 295 | 398 | 11 | 754 |
| PemaGatshel | 2 | 6 | 4 | 50 | 177 | 1 | 240 |
| Punakha | 1 | 3 | .. | 70 | 261 | .. | 335 |
| SamdrupJongkhar | 10 | 20 | 3 | 301 | 346 | 8 | 688 |
| Samtse | 13 | 9 | 12 | 186 | 276 | 6 | 502 |
| Sarpang | 19 | 14 | 3 | 283 | 419 | 2 | 740 |
| Thimphu | 21 | 110 | 10 | 1,843 | 3,532 | 146 | 5,662 |
| Trashigang | 2 | 17 | .. | 163 | 454 | 2 | 638 |
| Trashiyangtse | 1 | 5 | .. | 34 | 132 | .. | 172 |
| Trongsa | 1 | 5 | .. | 56 | 170 | .. | 232 |
| Tsirang | 3 | 1 | .. | 94 | 119 | .. | 217 |
| Wangdue Phodrang | 2 | 7 | 3 | 127 | 616 | 5 | 760 |
| Zhemgang | 3 | 10 | .. | 52 | 260 | 1 | 326 |
| Bhutan | 126 | 336 | 46 | 4,478 | 9,102 | 222 | 14,310 |

*Source: Department of Industry, MTI, Thimphu.*



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

| Minerals | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|
| Dolomite ('000 tonnes or mt) | 338,846 | 388,056 | 367,402 | 226,110 |
| Lime stone ('000 tonnes or mt) | 514,976 | 506,268 | 551,525 | 326,736 |
| Gypsum ('000 tonnes or mt) | 100,907 | 105,658 | 122,829 | 28,547 |
| Slate ('000 square feet) | 0 | 6,100 | 57,970 | 69,437 |
| Coal mines('000 tonnes or mt) | 84,596 | 88,567 | 66,324 | 12,383 |
| Marble ('000 square feet) | 4,993 | 3,207 | 6,228 | 2,773 |
| Quartzite ('000 tonnes or mt) | 47,511 | 47,464 | 52,058 | 23,478 |
| Talc ("000 tonnes or mt) | 13,528 | 23,118 | 23,101 | 27,200 |
| Iron Ore ('000 mt) | 0 | 0 | 0 | 0 |
| Shale ('000 mt) | 136 | 937 | 0 | 0 |
| Const. Material ('000 mt) | 10,375 | 319,702 | 316,068 | 121,048 |
| Granite ('000 Square feet) | 0 | 5,559 | 11,579 | 403 |

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

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

| Minerals | 2003 | | | 2004 | | |
|---|---|---|---|---|---|---|
| | Export | Domestic use | Total | Exports | Domestic use | Total |
| Dolomites('000 tonnes) | 367.402 | 0 | 367.402 | 226.075 | 35 | 226,110 |
| Lime stone ('000 tonnes) | 26.448 | 525.076 | 551.524 | 18.815 | 307.921 | 19,122 |
| Gypsum ('000 tonnes) | 91.932 | 30.897 | 122.829 | 24.412 | 4.135 | 28,547 |
| Coal mine ('000 tonnes) | 24.606 | 41.718 | 66.324 | 3.454 | 8.929 | 12,383 |
| Marble ('000 square feet) | 0 | 6.228 | 6.228 | 0 | 2.773 | 2,773 |
| Slate ('000 square feet) | 0 | 57.970 | 57.970 | 0 | 69.437 | 69,437 |
| Quartzite ('000 tonnes) | 3.230 | 48.827 | 52.057 | 6.449 | 17.029 | 23,478 |
| Talc (tonnes) | 23.101 | 0 | 23.101 | 27.200 | 0 | 27,200 |
| Iron Ore ('000 mt) | 0 | 0 | 0 | 0 | 0 | 0 |
| Shale ('000 mt) | 0 | 0 | 0 | 0 | 0 | 0 |
| Const. Material ('000 mt) | 42.711 | 273.356 | 316.067 | 12.123 | 108.925 | 121,048 |
| Granite ('000 square feet) | 0 | 11.579 | 11.579 | 0 | 403 | 403 |

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

TABLE 6.8
NUMBER OF ESTABLISHMENT BY TYPE OF INDUSTRY AND SECTOR, BHUTAN, 1997

| Type of Industry | Private sector | Joint sector | Public sector | Semi-government | Others | Company | All Sectors |
|---|---|---|---|---|---|---|---|
| Forest based industry | 89 | 3 | .. | 1 | 1 | 3 | 97 |
| Agrobased industry | 34 | 2 | 2 | 1 | 2 | 5 | 46 |
| Mineralbased industry | 18 | 2 | 1 | .. | .. | 6 | 27 |
| Other industry | 36 | 1 | 5 | .. | 1 | .. | 43 |
| All industries | 177 | 8 | 8 | 2 | 4 | 14 | 213 |

*Source: 1998 National Census of Manufacturing Industries.*



TABLE 6.9
DISTRIBUTION OF ESTABLISHMENT BY DZONGKHAG, BHUTAN, 1997

| Dzongkhag | Number of establishment | Percentage |
|---|---|---|
| Bumthang | 15 | 7.0 |
| Chukha | 43 | 20.2 |
| Dagana | .. | .. |
| Gasa | .. | .. |
| Haa | 3 | 1.4 |
| Lhuntse | .. | .. |
| Monggar | 6 | 2.8 |
| Paro | 11 | 5.2 |
| Pema Gatshel | 2 | 0.9 |
| Punakha | .. | .. |
| Samdrup Jongkhar | 15 | 7.0 |
| Samtse | 21 | 9.9 |
| Sarpang | 11 | 5.2 |
| Thimphu | 70 | 32.9 |
| Trashigang | 5 | 2.3 |
| Trashiyangtse | 3 | 1.4 |
| Trongsa | 2 | 0.9 |
| Tsirang | .. | .. |
| Wangdue Phodrang | 3 | 1.4 |
| Zhemgang | 3 | 1.4 |
| Bhutan | 213 | 100.0 |

*Source:19998 National Census of Manufaturing Industries.*

TABLE 6.10
NUMBER OF ESTABLISHMENT BY SECTOR AND SIZE OF EMPLOYMENT, BHUTAN, 1997

| Legal status by industry | Total persons engaged | | | | |
|---|---|---|---|---|---|
| | 1-5 | 6-10 | 11-20 | 21-30 | 31-4 |
| Private Sector | 52 | 47 | 38 | 13 | 5 |
| Forest-based industry | 26 | 22 | 23 | 9 | 1 |
| Agro-based industry | 15 | 9 | 5 | 1 | - |
| Mineral-based industry | 1 | 4 | 3 | 1 | 3 |
| Other industry | 10 | 12 | 7 | 2 | 1 |
| Joint Sector | .. | .. | 1 | 3 | 1 |
| Forest-based industry | .. | .. | 1 | 1 | .. |
| Agro-based industry | .. | .. | .. | 1 | .. |
| Mineral-based industry | .. | .. | .. | 1 | .. |
| Other industry | .. | .. | .. | .. | 1 |
| Public Sector | .. | .. | 2 | .. | .. |
| Agro-based industry | .. | .. | .. | .. | .. |
| Mineral-based industry | .. | .. | 1 | .. | .. |
| Other industry | .. | .. | 1 | .. | .. |
| Semi-government | .. | .. | .. | .. | .. |
| Forest-based industry | .. | .. | .. | .. | .. |
| Agro-based industry | .. | .. | .. | .. | .. |
| Other Sector | .. | .. | 1 | .. | 1 |
| Forest-based industry | .. | .. | 1 | .. | .. |
| Agro-based industry | .. | .. | .. | .. | 1 |
| Other industry | .. | .. | .. | .. | .. |
| Company | .. | 1 | 4 | 1 | .. |
| Forest-based industry | .. | .. | 2 | .. | .. |
| Agro-based industry | .. | .. | 2 | 1 | .. |
| Mineral-based industry | .. | 1 | .. | .. | .. |
| Total | 52 | 48 | 46 | 17 | 7 |

Contd..



TABLE 6.10 (contd.)
NUMBER OF ESTABLISHMENT BY SECTOR & SIZE OF EMPLOYMENT, BHUTAN, 1997

| Legal status by industry | 41-50 | 51-100 | 101-200 | 201-300 | 300+ | Total |
|---|---|---|---|---|---|---|
| Private Sector | 1 | 11 | 5 | 1 | 4 | 177 |
| Forest-based industry | .. | 6 | 2 | .. | .. | 89 |
| Agro-based industry | .. | 2 | .. | .. | 2 | 34 |
| Mineral-based industry | | 2 | 1 | 1 | 2 | 18 |
| Other industry | 1 | 1 | 2 | .. | .. | 36 |
| Joint Sector | .. | .. | 1 | .. | 2 | 8 |
| Forest-based industry | .. | .. | .. | .. | 1 | 3 |
| Agro-based industry | .. | .. | 1 | .. | .. | 2 |
| Mineral-based industry | .. | .. | .. | .. | 1 | 2 |
| Other industry | .. | .. | .. | .. | .. | 1 |
| Public Sector | 1 | 1 | 2 | .. | 2 | 8 |
| Agro-based industry | .. | .. | 1 | .. | 1 | 2 |
| Mineral-based industry | .. | .. | .. | .. | .. | 1 |
| Other industry | 1 | 1 | 1 | .. | 1 | 5 |
| Semi-government | .. | 2 | .. | .. | .. | 2 |
| Forest-based industry | .. | 1 | .. | .. | .. | 1 |
| Agro-based industry | .. | 1 | .. | .. | .. | 1 |
| Other Sector | .. | 2 | .. | .. | .. | 4 |
| Forest-based industry | .. | .. | .. | .. | .. | 1 |
| Agro-based industry | .. | 2 | .. | .. | .. | 2 |
| Other industry | .. | .. | .. | .. | .. | 1 |
| Company | 2 | 1 | 3 | .. | 2 | 14 |
| Forest-based industry | 1 | .. | .. | .. | .. | 3 |
| Agro-based industry | .. | .. | 2 | .. | .. | 5 |
| Mineral-based industry | 1 | 1 | 1 | .. | 2 | 6 |
| Total | 4 | 17 | 11 | 1 | 10 | 213 |

Source: *1998 National Census of Manufaturing Industries.*

TABLE 6.11
PERSONS ENGAGED AT THE END OF EACH QUARTER BY TYPE OF WORK BY INDUSTR
BHUTAN, 1997

| Type of industry | Production Line Workers | | | |
|---|---|---|---|---|
| | Feb. | May | Aug. | No |
| Forest based industry | 1,240 | 1,348 | 1,342 | 1,30 |
| Agrobased industry | 1,571 | 1,457 | 1,411 | 1,49 |
| Mineralbased industry | 1,497 | 1,512 | 1,531 | 1,51 |
| Other industry | 713 | 708 | 764 | 80 |
| Total | 5,021 | 5,025 | 5,048 | 5,11 |

Contd..

TABLE 6.11(contd..)
PERSON ENGAGED AT THE END OF EACH QUARTER BY TYPE OF WORK BY INDUSTR
BHUTAN, 1997

| Type of industry | Non-production Line Workers | | | |
|---|---|---|---|---|
| | Feb. | May | Aug. | No |
| Forest based industry | 474 | 507 | 501 | 48 |
| Agrobased industry | 363 | 360 | 339 | 34 |
| Mineralbased industry | 1,676 | 1,548 | 1,549 | 1,67 |
| Other industry | 111 | 109 | 110 | 11 |
| Total | 2,624 | 2,524 | 2,499 | 2,61 |

*Source: 1998 National Census of Manufaturing Industries.*

TABLE 6.12
NUMBER OF PERSON ENGAGED IN INDUSTRIAL SECTORS BY EMPLOYMENT STATUS AN
SEX, BHUTAN, 1997

| Sector | Male | | | |
|---|---|---|---|---|
| | All male | Proprieter | Unpaid | Employee |
| Private | 3,712 | 71 | 10 | 3,63 |
| Joint Sector | 576 | 15 | .. | 56 |
| Public Sector | 1,355 | .. | .. | 1,35 |
| Semi-government | 98 | .. | .. | 9 |
| Others | 98 | 1 | .. | 9 |
| Company | 1,039 | 1 | .. | 1,03 |
| Total | 6,878 | 88 | 10 | 6,78 |

Contd..



TABLE 6.12 (contd..)
NUMBER OF PERSON ENGAGED IN INDUSTRIAL SECTORS BY EMPLOYMENT STATUS AND SEX, BHUTAN, 1997

| Sector | Female | | | |
|---|---|---|---|---|
| | All female | Proprieter | Unpaid | Employee |
| Private | 1,415 | 21 | 10 | 1,382 |
| Joint Sector | 69 | 1 | .. | 68 |
| Public Sector | 507 | .. | .. | 507 |
| Semi-government | 48 | .. | .. | 48 |
| Others | 75 | .. | .. | 75 |
| Company | 787 | .. | .. | 787 |
| Total | 2,901 | 22 | 10 | 2,867 |

Note:
Exculdes 2,813 employees whose differentiation by sex was not available.

*Source: 1998 National Census of Manufaturing Industries.*

TABLE 6.13
PERCENT OF EXPENDITURE ON FUEL USED BY SECTOR, BHUTAN, 1997

| sector | Kerosene | Fuel oil | Wood/ charcoal | Gas | Other | All fuel |
|---|---|---|---|---|---|---|
| Private sector | 88.7 | 16.7 | 28.4 | 53.2 | 43.1 | 35.4 |
| Joint sector | 0.2 | .. | 45.2 | .. | 1.1 | 24.7 |
| Public sector | 0.5 | 83.3 | 15.9 | 38.3 | | 9.5 |
| Semi-government | .. | .. | .. | .. | .. | .. |
| Others | .. | .. | .. | .. | .. | .. |
| Company | 10.6 | .. | 10.5 | 8.5 | 55.8 | 30.4 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Source: 1998 National Census of Manufaturing Industries.*

## CHAPTER 7 : TRANSPORT AND COMMUNICATION

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 June 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 415 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 one an average, one Post Office caters 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. The four new regions covered are Wangdue Phodrang, Punakha, Gelephug and Samdrup Jongkhar.



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

(Length in Km.)

| Type of road | highway | road | 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 |

*Source: Ministry of Works & Human Settlement, Thimphu*

TABLE 7.2
LENGTH OF ROADS BY TYPE AND DZONGKHAG, BHUTAN, JUNE 2004

(Length in Km)

| Dzongkhag | National highway | District road | Feeder road | Urban road | Farm Road | Forest road | Total | Percentage |
|---|---|---|---|---|---|---|---|---|
| Bumthang | 122.00 | 0.00 | 57.02 | 0.00 | 16.50 | 47.60 | 243.12 | 5.9% |
| Chhukha | 231.89 | 0.00 | 197.79 | 15.70 | 0.00 | 30.928 | 476.308 | 11.6% |
| Dagana* | 0.00 | 87.00 | 31.36 | 0.00 | 0.00 | 0.00 | 118.36 | 2.9% |
| Gasa | 0.00 | 0.00 | 18.61 | 0.00 | 0.00 | 0.00 | 18.61 | 0.5% |
| Haa* | 16.00 | 25.60 | 31.523 | 1.60 | 0.00 | 36.00 | 110.72 | 2.7% |
| Lhuntse | 0.00 | 45.00 | 32.90 | 0.00 | 11.20 | 0.00 | 89.10 | 2.2% |
| Mongar | 177.00 | 20.00 | 60.85 | 2.21 | 14.50 | 44.80 | 319.36 | 7.8% |
| Paro* | 103.00 | 36.40 | 50.03 | 0.00 | 49.54 | 5.19 | 244.16 | 6.0% |
| Pemagatshel | 0.00 | 23.00 | 31.62 | 0.00 | 16.66 | 17.60 | 88.88 | 2.2% |
| Punakha* | 9.00 | 0.00 | 86.32 | 0.00 | 9.50 | 59.00 | 163.82 | 4.0% |
| Samdrup Jongkhar* | 59.00 | 50.00 | 60.62 | 0.00 | 0.00 | 29.90 | 199.52 | 4.9% |
| Samtse | 0.00 | 89.00 | 25.10 | 8.20 | 0.50 | 7.00 | 129.80 | 3.2% |
| Sarpang* | 123.40 | 0.00 | 42.50 | 0.00 | 0.00 | 93.25 | 259.15 | 6.3% |
| Thimphu | 111.00 | 0.00 | 87.56 | 71.00 | 14.55 | 103.86 | 387.97 | 9.5% |
| Trashigang | 141.00 | 5.00 | 119.908 | 4.00 | 2.42 | 8.50 | 280.83 | 6.9% |
| Trashi Yangtse | 0.00 | 40.00 | 35.80 | 0.00 | 4.12 | 2.20 | 82.12 | 2.0% |
| Trongsa | 168.00 | 0.00 | 34.22 | 0.00 | 11.80 | 10.71 | 224.73 | 5.5% |
| Tsirang* | 62.00 | 0.00 | 37.70 | 1.50 | 0.00 | 6.48 | 107.68 | 2.6% |
| Wangdue Phodrang | 150.80 | 0.00 | 101.48 | 3.00 | 11.42 | 19.60 | 286.26 | 7.0% |
| Zhemgang | 104.00 | 38.00 | 70.61 | 1.89 | 5.86 | 41.60 | 261.96 | 6.4% |
| Bhutan | 1,578.09 | 459.00 | 1,213.52 | 109.10 | 168.57 | 564.224 | 4,092.46 | 100.1% |

*Source: Ministry of Works & Human Settlement, Thimphu*



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

(Length in Km.)

| Type of bridges | Number | Length | Percent |
|---|---|---|---|
| Reinforced concrete | 63 | 1173.4 | 20 |
| Prestressed concrete | 5 | 306.0 | 5 |
| Bailey bridge | 82 | 2249.6 | 38 |
| Bailey Suspension Bridge | 5 | 475.8 | 8 |
| Hemilton and steel | 6 | 171.0 | 3 |
| Composite bridge | 23 | 335.6 | 6 |
| Wooden | 3 | 41.0 | 1 |
| Submersible | 7 | 193.6 | 3 |
| Arch-RCC | 1 | 120.0 | 2 |
| Steel Pony Truss | 4 | 197.0 | 3 |
| Steel Truss | 6 | 310.0 | 5 |
| Langer Arch | 1 | 95.2 | 2 |
| Steel Girder | 3 | 250.0 | 4 |
| All bridges | 209 | 5918.1 | 100 |

*Source: Ministry of Works & Human Settlement, Thimphu*

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

| Dzongkhag | Plan periods | | | | | | All plans % |
|---|---|---|---|---|---|---|---|
| | I - IV | V | VI | VII | VIII | IX | (I - IX) |
| Bumthang | 1 | 7 | 3 | 4 | 2 | 1 | 18 |
| Chhukha | 3 | 5 | 1 | 3 | 2 | 2 | 16 |
| Dagana | 2 | 2 | 2 | 3 | 4 | 1 | 14 |
| Gasa | | | 2 | 2 | 2 | | 6 |
| Haa | 3 | 6 | 1 | 3 | 2 | | 15 |
| Lhuntse | 3 | 4 | 2 | 3 | 5 | | 17 |
| Monggar | 9 | 5 | 2 | 5 | 6 | 1 | 28 |
| Paro | 3 | 8 | 3 | 2 | 1 | 1 | 18 |
| PemaGatshel | 2 | 7 | 2 | 3 | 4 | | 18 |
| Punakha | 3 | 4 | 1 | 0 | 2 | 1 | 11 |
| Samdrup Jongkhar | 10 | 13 | 6 | 2 | 6 | 1 | 38 |
| Samtse | 9 | 15 | 2 | 1 | 2 | | 29 |
| Sarpang | 9 | 8 | 5 | 0 | 5 | 1 | 28 |
| Thimphu | | 1 | 3 | 3 | 1 | | 8 |
| Trashigang | 7 | 12 | 2 | 3 | 8 | 1 | 33 |
| TrashiYangtse | 3 | 6 | 4 | 3 | 3 | 1 | 20 |
| Trongsa | 4 | 6 | 3 | 3 | 2 | | 18 |
| Tsirang | 6 | 4 | 1 | 2 | 2 | 1 | 16 |
| Wangdue Phodrang | 2 | 10 | 5 | 3 | 3 | | 23 |
| Zhemgang | 1 | 5 | 4 | 4 | 4 | 2 | 20 |
| Bhutan | 80 | 128 | 54 | 52 | 66 | 14 | 394 |

*Source: Bridge Section, DUDES, MoW&HS, Thimphu*



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

| Region | Heavy | Medium | Light | Two-Wheeler | Taxi | Earth mover | Others Types | All |
|---|---|---|---|---|---|---|---|---|
| 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 | 21 | 10 | 138 | 1,263 |
| Phuntsholing | 1,915 | 230 | 3,144 | 1,608 | 441 | 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.Number of Government light vehicles include those of Royal Family and International Agencies.
3."Others" include bull dozers, road rollers, pay loaders, excavators, cranes, tractors, power tillers, etc.
4. ^For 2003, Medium-category vehilces are included in the Heavy category for Thimphu region.
5.^^For 2004, Medium-category vehilces are included in the Heavy category, Earcth movers unver Others for all regions.

*Source: Road Safety & Transport Authority, MoIC, Thimphu.*

TABLE 7.6
NUMBER OF DRIVING LICENCES ISSUED BY REGION AS OF JUNE 2004

| Region | No. of Licenses |
|---|---|
| Thimphu | 19,420 |
| Phuentsholing | 4,006 |
| Gelephu | 2,537 |
| Samdrupjongkhar | 2,106 |
| Total | 28,069 |

*Source: Road Safety & Transport Authority, MoIC, Thimphu.*

TABLE 7.8
NUMBERS OF PASSENGERS CARRIED & REVENUE EARNED BY DRUK AIR FLIGHTS BY SECTO
2000 TO JUNE 2004

| Sector | 2000 | 2001 | 2002 | 2003 | 200 |
|---|---|---|---|---|---|
| Paro to Kolkata | 2,600 | 2,400 | 3,156 | 3,592 | 2,2 |
| Kolkata to Paro | 2,470 | 2,394 | 2,585 | 3,116 | 2,1 |
| Paro to Bangkok | 6,556 | 7,578 | 9,007 | 8,431 | 4,8 |
| Bangkok to Paro | 6,623 | 8,292 | 8,874 | 8,269 | 4,6 |
| Paro to Dhaka | 363 | 233 | 142 | 462 | |
| Dhaka to Paro | 332 | 200 | 90 | 471 | |
| Paro to Delhi | 3,713 | 3,417 | 3,185 | 3,393 | 1,9 |
| Delhi to Paro | 3,728 | 3,604 | 3,296 | 3,469 | 1,9 |
| Paro to Kathmandu | 3,793 | 3,753 | 3,193 | 2,881 | 1,7 |
| Kathmandu to Paro | 3,722 | 3,677 | 3,229 | 2,953 | 1,6 |
| Kathmandu to Delhi | 563 | 217 | 427 | 2,121 | 1,6 |
| Delhi to Kathmandu | 221 | 62 | 81 | 1,046 | 6 |
| Kolkata to Bangkok | 2,208 | 1,880 | 1,568 | 2,059 | 1,2 |
| Bangkok to Kolkata | 1,313 | 1,076 | 1,406 | 1,991 | 9 |
| Dhaka to Bangkok | 427 | 115 | 184 | 1279 | |
| Bangkok to Dhaka | 321 | 111 | 157 | 558 | |
| Paro to Yangon | .. | .. | 42 | 82 | |
| Yangon to Paro | .. | .. | 1 | 82 | |
| Paro to Gaya | .. | .. | 0 | 106 | |
| Gaya to Paro | .. | .. | 0 | 58 | |
| Yangon to Bangkok | .. | .. | 139 | 615 | |
| Bangkok to Yangon | .. | .. | 18 | 169 | 27,5 |
| Total passengers (a) | 38,953 | 39,009 | 40,859 | 47,712 | 24 |
| Revenue (Nu.in millions) | 208 | 351 | 424.5 | 451.3 | |
| During fiscal/calendar year | 1999/00 | 2000/01 | 2001/02 | 2002/03 | 2003 |

*Source:Policy & Planning Division, MoIC, Thimphu.*



TABLE 7.9
NUMBER OF FLIGHTS MADE BY DRUK AIR BY SECTOR, 2000 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 | 9 |
| 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 7.10
TELEPHONE CONNECTION CAPACITY BY EXCHANGE, BHUTAN, 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 | 128 |
| 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 | 884 |
| 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 | 15448 |
| Trashigang (TS/LS) | 724 | 286 | 924 | 1180 | 1180 |
| Trashiyangtse(DRMASS) | 128 | 83 | 128 | 128 | 128 |
| Trongsa (TS/LS) | 280 | 205 | 590 | 628 | 628 |
| Tsimakothi(DRMASS) | 220 | 216 | 556 | 604 | 760 |
| Wangduephodrang(RLU) | 392 | 366 | 636 | 636 | 1000 |
| Zhemgang (corDECT) | 0 | 0 | 0 | 0 | 376 |
| Zhemgang(RLU) | 200 | 147 | 256 | 376 | 36,681 |
| Total capacity | 15,678 | 13,031 | 24,115.00 | 33,729 | |

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.
*1 Jan. to 30 June 2004

*Source:Policy & Planning Division, MoIC, Thimphu.*



TABLE 7.11
NUMBER OF TELEPHONE TRUNK CIRCUITS, BHUTAN, JUNE 2004

| Sector connection | Type of circuits | Existing |
|---|---|---|
| Thimphu - London (BT) | BW | 12 |
| Thimphu - Singapore (ST) | BW | 14 |
| Thimphu - Japan (KDD) | BW | 6 |
| Thimphu - Telco214(USA) | BW | 16 |
| Thimphu - Intel.Gateway Switch | BW | 60 |
| Thimphu - India | BW | 30(still under testing) |
| Thimphu - Phuntsholing | BW | 120 |
| Thimphu - Samtse | .. | .. |
| Thimphu - Trongsa | OG/IC | 30/30 |
| Thimphu - Gelephu | OG/IC | 30/30 |
| Thimphu - Trashigang | OG/IC | 30/30 |
| Thimphu - Samdrup Jongkhar | OG/IC | 30/30 |
| Thimphu - Paro | BW | 60 |
| Thimphu - Paro Airport | .. | .. |
| Thimphu - Tsimakothi | .. | .. |
| Thimphu - Wangdue Phodrang | BW | 60 |
| Thimphu - Lobesa | .. | .. |
| Thimphu - Punakha | BW | 60 |
| Thimphu - VOIP | BW | 30 |
| Paro - Phuntsholing | BW | 60 |
| Paro - Tsimasham | BW | 90 |
| Paro - Haa | BW | 60 |
| Trongsa - Trashigang | OG/IC | 30/30 |
| Trongsa - Gelephu | OG/IC | 30/30 |
| Trongsa - Samdrup Jongkhar | OG/IC | 15/15 |
| Trongsa - Zhemgang | BW | 60 |
| Gelephu - Trashigang | OG/IC | 15/15 |
| Trashigang - Samdrup Jongkhar | OG/IC | 30/30 |
| Trashigang - Kanglung | BW | 60 |
| Trashigang - Mongar | BW | 60 |
| Samtse - Phuntsholing | BW | 60 |
| Samtse - Banarhat (India) | .. | .. |
| Phuntsholing - India (Kolkota) | OG/IC | 45/45 |
| Phuntsholing - India (Delhi) | OG/IC | 15/15 |
| Phuntsholing - India (Siliguri) | OG/IC | 15/15 |
| Phuntsholing - India (Thimphu) | .. | .. |
| Thimphu -DAMA | OG/IC | 15/15 |
| Phuentsholing - DAMA | OG/IC | 3 each |
| Samtse - DAMA | OG/IC | 3 each |
| Gelephu - DAMA | OG/IC | 6 circuits each |
| Trashigang - DAMA | OG/IC | 3 circuits each |
| Samdrup Jongkhar - DAMA | OG/IC | 12 circuits each |
| Thimphu - CorDECT* | BW | 60 |
| Trongsa - CorDECT* | BW | 30 |
| Thimphu-B-Mobile* | BW | 90 |
| Intnl.Gateway Switch - B -Mobile* | BW | 60 |
| Thimphu-Druknet | OG | 120 |
| Thimphu-Druknet* | OG | 30 |

Note:
* New trunk circuits

Source:*Bhutan Telecom, Thimphu.*

TABLE 7.12
NUMBER OF TRUNK LINES, CONNECTION CAPACITIES & SETS IN USE, BHUTAN, 2000 TO JUNE 2004

| Details | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|
| Trunk lines | .. | .. | 691 | 713 | 713 |
| Satellite Communications | 88 | 106 | 106 | 128 | 128 |
| International Lines | 28 | 28 | 28 | 50 | 50 |
| Domestic (DAMA) | 60 | 78 | 78 | 78 | 78 |
| Digital Microwave | 480 | 480 | 480 | 480 | 480 |
| Digital Radio Concentrator System | 15 | 15 | 15 | 15 | 15 |
| DRMASS | 60 | 60 | 60 | 60 | 60 |
| VOIP | n.a | n.a | 30 | 30 | 30 |
| Connection capacity | 16,580 | 21,879 | 21,879 | 34,120 | 36,812 |
| Telephone sets in use | 13,531 | 17,730 | 20,168 | 23,657 | 26,822 |
| Cellular Mobile Subscribers | .. | .. | .. | 7,736 | 10,500 |

Note:
1. Trunk Lines consist of Satellite, Microwave, DRCS, DRMASS and VOIP.
2. Bhutan Telecom has a total of 1.5 Mb/sec IDR voice circuits which equals to 24 trunk lines and can go up to 48 channels with LRE equipment.

*Source:Bhutan Telecom, Thimphu.*

TABLE 7.13
NUMBER OF TELEPHONE TRUNK CALLS BY TYPE, BHUTAN, 2000 TO JUNE 2004

| Type of call | 2000 | 2001 | 2002 | 2003 | 2004* |
|---|---|---|---|---|---|
| Domestic calls | 6,843 | 8,212.00 | 10,285 | 13,684,113 | 7,526,262 |
| International calls | 170 | 187.00 | 220 | 273,431 | 64,899 |
| India | 1,086 | 1,227 | 1,387 | 1,710,548 | 1,026,329 |
| Other | n.a | n.a | n.a | n.a | n.a |
| All calls | 8,100 | 9,628 | 11,893 | 15,668,092 | 8,617,490 |

*Source:Bhutan Telecom, Thimphu.*



TABLE 7.14
TELECOMMUNICATION TRAFFIC IN MINUTES AND REVENUE EARNINGS, BHUTAN, 2001 TO JUNE 2004

| Detail | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|
| Type of call | | | | |
| Domestic call (minutes) | 19,617,143 | 24,704,092 | 34,210,284 | 18,815,656 |
| International call (minutes) | 4,227,729 | 4,824,491 | 4,959,950 | 2,727,972 |
| India | 3,510,283 | 4,099,185 | 4,276,372 | 2,565,823 |
| Other countries | 717,446 | 725,306 | 683,578 | 162,149 |
| Total calls | 23,844,872 | 29,528,583 | 39,170,234 | 21,543,628 |

TABLE 7.15
NUMBER OF COMMUNICATION FACILITIES, 2001 TO JUNE 2004

| Postal infrastructure | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|
| General Post Office | 2 | 2 | 2 | 2 |
| Post Office | 25 | 25 | 27 | 28 |
| Branch Post Office | .. | .. | .. | .. |
| Agency Post Office | 10 | 10 | 10 | 10 |
| Community Mail Office | 70 | 70 | 70 | 70 |
| Telegraph or Fax Office | .. | .. | .. | .. |
| Wireless Stations(a) | n.a | n.a | n.a | n.a |

Notes:
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 7.16
VOLUME OF POSTAL MAIL TRAFFIC BY DESTINATION, BHUTAN, 2000 TO 2003

| Type of service | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|
| Domestic | 1,305,044 | 1,117,047 | 1,278,831 | 1,062,100 |
| International | 1,001,435 | 683,789 | 658,701 | 590,400 |
| Dispatch | 408,544 | 265,886 | 246,845 | 204,900 |
| Receipt | 592,891 | 417,903 | 411,856 | 385,500 |
| Total mail items | 2,306,479 | 1,800,836 | 1,937,532 | 1,652,500 |

*Source: Bhutan Post, Thimphu*

TABLE 7.17
VOLUME OF MAIL, BY TYPE OF ARTICLE AND DESTINATION, BHUTAN, 2003

| Type of mail | Actual Volume | International | | |
|---|---|---|---|---|
| | Total Domestic | Total | Inward | Outward |
| Letter-post items | | | | |
| Ordinary letter | 844,200 | 461,700 | 317,700 | 144,000 |
| Registered items | 103,000 | 56,100 | 18,600 | 37,500 |
| Parcels | 1,900 | 3,130 | 2,970 | 160 |
| Express mail service (EMS) | 19,200 | 16,900 | 9,800 | 7,100 |
| Facsimile message | 93,800 | 51,300 | 35,300 | 16,000 |
| All mail items | 1,062,100 | 589,130 | 384,370 | 204,760 |

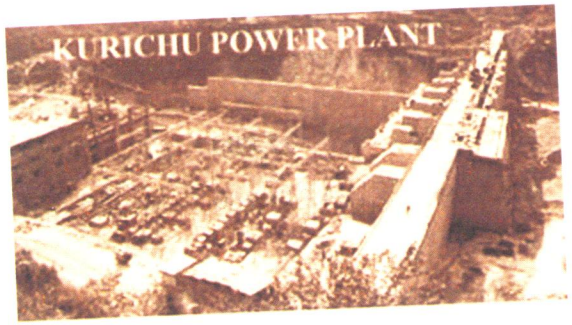
*Source: Bhutan Post, Thimphu*



TABLE 7.18
NUMBER AND VALUE OF MONEY ORDER BY TYPE, BHUTAN, 2000 TO 2003

| Type | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|
| Total money orders | | | | |
| Number of orders ('000) | 415,880 | 47,365 | 27,659 | 38,780 |
| Amount of orders ('000 Nu.) | 153,546,700 | 169,444,915 | 64,011,289 | 67,981,300 |
| Domestic money order | | | | |
| Number of orders ('000) | 23,830 | 34,810 | 12,071 | 23,000 |
| Amount of orders ('000 Nu.) | 122,688,140 | 134,956,960 | 30,157,172 | 36,021,200 |
| International money order | | | | |
| Dispatched | | | | |
| Number of orders ('000) | 17,570 | 12,360 | 15,458 | 15,700 |
| Amount of orders ('000 Nu.) | 29,780,975 | 33,356,490 | 33,703,539 | 31,844,200 |
| Receipts | | | | |
| Number of orders ('000) | 188 | 195 | 130 | 80 |
| Amount of orders ('000 Nu.) | 1,077,585 | 1,131,465 | 150,678 | 115,900 |

*Source: Bhutan Post, Thimphu*




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 2002/03

| Generating station (Dzongkhag) | Installed capacity (No. x MW) | Generating capacity ( MW ) | Peak generation (MW) | Energy generated (MU) |
|---|---|---|---|---|
| Hydro stations (a) | | | | |
| Chukha | 4 X 84.000 | 336.000 | 360.000 | 1815.356 |
| Chumey (Bumthang) | 3 X 0.50 | 1.350 | 1.081 | 3.637 |
| Gidakom (Thimphu) | 5 X 0.25 | 0.660 | 0.580 | 1.565 |
| Jushina (Thimphu) | 4 X 0.09 | 0.360 | 0.269 | 1.628 |
| Kurichu (MonGgar) | 4 X 15.00 | 60.000 | 45.000 | 255.772 |
| Basochu(W/phodrang) | 2 X 24.00 | 24.000 | 24.540 | 109.284 |
| Rangjung (Trashigang) | 2 X 1.10 | 2.200 | 1.890 | 6.610 |
| Chenari (Trashigang) | 3 X 0.25 | 0.000 | 0.000 | 0.000 |
| Khaling (Trashigang) | 3 X 0.20 | 0.400 | 0.319 | 0.629 |
| Khalangzi (Monggar) | 3 X 0.13 | 0.260 | 0.242 | 0.376 |
| Wangdue Phodrang | 3 X 0.10 | 0.300 | 0.147 | 0.779 |
| Micro hydels | | | | |
| Lhuntse (Lhuntse) | 2 X 0.06 | 0.120 | .. | 0.226525 |
| Rukubji (W/phodrang) | 1 X 0.04 | 0.040 | .. | 0.064704 |
| Tangsibi (Trongsa) | 1 X 0.03 | 0.030 | .. | 0.013280 |
| Trongsa (Trongsa) | 1 X 0.05 | 0.050 | .. | 0.069641 |
| Bubja (Trongsa) | 1 X 0.03 | 0.030 | .. | 0.044104 |
| Tamshing (Bjakar) | 1 X 0.03 | 0.030 | .. | 0.079350 |
| Ura (Bjakar) | 1 X 0.05 | 0.050 | .. | 0.159914 |
| Yadi (Mongar) | 1 X 0.03 | 0.030 | .. | 0.086857 |
| Kekhar (Zhemgang) | 1 X 0.02 | 0.020 | .. | .. |
| Surey (Sarpang) | 1 X 0.07 | 0.070 | .. | .. |
| Damphu (Tsirang) | 2 X 0.10 | 0.020 | 0.138 | 0.820320 |
| Tingtibi (Zhemgang) | 2 X 0.10 | 0.020 | 0.150 | 0.993020 |
| Dagana ( Dagana) | 2 X 0.10 | 0.020 | 0.170 | 0.820229 |
| Lingzhi (Thimphu) | 1 X 0.01 | 0.008 | .. | .. |
| Rongchu (Lhuntse) | 2 X 0.10 | 0.200 | .. | 0.540260 |

Source:*Department of Energy, MTI, Thimphu.*

Contd...

TABLE 8.1 (contd.)
ELECTRICITY GENERATING STATIONS AND THEIR CAPACITIES, BHUTAN, FY 2002/03

| Generating station | (Dzongkhag) | Number of machines | Generating capacity (MW) | Peak generation (MW) | Energy generated (MU) |
|---|---|---|---|---|---|
| Diesel generation station | | | | | |
| Thimphu | | 7 | .. | .. | 0.000 |
| Paro | | 1 | .. | .. | 0.000 |
| Phuntsholing | | 3 | 0.000 | .. | 0.000 |
| Damphu | | 3 | .. | .. | 0.002 |
| Trongsa | | 2 | .. | .. | 0.150 |
| Gelephu | | 2 | 0.692 | .. | 0.054 |
| Sarpang | | 2 | 0.505 | .. | 0.017 |
| Kalikhola | | 2 | 0.000 | .. | .. |
| Zhemgang | | 3 | .. | .. | 0.017 |
| Dagana | | 2 | .. | .. | 0.001 |
| Trashigang | | 5 | .. | .. | 0.009 |
| Bjakar | | 3 | .. | .. | 0.271 |
| Monggar | | 1 | .. | .. | 0.019 |
| Samdrup Jongkhar | | 2 | .. | .. | 0.000 |
| Trashiyangtse | | 1 | .. | .. | 0.058 |
| Pema Gatshel | | 1 | .. | .. | 0.012 |
| Samtse | | 1 | .. | .. | 0.000 |
| Other diesel station | | | | | 0.000 |
| Penden Cement Authority Ltd. | | 4 | 3.600 | .. | .. |
| Bhutan Board Products Ltd. | | 2 | 0.458 | .. | 0.000 |
| Chhukha Hydro Power Corp. | | 5 | 1.949 | .. | 0.001 |
| Bhutan Carbide & Chemical Ltd. | | 2 | 0.225 | .. | 0.140 |
| Bhutan Ferro Alloys Ltd. | | 1 | 0.288 | .. | 0.153 |
| Kurichu Project Authority | | 2 | 0.563 | .. | 0.000 |
| Basochu Project Authority | | 1 | 0.090 | .. | |

*Source:Department of Energy, MTI, Thimphu.*



TABLE 8.2
TOTAL ELECTRICITY GENERATION AND SUPPLY, BHUTAN, 2000/01 TO 2002/03

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

Note:
The imports data unlike in the past now include import at CHPC from PGCIL(21.738 MU) and import at KHPC from PGCIL
(0.450 MU). Similarly total energy requirement and losses include that of CHPC, KHPC and BHPC
The HT overhead in the past was only 11 KV lines, now the figures have been changed to include 33 KU also.
Source : *Department of Energy, MTI, Thimphu.*

TABLE 8.3
MAJOR TRANSMISSION LINES FOR EVACUATING HYDRO POWER FROM CHHUKHA POWER PLANT, 2003

| Station | | 220 KV line(Km) | 132 KV line(Km) | 66 KV line (Km) |
|---|---|---|---|---|
| Chukha | - Birpara | 1.000 ( D/C ) | .. | |
| Chukha | - Singhigoan | 33.320 | .. | |
| Chukha | - Simtokha | 54.367 | .. | |
| Gelephug | - Indian border | .. | 0.300 | |
| Gyleposhing | - kilikhar | .. | 10.214 | |
| Kilikhar | - Kanglung | .. | 29.807 | |
| Nangkor | - Deothang | .. | 23.668 | |
| Gyleposhing | - Nangkor | .. | 33.700 | |
| Nangkor | - Nganglam | .. | 34.300 | |
| Nganglam | - Tingtibi | .. | 83.200 | |
| Tingtibi | - Gelephug | .. | 46.000 | |
| Chukha | - Gedu | .. | .. | 20.100 |
| Gedu | - Phuntsholing | .. | .. | 17.700 |
| Chukha | - 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 | | D/C::87.687 (S/C) | 261.189 | 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, BHUTAN, 1999/00 TO 2002/03

| Details | 1999/00 | 2000/01 | 2001/02 | 2002/03 |
|---|---|---|---|---|
| Towns electrified (numbers) | 40.0 | 40.0 | 40.0 | 40.0 |
| Villages electrified (numbers) | 552.0 | 646.0 | 690.0 | 819.0 |
| Consumers ('000) | 35.7 | 35.9 | 38.7 | 44.7 |
| Sales of energy (million Nu.) | 280.7 | 268.7 | 381.1 | 468.2 |
| Per capita energy consumption Units) | 720.0 | 632.2 | 808.0 | 927.3 |

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, 2002 TO 2003

| Month | 2002 | | | 2003 | | |
|---|---|---|---|---|---|---|
| | Export | Internal | Total | Export | Internal | Total |
| January | 33.37 | 14.54 | 47.91 | 30.31 | 13.97 | 44.28 |
| February | 20.73 | 12.67 | 33.40 | 19.97 | 13.04 | 33.01 |
| March | 21.60 | 13.50 | 35.10 | 21.87 | 13.90 | 35.77 |
| April | 64.11 | 12.38 | 76.49 | 109.8 | 12.71 | 122.51 |
| May | 144.59 | 12.83 | 157.42 | 116.21 | 12.77 | 128.97 |
| June | 279.25 | 10.38 | 289.63 | 260.74 | 11.13 | 271.88 |
| July | 349.82 | 11.25 | 361.06 | 342.98 | 12.10 | 355.07 |
| August | 329.89 | 11.62 | 341.51 | 347.47 | 11.74 | 359.21 |
| September | 313.01 | 11.23 | 324.23 | 335.65 | 11.55 | 347.20 |
| October | 257.49 | 12.11 | 269.61 | 325.81 | 12.12 | 337.93 |
| November | 111.50 | 12.32 | 123.82 | 185.35 | 12.26 | 197.60 |
| December | 57.76 | 13.43 | 71.19 | 89.81 | 14.00 | 103.81 |
| Total | 1,983.10 | 148.27 | 2,131.37 | 2185.97 | 151.29 | 2337.26 |

Source: Department of Energy, MTI, Thimphu.

TABLE 8.6
CONSUMPTION OF ELECTRICITY BY TYPE OF CONSUMER, BHUTAN, 1999/00TO 2002/03

| Type of consumer | 1999/00 | 2000/01 | 2001/02 | 2002/03 |
|---|---|---|---|---|
| Total consumption (MU) | 434.40 | 383.99 | 489.26 | 550.64 |
| Domestic | 46.70 | 52.54 | 63.670 | 72.12 |
| Commercial & Government Office | 42.03 | 57.58 | 32.24 | 44.97 |
| Industry | 338.53 | 267.11 | 343.73 | 365.76 |
| Bulk supply | 6.81 | 6.38 | 49.20 | 66.85 |
| Public lighting | 0.34 | 0.37 | 0.42 | 0.95 |
| Consumption as percentage | 100.00 | 100.00 | 100.00 | 100.00 |
| Domestic | 10.75 | 13.68 | 13.01 | 13.10 |
| Commercial & Government Office | 9.68 | 14.99 | 6.59 | 8.17 |
| Industries | 77.93 | 69.56 | 70.26 | 66.42 |
| Bulk supply | 1.57 | 1.66 | 10.06 | 12.14 |
| Public lighting | 0.08 | 0.10 | 0.09 | 0.17 |

*Source: Department of Energy, MTI, Thimphu.*

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 2003, there were 5,823 tourists compared to 5,242 in 2002. 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 REGION/CONTINENT, BHUTAN, 2000 TO JUNE 2004

| Country | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|
| Africa | 7 | 27 | 17 | 14 | 3 |
| South Africa | 7 | 27 | 17 | 14 | 3 |
| Asia & Pacific | 1,383 | 1,346 | 1,281 | 1411 | 652 |
| Australia | 179 | 138 | 214 | 165 | 85 |
| China | 10 | 27 | 25 | 19 | 29 |
| Japan | 875 | 1,038 | 892 | 952 | 436 |
| Korea | 3 | 34 | 44 | 13 | 4 |
| Malaysia | 16 | 3 | 2 | 28 | 6 |
| Nepal | 50 | 14 | 16 | 13 | 8 |
| New Zealand | 31 | 25 | 32 | 37 | 25 |
| Phillipines | 13 | 8 | 8 | 8 | 6 |
| Singapore | 31 | 15 | 8 | 20 | |
| Taiwan | 175 | 44 | 40 | 90 | 30 |
| Thailand | 92 | 36 | 46 | 66 | 23 |
| America | 3,024 | 2,367 | 2,142 | 2,025 | 1,301 |
| Argentina | 29 | 4 | 4 | 7 | 4 |
| Brazil | 10 | 10 | 21 | 19 | 23 |
| Canada | 194 | 197 | 166 | 121 | 85 |
| Mexico | 37 | 7 | 38 | 72 | 7 |
| USA | 2,754 | 2,149 | 1,913 | 1,806 | 1,182 |
| Europe | 1,941 | 1,342 | 1,067 | 2,671 | 1,329 |
| Austria | 131 | 128 | 92 | 152 | 55 |
| Belgium | 95 | 76 | 22 | 104 | 44 |
| Czech | 12 | 2 | 5 | 11 | 4 |
| Denmark | 30 | 22 | 10 | 55 | 23 |
| Finland | 60 | 17 | 14 | 14 | 7 |
| France | 399 | 287 | 192 | 288 | 184 |
| Germany | 662 | 414 | 346 | 496 | 225 |
| Greece | 25 | 11 | 4 | 3 | 12 |
| Ireland | 10 | 9 | 7 | 14 | 3 |
| Italy | 156 | 192 | 177 | 331 | 205 |
| Luxemburg | 2 | 4 | 1 | 7 | 3 |
| Netherlands | 359 | 180 | 197 | 179 | 49 |

Contd...



TABLE 9.1(contd.)
ANNUAL TOURIST ARRIVALS BY REGION/CONTINENT, BHUTAN, 2000 TO JUNE 2004

| Country | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|
| Norway | 7 | 19 | 25 | 9 | 2 |
| Poland | 26 | 39 | 41 | 11 | 34 |
| Portugal | 19 | 43 | 4 | 25 | 8 |
| Russia | 13 | 27 | 25 | 56 | 19 |
| Spain | 141 | 73 | 68 | 77 | 23 |
| Sweden | 48 | 28 | 41 | 48 | 17 |
| Switzerland | 137 | 170 | 164 | 177 | 67 |
| Turkey | 34 | 30 | 61 | 9 | 1 |
| United Kingdom | 595 | 681 | 519 | 605 | 344 |
| Middle East | 92 | 165 | 98 | 47 | 15 |
| Israel | 68 | 78 | 5 | 47 | 15 |
| Others | 24 | 87 | 93 | 93 | 43 |
| Total arrivals | 7,559 | 6,393 | 5,599 | 6,261 | 3,343 |
| Trekkers | 926 | 468 | 357 | 438 | 136 |
| Cultural | 6,633 | 5,925 | 5,242 | 5,823 | 3,207 |

*Source: Department of Tourism, MTI, Thimphu.*

TABLE 9.2
TOURIST ARRIVALS BY COUNTRY OF RESIDENCE AND REVENUE RECEIPTS, BHUTAN, 2000 TO JUNE 2004

| Region | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|
| America | 3,024 | 2,367 | 2,142 | 2025 | 1,301 |
| Asia and Pacific | 1,556 | 1,462 | 1,332* | 1411 | 652 |
| Europe | 2,948 | 2,450 | 2,015 | 2671 | 1,329 |
| Africa | 7 | 27 | 17 | 14 | 3 |
| Others | 24 | 87 | 93 | 140 | 58 |
| All regions (persons) | 7,559 | 6,393 | 5,599 | 6261 | 3,343 |
| Tourism revenue receipts | | | | | |
| Ngultrums (million) | n.a | n.a | 133.4 | n.a | n.a |
| Or | | | | | |
| US Dollars (million) | 10.50 | 9.20 | 7.98 | 8.32 | 4 |

Note:
*Includes Israel which falls under Middle East region.

*Source : Department of Tourism, MTI, Thimphu.*

TABLE 9.3
NUMBER OF TOURIST ARRIVALS BY SEASON AND MONTH, BHUTAN, 2000 TO JUNE 2004

| Season/Month | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|
| Winter | 1,274 | 874 | 849 | 1,343 | 89 |
| November | 996 | 517 | 643 | 862 | n.a |
| December | 213 | 172 | 151 | 289 | n.a |
| January | 65 | 185 | 55 | 192 | 89 |
| Spring | 2,284 | 2,540 | 1,814 | 1,967 | 2,493 |
| February | 223 | 355 | 269 | 98 | 355 |
| March | 1,066 | 553 | 862 | 654 | 831 |
| April | 995 | 1,632 | 683 | 1,215 | 1,304 |
| Summer | 764 | 551 | 489 | 685 | 761 |
| May | 415 | 276 | 296 | 397 | 448 |
| June | 187 | 146 | 79 | 176 | 313 |
| July | 162 | 129 | 114 | 112 | n.a |
| Autumn | 3,237 | 2,428 | 2,447 | 2,266 | na |
| August | 307 | 252 | 213 | 198 | n.a |
| September | 683 | 868 | 760 | 612 | n.a |
| October | 2,247 | 1,308 | 1,474 | 1,456 | n.a |
| Total ArrivalS | 7,559 | 6,393 | 5,599 | 6,261 | 3,343 |

*Source: Department of Tourism, MTI, Thimphu.*



TABLE 9.4
NUMBER OF TOURIST ARRIVALS BY PURPOSE OF VISIT, BHUTAN, 2000 TO JUNE 2004

| Purpose | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|
| Tour, holidays & recreation | 6,633 | 5,925 | 5,242 | 5,823 | 3,207 |
| Trekking & mountaineering | 926 | 468 | 357 | 438 | 136 |
| Total tourists | 7,559 | 6,393 | 5,599 | 6,261 | 3,343 |

*Source : Department of Tourism, MTI, Thimphu.*

TABLE 9.5
NUMBER OF TOURIST ARRIVALS BY MODE OF TRANSPORT, BHUTAN, 2000 TO JUNE 2004

| Mode of transport | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|
| By Air | 6,522 | 5,544 | 4,062 | 5,134 | 2,749 |
| By Road | 1,037 | 849 | 1,537 | 1,127 | 594 |
| Total arrivals | 7,559 | 6,393 | 5,599 | 6,261 | 3,343 |

*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.

TABLE 10.1
OVERALL BALANCE OF PAYMENTS ESTIMATES, BHUTAN, FY 2000/01 TO 2002/03

| Item | 2000/01 | 2001/02 | 2002/03 |
|---|---|---|---|
| A.Current Account | (370.1) | (297.0) | 2,937.1 |
| Exports, fob | 4615.8 | 4,994.8 | 5,405.90 |
| Imports, cif | (9,106.3) | (8,990.2) | (9,042.1) |
| Trade balance | (4,490.4) | (3,995.5) | (3,636.2) |
| Services*1 | (113.4) | (115.1) | (780.5) |
| Credit | 1,570.3 | 1,530.3 | 1272.0 |
| Debit | (1,683.7) | (1,645.4) | (2,052.5) |
| Income | 34.1 | (226.5) | (6,46.6) |
| Credit | 718.5 | 436.3 | 513.6 |
| Debit | (684.4) | (662.9) | (11,60.3) |
| Current Transfers | 4,199.7 | 4,040.0 | 8,000.50 |
| Credit | 6,083.6 | 6,222.0 | 10,180.70 |
| Debit | (1,883.9) | (2,181.90) | (21,80.3) |
| B.Capital and Financial Account | 1,428.6 | 2,947.4 | 4,645.50 |
| Foreign Direct Investment | .. | 101.2 | 117.9 |
| Portfolio Investment | (881.4) | .. | .. |
| Foreign Aid (Loans net)*2 | 2,310.0 | 2,846.2 | 4,527.50 |
| Other loans | .. | .. | .. |
| C.Net Errors and Omissions | (815.7) | (1,406.40) | (5,009.4) |
| D.Overall balance*3 | (242.77) | 1,243.99 | 2,573.50 |

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 (data 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.

Source : *Royal Monetary Authority Bhutan, Thimphu.*

TABLE 10.2
VALUE OF EXPORTS AND IMPORTS, BHUTAN, 2000 TO 2003

| Trade | 2000 | 2001 | 2002 | 200 |
|---|---|---|---|---|
| Export | 4,615.84 | 4,994.75 | 3,131.18 | 3,586.6 |
| India | 4,376.95 | 4,700.47 | 2,789.64 | 3,322.4 |
| Third Countries | 238.89 | 294.28 | 341.54 | 264.2 |
| Import | 7,875.00 | 8990.20 | 10,046.14 | 11,566.9 |
| India | 6,231.31 | 6,988.78 | 7,573.57 | 10,228.5 |
| Third Countries | 1,643.69 | 2,001.42 | 2,472.57 | 1,338.4 |
| Balance of trade | (3,259.16) | (3,995.45) | (6,914.96) | (7,980.29 |
| India | (1,854.36) | (2,288.31) | (4,783.93) | (6,906.12 |
| Third Countries | (1,404.80) | (1,707.14) | (2,131.03) | (1,074.17 |

Note:
Figures within bracket indicate deficit (-).

*Source : "Bhutan Trade Statistics 2003", Dept. of Revenue & Customs, MoF, Thimphu.*

TABLE 10.3 (a)
TOP TEN COMMODITIES OF EXPORTS, BHUTAN, 2003

| Commodity | Million Nu. | Share(%) | Rank |
|---|---|---|---|
| Parts of hydraulic turbines and water wheels including regulators | 930.94 | 22.63 | 1 |
| High Speed Diesel (HSD) | 813.29 | 19.77 | 2 |
| Other generating Sets | 696.12 | 16.92 | 3 |
| Rice | 459.35 | 11.17 | 4 |
| Beer made from malt | 277.24 | 6.74 | 5 |
| Cars, petrol below 1000 cc | 263.51 | 6.41 | 6 |
| Petrol | 255.04 | 6.20 | 7 |
| Other bars and rods | 143.93 | 3.50 | 8 |
| Parts and accessories of automatic regulating or controlling instruments and apparatus | 138.68 | 3.37 | 9 |
| With steel core | 135.58 | 3.30 | 10 |

*Source: "Bhutan Trade Statistics 2003", Dept. of Revenue & Customs, MoF, Thimphu.*



TABLE 10.3 (b)
TOP TEN COMMODITIES OF IMPORTS, BHUTAN, 2003

| Commodity | Million Nu. | Share(%) | Rank |
|---|---|---|---|
| Carbides, whether or not chemically defined of calcium | 640.80 | 24.03 | 1 |
| Ferro-silicon | 596.86 | 22.37 | 2 |
| Portland cement | 405.96 | 15.21 | 3 |
| Mineral & aerated water (with sugar & flavour ) | 225.55 | 8.45 | 4 |
| Particle board | 184.59 | 6.92 | 5 |
| Stranded wire, cables, plaited bands and the like, of copper, not electrically insulated. | 166.78 | 6.25 | 6 |
| Oranges | 145.82 | 5.46 | 7 |
| Gypsum; anhydrite | 103.92 | 3.89 | 8 |
| Mixtures of Juices | 99.96 | 3.75 | 9 |
| Textured yarn | 98.20 | 3.68 | 10 |

*Source: "Bhutan Trade Statistics 2003", Dept. of Revenue & Customs, MoF, Thimphu.*

TABLE 10.4
VALUE AND ITS PERCENTAGE SHARE OF IMPORTS FROM TEN SELECTED COUNTRIES, BHUTAN, 2003

| Country | Mill. Nu | Share(%) | Rank |
|---|---|---|---|
| India | 10228.52 | 91.3 | 1 |
| Japan | 200.20 | 1.8 | 2 |
| Singapore | 198.92 | 1.7 | 3 |
| Thailand | 148.78 | 1.3 | 4 |
| Korea South | 132.46 | 1.2 | 5 |
| Denmark | 72.44 | 0.6 | 6 |
| Germany | 69.60 | 0.6 | 7 |
| Italy | 55.34 | 0.5 | 8 |
| Sweden | 51.49 | 0.4 | 9 |
| Bangaladesh | 49.11 | 0.4 | 10 |

Note:

Source: "Bhutan Trade Statistics 2003".Dept. of Revenue &Customs, MoF, Thimphu.

TABLE 10.5
VALUE AND ITS PERCENTAGE SHARE OF EXPORTS FROM TEN SELECTED COUNTRIES, BHUTAN, 2003

| Country | Mill. Nu | Share(%) | Rank |
|---|---|---|---|
| India | 3322.40 | 92.70 | 1 |
| Bangladesh | 223.94 | 6.20 | 2 |
| Nepal | 14.20 | 0.40 | 3 |
| Swaziland | 5.46 | 0.20 | 4 |
| Japan | 5.17 | 0.10 | 5 |
| United States of America | 5.08 | 0.10 | 6 |
| United Kingdom | 4.54 | 0.10 | 7 |
| Netherlands | 2.01 | 0.10 | 8 |
| Singapore | 0.99 | 0.00 | 9 |
| Canada | 0.98 | 0.00 | 10 |

Note:

*Source: "Bhutan Trade Statistics 2003",Dept. of Revenue &Customs, MoF, Thimphu.*

TABLE 10.6
GROSS INTERNATIONAL RESERVES, BHUTAN, 2000/01 TO 2003/04

| Money reserves | 2000/01 | 2001/02 | 2002/03 | 2003/04 |
|---|---|---|---|---|
| | Millions of Indian Rupees | | | |
| 1.Rupee reserves | 3,567.3 | 3,663.9 | 3,330.2 | 4,362.8 |
| Royal Monetary Authority | 89.4 | 635.7 | 863.6 | 1,822.4 |
| Bank of Bhutan | 2,149.7 | 1,964.7 | 1,734.4 | 1,988.3 |
| Bhutan National Bank | 1,328.3 | 1,063.6 | 732.1 | 552.1 |
| | Millions of US Dollars | | | |
| 2.Convertible currency | 217.2 | 240.5 | 301.7 | 287.2 |
| Royal Monetary Authority (a) | 186.1 | 202.6 | 244.4 | 248.9 |
| Royal Government | .. | .. | .. | .. |
| Bank of Bhutan | 16.3 | 18.4 | 39.6 | 31.3 |
| Bhutan National Bank | 14.8 | 19.5 | 17.7 | 7.0 |
| Royal Insurance Corporation of Bhutan (RICB) | 0.00 | 0.1 | 0.2 | 0.0 |
| 3.Total reserves(1+2) | 293.1 | 315.4 | 373.0 | 383.1 |
| 4.Total reserves | 18.16 | 20.61 | 23.13 | 23.3 |
| Rupee reserves | 5.74 | 6.29 | 4.87 | 6.3 |
| Convertible currecny reserves | 74.54 | 70.61 | 201.72 | 187.0 |

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 : "Selected Economic Indicators June 2003", Royal Monetary Authority of Bhutan, Thimphu.*



TABLE 10.7
MONTHLY AVERAGE EXCHANGE RATES, NGULTRUMS PER US $, BHUTAN, 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 : *Royal Monetary Authority of Bhutan, 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 AND BANK OF BHUTAN, 2001 TO MAY 2004

(Nu. in Million)

| Item | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|
| Assets total | 16,312.7 | 20,252.8 | 20,233.9 | 21,154.0 |
| Reserves | 14,823.3 | 17,303.7 | 16,766.2 | 17,258.9 |
| Foreign Asset | 14,823.3 | 17,303.7 | 16,766.2 | 17,258.9 |
| Rupee | 3,405.1 | 4,567.0 | 3,575.9 | 3,245.5 |
| Others | 11,418.2 | 12,736.7 | 13,190.3 | 14,013.5 |
| Domestic Credit | 1,489.4 | 2,949.0 | 3,467.7 | 3,895.0 |
| Claims on Government. (Net) | (1,255.7) | (455.9) | (1,038.5) | (1,058.5) |
| Claims on Government Corps | 315.2 | 252.0 | 252.0 | 287.0 |
| Claims on Joint Corps. | 117.4 | 117.8 | 126.8 | 108.3 |
| Claims on private sector | 2,308.7 | 3,031.5 | 4,123.8 | 4,554.4 |
| Claims on NFIs(1) | 3.7 | 3.7 | 3.7 | 3.7 |
| Real estate | 0.0 | 0.0 | 0.0 | 0.0 |
| Liabilities total | 16,312.7 | 20,252.8 | 20,233.9 | 21,154.0 |
| General Insurance reserve funds | 0.0 | 0.0 | 0.0 | 0.0 |
| Life fund | 0.0 | 0.0 | 0.0 | 0.0 |
| Government employee provident funds | 0.0 | 0.0 | 0.0 | 0.0 |
| Group Insurance Fund | 0.0 | 0.0 | 0.0 | 0.0 |
| Credit from DMB | 0.0 | 0.0 | 0.0 | 0.0 |
| Unit Trust of Bhutan fund | 0.0 | 0.0 | 0.0 | 0.0 |
| Capital accounts | 417,088.5 | 1,472.1 | 1,909.0 | 1,839.3 |
| Other items(net) | 5,505.5 | 6,366.0 | 6,300.5 | 5,678.7 |

Notes:
(1)NFIs stands for Non Monetary Financial Institutions.

Source : *Royal Monetary Authority of Bhutan, Thimphu.*

TABLE 11.2
FINANCIAL DETAILS OF ROYAL INSURANCE CORPORATION OF BHUTAN, 2001 TO MAY 2004

(Nu. in Million)

| Item | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|
| Assets total | 1,077.4 | 1,259.1 | 1,468.7 | 1431.6 |
| Reserves | 30.6 | 44.2 | 131.7 | 73.5 |
| Foreign Asset | 55.4 | 8.7 | 4.9 | 4.1 |
| Rupee | 50.0 | 2.7 | 0.1 | 0.1 |
| Others | 5.4 | 6.0 | 4.8 | 4.0 |
| | | | | |
| Domestic Credit | 991.3 | 1,156.2 | 1,262.1 | 1334.0 |
| Claims on Government (Net) | 0.0 | 0.0 | 0.0 | 0.0 |
| Claims on Government Corps. | 17.3 | 18.2 | 25.1 | 25.1 |
| Claims on Joint Corps. | 0.0 | 0.0 | 0.0 | 0.0 |
| Claims on private sector | 974.0 | 1,138.0 | 1,237.0 | 1308.9 |
| 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 | 1431.6 |
| General Insurance reserve funds | 0.0 | 0.0 | 0.0 | 0.0 |
| Life fund | 44.1 | 55.8 | 71.6 | 77.0 |
| Government employee provident funds | 360.2 | 47.8 | 65.9 | 68.8 |
| Group Insurance Fund | 153.3 | 168.0 | 188.6 | 203.5 |
| Credit from DMB | 595.0 | 673.6 | 186.3 | 149.0 |
| Unit Trust of Bhutan fund | 0.0 | 0.0 | 0.0 | 0.0 |
| Capital accounts | 156.8 | 193.6 | 269.4 | 266.8 |
| Other items (net) | -232.0 | 120.0 | 236.9 | 266.4 |

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

*Source: Royal Monetary Authority of Bhutan, Thimphu.*



TABLE 11.3
FINANCIAL DETAILS OF BHUTAN NATIONAL BANK, 2000 TO MAY 2004

(Nu. in Million)

| Item | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|
| Asset total | 3,979.7 | 4,854.7 | 5,361.7 | 6073.6 |
| Reserves with RMA | 195.4 | 1,917.8 | 1,441.8 | 1992.8 |
| Foreign Asset | 2,053.6 | 1,115.2 | 966.0 | 819.8 |
| Rupee | 1,088.3 | 651.0 | 609.8 | 491.0 |
| Others | 965.3 | 464.3 | 356.2 | 328.8 |
| | | | | |
| Domestic Credit | 1,345.0 | 1,821.7 | 2,953.9 | 3261.0 |
| Claims on Government | 120.0 | 120.0 | 541.6 | 541.6 |
| Claims on Government Corps | 0.0 | 0.0 | 0.0 | 0.0 |
| Claims on Joint Corps. | 7.4 | 7.6 | 7.6 | 7.6 |
| Claims on private sector | 1,213.9 | 1,690.4 | 2,401.0 | 2708.1 |
| Claims on NBFIs | 3.7 | 3.7 | 3.7 | 3.7 |
| | | | | |
| Liabilities total | 3,979.7 | 4,854.7 | 5,361.7 | 6073.6 |
| Demand Deposit (Current and saving Deposits) | 683.4 | 650.4 | 873.8 | 353.8 |
| Time Deposit | 2,220.6 | 3,057.6 | 2,510.0 | 3340.5 |
| Foreign currency Deposit | 30.0 | 29.6 | 44.3 | |
| Central Govt. Deposit | 556.2 | 640.0 | 375.0 | 288.5 |
| Credit from RMA (b) | 0.0 | 0.0 | 0.0 | 0.0 |
| Capital account | 334.9 | 328.5 | 700.0 | 723.3 |
| Other items (net) | 154.7 | 148.6 | 207.6 | 130.8 |

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

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

| Item | 2001 | 2002 | 2003 | 20 |
|---|---|---|---|---|
| Asset total | 9,137.7 | 11,300.5 | 11,602.3 | 1234 |
| Reserve with RMA | 3,083.8 | 4,555.6 | 4,900.7 | 569 |
| Foreign asset | 3,027.0 | 4,189.8 | 3,937.9 | 373 |
| Rupee | 2,074.7 | 3,002.6 | 1,978.8 | 202 |
| Other | 952.3 | 1,187.2 | 1,959.1 | 171 |
| Claims on Government | 250.0 | 853.8 | 671.6 | 67 |
| Claims on Government's corpns. | 315.2 | 252.0 | 252.0 | 28 |
| Claims on joint's Corporations | 110.0 | 110.2 | 119.2 | 10 |
| Claims on private sector | 1,093.0 | 1,339.2 | 1,721.0 | 184 |
| Liabilities total | 8,531.5 | 11,300.5 | 11,602.3 | 1234 |
| Demand deposit (a) | 2,554.8 | 4,672.4 | 4,093.8 | 507 |
| Time deposit | 3,407.8 | 3,203.2 | 3,519.8 | 335 |
| Foreign currency deposits | 209.3 | 441.9 | 1,002.1 | 688 |
| Foreign liabilities | 973.4 | 0.0 | 0.0 | 73 |
| Rupee | 973.4 | 0.0 | 0.0 | 73 |
| Other | 0.0 | 0.0 | 0.0 | 0 |
| Government deposits | 731.6 | 775.5 | 924.9 | 792 |
| Credit from RMA | 0.0 | 0.0 | 0.0 | 0 |
| Capital account | 654.7 | 865.8 | 1,034.7 | 985 |
| Other items (net) | 606.2 | 1,341.8 | 1,027.1 | 700 |

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, BHUTAN, 2001 TO MAY 2004

| Industry | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|
| Agriculture | 192.1 | 214.5 | 220.7 | 230.0 |
| Bank of Bhutan | 4.8 | 6.3 | 6.2 | 4.8 |
| RICB | 0.4 | 0.3 | 0.1 | 0.0 |
| BDFC | 186.9 | 208.1 | 214.0 | 225.2 |
| Bhutan National Bank | 0.0 | 0.0 | 0.0 | 0.0 |
| Service and Tourism | 536.6 | 1,140.4 | 734.3 | 731.3 |
| Bank of Bhutan | 308.7 | 852.0 | 346.1 | 306.9 |
| RICB | 0.0 | 0.0 | 0.0 | 0.0 |
| BDFC | 175.1 | 214.9 | 269.1 | 298.2 |
| Bhutan National Bank | 52.8 | 73.6 | 119.1 | 126.2 |
| Industry, Manufacturing | 821.1 | 1,100.5 | 1,422.1 | 1,474.4 |
| Bank of Bhutan | 239.6 | 305.4 | 431.6 | 411.1 |
| RICB | 221.7 | 283.7 | 226.3 | 264.9 |
| BDFC | 143.2 | 186.2 | 243.9 | 241.7 |
| Bhutan National Bank | 216.6 | 325.2 | 520.4 | 556.7 |
| Building and construction | 900.2 | 1,348.3 | 1,878.2 | 2,175.9 |
| Bank of Bhutan | 184.3 | 286.7 | 350.2 | 377.1 |
| RICB | 322.9 | 360.9 | 350.2 | 519.0 |
| BDFC | 68.1 | 196.2 | 456.9 | 376.8 |
| Bhutan National Bank | 324.9 | 504.5 | 336.3 | 903.0 |
| Trade and commerce | 658.3 | 822.2 | 734.8 | 1,186.3 |
| Bank of Bhutan | 303.4 | 354.0 | 1,025.2 | 473.6 |
| RICB | 117.8 | 165.6 | 393.8 | 349.4 |
| BDFC | 47.1 | 67.4 | 326.8 | 42.3 |
| Bhutan National Bank | 190.0 | 235.1 | 36.6 | 321.0 |
| Transport | 711.8 | 743.3 | 267.9 | 734.9 |
| Bank of Bhutan | 400.3 | 416.3 | 794.8 | 467.7 |
| RICB | 155.7 | 139.2 | 452.2 | 96.6 |
| BDFC | 24.0 | 12.5 | 107.0 | 12.5 |
| Bhutan National Bank | 131.8 | 175.4 | 10.8 | 158.1 |
| Personal and other loans | 525.3 | 631.3 | 224.9 | 781.6 |
| Bank of Bhutan | 90.2 | 89.7 | 697.5 | 162.6 |
| RICB | 137.3 | 163.0 | 104.0 | 53.5 |
| BDFC | 5.5 | 4.0 | 54.6 | 3.1 |
| Bhutan National Bank | 292.3 | 374.6 | 535.5 | 562.3 |
| Total | 4,345.3 | 6,000.4 | 6,772.8 | 7,314.3 |

*Source: Royal Monetary Authority of Bhutan, Thimphu.*

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

| Type of deposit | 2000 | 2001 | 2002 | 2003* | 2004 |
|---|---|---|---|---|---|
| Savings | 5.0% | 5.0% | 5.0% | 5.0% | 4.5-5.0% |
| Fixed deposit | | | | | |
| a) 3 months to less than 1year | 5.5% | 5.5% | 4.0% | 5.5% | 4.5-5.5% |
| b) 1 year to less than 1 year | 7.0% | 7.0% | 5.5% | 6.0% | 6.0% |
| c) 2 years to less than 3 years | 9.0% | 9.0% | 7.5% | 6.5-7.5% | 6.0-6.5% |
| d) More than 3 years | 10.0% | 10.0% | 8.5% | 7.0-8.5% | 7.0-8.5% |

*Till Septeber 2003

*Source: Royal Monetary Authority of Bhutan, Thimphu.*

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

| Sector | 2002 | | 2003* | | 2004 | |
|---|---|---|---|---|---|---|
| | 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 | 1 | 13-15 | 1 |
| General trade | 15-15.5 | 3 | 15 | 3 | 15 | 3 |
| Buses and trucks | 13-16 | 5 | 13-16 | 5 | 13 | 5 |
| Other passanger vehicles | 15.5-16 | 5 | 12-13 | 5 | 15-16 | 5 |
| Agriculture and Livestock | 13.0 | 10 | 3-15 | 10 | 13-15 | 10 |
| Manufacturing Industry | 13.0 | 10 | 12 | 10 | 12-13 | 10 |
| Service Industries(b) | 13.0 | 5 | 12-13 | 5 | 12-13 | 5 |
| Personal loans | 15-16 | 5 | 15-16 | 5 | 15-16 | 5 |
| Equity finance | 13-14 | 5 | 12-13 | 5 | 12-13 | 5 |
| Working capital | 13-15.5 | .. | 13-15 | .. | 15 | .. |
| Housing | 14.0 | 20 | 13 | 20 | 10-13 | 20 |

Notes:
(a)Rates applicable since August 22, 1994.
(b)includes tourism, contract services, and other service activities.
*Till Septeber 2003
*Source: Royal Monetary Authority of Bhutan, Thimphu.*



TABLE 11.10
NUMBER OF SHAREHOLDERS, BHUTAN, 2000 TO JUNE 2004

| Company | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|
| Bhutan Beverages & Company Ltd. | .. | .. | 4,820.0 | 4,443.0 | 4,435.0 |
| Bhutan Board Products Ltd. | 489.0 | 489.0 | 489.0 | 489.0 | 489.0 |
| Bhutan Carbide & Chemical Ltd. | 266.0 | 266.0 | 267.0 | 267.0 | 267.0 |
| Bhutan Dairy Ltd. | 96.0 | 96.0 | 96.0 | 96.0 | 96.0 |
| Bhutan Ferro Alloys Ltd. | 42.0 | 37.0 | 37.0 | 40.0 | 49.0 |
| Bhutan National Bank | 407.0 | 405.0 | 409.0 | 5,451.0 | 4,978.0 |
| Bhutan Polimers Company Ltd. | 78.0 | 78.0 | 95.0 | 104.0 | 104.0 |
| Bhutan Tourism Corpn. Ltd | 89.0 | 89.0 | 83.0 | 83.0 | 80.0 |
| Druk Petroleum Corpn. Ltd. | 80.0 | 80.0 | 80.0 | 79.0 | 71.0 |
| Druk plaster & Chemicals Ltd. | .. | 203.0 | 203.0 | 203.0 | 203.0 |
| Druk Satair Corpn. Ltd. | 1,201.0 | 1,201.0 | 1,200.0 | 1,186.0 | 1,173.0 |
| Druk Stone & Minerals Ltd. | 64.0 | 64.0 | 64.0 | 64.0 | 64.0 |
| Penden Cement Authority Ltd. | 1,630.0 | 1,616.0 | 1,620.0 | 1,520.0 | 1,518.0 |
| Royal Insurance Corpn. of Bhutan | 2,543.0 | 2,056.0 | 1,871.0 | 1,715.0 | 1,688.0 |
| State Trading Corpn. of Bhutan | 133.0 | 133.0 | 127.0 | 127.0 | 127.0 |
| Total | 7,118.0 | 6,813.0 | 11,461.0 | 15,867.0 | 15,342.0 |

*Source: Royal Securities Exchange of Bhutan Ltd., Thimphu.*

TABLE 11.11(a)
MARKET INFORMATION AT THE END OF DECEMBER, BHUTAN, 2003

| Company | Price per share (Nu) | Paid-up Shares | Market Capitalization (Nu) |
|---|---|---|---|
| Bhutan Beverages Company Ltd. | 320 | 1,150,000 | 368,000,000 |
| Bhutan Board Products Ltd. | 89 | 1,400,014 | 124,601,246 |
| Bhutan Carbide Chemicals Ltd. | 5,000 | 100,000 | 500,000,000 |
| Bhutan Dairy Ltd. | 100 | 25,000 | 2,500,000 |
| Bhutan Ferro Alloys Ltd. | 140 | 1,500,000 | 210,000,000 |
| Bhutan National Bank | 550 | 1,190,080 | 654,544,000 |
| Bhutan Polimers Company Ltd. | 250 | 249,334 | 62,333,500 |
| Bhutan Tourism Corpn. Ltd. | 1,000 | 20,940 | 20,940,000 |
| Druk Petroleum Corpn. Ltd. | 100 | 62,370 | 6,237,000 |
| Druk plaster & Chemicals Ltd. | 100 | 100,000 | 10,000,000 |
| Druk Satair Corpn. Ltd. | 100 | 304,032 | 30,403,200 |
| Druk Stone & Minerals Export Co. Ltd. | 100 | 37,702 | 3,770,200 |
| Penden Cement Authority Ltd. | 5,200 | 226,667 | 1,178,668,400 |
| Royal Insurance Corpn. of Bhutan Ltd. | 3,500 | 96,000 | 336,000,000 |
| State Trading Corpn. of Bhutan Ltd. | 130 | 200,000 | 26,000,000 |
| Total | 16,679 | 6,662,139 | 3,533,997,546 |

*Source: Royal Securities Exchange of Bhutan Ltd., Thimphu.*



TABLE 11.11(b)
MARKET INFORMATION, BHUTAN, AT THE END OF JUNE 2004

| Company | Price per share (Nu.) | Paid-up Shares | Market Capitalization (Nu.) |
|---|---|---|---|
| Bhutan Beverages Company Ltd. | 250 | 1,150,000 | 287,500,000 |
| Bhutan Board Products Ltd. | 89 | 1,400,014 | 124,601,246 |
| Bhutan Carbide & Chemicals Ltd. | 5,000 | 100,000 | 500,000,000 |
| Bhutan Dairy Ltd. | 100 | 25,000 | 2,500,000 |
| Bhutan Ferro Alloys Ltd. | 510 | 1,500,000 | 765,000,000 |
| Bhutan National Bank | 650 | 1,190,080 | 773,552,000 |
| Bhutan Polimers Company Ltd. | 240 | 249,334 | 59,840,160 |
| Bhutan Tourism Corpn. Ltd | 1,000 | 20,940 | 20,940,000 |
| Druk Petroleum Corpn. Ltd. | 100 | 62,370 | 6,237,000 |
| Druk plaster & Chemicals Ltd. | 100 | 100,000 | 10,000,000 |
| Druk Satair Corpn. Ltd. | 400 | 304,032 | 121,612,800 |
| Druk Stones & Minerals Export Co. Ltd. | 100 | 37,702 | 3,770,200 |
| Penden Cement Authority Ltd. | 5,500 | 226,667 | 1,246,668,500 |
| Royal Insurance Corpn. of Bhutan Ltd. | 3,650 | 96,000 | 350,400,000 |
| State Trading Corpn. of Bhutan Ltd. | 190 | 200,000 | 38,000,000 |
| Total | 17,879 | 6,662,139 | 4,310,621,906 |

*Source: Royal Securities Exchange of Bhutan, Thimphu.*

TABLE 11.12
VOLUME TRADED, BHUTAN, 2000 TO JUNE 2004

| Company | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|
| Bhutan Beverages Company Ltd. | .. | .. | 1160153 | 27,346 | 1,789 |
| Bhutan Board Products Ltd. | 5,000 | .. | 230 | .. | .. |
| Bhutan Carbide & Chemicals Ltd. | 4 | 58 | .. | 6 | .. |
| Bhutan Dairy Ltd. | .. | .. | .. | .. | .. |
| Bhutan Ferro Alloys Ltd. | 3,500 | 24,750 | .. | .. | 100 |
| Bhutan National Bank | 3,773 | 124,119 | 2,898 | 607,369 | 31,092 |
| Bhutan Polimers Company Ltd. | 58,719 | .. | 57,185 | 1,100 | 720 |
| Bhutan Tourism Corpn. Ltd | .. | .. | 20 | 17 | 101 |
| Druk Petroleum Corpn. Ltd. | .. | .. | .. | .. | 53,070 |
| Druk plaster & Chemicals Ltd. | .. | 30,000 | .. | .. | .. |
| Druk Satair Corpn. Ltd. | 23 | 304,032 | .. | 27 | 118,597 |
| Druk Stone & Minerals Ltd. | .. | 4,800 | .. | .. | .. |
| Penden Cement Authority Ltd. | 3,977 | 1,393 | 2,974 | 679 | 67 |
| Royal Insurance Corpn. of Bhutan Ltd. | 12,141 | 2,021 | 1,583 | 82,012 | 254 |
| State Trading Corpn. of Bhutan | 10,000 | 10 | .. | .. | 370 |
| Total | 97,137 | 491,183 | 1,225,043 | 718,556 | 206,160 |

*Source: Royal Securities Exchange of Bhutan, Thimphu.*



TABLE 11.13
TRADED VALUES, BHUTAN, DECEMBER 2000 TO JUNE 2004

(Nu.in Million)

| Company | Sector | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|
| Bhutan Beverages Company Ltd. | Primary | .. | .. | 115.000 | .. | .. |
| | Secondary | .. | .. | 1.020 | 6.740 | 0.513 |
| Bhutan Board Products Ltd. | Primary | .. | .. | .. | .. | .. |
| | Secondary | 0.520 | .. | 0.023 | .. | .. |
| 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 | .. | .. | 0.051 |
| Bhutan National Bank | Primary | .. | .. | .. | 327.270 | .. |
| | Secondary | 2.060 | 60.160 | 3.830 | 6.930 | 21.335 |
| Bhutan Polimers Company Ltd. | Primary | 5.870 | .. | .. | .. | .. |
| | Secondary | .. | .. | | 0.330 | 0.173 |
| Bhutan Tourism Corpn. Ltd | Primary | .. | .. | .. | .. | .. |
| | Secondary | 0.470 | .. | 0.030 | 0.020 | 0.119 |
| Druk Petroleum Corpn. Ltd. | Primary | .. | .. | .. | .. | .. |
| | Secondary | .. | .. | | .. | 5.307 |
| Druk plaster & Chemicals Ltd. | Primary | .. | 3.000 | .. | .. | .. |
| | Secondary | .. | .. | .. | .. | .. |
| Druk Satair Corpn. Ltd. | Primary | .. | 30.400 | .. | .. | .. |
| | Secondary | 0.002 | .. | .. | .. | 47.039 |
| Druk Stones & Minerals Export Co. Ltd. | Primary | .. | .. | .. | .. | .. |
| | Secondary | .. | 0.480 | .. | .. | .. |
| Penden Cement Authority Ltd. | Primary | .. | .. | .. | .. | .. |
| | Secondary | 13.960 | 5.880 | 3.650 | 3.400 | 0.353 |
| Royal Insurance Corpn. of Bhutan Ltd. | Primary | 24.540 | .. | .. | 81.360 | .. |
| | Secondary | 7.140 | 8.290 | 6.620 | 2.580 | 0.985 |
| State Trading Corpn. of Bhutan | Primary | .. | .. | .. | .. | .. |
| | Secondary | .. | .. | .. | .. | 0.055 |
| Total | | 54.578 | 111.966 | 153.453 | 428.660 | 75.930 |

*Source: Royal Securities Exchange of Bhutan, Thimphu.*

TABLE 11.12
VOLUME TRADED, BHUTAN, 2000 TO JUNE 2004

| Company | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|
| Bhutan Beverages Company Ltd. | .. | .. | 1160153 | 27,346 | 1,789 |
| Bhutan Board Products Ltd. | 5,000 | .. | 230 | .. | - |
| Bhutan Carbide & Chemicals Ltd. | 4 | 58 | .. | 6 | - |
| Bhutan Dairy Ltd. | .. | .. | .. | .. | - |
| Bhutan Ferro Alloys Ltd. | 3,500 | 24,750 | .. | .. | 100 |
| Bhutan National Bank | 3,773 | 124,119 | 2,898 | 607,369 | 31,092 |
| Bhutan Polimers Company Ltd. | 58,719 | .. | 57,185 | 1,100 | 720 |
| Bhutan Tourism Corpn. Ltd | .. | .. | 20 | 17 | 101 |
| Druk Petroleum Corpn. Ltd. | .. | .. | .. | .. | 53,070 |
| Druk plaster & Chemicals Ltd. | .. | 30,000 | .. | .. | - |
| Druk Satair Corpn. Ltd. | 23 | 304,032 | .. | 27 | 118,597 |
| Druk Stone & Minerals Ltd. | .. | 4,800 | .. | .. | - |
| Penden Cement Authority Ltd. | 3,977 | 1,393 | 2,974 | 679 | 67 |
| Royal Insurance Corpn. of Bhutan Ltd. | 12,141 | 2,021 | 1,583 | 82,012 | 254 |
| State Trading Corpn. of Bhutan | 10,000 | 10 | .. | .. | 370 |
| Total | 97,137 | 491,183 | 1,225,043 | 718,556 | 206,160 |

*Source: Royal Securities Exchange of Bhutan, Thimphu.*



TABLE 11.13
TRADED VALUES, BHUTAN, DECEMBER 2000 TO JUNE 2004

(Nu.in Million)

| Company | Sector | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|
| Bhutan Beverages Company Ltd. | Primary | .. | .. | 115.000 | .. | .. |
| | Secondary | .. | .. | 1.020 | 6.740 | 0.513 |
| Bhutan Board Products Ltd. | Primary | .. | .. | .. | .. | .. |
| | Secondary | 0.520 | .. | 0.023 | .. | .. |
| 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 | .. | .. | 0.051 |
| Bhutan National Bank | Primary | .. | .. | .. | 327.270 | .. |
| | Secondary | 2.060 | 60.160 | 3.830 | 6.930 | 21.335 |
| Bhutan Polimers Company Ltd. | Primary | 5.870 | .. | .. | .. | .. |
| | Secondary | .. | .. | | 0.330 | 0.173 |
| Bhutan Tourism Corpn. Ltd | Primary | .. | .. | .. | .. | .. |
| | Secondary | 0.470 | .. | 0.030 | 0.020 | 0.119 |
| Druk Petroleum Corpn. Ltd. | Primary | .. | .. | .. | .. | .. |
| | Secondary | .. | .. | | .. | 5.307 |
| Druk plaster & Chemicals Ltd. | Primary | .. | 3.000 | .. | .. | .. |
| | Secondary | .. | .. | .. | .. | .. |
| Druk Satair Corpn. Ltd. | Primary | .. | 30.400 | .. | .. | .. |
| | Secondary | 0.002 | .. | .. | .. | 47.039 |
| Druk Stones & Minerals Export Co. Ltd. | Primary | .. | .. | .. | .. | .. |
| | Secondary | .. | 0.480 | .. | .. | .. |
| Penden Cement Authority Ltd. | Primary | .. | .. | .. | .. | .. |
| | Secondary | 13.960 | 5.880 | 3.650 | 3.400 | 0.353 |
| Royal Insurance Corpn. of Bhutan Ltd. | Primary | 24.540 | .. | .. | 81.360 | .. |
| | Secondary | 7.140 | 8.290 | 6.620 | 2.580 | 0.985 |
| State Trading Corpn. of Bhutan | Primary | .. | .. | .. | .. | .. |
| | Secondary | .. | .. | .. | .. | 0.055 |
| Total | | 54.578 | 111.966 | 153.453 | 428.660 | 75.930 |

*Source: Royal Securities Exchange of Bhutan, Thimphu.*

## 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, 1999/00 TO 2003/04

(Nu. in Million)

| Organization | 1999/00 (actual) | 2000/01 (actual) | 2001/02 (actual) | 2002/03 (actual) | 2003/2004 (revised) |
|---|---|---|---|---|---|
| Ministry | 2,468.0 | 2,293.8 | 2,800.7 | 2,769.5 | 3601.214 |
| Agriculture | 331.1 | 395.3 | 420.9 | 455.3 | 603.5 |
| Communications(a) | 247.5 | 216.5 | 251.1 | 263.3 | .. |
| Education | .. | .. | .. | .. | 472.151 |
| Finance | 504.6 | 207.7 | 551.9 | 624.8 | 841.6 |
| Foreign Affairs | 177.8 | 191.2 | 196.8 | 215.4 | 224 |
| Health & Education(a) | 546.9 | 591.3 | 616.6 | 680.1 | .. |
| Health | .. | .. | .. | .. | 485.992 |
| Home Affairs | 375.1 | 376.9 | 399.7 | 424.3 | 470.0 |
| Information & communications | | | | | 62.5 |
| Labour & Human Resources | .. | .. | .. | .. | 95.411 |
| Planning(a) | 12.5 | 10.9 | .. | .. | .. |
| Trade and Industry | 272.6 | 304.0 | 363.7 | 106.3 | 109.2 |
| Works & Human Settlement | | | | | 236.9 |
| Non-ministerial organization | | | | | |
| His Majesty's Secretariat | 9.9 | 11.4 | 12.4 | 12.2 | 13.5 |
| National Assembly Secretariat | 13.4 | 12.2 | 13.4 | 19.0 | 20.7 |
| Royal Advisory Council | 7.7 | 8.2 | 9.8 | 7.9 | 7.3 |
| Cabinet Secretarait | n.a | n.a | 2.7 | 5.8 | 4.8 |
| Royal Civil Service Commission | 17.4 | 10.5 | 10.0 | 13.3 | 11.5 |
| Judiciary | 46.6 | 53.0 | 62.6 | 60.1 | 65.4 |
| Royal Audit Authority | 23.2 | 27.4 | 29.9 | 31.1 | 40.4 |
| Bhutan Olympic Committee | 18.0 | 20.5 | 23.2 | 10.7 | 9.8 |
| Centre for Bhutan Studies | n.a | n.a | 4.3 | 4.6 | 8.9 |
| Council for Religious Affairs | n.a | n.a | 118.8 | 133.4 | 150.5 |
| Department of legal Affairs | n.a | n.a | 6.8 | 8.5 | 12.9 |
| Druk Air Corporation | n.a | 29.0 | n.a | n.a | na |
| Dzongkhag Development Commission | 6.4 | 10.2 | 10.0 | 7.7 | na |
| National Commission for Cultural affaris | n.a | n.a | 30.9 | 32.5 | 50.2 |
| National Employment Board | n.a | n.a | 6.4 | n.a | na |
| National Environment Commission | n.a | n.a | 10.0 | 11.6 | 16.6 |
| National Technical Traning Authority | n.a | n.a | 51.0 | 60.8 | na |
| National Women's Association | n.a | 0.4 | n.a | n.a | na |
| Planning Commission Secretarait | n.a | n.a | 12.3 | 17.5 | na |
| Royal Institute of Management | n.a | n.a | 23.1 | 21.3 | 24.6 |
| Royal University of Bhutan | n.a | n.a | n.a | n.a | 3.4 |
| Special Commission | 23.6 | 31.4 | n.a | n.a | na |
| Tourism Corporation | n.a | 5.0 | n.a | n.a | na |
| Urban Development Corporation | n.a | n.a | n.a | n.a | na |

Contd...

TABLE 12.1 (contd..)
CURRENT BUDGETARY EXPENDITURE OF THE GOVERNMENT BY MINISTRY/AGEN
BHUTAN, 1999/00 TO 2003/04

(Nu. in Million

| Organization | 1999/00 (actual) | 2000/01 (actual) | 2001/02 (actual) | 2002/03 (actual) | 2003/0 (revise |
|---|---|---|---|---|---|
| Punakha Dzong Renovation Project | n.a | n.a | n.a | 3.6 | 2 |
| Dzongkhag Administration, Chhukha | 55.8 | 91.9 | .. | 114.3 | 144 |
| Dzongkhag Administration, Tsirang | 15.5 | 29.9 | .. | 36.4 | 44 |
| Dzongkhag Administration, Thimphu | 97.7 | 117.7 | 131.6 | 141.0 | 146 |
| Dzongkhags Administration | 678.6 | n.a | 1,229.7 | 1,318.7 | 1,476 |
| Total current expenditure | 3,702.1 | 4,435.6 | 4,467.9 | 4,580.9 | 5,574 |

Note:
(a)erstwhile ministries

*Source : Department of Budget & Accounts, MoF, Thimphu.*

TABLE 12.2
BUDGETARY DEVELOPMENT EXPENDITURE OF THE GOVERNMENT BY MINISTRY/NON
MINISTERAIL ORGANIZATION, BHUTAN, 1999/00 TO 2002/03

(Nu.in Million

| Organization | 1999/00 (actual) | 2000/01 (actual) | 2001/02 (actual) | 2002/03 (actual) | 2003/200 (revised |
|---|---|---|---|---|---|
| Ministry | 3,425.70 | n.a | 4,350.37 | 4,471.61 | 5,432.4 |
| Agriculture | 289.20 | 319.33 | 423.73 | 658.45 | 825.1 |
| Communications(a) | 927.50 | 1,034.70 | 1,021.31 | 1,061.80 | 553.4 |
| Education | | | | | 417.0 |
| Finance | 1,406.00 | 207.67 | 472.53 | 943.30 | 77.7 |
| Foreign Affairs | 15.60 | 258.50 | 29.37 | 141.81 | 345.7 |
| Health | | | | | |
| Health & Education(a) | n.a | n.a | 797.27 | 524.20 | 160.6 |
| Home Affairs | 102.90 | 86.39 | 71.74 | 97.30 | 94.5 |
| Information & Communications | | | | | .. |
| Planning(a) | 5.20 | 2.80 | .. | .. | 210.1 |
| Labour & Human Resources | | | | | 963.0 |
| Trade and Industry | 678.30 | 3,118.08 | 1,534.43 | 1,044.75 | 1,784.8 |
| Works & Human Settlement | | | | | |
| Non-ministerial organization | | | | | 1.5 |
| His Majesty's Secretariat | n.a | n.a | 0.69 | 0.82 | 19.7 |
| National Assembly | 9.70 | 3.13 | 5.24 | 1.48 | 0.2 |
| Royal Advisory Council | 1.30 | 0.05 | 1.92 | 0.64 | 1.4 |
| Cabinet Secretarait | n.a | n.a | 0.09 | 0.29 | |

Contd..



TABLE 12.2(Contd...)
BUDGETARY DEVELOPMENT EXPENDITURE OF THE GOVERNMENT BY MINISTRY/NON-MINISTERIAL ORGANIZATION, BHUTAN, 1999/00 TO 2002/03

(Nu.in Million)

| Organization | 1999/00 (actual) | 2000/01 (actual) | 2001/02 (actual) | 2002/03 (actual) | 2003/2004 (revised) |
|---|---|---|---|---|---|
| Royal Civil Service Commission | 99.30 | 101.33 | 120.28 | 141.30 | 122.79 |
| Judiciary | 13.50 | 34.47 | 15.53 | 17.74 | 14.79 |
| Royal Audit Authority | 2.80 | 11.90 | 9.91 | 18.63 | 11.41 |
| Bhutan Olympic Committee | 0.80 | 2.16 | 2.97 | 0.05 | 0.1 |
| Centre for Bhutan Studies | n.a | n.a | 1.18 | 0.66 | 1.14 |
| Coucil of for Religious Affairs | n.a | n.a | 14.68 | 24.51 | 45.37 |
| Office of Legal Affairs | n.a | n.a | 5.29 | 2.01 | 14.27 |
| Dzongkha Dev. Commission | 0.50 | 14.061 | 13.91 | 2.46 | na |
| Nataional Women's Association | n.a | 1.34 | n.a | n.a | na |
| National Commission for Cultural Affairs | n.a | n.a | 19.28 | 12.48 | 43.30 |
| National Employment Board | n.a | n.a | 1.51 | n.a | na |
| National Environment Commissio | 6.20 | n.a | 14.31 | 15.25 | 33.11 |
| National Technical Training Authority | n.a | n.a | 34.45 | 60.09 | na |
| planning Commission Secretarait | n.a | n.a | 9.76 | 16.53 | na |
| Royal Institute of Management | n.a | n.a | 6.09 | 11.77 | 28.41 |
| Royal Secretariat (HM) | 9.90 | 0.20 | n.a | n.a | na |
| Royal University of Bhutan | n.a | n.a | n.a | n.a | 2.88 |
| SAARC Conference complex | n.a | n.a | n.a | 7,759.88 | na |
| Social And Culture Division | n.a | 13.90 | n.a | n.a | na |
| Special Commission | 20.20 | 13.90 | n.a | n.a | 43.30 |
| Urban Development Corporatio | n.a | n.a | n.a | n.a | na |
| Punakha Dz. Renovation Project | 87.60 | 67.97 | 81.01 | 126.62 | 11.03 |
| Dzongkhag Administration, Thimphu | 40.30 | 70.60 | 60.88 | 49.90 | 38.69 |
| Dzongkhags Administration | n.a | n.a | 604.09 | 375.08 | 562.60 |
| Total development expenses (c) | 4,632.10 | | 5,312.55 | 5,309.58 | 6,570.23 |

Note:
(a)erstwhile ministries

*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 | 2,192.17 | 2,675.55 | 2,928.30 | 3,350.31 |
| Direct tax | 1,524.65 | 1,626.11 | 1,616.25 | 1,936.52 |
| Business Income Tax | 1,257.67 | 317.20 | 350.20 | 377.75 |
| Corporate Income Tax | 919.54 | 987.83 | 922.49 | 1,150.82 |
| 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 | 1,413.80 |
| 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 | 1,864.45 |
| 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 | 1,417.82 |
| 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 | 5,214.76 |

*Source : Department of Budget & 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 | 3,711.0 | 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 |
| Lending(net) | -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 & 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 that 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.

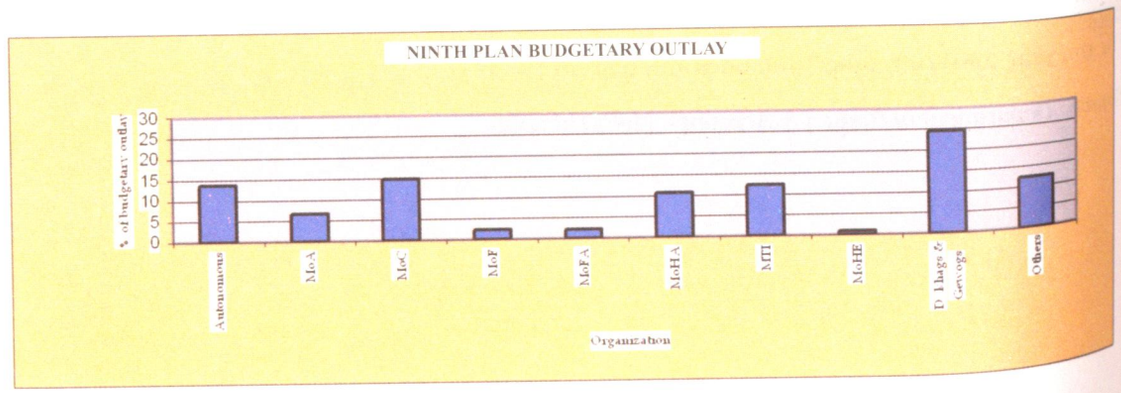





TABLE 13.1
NINTH PLAN BUDGETARY OUTLAY AND ALLOCATION, BHUTAN, 2002-2007

(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 TO NINTH PLAN, BHUTAN

(Nu.in Million)

| Organization | Fifth Plan | Sixth Plan | Seventh Plan | Eighth Plan | Ninth Plan |
|---|---|---|---|---|---|
| Autonomous Agency/Non-ministerail org. | .. | .. | .. | .. | 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 Affairs | 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 TO 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 management | 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, 1997- 2002

(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 14.1
GROSS AND NET DOMESTIC PRODUCT AND ITS RELATED AGGREGATES, BHUTAN, 1999 TO 2003

(Nu. in Million)

| Activity | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| In current prices | | | | | |
| Net Domestic Product at factor cost | 15,170 | 17,464 | 20,002 | 22,365 | 24,816 |
| Consumption of fixed capital | 1,831 | 2,056 | 2,371 | 2,617 | 2,929 |
| Gross Domestic Product at factor cost | 17,001 | 19,521 | 22,373 | 24,982 | 27,745 |
| Indirect taxes less subsidies | 621 | 583 | 910 | 1,238 | 797 |
| Gross Domestic Product at factor cost | 17,622 | 20,104 | 23,283 | 26,220 | 28,542 |
| Net factor income from abroad | -3,082.8 | -1,980 | -2,697 | -3,328 | -2,538 |
| Gross National Product at market prices | 14,539 | 18,124 | 20,586 | 22,892 | 26,004 |
| Net National Product at market prices. | 12,708 | 16,067 | 18,215 | 20,275 | 23,075 |
| In 2000 prices | | | | | |
| Net Domestic Product at factor cost | 15,909 | 17,464 | 18,964 | 20,349 | 21,737 |
| Add consumption of fixed capital | 1,915 | 2,056 | 2,238 | 2,358 | 2,525 |
| Gross Domestic Product at factor cost | 17,824 | 19,521 | 21,202 | 22,707 | 24,262 |

*Source: National Statistical Bureau, Thimphu.*



TABLE 14.2
GROSS DOMESTIC PRODUCT AT FACTOR COST IN CURRENT PRICES, BHUTAN, 1999 TO 2003

(Nu. in Million)

| Activity | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| Agriculture, livestock, forestry & fishery | 5,048 | 5,569 | 6,037 | 6,909 | 7,401 |
| Agriculture proper | 2,291 | 2,516 | 2,682 | 3,001 | 3,196 |
| Livestock production | 1,607 | 1,747 | 1,930 | 2,032 | 2,210 |
| Forestry & logging | 1,150 | 1,305 | 1,425 | 1,877 | 1,995 |
| Fishing | .. | .. | .. | .. | .. |
| Mining & quarrying | 360 | 301 | 404 | 440 | 581 |
| Manufacturing | 1,557 | 1,659 | 1,889 | 1,937 | 2,129 |
| Electricity, water & gas | 2,313 | 2,475 | 2,674 | 2,963 | 3,420 |
| Construction | 2,056 | 3,043 | 4,093 | 5,061 | 5,616 |
| Wholesale & retail trade, Hotel & restaurant | 1,598 | 1,834 | 2,091 | 2,106 | 2,500 |
| Wholesale and retail trade | 1,346 | 1,575 | 1,806 | 1,895 | 2,278 |
| Hotel and restaurant | 252 | 259 | 285 | 210 | 223 |
| Transport, storage & communications | 1,637 | 1,881 | 2,261 | 2,559 | 2,812 |
| Finance, insurance & real estate | 986 | 1,196 | 1,324 | 1,248 | 1,440 |
| Finance | 621 | 743 | 816 | 662 | 781 |
| Real estate & dwelling | 364 | 453 | 508 | 586 | 659 |
| Community, social & services (govt.) | 1,641 | 1,773 | 1,950 | 2,080 | 2,302 |
| Less: Imputed bank service charges | 193 | 210 | 350 | 321 | 456 |
| Gross Domestic product | 17,001 | 19,521 | 22,373 | 24,982 | 27,745 |
| Growth rate of GDP (%) | 16 | 15 | 15 | 12 | 11 |

Source: *National Statistical Bureau, Thimphu.*

TABLE 14.3
SECTOR-WISE GROWTH RATE IN CURRENT PRICES, BHUTAN, 1999 TO 2003

| Sectors | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| Agriculture, livestock, forestry & fishery | 7.3 | 10.3 | 8.4 | 14.4 | 7.1 |
| Agriculture proper | 7.9 | 9.8 | 6.6 | 11.9 | 6.5 |
| Livestock production | 8.2 | 8.7 | 10.4 | 5.3 | 8.8 |
| Forestry & logging | 5.1 | 13.5 | 9.2 | 31.7 | 6.3 |
| Fishing | .. | .. | .. | .. | .. |
| Mining & quarrying | 15.1 | -16.2 | 33.9 | 8.9 | 32.1 |
| Manufacturing | 8.7 | 6.6 | 13.9 | 2.5 | 9.9 |
| Electricity, water & gas | 29.3 | 7.0 | 8.0 | 10.8 | 15.4 |
| Construction | 39.3 | 48.0 | 34.5 | 23.6 | 11.0 |
| Wholesale & retail trade, Hotel & restaurant | 10.3 | 14.8 | 14.0 | 0.7 | 18.8 |
| Wholesale and retail trade | 9.4 | 17.0 | 14.7 | 4.9 | 20.2 |
| Hotel and restaurant | 15.1 | 3.0 | 9.9 | -26.2 | 6.0 |
| Transport, storage & communications | 32.7 | 14.9 | 20.2 | 13.2 | 9.9 |
| Finance, insurance & real estate | 0.2 | 21.3 | 10.7 | -5.7 | 15.4 |
| Finance | -7.4 | 19.5 | 9.9 | -18.9 | 18.0 |
| Real estate & dwelling | 16.5 | 24.3 | 12.1 | 15.4 | 12.4 |
| Community, social & services (govt.) | 20.2 | 8.1 | 10.0 | 6.7 | 10.7 |
| Less: Imputed bank service charges | 33.9 | 9.1 | 66.6 | -8.5 | 42.1 |
| Growth rate of GDP (%) | 16.4 | 14.8 | 14.6 | 11.7 | 11.1 |

*Source: National Statistical Bureau, Thimphu.*



TABLE 14.4
SECTORAL PERCENTAGE SHARE TO GDP IN CURRENT PRICES, BHUTAN, 1999 TO 2003

| Sector | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| Agriculture, livestock, forestry & fishery | 29.7 | 28.5 | 27.0 | 27.7 | 26.7 |
| Agriculture proper | 13.5 | 12.9 | 12.0 | 12.0 | 11.5 |
| Livestock production | 9.5 | 9.0 | 8.6 | 8.1 | 8.0 |
| Forestry & logging | 6.8 | 6.7 | 6.4 | 7.5 | 7.2 |
| Fishing | .. | .. | .. | .. | .. |
| Mining & quarrying | 2.1 | 1.5 | 1.8 | 1.8 | 2.1 |
| Manufacturing | 9.2 | 8.5 | 8.4 | 7.8 | 7.7 |
| Electricity, water & gas | 13.6 | 12.7 | 12.0 | 11.9 | 12.3 |
| Construction | 12.1 | 15.6 | 18.3 | 20.3 | 20.2 |
| Wholesale & retail trade, Hotel & restaurant | 9.4 | 9.4 | 9.3 | 8.4 | 9.0 |
| Wholesale and retail trade | 7.9 | 8.1 | 8.1 | 7.6 | 8.2 |
| Hotel and restaurant | 1.5 | 1.3 | 1.3 | 0.8 | 0.8 |
| Transport, storage & communications | 9.6 | 9.6 | 10.1 | 10.2 | 10.1 |
| Finance, insurance & real estate | 5.8 | 6.1 | 5.9 | 5.0 | 5.2 |
| Finance | 3.7 | 3.8 | 3.6 | 2.7 | 2.8 |
| Real estate & dwelling | 2.1 | 2.3 | 2.3 | 2.3 | 2.4 |
| Community, social & services (govt.) | 9.6 | 9.1 | 8.7 | 8.3 | 8.3 |
| Less: Imputed bank service charges | -1.1 | -1.1 | -1.6 | -1.3 | -1.6 |
| Gross Domestic product | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Source: National Statistical Bureau, Thimphu.*

TABLE 14.5
GROSS DOMESTIC PRODUCT AT FACTOR COST IN 2000 PRICES, BHUTAN, 1999 TO 2003

(Nu. in Million)

| Activity | 1999 | 2000 | 2001 | 2002 | 2003 | C.growth rate |
|---|---|---|---|---|---|---|
| Agriculture, livestock, forestry & fishery | 5,323 | 5,569 | 5,849 | 6,033 | 6,134 | 4 |
| Agriculture proper | 2,403 | 2,516 | 2,617 | 2,690 | 2,721 | 4 |
| Livestock production | 1,663 | 1,747 | 1,888 | 1,943 | 1,969 | 4 |
| Forestry & logging | 1,257 | 1,305 | 1,345 | 1,401 | 1,443 | 3 |
| Fishing | .. | .. | .. | .. | .. | |
| Mining & quarrying | 310 | 301 | 352 | 389 | 402 | 13 |
| Manufacturing | 1,590 | 1,659 | 1,839 | 1,848 | 1,980 | 12 |
| Electricity, water & gas | 2,501 | 2,475 | 2,497 | 2,759 | 3,021 | 26 |
| Construction | 2,149 | 3,043 | 3,769 | 4,681 | 5,127 | 10 |
| Wholesale & retail trade, Hotel & restaurant | 1,616 | 1,834 | 2,057 | 2,028 | 2,387 | 5 |
| Wholesale and retail trade | 1,361 | 1,575 | 1,777 | 1,824 | 2,172 | 5 |
| Hotel and restaurant | 255 | 259 | 280 | 204 | 215 | 6 |
| Transport, storage & communications | 1,775 | 1,881 | 2,020 | 2,112 | 2,204 | 10 |
| Finance, insurance & real estate | 1,010 | 1,196 | 1,276 | 1,230 | 1,365 | 9 |
| Finance | 632 | 743 | 805 | 690 | 825 | 14 |
| Real estate & dwelling | 378 | 453 | 471 | 540 | 540 | 6 |
| Community, social & services (govt.) | 1,745 | 1,773 | 1,889 | 1,962 | 2,124 | 6 |
| Less: Imputed bank service charges | 196 | 210 | 346 | 334 | 481 | 11 |
| Gross Domestic product | 17,824 | 19,521 | 21,202 | 22,707 | 24,262 | |
| Growth rate of GDP (%) | 7.7 | 9.5 | 8.6 | 7.1 | 6.8 | |

*Source: National Statistical Bureau, Thimphu.*



TABLE 14.6
SECTOR-WISE GROWTH RATE IN 2000 PRICES, BHUTAN, 1999 TO 2003

| Sector | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| Agriculture, livestock, forestry & fishery | 1.5 | 4.6 | 5.0 | 3.1 | 1.7 |
| Agriculture proper | 3.7 | 4.7 | 4.0 | 2.8 | 1.2 |
| Livestock production | 1.3 | 5.1 | 8.0 | 2.9 | 1.4 |
| Forestry & logging | -2.0 | 3.8 | 3.0 | 4.2 | 3.0 |
| Fishing | .. | .. | .. | .. | .. |
| Mining & quarrying | 0.4 | -2.8 | 16.9 | 10.4 | 3.4 |
| Manufacturing | 3.8 | 4.3 | 10.8 | 0.5 | 7.1 |
| Electricity, water & gas | 9.1 | -1.0 | 0.9 | 10.5 | 9.5 |
| Construction | 39.1 | 41.6 | 23.9 | 24.2 | 9.5 |
| Wholesale & retail trade, Hotel & restaurant | 7.4 | 13.5 | 12.1 | -1.4 | 17.7 |
| Wholesale and retail trade | 6.4 | 15.7 | 12.8 | 2.7 | 19.1 |
| Hotel and restaurant | 13.3 | 1.8 | 8.0 | -27.2 | 5.4 |
| Transport, storage & communications | 7.1 | 6.0 | 7.4 | 4.6 | 4.4 |
| Finance, insurance & real estate | -3.6 | 18.3 | 6.7 | -3.6 | 11.0 |
| Finance | -12.4 | 17.4 | 8.4 | -14.3 | 19.6 |
| Real estate & dwelling | 15.7 | 19.8 | 4.0 | 14.6 | -0.1 |
| Community, social & services (govt.) | 11.5 | 1.6 | 6.5 | 3.9 | 8.2 |
| Less: Imputed bank service charges | 11.0 | 26.7 | 7.2 | 64.3 | -3.3 |

*Source: National Statistical Bureau, Thimphu.*

TABLE 14.7
SECTORAL PERCENTAGE SHARE TO GDP IN CURRENT PRICES, BHUTAN, 1999 TO 2003

| Sector | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| Agriculture, livestock, forestry & fishery | 29.9 | 28.5 | 27.6 | 26.6 | 25.3 |
| Agriculture proper | 13.5 | 12.9 | 12.3 | 11.8 | 11.2 |
| Livestock production | 9.3 | 9.0 | 8.9 | 8.6 | 8.1 |
| Forestry & logging | 7.1 | 6.7 | 6.3 | 6.2 | 5.9 |
| Fishing | .. | .. | .. | .. | .. |
| Mining & quarrying | 1.7 | 1.5 | 1.7 | 1.7 | 1.7 |
| Manufacturing | 8.9 | 8.5 | 8.7 | 8.1 | 8.2 |
| Electricity, water & gas | 14.0 | 12.7 | 11.8 | 12.2 | 12.5 |
| Construction | 12.1 | 15.6 | 17.8 | 20.6 | 21.1 |
| Wholesale & retail trade, Hotel & restaurant | 9.1 | 9.4 | 9.7 | 8.9 | 9.8 |
| Wholesale and retail trade | 7.6 | 8.1 | 8.4 | 8.0 | 9.0 |
| Hotel and restaurant | 1.4 | 1.3 | 1.3 | 0.9 | 0.9 |
| Transport, storage & communications | 10.0 | 9.6 | 9.5 | 9.3 | 9.1 |
| Finance, insurance & real estate | 5.7 | 6.1 | 6.0 | 5.4 | 5.6 |
| Finance | 3.5 | 3.8 | 3.8 | 3.0 | 3.4 |
| Real estate & dwelling | 2.1 | 2.3 | 2.2 | 2.4 | 2.2 |
| Community, social & services (govt.) | 9.8 | 9.1 | 8.9 | 8.6 | 8.8 |
| Less: Imputed bank service charges | 0.9 | 1.0 | 1.0 | 1.5 | 1.4 |
| Gross Domestic product | 100.2 | 100.1 | 100.0 | 99.9 | 100.0 |

*Source: National Statistical Bureau, 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 INDICES FOR FOOD AND NON-FOOD COMPONENTS, BHUTAN 2003 TO 2004

(3rd Qtr. 2003=100)

| Item | Weight | 2003 | | | 2004 | | |
|---|---|---|---|---|---|---|---|
| | (%) | June | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr |
| Index | | | | | | | |
| Food | 31.67 | 99.78 | 100.00 | 101.40 | 101.86 | 101.07 | 102.85 |
| Non-food | 68.33 | 97.37 | 100.00 | 102.31 | 104.73 | 104.74 | 105.34 |
| Total | 100 | 98.80 | 100.00 | 102.02 | 03.82 | 103.58 | 104.55 |
| PERCENTAGE CHANGE, YEAR ON YEAR | | | | | | | |
| Food | 31.67 | 1.44 | 0.00 | 1.49 | 0.00 | 1.29 | 2.85 |
| Non-food | 68.33 | 2 | 0.00 | 5.49 | 0.00 | 7.57 | 5.34 |
| Total | 100 | 1.84 | 0.00 | 3.36 | 0.00 | 4.84 | 4.55 |
| PERCENTAGE CHANGE, PERIOD TO PERIOD | | | | | | | |
| Food | 31.67 | -0.13 | 0.22 | 1.40 | 0.45 | -0.78 | 1.76 |
| Non-food | 68.33 | 0.39 | 2.70 | 2.31 | 2.37 | 0.01 | 0.57 |
| Total | 100 | 0.09 | 1.22 | 2.02 | 1.76 | -0.23 | 0.94 |
| PURCHASING POWER OF NGULTRUM (PPN) | | | | | | | |
| | 1.00 | 1.01 | 1.00 | 0.98 | 0.96 | 0.97 | 0.96 |

*Source: National Statistical Bureau, Thimphu.*



TABLE 15.2
CONSUMER PRICE INDICES FOR MAJOR COMPONENTS, BHUTAN 2003 TO 2004

(3rd Qtr. 2003=100)

| Item | Weight | 2003 | | | 2004 | | |
|---|---|---|---|---|---|---|---|
| | (%) | June | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr |
| Food and non-alcoholic beverages | 29.44 | 100.45 | 100.00 | 101.42 | 101.95 | 101.13 | 102.91 |
| Alcoholic beverages, tobacco & narcotics | 2.23 | 90.31 | 100.00 | 101.12 | 100.62 | 100.22 | 102.02 |
| Clothing and footwear | 10.49 | 98.38 | 100.00 | 104.91 | 104.54 | 103.48 | 105.23 |
| Housing, water, electricity, gas & other fuels | 25.68 | 0.00 | 100.00 | 100.80 | 107.39 | 107.43 | 107.29 |
| Furnishing, household equipment & routine household maintenance | 5.68 | 97.49 | 100.00 | 103.35 | 104.15 | 103.59 | 103.56 |
| Health | 2.94 | 89.92 | 100.00 | 100.40 | 102.30 | 100.26 | 101.43 |
| Transport | 7.06 | 0.00 | 100.00 | 107.04 | 107.17 | 106.68 | 110.74 |
| Communication | 4.10 | 0.00 | 100.00 | 100.63 | 100.82 | 100.10 | 98.25 |
| Recreation and culture | 2.62 | 0.00 | 100.00 | 104.44 | 99.57 | 103.12 | 103.97 |
| Education | 4.04 | 0.00 | 100.00 | 100.00 | 99.95 | 100.00 | 100.00 |
| Restaurants and hotels | 3.01 | 0.00 | 100.00 | 99.35 | 99.34 | 101.09 | 106.60 |
| Miscellaneous goods & services | 2.72 | 100.11 | 100.00 | 101.37 | 101.69 | 106.01 | 99.87 |
| Total | 100.00 | 98.79 | 100.00 | 102.02 | 103.82 | 103.58 | 104.55 |

*Source: National Statistical Bureau, Thimphu.*

TABLE 15.3
CONSUMER PRICE INDICES - MAJOR COMPONENTS, BHUTAN, 2003 TO 2004

YEAR ON YEAR GROWTH RATE (%) (3rd Qtr. 2003=100)

| Item | Weight | 2003 | | | 2004 | | |
|---|---|---|---|---|---|---|---|
| | (%) | June | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr |
| Food and non-alcoholic beverages | 29.44 | 1.87 | 0.00 | 1.26 | 0.00 | 0.68 | 2.91 |
| Alcoholic beverages, tobacco & narcotics | 2.23 | -4.96 | 0.00 | 4.90 | 0.00 | 10.98 | 2.02 |
| Clothing and footwear | 10.49 | 1.52 | 0.00 | 6.95 | 0.00 | 5.18 | 5.23 |
| Housing, water, electricity, gas & other fuels | 25.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.29 |
| Furnishing, household equipment & routine household maintenance | 5.68 | 6.90 | 0.00 | 6.78 | 0.00 | 6.26 | 3.56 |
| Health | 2.94 | -0.18 | 0.00 | 11.47 | 0.00 | 11.50 | 1.43 |
| Transport | 7.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.74 |
| Communication | 4.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -1.75 |
| Recreation and culture | 2.62 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.97 |
| Education | 4.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Restaurants and hotels | 3.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.60 |
| Miscellaneous goods & services | 2.72 | 1.41 | 0.00 | 2.54 | 0.00 | 0.00 | -0.13 |
| Total | 100.00 | 1.84 | 0.00 | 3.36 | 0.00 | 0.00 | 0.70 |

*Source: National Statistical Bureau, Thimphu.*



TABLE 15.4
CONSUMER PRICE INDICES- MAJOR COMPONENTS, BHUTAN, 2003 TO 2004

PERIOD TO PERIOD GROWTH (%) (3rd Qtr. 2003=100)

| Item | Weight | 2003 | | | 2004 | | |
|---|---|---|---|---|---|---|---|
| | (%) | June | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr |
| Food and non-alcoholic beverages | 29.44 | 0.29 | -0.45 | 1.42 | 0.52 | -0.80 | 1.76 |
| Alcoholic beverages, tobacco & narcotics | 2.23 | -6.32 | 10.74 | 1.12 | -0.49 | -0.40 | 1.8 |
| Clothing and footwear | 10.49 | 0.30 | 1.64 | 4.91 | -0.35 | -1.01 | 1.69 |
| Housing, water, electricity, gas & other fuels | 25.68 | 0.00 | 0.00 | 0.80 | 6.54 | 0.04 | -0.13 |
| Furnishing, household equipment & routine household maintenance | 5.68 | 0.72 | 0.00 | 3.35 | 0.77 | -0.54 | -0.03 |
| Health | 2.94 | -1.17 | 2.57 | 0.40 | 1.89 | -1.99 | 1.17 |
| Transport | 7.06 | 0.00 | 11.21 | 7.04 | 0.12 | -0.46 | 3.81 |
| Communication | 4.10 | 0.00 | 0.00 | 0.63 | 0.19 | -0.71 | -1.8 |
| Recreation and culture | 2.62 | 0.00 | 0.00 | 4.44 | -4.66 | 3.57 | 0.82 |
| Education | 4.04 | 0.00 | 0.00 | 0.00 | -0.05 | 0.05 | 0.00 |
| Restaurants and hotels | 3.01 | 0.00 | 0.00 | -0.65 | -0.01 | 1.76 | 5.45 |
| Miscellaneous goods & services | 2.72 | 1.26 | -0.11 | 1.37 | 0.32 | 4.25 | -5.79 |
| Total | 100.00 | 0.09 | 1.22 | 2.02 | 1.76 | -0.23 | 0.94 |

*Source: National Statistical Bureau, Thimphu.*

TABLE 15.5
CONSUMER PRICE INDICES FOR FOOD ITEMS, SUB - COMPONENTS, BHUTAN, 2003 TO 2004

PERIOD TO PERIOD GROWTH (%) (3rd Qtr. 2003=100)

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

*Source: National Statistical Bureau, Thimphu.*



TABLE 15.6
CONSUMER PRICE INDICES FOR FOOD ITEMS, SUB - COMPONENTS, BHUTAN, 2003 TO 2004

PERIOD TO PERIOD GROWTH (%) (3rd Qtr. 2003=100)

| Item | Weight | 2003 | | | 2004 | | |
|---|---|---|---|---|---|---|---|
| | (%) | June | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr |
| Food | 27.69 | 0.29 | -0.47 | 1.42 | 0.51 | -0.73 | 1.85 |
| Bread | 7.93 | 0.14 | -2.50 | 2.28 | 0.92 | -0.19 | 1.23 |
| Meat | 3.27 | 1.14 | 0.06 | 0.92 | 0.13 | -0.02 | 1.88 |
| Fish | 1.03 | 0.00 | 0.00 | 1.05 | 0.41 | 0.66 | -1.71 |
| Milk, cheese & eggs | 5.16 | 0.03 | 0.84 | 1.25 | -0.82 | 0.16 | 0.42 |
| Oils and fats | 3.41 | 2.46 | -0.31 | 2.45 | -0.73 | -0.07 | 1.40 |
| Fruits | 1.35 | -4.33 | 6.76 | 0.78 | 10.73 | -9.84 | 2.23 |
| Vegetables | 4.12 | -1.53 | 8.69 | -0.38 | 3.46 | -3.03 | 7.84 |
| Sugar, jam & etc | 0.56 | -2.67 | 5.29 | 1.50 | -0.96 | -1.23 | 2.07 |
| Food Products n.e.c (ND) | 0.87 | 0.66 | -0.17 | 2.44 | -0.60 | 9.17 | -6.15 |
| Non - alcoholic beverages | 1.74 | 0.57 | 0.09 | 1.39 | 0.78 | -2.10 | 0.37 |
| Alcoholic beverages | 1.22 | 0.00 | 7.35 | 0.00 | -0.21 | -1.09 | 4.12 |
| Tobacco | 0.33 | -11.99 | 14.19 | 4.17 | -2.83 | 1.90 | -1.79 |
| Narcotics (ND) | 0.69 | 0.00 | 0.00 | 1.66 | 0.16 | -0.27 | -0.51 |
| Clothing | 7.87 | 0.30 | 1.64 | 5.02 | -0.36 | -1.16 | 1.53 |
| Actual rentals for housing | 18.77 | 0.00 | 0.00 | 1.05 | 8.98 | -0.41 | 0.11 |
| Electricity, gas & other fuels | 6.04 | 1.67 | 10.83 | 0.11 | -0.27 | 1.66 | -0.42 |
| Fules & lubricants | 3.20 | 0.00 | 0.00 | 0.90 | 0.57 | -0.67 | 0.33 |
| Education | 4.04 | 0.00 | 0.00 | 0.00 | -0.05 | 0.05 | 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 |

*Source: National Statistical Bureau, Thimphu.*

TABLE 15.7
CONSUMER PRICE INDICES, SUB-COMPONENTS, BHUTAN, 2002 TO 2004

YEAR ON YEAR GROWTH RATE (%) (3rd Qtr. 2003=100)

| Item | Weight | 2003 | | | 2004 | | |
|---|---|---|---|---|---|---|---|
| | (%) | June | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr |
| Food | 27.69 | 1.91 | 0.00 | 1.24 | 0.00 | 0.73 | 3.07 |
| Bread | 7.39 | 1.55 | 0.00 | -0.14 | 0.00 | -1.38 | 2.39 |
| Meat | 3.27 | 2.93 | 0.00 | 2.13 | 0.00 | 1.09 | 2.93 |
| Fish | 1.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 |
| Milk, cheese & eggs | 5.16 | 0.05 | 0.00 | 2.13 | 0.00 | 1.42 | 1.00 |
| Oils and fats | 3.41 | 3.82 | 0.00 | 4.64 | 0.00 | 1.32 | 3.05 |
| Fruits | 1.35 | -19.02 | 0.00 | 2.93 | 0.00 | 7.41 | 2.85 |
| Vegetables | 4.12 | 7.63 | 0.00 | 6.63 | 0.00 | 8.64 | 7.79 |
| Sugar, jam & etc | 0.56 | 1.46 | 0.00 | 4.02 | 0.00 | 4.54 | 1.35 |
| Food Products n.e.c (ND) | 0.87 | 0.66 | 0.00 | 2.94 | 0.00 | 10.98 | 4.33 |
| Non - alcoholic beverages | 1.74 | 0.54 | 0.00 | 2.07 | 0.00 | 0.12 | 0.40 |
| Alcoholic beverages | 1.22 | 1.42 | 0.00 | 7.35 | 0.00 | 5.96 | 2.77 |
| Tobacco | 0.33 | -10.69 | 0.00 | 4.69 | 0.00 | 17.77 | 1.29 |
| Narcotics (ND) | 0.69 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.03 |
| Clothing | 7.87 | 1.52 | 0.00 | 7.06 | 0.00 | 5.13 | 5.01 |
| Actual rentals for housing | 18.77 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 9.55 |
| Electricity, gas & other fuels | 6.04 | 8.12 | 0.00 | 12.80 | 0.00 | 12.49 | 1.07 |
| Fules & lubricants | 3.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.13 |
| Education | 4.04 | 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 |
| Total | 100.00 | 1.84 | 0.00 | 3.36 | 0.00 | 4.84 | 4.55 |

*Source: National Statistical Bureau, Thimphu.*



TABLE 15.8
QUATERLY PRICE INDICES FOR FOOD ITEMS, THIMPHU TOWN, 2003 TO 2004

(3rd Qtr. 2003=100)

| Item | 2003 | | | | 2004 | | |
|---|---|---|---|---|---|---|---|
| | March | June | Sept. | Dec. | March | June | Sept. |
| Cereal & its products | 99.48 | 100.03 | 100.00 | 102.21 | 102.89 | 101.80 | 107.82 |
| Vegetables, fruits & pulses | 98.75 | 100.86 | 100.00 | 99.98 | 100.00 | 99.60 | 110.90 |
| Edible oil & fats | | | 100.00 | 99.30 | 99.32 | 100.00 | 93.92 |
| Milk,Cheese & Eggs | | | 100.00 | 102.91 | 100.33 | 100.4 | 98.39 |
| Meat & fish | | | 100.00 | 99.99 | 99.58 | 100.40 | 113.89 |
| Other food | 100.08 | 100.01 | 100.00 | 102.71 | 103.71 | 103.30 | 109.98 |
| Non- alcoholic beverages | | | 100.00 | 105.49 | 102.74 | 101.20 | 102.63 |
| Total Index | 99.6 | 100.2 | 100.00 | 101.45 | 101.03 | 100.77 | 106.03 |

*Source: National Statistical Bureau, Thimphu.*

TABLE 15.9
QUATERLY PRICE INDICES FOR FOOD ITEMS, THIMPHU TOWN AND PURCASHING POWER OF NGULTRUM, 2003 TO 2004

(3rd Qtr. 2003=100)

| Item | 2003 | | | | 2004 | | |
|---|---|---|---|---|---|---|---|
| | March | June | Sept. | Dec. | March | June | Sept. |
| Cereal & its products | -0.28 | 0.6 | -0.03 | 2.21 | 0.67 | -1.06 | 5.91 |
| Vegetables, fruits & pulses | -0.67 | 2.14 | -0.86 | -0.02 | 0.02 | -0.40 | 11.35 |
| Edible oil & fats | | | | -0.70 | 0.02 | 0.68 | -6.08 |
| Milk,Cheese & Eggs | | | | 2.91 | -2.51 | 0.07 | -2.00 |
| Meat & fish | | | | -0.01 | -0.41 | 0.82 | 13.44 |
| Other food | 0.50 | -0.60 | -0.01 | 2.71 | 0.97 | -0.40 | 6.47 |
| Non- alcoholic beverages | | | | 5.49 | -2.61 | -1.50 | 1.41 |
| Total Index | -0.07 | 0.61 | -0.17 | 1.45 | -0.41 | -0.26 | 5.22 |
| Purchasing Power of Nu. | 1.00 | 0.99 | 0.00 | 0.98 | 0.98 | 0.99 | 0.94 |

*Source: National Statistical Bureau, Thimphu.*



## CHAPTER 16 : CRIME

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.

**CRIME REPORTED BY TYPE, 2003**

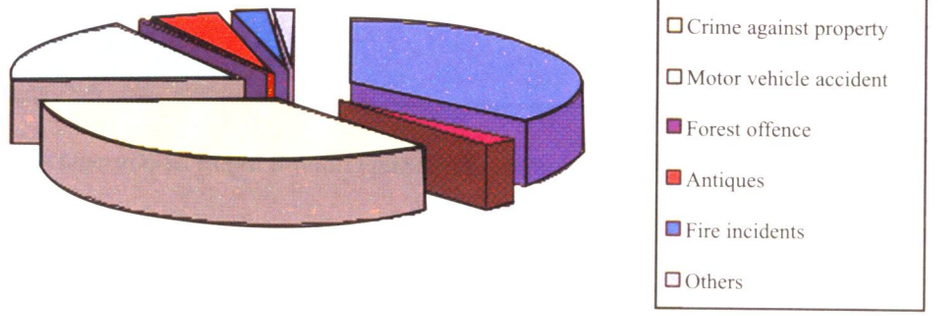


TABLE 16.1
CRIME REPORTS BY NATURE OF CRIME, BHUTAN, 1999 TO 2003

(Incident)

| Nature of crime | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| Crime against human body | 452 | 627 | 677 | 584 | 672 |
| Sexual offence | 48 | 71 | 84 | 52 | 51 |
| Crime against property | 635 | 731 | 623 | 583 | 643 |
| Motor vehicle accident | 240 | 266 | 298 | 344 | 318 |
| Forest offence | 8 | 4 | 10 | 12 | 4 |
| Antique | 125 | 98 | 104 | 68 | 95 |
| Fire incident | 33 | 30 | 36 | 34 | 42 |
| Others | 52 | 38 | 36 | 32 | 28 |
| All crimes | 1593 | 1865 | 1868 | 1709 | 1853 |

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



TABLE 16.2
DETAILS OF CRIME AGAINST HUMAN BODY, BHUTAN, 1999 TO 2003

(Incident)

| Detail | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| Murder | 14 | 18 | 19 | 19 | 5 |
| Attempted murder | 3 | 2 | 5 | 5 | 7 |
| Rape cum murder | 1 | - | 1 | - | 1 |
| Robbery cum murder | 2 | 1 | - | - | - |
| Unnatural death | 18 | 30 | 24 | 24 | 26 |
| Accidental death | 38 | 43 | 45 | 49 | 31 |
| Drowning | 18 | 27 | 20 | 15 | 25 |
| Suicide | 31 | 41 | 58 | 49 | 41 |
| Attempted suicide | 6 | 14 | 8 | 13 | 12 |
| Assault | 285 | 367 | 418 | 369 | 478 |
| Abduction | .. | 1 | .. | 1 | .. |
| Kidnapping | 1 | 1 | .. | .. | 2 |
| Poisoning | 2 | 1 | 1 | 2 | 2 |
| Drugs (Narcotics) | 20 | 25 | 23 | 18 | 25 |
| Obstruction of lawful authority | 3 | 3 | 2 | 1 | .. |
| Wrongful confinement | .. | .. | .. | .. | .. |
| Affray | 1 | - | 4 | .. | .. |
| Accidental injury | 2 | 6 | 9 | 3 | 4 |
| Black magic | .. | 1 | - | - | - |
| Defamation | 4 | 5 | 6 | 2 | 3 |
| Grevious hurt | 3 | 3 | 3 | .. | 1 |
| Missing of person | .. | 38 | 31 | .. | 9 |
| Total | 452 | 627 | 677 | 570 | 672 |

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

TABLE 16.3
DETAILS OF SEXUAL OFFENCES, BHUTAN, 2000 TO 2003

(Incident)

| Detail | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|
| Rape | 16 | 16 | 13 | 15 |
| Attempted rape | 15 | 8 | 12 | 10 |
| Adultry | 14 | 19 | 10 | 5 |
| Incest | 2 | 5 | .. | 1 |
| Molestation | .. | 5 | 1 | 2 |
| Elopment | 23 | 23 | 14 | 15 |
| Eve teasing | .. | .. | .. | .. |
| Un-natural offence | .. | 3 | .. | .. |
| Prostitution | .. | 2 | 2 | 2 |
| Robery cum rape | .. | 1 | .. | 1 |
| Dacoity cum Rape | 1 | 2 | .. | .. |
| Beastility | .. | .. | .. | .. |
| Total | 71 | 84 | 52 | 51 |

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



TABLE 16.4
DETAILS OF CRIME AGAINST PROPERTY, BHUTAN, 2000 TO 2003

(Incident)

| Detail | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|
| Theft | 390 | 306 | 267 | 326 |
| Burglary | 132 | 129 | 140 | 134 |
| House breaking | 12 | 3 | 10 | 7 |
| Robbery | 10 | 16 | 9 | 7 |
| Dacoity | 18 | 11 | 8 | 5 |
| Pick pocketing | 1 | 5 | 6 | 6 |
| Cheating | 31 | 30 | 34 | 30 |
| Loss of property | 14 | 13 | 4 | 6 |
| Forgery | 9 | 9 | 4 | 10 |
| Criminal breach of trust | 9 | 15 | 4 | 9 |
| Embezzlement | 6 | 5 | 8 | 3 |
| Counterfeit of coin/notes | 8 | 3 | 2 | 7 |
| Misappropriation | 4 | .. | 2 | 4 |
| Cattle lifting | 22 | 20 | 19 | 13 |
| Mischief | 39 | 39 | 36 | 49 |
| Extortion | 1 | 2 | 2 | .. |
| Scooter lifting | .. | 2 | 1 | .. |
| Bike lifting | .. | .. | .. | .. |
| Hijacking | 4 | .. | .. | .. |
| Bribery | 1 | .. | .. | .. |
| Impersonation | .. | .. | 5 | 2 |
| Money laundaring | 1 | .. | .. | .. |
| Attempted robery | .. | .. | .. | .. |
| Illegal tresspass | 2 | .. | 1 | .. |
| Attempted theft | .. | 8 | 7 | 17 |
| Snactching | .. | .. | . | .. |
| House tresspass | 4 | 1 | .. | .. |
| Explosive | .. | .. | .. | 1 |
| Criminal tresspass | 2 | 2 | .. | 2 |
| Smuggling | 4 | 4 | 5 | 2 |
| Conspiracy | .. | .. | .. | .. |
| Illegal collection of donation | 1 | .. | .. | .. |
| Sabotage | 6 | .. | 9 | 1 |
| Weight and measurement | .. | .. | .. | 1 |
| Food adultration | .. | .. | .. | 1 |
| Total | 731 | 623 | 583 | 643 |

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

TABLE 16.5
DETAILS OF MOTOR VEHICLE, ANTIQUES, FOREST OFFENCES AND FIRE INCIDENTS, BHUTAN, 2000 TO 2003

(Incident)

| Detail | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|
| Motor vehicles offence | 266 | 298 | 344 | 318 |
| Cycle accidents | 1 | .. | 1 | .. |
| Traffic voilation | 3 | .. | 1 | 2 |
| Hit and run | 3 | 11 | 10 | 17 |
| Motor vehicle accident | 245 | 270 | 319 | 284 |
| Motor vehicle accident (fatal) | 14 | 17 | 13 | 15 |
| | | | | |
| 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 |
| | 4 | 10 | 12 | 4 |
| Antique | 98 | 104 | 68 | 95 |
| Theft of antique | 5 | 12 | 6 | 3 |
| Chhoten vandalism | 77 | 78 | 59 | 90 |
| Smuggling of antique | 4 | 8 | 1 | 1 |
| Theft from Lhakhang | 12 | 6 | 2 | 1 |
| | | | | |
| Fire accident | 29 | 36 | 34 | 42 |
| Fire accident | 24 | 27 | 31 | 35 |
| Arson | 5 | 9 | 3 | 7 |
| | | | | |
| Others | 25 | 0 | 32 | 28 |
| Natural calamaties | 10 | .. | 4 | 3 |
| Fire arms | 3 | .. | 10 | 1 |
| Miscellaneous | 9 | .. | 14 | 13 |
| Public nuisance | 2 | .. | 2 | .. |
| Threat intimadation | 1 | .. | .. | 7 |
| Jail break | .. | .. | 2 | .. |
| Aiding militant | .. | .. | .. | 4 |

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



TABLE 16.6
MONTHLY MOTOR VEHICLE ACCIDENTS BY TRAFFIC DIVISION, BHUTAN, 2003

(Incident)

| Traffic Division | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gelephu | 2 | .. | .. | 1 | 1 | .. | .. | 1 | 1 | 1 | 3 | .. | 10 |
| Monggar | .. | 2 | .. | 1 | 2 | 3 | .. | 1 | .. | 3 | .. | .. | 12 |
| Paro | 2 | 4 | .. | 4 | 1 | 1 | 2 | 5 | 3 | 3 | 3 | 5 | 33 |
| | | | | | | | | | | | | | |
| Phuntsholing | 10 | 8 | 15 | 13 | 4 | 12 | 7 | 7 | 11 | 11 | 6 | 9 | 113 |
| Punakha | 2 | 4 | 6 | 2 | 3 | 4 | 8 | 9 | 7 | 5 | 6 | 8 | 64 |
| Samdrup Jongkhar | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | 3 |
| | | | | | | | | | | | | | |
| Samtse | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 |
| Thimphu | 5 | 1 | 2 | - | 3 | 1 | 3 | 2 | 3 | 3 | 2 | 7 | 32 |
| Trashigang | .. | 1 | .. | 1 | .. | 2 | 2 | 3 | 1 | 3 | 1 | 1 | 15 |
| | | | | | | | | | | | | | |
| Trongsa | 4 | 1 | 2 | 4 | 2 | 3 | 2 | 1 | 2 | 1 | 2 | 4 | 28 |
| Tsirang | 1 | .. | 3 | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 6 |
| | | | | | | | | | | | | | |
| Total | 26 | 21 | 28 | 26 | 16 | 27 | 25 | 29 | 28 | 34 | 24 | 34 | 318 |

*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. Phuntsholing

### 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
6. Tshengkhar
7. Metsho
8. 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. Tsakalin
16. Tsamang



### VIII. PARO DZONGKHAG

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

**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

### XVII. TRONGSA DZONGKHAG

**Gewogs:**

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

### 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

**Gewogs:**

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

### 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.*