STATISTICAL YEAR BOOK OF BHUTAN 1995

Central Statistical Organization
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PREFACE

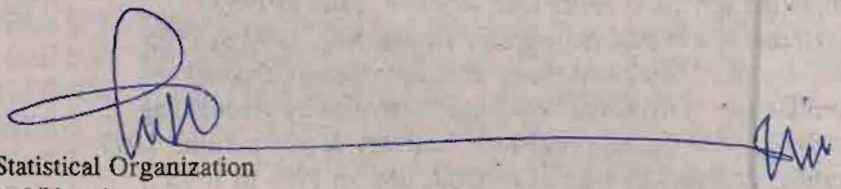
Statistical Yearbook of Bhutan 1995 is the fourteenth in the series of annual Statistical Year Book publications issued by the Central Statistical Organization, Ministry of Planning.

The purpose of the publication is to provide a summary of the more important statistics of Bhutan up to 1995. 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 given providing a brief description of the statistics, how they were obtained and 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 where appropriate, tables have been footnoted to highlight any shortcomings in the data.

Every effort has been made to ensure that the statistics given in the publication meet with acceptable statistical standards. However, it has been necessary to place reliance on existing data collections and it was not always possible to undertake as detailed an assessment of data sources as would have been preferred. This was due to the wide range of data sources used and because detailed background information on many data collections was not always available. Consequently, some shortcomings in the data presented are inevitable, though it is considered that these have been kept to a minimum. Throughout the compilation of the publication, the CSO has maintained close contact with all sectors.

The range and quality of statistics available in Bhutan should improve over the next few years, and this will be reflected in further upgrading of this publication in the future.



Central Statistical Organization
Ministry of Planning
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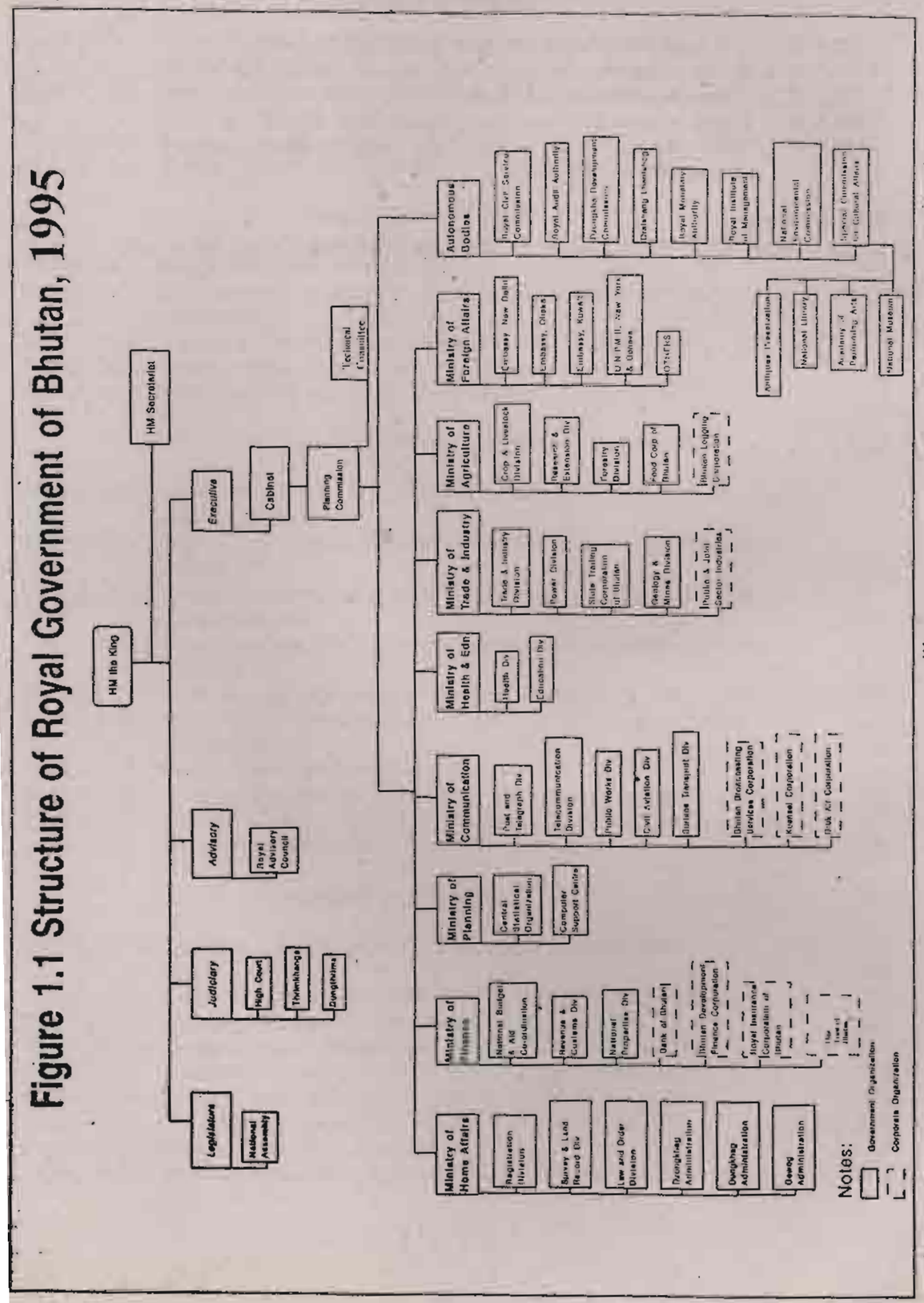


Figure 1.1 Structure of Royal Government of Bhutan, 1995

GENERAL DESCRIPTION OF BHUTAN

Position and area: Bhutan comprises a land area of 46,500 square kilometers. The land lies between latitudes 26°45'N and 28°10'N and between longitudes 88°45'E and 92°10'E. The country is relatively compact with a maximum latitudinal distance of 170 kilometers and the maximum longitudinal distance of 300 kilometers. Bhutan is landlocked and is bordered by India in the south, and by the Tibetan Autonomous Region of China in the north and north west.

Bhutan's borders are largely natural. 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. 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.

Landform: Bhutan is almost entirely mountainous with flat land limited to the broader river valleys. The land rises from approximately 300 metres above sea level in the south to the towering Himalayan mountains in the north of over 7,000 meters high. The densely populated central valleys are separated from the south by a 2,000 meter high chain of mountains. Bhutan has three major landform features; the southern foothills, the inner Himalayas and the higher Himalayas. The southern foothills rise from the plains to heights of 1,500 meters extending to the north by about 20 kilometers. Southern Bhutan consists of a heavy network of steep hills covered with large tracks of dense forests and jungles. Central Bhutan consisting of the inner Himalayas rises gradually to about 3,000 meters. This region contains the broader river valleys of Paro, Thimphu, Punakha, Wangduephodrang and Trashigang which comprise the economic and cultural heartland of the country. An infinite variety of plants, flowers and trees including apples, peaches and plums grow in the fertile valleys. Rice is the principle crop and large tracts of forests including birch, pine, chestnut and oak cover central Bhutan. The northern region comprises the main Himalayan range of high snow capped mountains which separate Bhutan from Tibet. The Kulagangri and the Gangkar Punsum (both over 7,500 meters) and the Jomolhari (7,316 metres) are the highest peaks in the Bhutan Himalaya. The slopes of the mountains are covered with birch, magnolia and rhododendrons while for many months of the year the summits are decked with snow. Population in this zone is sparse.

Rivers: All but two of Bhutan's rivers rise in the higher Himalayas and journey south to join the Brahmaputra in India. Almost all the valleys have swift flowing rivers or streams which merge ultimately into four major river systems as they flow south viz. the Ammochu, the Wangchhu, the Sankosh and the Manas. The flows of the rivers are fed by the perennial snows or the summer monsoons and are highest in the monsoon season (June to September) and lowest in winter (December to March).

Climate: The country can be divided into three distinct climatic zones corresponding broadly to the three main geographical divisions. The southern belt has a hot humid climate with temperatures remaining fairly even throughout the year between 15 and 30 degree celsius with rainfall ranging between 2,500 to 5,000 millimeters in some areas. The central inner Himalayas has a cool temperate climate with annual rainfall averaging about 1,000 millimeters with western region receiving comparatively higher rainfall. The higher and more northern region has a severe alpine climate with annual rainfall around 400 mm. Much of the rainfall is concentrated in the summer months with the southwest monsoon accounting for 60 to 90 percent of the total rainfall. There is substantial variation within these broad ranges and the climate and rainfall characteristics change dramatically from one valley to an adjacent on with consequent sharp changes in the composition of agricultural production. Wide spread flood rainfall may occur during summer monsoon and the waters of the valleys may swell dramatically, spreading across the plains and flooding fields, bridges and houses.

Government: The monarchy: On 17 December 1907, Ugyen Wangchuck was crowned the first hereditary monarch of Bhutan by the civil and monastic representatives. 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 Ugyen Wangchuck was succeeded by his son Jigme Wangchuck, who ruled until his death in 1952. Bhutan was fairly isolated from the outside world until 1960s

when the third Druk Gyalpo, Jigme Dorji Wangchuck (1952-1972) opened links to other countries. His Majesty the late King 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, for which he is known as the architect of modern Bhutan. Hence, the National Assembly consisting of representatives of the people, the Monastic order and Civil administration was re-established 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 and also the head of government. He is assisted by the cabinet which consists of His Majesty's representatives in various Ministries, Ministers and some senior civil servants.

The National Assembly: The Tshogdu (The National Assembly) consists of 150 members; 105 are the elected representatives of the people, 10 are from the Dratshang (Clergy) and 35 are nominated representatives of the Government. The people's representatives are directly elected by the people of their respective constituencies through secret ballot. The representatives of the clergy are elected by the Zhung Dratshang (Central Monastic Body) and the concerned Rabdeys (District Monastic Bodies). The representatives of the government are nominated by the King from among senior civil servants. All the members serve for a term of three years. The Speaker and the Deputy Speaker are elected by the National Assembly from among its members. The National Assembly meets twice a year. The assembly enacts legislation and advises the government on all matters of national importance. Decisions are passed by a simple majority. A secret ballot is taken on all matters of national importance. Any Bhutanese over 25 years of age can be a candidate for membership.

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. It consists of nine members. There are six representatives of the public (Meeser Thuepoens) who serve for a term of three years. They are elected by the National Assembly through secret ballot from among the representatives of the Dzongkhags. Each Dzongkhag (district) deputes one representative who is elected through secret ballot from among the public. Two members represent the Monastic Body, one each from the Central Monastic Body and the Rabdeys who serve a term of one year. The chairman (Zhung Kaloen) is nominated by the king.

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

Local Government: Local administration has been strengthened to meet the requirement 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. Groups of villages have 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 peoples representatives and government officials.

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 Thrimpoen and assisted by ramjams but minor disputes are settled by village gups (Head of the village).

GENERAL INFORMATION

EXPLANATION OF SYMBOLS USED IN THE YEARBOOK

n.a	stands for "not available"
..	stands for "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 calander year, period from January to December
FY	stands for fiscal year, period from April to March upto 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 up.
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. Totals of items may not add up slightly due to rounding up.

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

		Abbreviations	
10 mm	= 1 cm	mm	= millimetre
10 cm	= 1 dm	cm	= centimetre
10 dm	= 1 m	m	= metre
10 m	= 1 dkm	dm	= decimetre
10 dkm	= 1 hm	hm	= hectometre
10 hm	= 1 km	dkm	= decametre
		km	= kilometre

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 foot	= 0.3047997 m
1 yard	= 0.9143992 m
1 mile	= 1.609343 km
1 nautical mile	= 1.853182 km
1 m	= 39.370113 inches
1 m	= 3.280843 feet
1 m	= 1.093614 yard
1 km	= 0.6213717 miles

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 ares	= 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 tonne	= 1.016 metric tonne

D. Conversion of air temperatures

1. Degree celsius to degree Fahrenheit
   $(9 \times T_c)/5 + 32$, where T_c is temperature in degree celsius
2. Fahrenheit to degree celsius
   $5 \times (T_f - 32)/9$, where T_f is temperature in fahrenheit

CHAPTER 1: POPULATION

INTRODUCTION

The main source of statistics on population is the population census. Population censuses are undertaken in most countries 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 also for use 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 second major element of population statistics relates to the demography 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 a special sample survey (in 1984) to obtain the important demographic information.

Statistics presented in this chapter include estimates of current and future population together with data from 1984 demographic survey. The interpretation of demographic indicators is as follows:

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

General fertility rate: Number of live births in a year per thousand woman aged 15 to 49.

Total fertility rate: Average number of children born by women during their life time.

Gross reproduction rate: Average number of daughters born by women during their life time.

Net reproduction rate: Reproduction rate adjusted for mortality of women.

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

Infant mortality rate: Number of deaths during first year of life 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 persons 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, 1995

Age group	Persons			Percent		
	Total	Male	Female	Total	Male	Female
0 - 4	79,210	39,656	39,554	13.6	6.8	6.8
5 - 9	79,734	37,840	39,397	13.7	6.9	6.8
10 - 14	69,316	31,871	33,639	11.9	6.1	5.8
15 - 19	57,967	29,029	28,938	10.0	5.0	5.0
20 - 24	51,449	25,942	25,507	8.8	4.5	4.4
25 - 29	44,988	22,647	22,341	7.7	3.9	3.8
30 - 34	35,094	18,225	16,870	6.0	3.1	2.9
35 - 39	31,661	16,444	15,217	5.4	2.8	2.6
40 - 44	28,227	14,811	13,416	4.9	2.5	2.3
45 - 49	25,841	13,565	12,276	4.4	2.3	2.1
50 - 54	21,650	11,280	10,371	3.7	1.9	1.8
55 - 59	16,529	8,786	7,743	2.8	1.5	1.3
60 - 64	14,608	7,450	7,157	2.5	1.3	1.2
65 - 69	10,069	5,076	4,993	1.7	0.9	0.9
70 - 74	6,984	3,502	3,482	1.2	0.6	0.6
75 +	8,672	4,393	4,279	1.5	0.8	0.7
All ages	582,000	296,819	285,181	100.0	51.0	49.0

Note: Estimates based upon the population projection report prepared by Dr. Chuadhuri, March 1996.
Source: Estimates made by CSO, Ministry of Planning.

TABLE 1.2: SUMMARY OF POPULATION INDICATORS, 1990 TO 1995

Population Indicators	1990	1991	1992	1993	1994	1995
Sex Ratio (males per 100 females)	102.5	102.3	102.1	102.0	104.1	104.1
Age Composition (%)	100.0	100.0	100.0	100.0	100.0	100.0
0 - 14	39.2	38.9	38.7	38.6	39.2	39.2
15 - 49	47.3	47.7	47.9	48.0	47.3	47.3
50 - 59	6.6	6.6	6.7	6.8	6.6	6.6
60 +	6.9	6.8	6.7	6.6	6.9	6.9
Median age(years)	20.5	20.5	20.6	20.6	20.5	20.5
*Dependency Ratio						
Child dependency	67.4	68.8	68.4	68.6	69.6	69.6
Old age dependency	6.8	7.7	7.6	7.5	7.8	7.8
Total dependency	74.2	76.4	76.0	76.1	77.4	77.4
Index of aging	10.1	11.1	11.0	11.0	11.3	11.3

Source: Estimates by CSO, Ministry of Planning

TABLE 1.3: PERCENTAGE OF POPULATION BY MARITAL STATUS AND AGE, 1984

(percent)

Age group	Never married		Married		Divorced/separated		Widowed		Total	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
0 - 14	99.9	99.8	-	-	-	-	-	-	100.0	100.0
15 - 19	92.1	73.4	7.7	25.5	-	-	-	-	100.0	100.0
20 - 24	54.5	30.1	43.8	64.8	1.5	4.4		-	100.0	100.0
25 - 29	26.8	12.4	70.0	80.5	2.4	5.7	-	1.4	100.0	100.0
30 - 34	13.1	8.4	82.8	81.3	1.9	7.3	2.3	3.1	100.0	100.0
35 - 39	10.0	5.5	85.8	84.9	1.8	5.7	2.5	3.9	100.0	100.0
40 - 44	7.6	6.3	87.9	81.4	1.7	5.3	2.8	7.0	100.0	100.0
45 - 49	6.9	6.9	86.8	78.7	1.4	5.4	5.0	9.1	100.0	100.0
50 +	6.5	4.2	75.4	58.8	2.3	4.8	15.7	32.2	100.0	100.0
All ages	57.8	52.0	38.0	39.0	1.0	2.8	3.2	6.2	100.0	100.0

Source: 1984 Demographic Sample Survey, CSO, Ministry of Planning Thimphu.

TABLE 1.4: SUMMARY OF DEMOGRAPHIC INDICATORS, BHUTAN 1984 AND 1994

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

Note: For explanation of demographic indicators see introduction to this chapter.
Source: 1984 Demographic Sample Survey, and 1994 National Health Survey

CHAPTER 2: HEALTH

INTRODUCTION

General health conditions in Bhutan were affected by low nutrition intake, poor sanitation and high prevalence of parasitic infections and contagious diseases. Efforts to establish modern medical facilities in Bhutan were begun in 1962. Institutional health facilities until few years back were concentrated in the urban centers, but today the emphasis has shifted to the rural areas where the majority of the population live. Basic health units (BHUs) usually serving remote districts staffed by well trained paramedical personnel are equipped to treat minor ailments and advise on preventive measures to avoid the spread of communicable diseases. These BHUs are supported by dispensaries.

There are also a number of special health programs in Bhutan administered by the Division of Health. These cover immunization, maternal and child health services, malaria eradication, leprosy and family planning. 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. Morbidity and mortality data are usually obtained from administrative sources. Morbidity data can often be obtained from patients records of health units, while information on mortality rates and causes of death is usually obtained from vital registration systems (that is the civil registration of births and deaths). In Bhutan, some morbidity statistics are available based on patients treated by hospitals, basic health units and dispensaries. Little information is available, while a registration system is in place for the reporting of births and deaths, it is recognized that there is some under coverage and problems with the identification of cause of death. Over all level of mortality have been estimated from the demographic sample surveys, but cause of death data have not yet become available. Efforts are under way to improve the vital registration system.

TABLE 2.1: SUMMARY OF HEALTH FACILITIES AND PERSONNEL, BHUTAN, 1988 TO 1995

Facilities	1988	1989	1990	1991	1992	1993	1994	1995
Number of hospitals	28	26	26	26	26	26	26	26
Number of basic health units	69	69	71	74	75	79	84	84
Number of dispensaries	46	46	44	43	43	41	42	44
Number of indigenous hospitals	1	1	1	1	1	1	1	1
Number of indigenous dispensaries	6	6	6	6	6	7	8	11
Number of doctors	138	157	157	109	106	88	100	112
Persons per doctor	970	910	n.a	n.a	n.a	n.a	n.a	5,196
Number of hospital beds	932	944	944	914	954	979	970	970
Persons per hospital bed	1,500	1,500	n.a	n.a	n.a	n.a	n.a	600
Doctors per 10,000 persons	1	1	n.a	n.a	n.a	n.a	n.a	1.9
Hospital bed per 10,000 persons	7	7	n.a	n.a	n.a	n.a	n.a	17
Population covered by health care (%)	65	65	65	90	90	90	90	n.a
Population access to safe drinking water (%)	n.a	38	38	54	54	54	54	54
Women attended by trained personnel during child birth (%)	n.a	16	21	25	25	n.a	15	21

Note: Includes doctors in adminstrative services, non-nationals and expatriates for 1995 figure.
Source: Health Division, Thimphu

TABLE 2.2: TYPE OF HEALTH FACILITIES BY DZONGKHAG, 1995

(number)

Dzongkhag	Hospital	Basic health unit	Dispensary	Outreach clinic
Bjakar	1	3	0	23
Chhukha	2	5	3	39
Dagana	0	3	3	16
Gasa	0	1	1	7
Haa	1	1	1	15
Lhuntse	1	4	3	27
Mongar	1	9	1	55
Paro	1	2	0	19
Pemagatshel	1	2	0	24
Punakha	0	2	1	12
Samtse	3	2	9	0
Samdrupjongkha	2	11	1	38
Sarpang	2	5	7	0
Zhemgang	1	7	1	32
Thimphu	4	3	1	25
Trashigang	3	10	3	56
Trashiyangtse	0	4	0	20
Trongsa	1	2	2	23
Tsirang	1	3	5	0
Wangduephodrang	1	5	2	23
Bhutan	26	84	44	454

Source: Health Division, Thimphu

TABLE 2.3: HEALTH PERSONNEL BY CATEGORY, 1988 TO 1995

(numbers)

Health personnel	1988	1989	1990	1991	1992	1993	1994	1995
Doctors	138	157	157	109	106	88	100	112
Health Assistants	100	119	117	115	116	100	99	105
Basic health workers	97	91	114	127	119	125	137	137
Sister and nurses	303	317	325	316	323	329	342	340
Other technicians	178	144	182	239	251	133	136	168
Indigenous physicians	10	12	12	14	14	19	29	19
Indigenous compounders	9	10	10	8	8	11	15	11
Village health workers (VHW)	..	..	n.a	n.a	n.a	1,413	1,058	1085

Note: Including expatriates.
Source: Health Division, Thimphu

TABLE 2.4: PATIENTS TREATED IN BASIC HEALTH UNITS BY DISEASE, BHUTAN, 1990 TO 1995

Disease	Persons ('000)						Percent					
	1990	1991	1992	1993	1994	1995	1990	1991	1992	1993	1994	1995
Diarrhoea/Dysentery	78.7	53.6	55.9	53.9	65.1	63.1	15.1	15.0	14.0	12.4	13.6	14.2
Respiratory tract infection	104.0	75.6	89.6	94.2	106.5	113.6	20.0	21.2	22.5	21.7	22.2	25.6
Worms	55.3	39.3	39.4	41.8	43.4	39.6	10.6	11.0	9.9	9.6	9.1	8.9
Skin infection	69.9	51.2	58.2	63.9	70.0	66.4	13.4	14.3	14.6	14.7	14.6	14.9
Malaria/P.U.O	41.8	25.7	29.3	37.3	39.2	9.3	8.0	7.2	7.3	8.6	8.2	2.1
Conjunctivitis	35.9	25.9	30.2	37.7	43.1	38.0	6.9	7.3	7.6	8.7	9.0	8.6
Otitis media	10.8	7.8	8.8	9.9	10.3	10.4	2.1	2.2	2.2	2.3	2.1	2.3
Nutritional deficiency	26.2	14.7	13.6	13.9	16.0	14.6	5.0	4.1	3.4	3.2	3.3	3.3
Peptic ulcer syndrome	22.3	14.6	17.0	18.7	21.1	22.5	4.3	4.1	4.3	4.3	4.4	5.1
Disease of teeth and gum	9.5	7.0	9.0	9.1	10.4	9.8	1.8	2.0	2.3	2.1	2.2	2.2
Urinary tract infection and nephretis	8.5	5.5	5.5	6.2	6.5	6.7	1.6	1.5	1.4	1.4	1.4	1.5
Injuries	22.4	13.8	16.4	17.6	18.2	17.7	4.3	3.9	4.1	4.1	3.8	4.0
Sexually transmitted diseases	1.4	1.3	1.5	1.0	0.7	0.7	0.3	0.4	0.4	0.2	0.1	0.1
Childhood diseases	2.5	1.2	2.1	1.8	2.4	1.9	0.5	0.3	0.5	0.4	0.5	0.4
Disease of female genital tract	1.5	1.3	1.2	1.3	1.2	1.3	0.3	0.4	0.3	0.3	0.3	0.3
Complication of pregnancy and childbirth peuperum	1.3	1.0	1.2	1.1	1.1	1.0	0.3	0.3	0.3	0.3	0.2	0.2
Others	28.4	17.7	19.9	24.4	24.3	27.8	5.5	5.0	5.0	5.6	5.1	6.3
All diseases	520.4	357.3	398.8	433.7	479.5	444.4	100.0	100.0	100.0	100.0	100.0	100.0

Source: Health Division, Thimphu

TABLE 2.5: PATIENTS TREATED IN HOSPITALS FOR VARIOUS DISEASES BY SEX AND AGE, BHUTAN, 1995

(persons)

Disease	Age below 1		Age 1 to 4		Age 5 to 14		Age 15 to 49		Age >= 50		All ages			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total	Percent
Bacterial and amoebic intestinal infections	1,360	1,539	2,690	2,683	2,910	2,881	4,905	3,961	2,212	1,715	14,077	12,779	26,856	5.78
Viral & other intestinal infection	1,686	1,821	3,423	3,358	3,585	3,527	6,105	4,419	1,638	1,279	16,437	14,404	30,841	6.64
Tuberculosis	6	14	43	92	127	107	460	445	247	197	883	855	1,738	0.37
Children's diseases	59	88	212	327	512	483	257	193	72	44	1,112	1,135	2,247	0.48
Tonsillitis	119	117	418	451	1,158	1,379	2,568	2,150	840	676	5,103	4,773	9,876	2.13
Scabies	416	464	964	1,198	2,030	2,081	2,537	2,217	1,174	1,067	7,121	7,027	14,148	3.05
Hepatitis	9	14	35	30	84	104	267	206	58	23	453	377	830	0.18
Malaria	342	380	625	701	1,097	1,367	2,417	1,739	1,202	901	5,683	5,088	10,771	2.32
Gonorrhoea	..	..	..	..	27	19	459	252	42	25	528	296	824	0.18
Intestinal worms	196	227	1,250	1,686	2,743	2,840	3,408	3,045	1,407	1,216	9,004	9,014	18,018	3.88
Other infections	84	92	359	530	849	1,022	1,332	1,200	726	633	3,350	3,477	6,827	1.47
Neoplasms	n.a	1	n.a	1	6	6	39	59	80	59	125	122	247	0.05
Endocrine, metabolic and nutritional diseases	335	329	694	685	793	874	1,176	1,224	992	824	3,990	3,936	7,926	1.71
Anaemia	98	120	301	426	720	954	1,465	2,709	1,094	1,112	3,678	5,321	8,999	1.94
Mental disorders	n.a	2	2	6	2	5	91	102	11	8	106	123	229	0.05
Diseases of the eye	505	670	1,243	1,563	2,373	2,633	3,710	3,361	1,666	1,366	9,497	9,593	19,090	4.11
Diseases of the ear	487	517	1,189	1,075	1,495	1,527	1,459	1,358	556	434	5,186	4,911	10,097	2.17
Diseases of the nervous system	118	64	109	164	254	315	671	544	262	203	1,414	1,290	2,704	0.58
Diseases of the circulatory system	27	21	60	76	192	229	1,737	1,778	1,566	1,193	3,582	3,297	6,879	1.48
Acute repiratory infections	2,733	2,957	4,395	4,329	6,297	7,218	12,691	11,149	4,402	2,999	30,518	28,652	59,170	12.74
Other diseases of the respiratory	1,276	1,302	2,514	2,401	2,597	3,052	5,403	4,567	2,470	2,083	14,260	13,405	27,665	5.96
Disease of the teeth & gum	13	13	244	311	2,814	3,216	4,939	5,013	2,215	1,811	10,225	10,364	20,589	4.43

(Continued).....

TABLE 2.5: (continuation) PATIENTS TREATED IN HOSPITALS FOR VARIOUS DISEASES BY SEX AND AGE, BHUTAN, 1995

(persons)

Disease	Age below 1		Age 1 to 4		Age 5 to 14		Age 15 to 49		Age >= 50		All ages			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total	Percent
Peptic ulcer & gastritis	136	163	488	947	1,449	1,753	7,336	7,502	3,968	4,020	13,377	14,385	27,762	5.98
Other diseases of the digestive system	256	193	425	385	958	1,291	2,455	2,586	1,512	1,236	5,606	5,691	11,297	2.43
Diseases of the urinary system	12	23	87	113	533	535	1,768	2,231	823	780	3,223	3,682	6,905	1.49
Diseases of male genital organs	4	..	53	..	271	..	756	..	536	..	1,620	..	1,620	0.35
Diseases of breast	..	..	..	2	..	58	..	616	..	171	..	847	847	0.18
Diseases of female genital organs	..	2	..	23	..	417	..	2,962	..	687	..	4,091	4,091	0.88
Pregnancy, childbirth and the	..	..	..	..	..	15	..	2,715	..	10	..	2,740	2,740	0.59
Diseases of the skin	1,564	1,732	3,482	3,503	5,083	5,274	9,486	7,099	2,783	2,048	22,398	19,656	42,054	9.06
Diseases of the musculo-skeletal system	4	9	76	121	488	578	5,314	3,812	2,375	1,985	8,257	6,505	14,762	3.18
Acute abdomen	8	13	42	57	200	247	636	764	250	218	1,136	1,299	2,435	0.52
Fever of unknown origin	793	859	1,581	1,545	2,065	2,306	4,877	3,858	1,594	1,415	10,910	9,983	20,893	4.50
Headache	42	49	227	523	1,529	2,008	5,149	5,309	2,806	2,283	9,753	10,172	19,925	4.29
Other symptoms and signs	132	179	441	442	719	807	1,874	1,874	917	954	4,083	4,256	8,339	1.80
Injuries	120	184	725	688	1,756	1,461	5,096	2,209	1,188	661	8,885	5,203	14,088	3.03
All diseases	3,071	3,406	7,627	8,349	15,051	16,750	102,843	43,537	18,752	16,468	89,248	88,510	177,758	38

Source: Health Division

TABLE 2.6: NUMBER OF PATIENTS REPORTED IN DIFFERENT HOSPITALS, 1989 TO 1995

(thousand patients)

Hospital	1989	1990	1991	1992	1993	1994	1995
Government hospitals							
Bjakar	6.4	4.4	9.4	10.4	10.0	9.1	10.7
Tsirang	23.8	20.3	73.8	38.7	18.3	15.1	12.0
Geylegphug	60.0	46.6	77.1	70.0	69.6	62.1	56.1
Pemagatshel	6.1	7.6	11.0	9.6	5.5	7.8	6.4
Paro	28.9	40.1	28.5	18.9	24.0	29.4	29.9
Phuntsholing	16.4	33.1	34.6	34.9	41.4	33.4	23.9
Samdrupjongkhar	22.5	25.8	17.7	25.6	28.0	26.2	17.7
Samtse	21.3	22.1	23.1	29.9	20.7	20.2	18.5
Sarpang	-	46.6	n.a	n.a	38.0	..	..
Sibsoo	8.9	9.4	9.5	8.4	6.6	5.9	6.1
Thimphu	129.6	145.0	5.5	5.1	19.0	5.8	6.8
Trashigang	17.2	28.6	17.7	20.9	19.0	17.8	17.6
Tshimalakha	24.7	20.5	24.6	20.6	21.4	24.1	20.5
Trongsa	5.9	7.0	6.9	6.4	7.1	7.7	7.2
Leprosy mission hospitals							
Gidakom	4.8	10.0	8.7	9.0	9.9	11.9	10.5
Lhuntshi	5.5	7.0	8.7	9.6	8.5	7.5	4.7
Mongar	10.0	11.0	11.8	12.1	10.6	10.2	13.1
Riserboo	n.a	3.6	5.2	7.9	6.4	8.7	9.5
Yebilaptsa(Zhemgang)	4.1	6.2	6.8	7.7	8.3	7.2	6.5
Army hospitals							
Lungtenphug	n.a	n.a	n.a	n.a	0.0	n.a	n.a
Wangdiphodrang	31.0	28.5	29.0	24.2	32.1	25.8	23.3
Ycuphula	n.a	7.0	15.2	10.5	7.8	9.8	11.9
Imtrat (Haa)	n.a	24.1	23.3	30.1	23.6	25.4	20.9
Others							
Dantak (Deothang)	n.a	24.1	56.5	n.a	0.0	n.a	n.a
IBFH (Thimphu)	n.a	56.9	44.6	51.5	55.7	64.2	56.0
Project hospitals							
Gomtu	n.a	26.1	33.2	38.3	34.3	36.4	34.0
Indigenous hospital	18.0	15.8	33.4	33.5	33.1	26.3	n.a
Indigenous dispensary	18.0	17.0	71.4	77.1	40.8	41.4	n.a
All hospitals(b)	463.1	694.4	687.2	610.9	599.4	539.4	423.6

Note: Comparisons over time may be affected by different coverage in each year

Source: Health Division, Thimphu

TABLE 2.7: NUMBER OF INDIVIDUALS COVERED BY IMMUNIZATION ACTIVITIES, 1986 TO 1995

Immunization	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
BCG	28469	28158	2483	2688	2009	18454	1659	16732	21891	14435
DPT1	21556	25456	2181	2371	1963	18363	1671	16427	21125	n.a
DPT3	14846	21358	1793	2181	1776	15730	1488	15059	19759	12643
OPV1	20927	25355	2145	2411	1976	18167	1630	16973	21627	n.a
OPV3	14179	21281	1749	2224	1793	15688	1470	15337	19344	12476
Measles	17076	21514	1687	2129	1399	13716	1243	12238	18499	11075
TT1	4912	8365	8883	1148	1034	7926	7073	6672	8441	n.a
TT2	2395	4948	5244	7497	7361	5475	4847	4529	13712	8505

Source: Health Division, Thimphu

TABLE 2.8: INCIDENCE OF E.P.I. DISEASES FOR CHILDREN BELOW AGE 15, BHUTAN, 1989 TO 1995

(numbers)

Year	1989	1990	1991	1992	1993	1994	1995
Diptheria							
Incidence	0	0	3	2	0	0	0
Deaths	0	0	0	0	0	0	0
Measles							
Incidence	554	299	441	103	505	683	148
Deaths	1	5	0	1	3	0	0
Pertussis							
Incidence	4	2	8	9	0	0	5
Deaths	0	0	0	0	0	0	0
Poliomyelitis							
Incidence	0	0	0	0	0	0	0
Deaths	0	0	0	0	0	0	0
Tetanus							
Incidence	0	0	4	0	0	0	0
Deaths	0	0	0	0	0	0	0
Neonatal tetanus							
Incidence	2	1	0	2	0	1	0
Deaths	2	1	0	1	0	1	0
Tuberculosis							
Incidence	437	22	129	140	101	311	269
Deaths	2	0	1	4	2	0	5
All EPI diseases							
Incidence	997	324	585	256	606	995	422
Deaths	5	6	1	6	5	1	5

Note: EPI stands for expanded program on Immunization
Source: Health Division, Thimphu

TABLE 2.9: DETAILS OF CHILD GROWTH MONITORING IN IMMUNIZATION CLINICS, BHUTAN, 1986 TO 1995

Details	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Children weighed (numbers)	n.a	n.a	n.a	n.a	n.a	n.a	18,499	20,501	18,229	14,800
Child malnutrition (numbers)	9030	15502	8334	10804	12115	11093	10,746	9,248	7,136	4,751
Degree I	n.a	n.a	n.a	n.a	n.a	n.a	7,676	6,510	4,930	3,176
Degree II	n.a	n.a	n.a	n.a	n.a	n.a	2,236	2,028	1,605	1,268
Degree III	953	2020	876	1145	2967	767	834	710	601	307
Child malnutrition (%)	n.a	n.a	n.a	n.a	n.a	n.a	58.1	45.1	39.1	32

Source: Health Division, Thimphu

TABLE 2.10: DETAILS OF MATERNAL AND CHILD HEALTH CARE SERVICES, 1987 TO 1995

(persons)

Type of care	1987	1988	1989	1990	1991	1992	1993	1994	1995
Maternal health care attendence(a)									
Antenatal	26,662	29,425	33,324	40,616	38,064	40,310	51,321	12,785	11,614
Postnatal	37,476	34,277	36,406	45,916	40,289	42,182	45,262	9,874	8,793
Deliveries attended									
Home (b)	2,170	1,838	2,258	2,450	2,206	2,667	2,680	n.a	1,379
Hospital/BHU	2,491	3,086	3,588	3,513	3,287	3,392	3,371	n.a	5,244
Total deliveries	4,661	4,924	5,846	5,963	5,438	6,059	6,051	14,864	6,623
Child health care attend.									
First visit	33,240	26,090	35,784	29,450	23,954	22,081	22,962	n.a	n.a
Re-visit	163,161	136,450	151,526	180,410	147,819	159,190	165,249	n.a	n.a
Total attendance	196,401	162,540	187,310	209,860	171,773	181,271	188,211	n.a	n.a
Malnourished children(c)									
All malnourished	15,502	8,334	10,807	12,155	11,093	10,746	9,248	7,136	4,751
Third degree	2,020	876	1,145	2,967	767	834	710	601	307

(a) Refers to total attendance, not a count of individuals
(b) Home deliveries are those attended by health staff.
(c) Children attending health units are classified according to three degreesmalnourishment
Third degree malnourishment refers to the most severe cases
Source: Health Division, Thimphu

TABLE 2.11: DETAILS OF MATERNAL HEALTH CARE ACTIVITIES BY DZONGKHAG, 1990 TO 1995

(numbers)

Dzongkhag	1990	1991	1992	1993	1994	1995
Bumtha						
Antenatal	1,139	894	1,302	408	345	228
Postnatal	1,608	872	1,625	n.a	118	193
Reported deliveries	58	87	255	407	424	199
Trained deliveries	10	95	109	114	75	162
Chhukha						
Antenatal	3,052	3,466	3,731	1,335	1,063	993
Postnatal	3,526	4,449	4,087	n.a	1,080	904
Reported deliveries	26	45	262	1,333	1,018	395
Trained deliveries	3	337	260	600	283	390
Dagana						
Antenatal	1,260	751	715	445	304	247
Postnatal	3,947	2,226	1,886	n.a	398	322
Reported deliveries	371	269	105	446	287	211
Trained deliveries	121	67	33	58	44	98
Gasa						
Antenatal	..	..	n.a	57	31	43
Postnatal	..	..	n.a	n.a	73	8
Reported deliveries	..	..	n.a	56	31	7
Trained deliveries	..	..	n.a	5	17	3
Haa						
Antenatal	753	790	694	235	153	125
Postnatal	401	321	221	n.a	208	47
Reported deliveries	57	15	96	235	163	29
Trained deliveries	12	4	32	275	29	29
Lhuntse						
Antenatal	1,773	1,503	1,581	465	370	355
Postnatal	1,268	1,462	1,548	n.a	429	287
Reported deliveries	369	263	193	460	404	405
Trained deliveries	22	31	21	207	39	333
Mongar						
Antenatal	3,433	2,239	3,414	981	871	870
Postnatal	1,796	2,019	2,835	n.a	845	847
Reported deliveries	105	396	689	988	1,172	973
Trained deliveries	78	151	237	652	190	664

(continued)....

TABLE 2.11: (continuation) DETAILS OF MATERNAL HEALTH CARE ACTIVITIES BY DZONGKHAG, 1990 TO 1995

(numbers)

Dzongkhag	1990	1991	1992	1993	1994	1995
Paro						
Antenatal	1,590	1,616	1,128	536	520	237
Postnatal	1,788	1,826	1,780	n.a	100	223
Reported deliveries	n.a	n.a	113	540	521	194
Trained deliveries	n.a	77	110	54	121	184
Pemagatshel						
Antenatal	1,143	885	933	470	272	327
Postnatal	4,702	4,005	4,206	n.a	430	393
Reported deliveries	116	219	282	470	437	147
Trained deliveries	8	60	59	381	135	84
Punakha						
Antenatal	1,901	1,438	1,806	495	388	294
Postnatal	839	786	561	n.a	300	44
Reported deliveries	269	134	105	507	761	92
Trained deliveries	45	51	39	71	85	63
Samdrupjongkhar						
Antenatal	2,546	2,030	2,305	1,032	784	903
Postnatal	361	2,049	2,947	n.a	849	730
Reported deliveries	165	174	260	1,021	941	500
Trained deliveries	70	93	139	429	218	332
Samtse						
Antenatal	1,971	2,073	2,450	1,378	908	803
Postnatal	2,081	1,557	2,264	n.a	733	622
Reported deliveries	35	5	255	1,384	783	50
Trained deliveries	25	240	255	263	311	50
Sarpang						
Antenatal	3,821	3,264	2,469	721	734	660
Postnatal	3,102	2,662	1,556	n.a	286	363
Reported deliveries	191	n.a	234	741	753	86
Trained deliveries	114	293	234	126	90	86
Thimphu						
Antenatal	8,280	9,830	10,225	2,491	2,385	n.a
Postnatal	4,292	5,465	3,693	n.a	704	n.a
Reported deliveries	60	119	1,181	2,516	2,430	n.a
Trained deliveries	33	1,160	1,128	1,107	1,359	n.a
Trashigang						
Antenatal	4,751	3,834	4,852	1,379	1,136	1053
Postnatal	1,075	4,187	5,486	n.a	1,210	1138
Reported deliveries	632	941	1,475	1,385	1,507	1266
Trained deliveries	168	251	503	457	269	883

(continued)..

TABLE 2.11: (continuation) DETAILS OF MATERNAL HEALTH CARE ACTIVITIES BY DZONGKHAG, 1990 TO 1995

(numbers)

Dzongkhag	1990	1991	1992	1993	1994	1995
Tashiyangtse						
Antenatal	n.a	n.a	646	696	381	227
Postnatal	n.a	n.a	511	n.a	257	228
Reported deliveries	n.a	n.a	184	700	782	290
Trained deliveries	n.a	n.a	8	196	30	282
Trongsa						
Antenatal	990	664	813	358	445	296
Postnatal	2,059	1,076	1,903	n.a	259	245
Reported deliveries	111	38	24	354	258	245
Trained deliveries	55	34	21	85	61	192
Tsirang						
Antenatal	2,656	1,545	745	345	352	372
Postnatal	2,023	996	622	n.a	492	438
Reported deliveries	205	17	47	333	589	122
Trained deliveries	135	84	47	40	58	122
Wangduephodrang						
Antenatal	1,774	3,052	2,200	1,034	880	607
Postnatal	1,170	1,188	1,248	n.a	661	635
Reported deliveries	246	234	153	1,041	1,051	264
Trained deliveries	46	181	108	281	272	214
Zhemgang						
Antenatal	1,548	1,257	1,510	892	463	406
Postnatal	2,981	2,734	2,763	n.a	442	416
Reported deliveries	117	70	169	882	551	295
Trained deliveries	35	78	72	335	52	254
Royal Bhutan Army						
Antenatal	n.a	488	466	n.a	n.a	n.a
Postnatal	n.a	399	440	n.a	n.a	n.a
Reported deliveries	n.a	n.a	n.a	n.a	n.a	n.a
Trained deliveries	n.a	n.a	n.a	n.a	n.a	n.a

Note: Trained delivery refer to deliveries attended by trained health personnels in hospitals/BHUs and at home
Source: Health Division, Thimphu

TABLE 2.12: DETAILS OF COMPLICATIONS DURING PREGNANCY, DELIVERY AND PUERPERIUM, BHUTAN, 1995

Complications	Numbers	Percent
Pregnancy of mothers	770	63.8
Abortions	156	12.9
Antepartum haemorrhage	52	4.3
Hypertensive diseases	58	4.8
Anaemia	456	59.0
Hepatitis	14	1.2
Malaria	33	2.7
Others	1	0.1
Labour/delivery	226	18.7
Obstructed labour	67	5.6
Transverse lie	22	1.8
Breech	65	5.4
Ruptured uterus	2	0.2
Hypertensive diseases	13	1.1
Prematurity	56	4.6
Others	1	0.1
Puerperium	358	29.7
Postpartum hamorrhage	96	8.0
Retained	142	11.8
Placenta	16	1.3
Pyrexia	104	8.6
All complications	1,354	112.2

Source: Health Division, Thimphu

TABLE 2.13: FAMILY PLANNING ACCEPTORS BY TYPE OF METHOD, BHUTAN 1986 TO 1995

(persons)

Method	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Vasectomy	414	552	897	1,961	1,120	685	231	714	2,043	1,263
Minilap	428	470	379	506	301	177	68	172	355	n.a
Intra uterine	896	665	619	757	987	986	637	687	930	759
Pills	6,355	6,03	5,663	7,168	5,675	7,721	9,572	9,936	7,496	8,794
Condoms	2,846	1,09	897	1,476	2,049	6,777	7,529	6,568	4,877	5,635
Injection DMPA	81	78	48	125	50	453	6,448	6,662	7,748	9,278
All methods	11,02	8,90	8,503	11,99	10,18	16,79	24,485	24,73	23,44	25,729

Source: Health Division, Thimphu

TABLE 2.14: NUMBER OF USERS OF FAMILY PLANNING METHODS BY TYPE BY DZONGKHAG, 1995

Dzongkhag	Family planning methods					All methods
	Sterilisation	IUD	DMPA	Pills	Condom	
Bjakar	5	4	338	245	116	708
Chhukha	33	50	215	469	247	1014
Daga	34	2	305	851	90	1282
Gasa	0	0	43	17	57	117
Haa	67	7	78	48	13	213
Lhuntse	27	6	321	269	314	937
Mongar	75	35	1077	954	472	2613
Paro	9	32	172	170	159	542
Pemagatshel	18	11	199	100	92	420
Punakha	21	26	276	82	62	467
Samdrupjongkha	18	22	732	754	678	2204
Samtse	319	7	403	453	353	1535
Sarpang	82	25	602	306	156	1171
Zhemgang	50	22	489	481	188	1230
Thimphu	188	380	813	672	919	2972
Trashigang	111	15	1304	583	522	2535
Trashiyangtse	0	0	267	228	85	580
Trongsa	26	5	578	349	398	1356
Tsirang	64	79	516	859	375	1893
Wangduephodrang	116	31	550	904	339	1940
Bhutan	1,263	759	9,278	8,794	5,635	25,729

Source: Health Division, Thimphu

TABLE 2.15: DETAILS OF LEPROSY PATIENTS, LEPROSY CONTROL PROGRAMME, 1987 TO 1995

(persons)

Details	1987	1988(	1989	1990	1991	1992	1993	1994	1995
Patients at beginning of year	1,674	1,018	601	405	245	201	156	127	113
New cases detected	88	69	57	58	54	53	45	57	32
Relapse cases	6	11	3	12	1	2	1	1	3
Released from control(a)	534	447	282	209	91	55	72	61	35
Lost to control(b)	18	30	14	11	9	12	10	5	3
Patients at the end of year	1,183	601	353	249	201	162	127	113	117
Deaths	33	20	12	7	5	5	1	4	0

(a) Patients successfully treated.
(b) Patients unsuccessfully treated.
(c) Some non-national patient left the course at the beginning of 1990.

Source: Health Division, Thimphu

TABLE 2.16: NUMBER OF BLOOD SLIDE EXAMINATIONS FOR MALARIA AND MALARIOMETRIC INDICES, BHUTAN, 1987 TO 1995

Details	1987	1988	1989	1990	1991	1992	1993	1994	1995
Total blood films examined	69029	51164	71653	33973	67699	73986	80980	97425	83899
Blood film detected negative	55895	39850	52491	24476	45573	45086	52588	58524	n.a
Blood films detected positive	13134	11314	19162	9497	22126	28900	28392	38901	23195
Plasmodium vivax	n.a	n.a	n.a	n.a	8988	14808	15337	22427	15655
Plasmodium falciparum	n.a	n.a	n.a	n.a	12966	13910	12779	15998	7236
Mixed infections	n.a	n.a	n.a	n.a	172	182	276	476	304
Malariometric indices									
Annual blood slide examination	n.a	n.a	n.a	n.a	19.3	12.1	23.1	27.8	23.9
Slide positive rate	n.a	n.a	n.a	n.a	32.7	39	35	39.9	27.6
Annual parasite incidence	n.a	n.a	n.a	n.a	63.2	82.6	81.1	111.1	66.2
Slide falciparum rate	n.a	n.a	n.a	n.a	19.4	19	16.1	16.4	8.9
Positive falciparum rate (%)	n.a	n.a	n.a	n.a	59.3	49.2	45.9	41.1	32.5
Deaths due to malaria (numbers)	n.a	n.a	n.a	n.a	n.a	54	62	n.a	n.a

Source: Health Division, Thimphu

TABLE 2.17: NUMBER OF TUBERCULOSIS CASES BY TYPE, BHUTAN, 1993 TO 1995

(persons)

Year	Cases diagnosed and treated			
	Pulmonary	Extra Pulmonary	Total cases	Total deaths
1993	3224	1034	4258	40
1994	1427	393	1820	23
1995	1038	270	1308*	62

* New cases treated during the year

Source: Annual Health Bulletin, Division of Health, Thimphu:

TABLE 2.18: TYPE OF SANITATION FACILITIES CONSTRUCTED BY DZONGKHAG, 1995

(numbers)

Dzongkhag	Houses	Latrines	Houses with piped water	Animal sheds	Garbage pits	Kitchen gardens
Bjakar	1,225	1,211	717	1,140	1,049	1,182
Chhukha	4,195	2,649	1,684	1,263	1,009	2,243
Dagana	1,224	935	227	148	149	793
Gasa	374	299	74	222	227	232
Haa	1,097	880	890	180	110	805
Lhuntse	2,407	1,664	889	756	589	1,260
Mongar	4,865	4,644	2,776	1,584	2,126	3,553
Paro	2,860	2,251	877	300	266	0
Pemagatshel	2,417	1,945	1,716	1,522	314	1,547
Punakha	1,748	1,414	831	1,116	522	1,217
Samdrupjongkha	5,566	4,093	2,497	2,765	1,962	3,017
Samtse*	7,866	1,095	1,774	1,095	0	1,774
Sarpang	3,404	2,403	437	2,050	370	2,960
Shemgang	2,000	1,744	1,234	899	296	1,442
Thimphu	2,298	1,876	1,453	572	470	2,140
Trashigang	5,854	4,872	2,925	2,128	773	4,230
Trashiyangtse	3,138	2,694	1,516	1,145	260	2,718
Trongsa	1,340	1,181	1,096	371	431	1,041
Tsirang	2,645	1,833	563	2,281	940	2,135
Wangduephodrang	3,097	2,263	1,179	1,452	1,726	2,502
Bhutan	59,620	41,946	25,355	22,989	13,583	36,791

Note: Coverage for Thimphu Dzongkhag is for rural areas only
* Based on 1994 report
Source: Annual Health Bulletin 1995, Health Division, Thimphu

CHAPTER 3: EDUCATION

INTRODUCTION

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. Many schools contain boarding facilities for students living in areas far from the nearest school.

While the medium of instruction in schools is english, Bhutan's national language dzongkha is taught as a compulsory subject from primary to college level. School curricula also includes religious instruction, training in traditional arts and crafts and agriculture.

The division of education maintain an extensive range of data on students, schools and teaching personnel, some summary data are presented in this chapter.

TABLE 3.1: NUMBER OF SCHOOLS AND INSTITUTIONS, STAFF AND STUDENTS, BHUTAN 1995

Details	Community schools	Primary schools	Junior schools	High schools	Private schools	Other institutes	Total
Number of infrastructures	102	143	18	8	7	8	288
Total staff	239	1591	431	354	64	355	3034
Teaching staff	228	1,356	342	246	51	200	2,423
Nationals	218	1,049	230	153	45	136	1,831
Non Nationals	10	307	112	93	6	64	592
Non teaching staff	11	235	89	108	13	155	611
Nationals	11	233	87	100	5	113	549
Non Nationals	0	2	2	8	8	42	62
Number of students	9,655	49,064	10,469	5,296	999	1,793	77,276
Males	5,502	27,811	5,883	3,084	533	1,388	44,201
Females	4,153	21,253	4,586	2,212	466	405	33,075
Student to teacher ratio	42	36	31	22	20	9	32

Note: Institutions include 1 Sanskrit Patshala having 1 national teacher

Source: Education Division, Thimphu

TABLE 3.2: NUMBER OF EDUCATIONAL INSTITUTIONS, TEACHERS AND STUDENTS, BHUTAN, 1977 TO 1995

Year	Infrastructure			Teachers			Students		
	Schools	Institutes	Total	Schools	Institutes	Total	Schools	Institutes	Total
1977	114	8	122	769	103	872	19,973	465	20,438
1981	142	8	150	1,219	108	1,327	31,938	1,105	33,043
1982	158	12	170	1,263	159	1,422	40,064	2,058	42,122
1983	166	28	194	1,520	n.a	1,520	43,782	2,035	45,817
1984	171	30	201	1,655	n.a	..	46,328	2,439	48,767
1985	175	31	206	1,668	n.a	..	49,175	2,660	51,835
1986	177	n.a	..	1,934	n.a	..	52,452	n.a	..
1987	178	n.a	..	2,038	n.a	..	54,927	n.a	..
1988	180	7	187	2,208	150	2,358	58,796	1,761	60,557
1989	n.a	n.a	n.a	n.a	n.a	n.a	65,533	n.a	..
1990	187	9	196	2,419	206	2,625	68,013	2,341	70,354
1991	244	8	252	2,153	184	2,337	50,412	1,693	52,105
1992	268	8	276	2,146	187	2,333	55,793	1,577	57,370
1993	267	8	275	2,084	197	2,281	62,138	1,524	63,662
1994	278	8	286	2,207	211	2,418	69,133	1,753	70,886,
1995	280	8	288	2,223	200	2,423	75,483	1,793	77,276

Source: Education Division, Thimphu

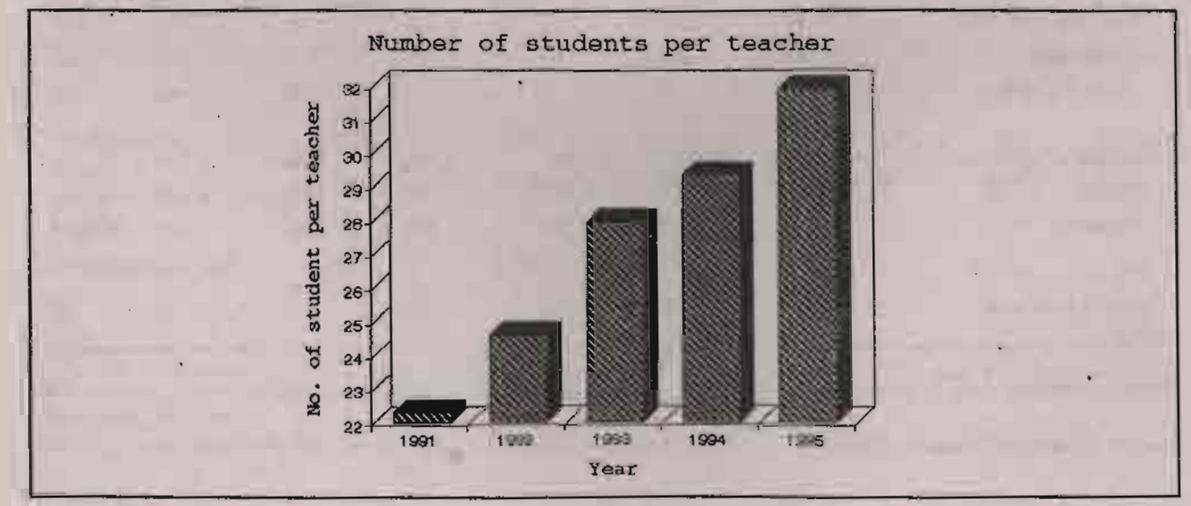


TABLE 3.3: NUMBER OF EDUCATIONAL FACILITIES BY TYPE AND DZONGKHAG, 1995

Dzongkhag	Private schools	Community schools	Primary schools	Junior schools	High schools	Other institutes	Total
Bjakar	0	3	4	0	1	0	8
Chhukha	2	10	10	1	1	1	25
Dagana	0	2	2	1	0	0	5
Gasa	0	0	1	0	0	0	1
Haa	0	1	5	1	0	0	7
Lhuntse	0	9	5	1	0	0	15
Mongar	0	10	11	1	1	0	23
Paro	0	2	8	2	1	1	14
Pemagatshel	0	7	5	1	0	0	13
Punakha	0	3	5	0	1	0	9
Samdrupjongkhar	0	9	11	1	0	1	22
Samtse	0	0	7	1	0	1	9
Sarpang	0	4	3	1	0	1	9
Thimphu	5	1	13	2	2	1	24
Trashigang	0	19	20	2	1	2	44
Trashiyangtse	0	8	6	1	0	0	15
Trongsa	0	4	3	1	0	0	8
Tsirang	0	2	2	0	0	0	4
Wangduephodrang	0	6	8	1	0	0	15
Zhemgang	0	2	14	1	1	0	18
Bhutan	7	102	143	19	9	8	288

Source: Education Division, Thimphu

TABLE 3.4: NUMBER OF TEACHERS IN EDUCATIONAL INSTITUTIONS BY NATIONALITY, 1993 TO 1995

Institutions	1993			1994			1995		
	National	Foreigner	Total	National	Foreigner	Total	National	Foreigner	Total
Schools	1,472	612	208	1,604	603	2,207	1695	528	2223
Community School	190	15	205	205	18	223	218	10	228
Primary School	984	365	1,349	1,037	351	1,388	1049	307	1,356
Junior School	191	134	325	212	135	347	230	112	342
High School	107	98	205	105	92	197	153	93	246
Private School	n.a	n.a	n.a	45	7	52	45	6	51
Specialised/Professional	135	62	197	139	72	211	136	64	200
Sherubtse College	13	34	47	13	39	52	13	32	45
National Institute of	22	5	27	22	5	27	21	4	25
Teachers Training Centre	14	2	16	15	1	16	19	0	19
Royal Bhutan Polytechnic	19	10	29	24	13	37	24	14	38
Royal Technical Institute	30	11	41	28	14	42	25	14	39
National Trade Training	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Simtokha Rigney School	27	0	27	27	0	27	24	0	24
Zangley Muenseling School	10	0	10	9	0	9	9	0	9
Sanskrit Patshala	n.a	n.a	n.a	1	0	1	1	0	1
Total teachers	1,607	674	228	1,743	675	2,418	1831	592	2423

Source: Education Division, Thimphu

TABLE 3.5: NUMBER OF EDUCATIONAL FACILITIES, TEACHERS AND STUDENTS BY DZONGKHAG, APRIL 1995

Dzongkhag	Edtl. Facilities	Teachers			Students		
		Total	National	Non national	Total	Girls	Boys
Bjakar	8	69	54	15	2,162	1,163	1,305
Chhukha	25	235	163	72	5,816	2,898	3,824
Dagana	5	34	30	4	1,188	552	710
Gasa	1	9	9	0	199	80	137
Haa	7	69	56	13	2,093	1,068	1,207
Lhuntse	15	71	58	13	2,166	874	1,421
Mongar	23	138	107	31	4,309	1,831	2,784
Paro	14	184	152	32	5,274	2,609	3,095
Pemagatshel	13	70	57	13	2,781	1,066	1,695
Punakha	9	95	65	30	2,604	1,205	1,600
Samdrupjongkhar	22	104	80	24	5,222	2,049	3,694
Samtse	9	192	120	72	2,365	1,104	1,535
Sarpang	9	57	45	12	1,963	1,079	1,219
Thimphu	24	426	336	90	12,322	6,604	7,036
Trashigang	44	290	208	82	5,649	3,581	5,649
Trashiyangtse	15	75	59	16	2,344	975	1,574
Trongsa	8	62	47	15	1,945	1,031	1,058
Tsirang	4	17	13	4	782	363	504
Wangduephodran	15	100	78	22	3,320	1,651	1,896
Zhemgang	18	126	94	32	3,367	1,292	2,258
Bhutan	288	2,423	1,831	592	77,276	33,075	44,201

Source: Education Division, Thimphu

TABLE 3.6: NUMBER OF ENROLMENT IN EDUCATIONAL INSTITUTIONS, BHUTAN 1991 TO 1995

Institutions	1991	1992	1993	1994	1995
Schools	50,412	55,793	62,138	69,133	75,771
Community school	5,576	7,239	8,350	9,425	9,655
Primary school	34,807	38,973	42,139	45,937	49,064
Junior high schools	7,065	6,503	8,138	8,870	10,469
High schools	2,964	3,078	3,511	4,185	5,584
Private schools	n.a	n.a	n.a	716	999
Other institutions	1,693	1,577	1,524	1,753	1,793
Sherubtse college	383	395	338	533	508
National Institute of Education	185	127	131	160	165
Teachers Training College	66	61	74	146	164
Royal Bhutan Polytechnic	164	142	155	191	226
Royal Technical Institute	275	295	280	233	239
Simtokha Rigney School	562	530	516	436	440
Zangley Munseling School	24	27	30	33	30
Sanskrit patshala	n.a	n.a	n.a	21	21
Natioanl trade training institute	34	..	..	..	..
All institutions	52,105	57,370	63,662	70,886	77,564

Source: Education Division

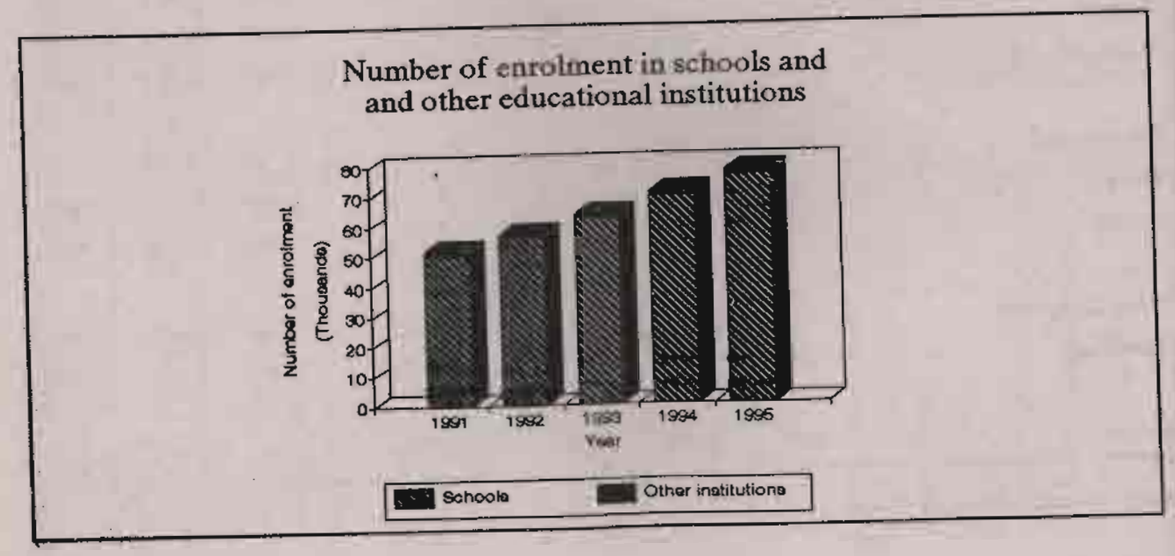


TABLE 3.7: NUMBER OF STUDENTS BY GRADE AND TYPE OF SCHOOL, BHUTAN 1995

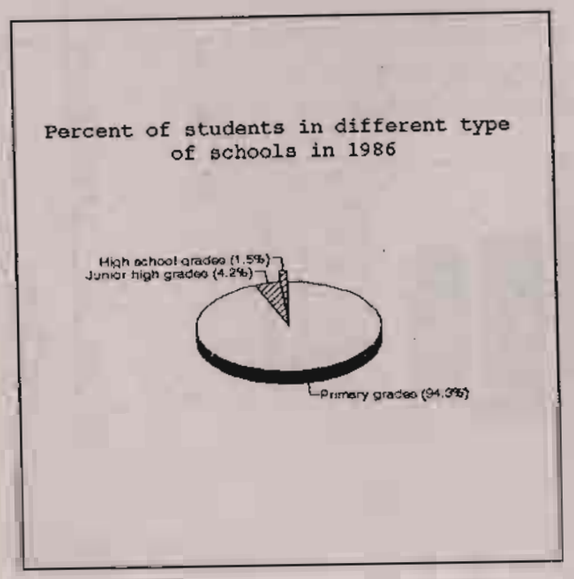
Grade	Private school			Community school			Primary school			Junior school			High school			All schools		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Nursery	107	123	230	..	..	..	..	..	..	..	..	..	..	..	..	107	123	230
Pre primary	224	177	401	1,487	1,152	2,639	4,682	3,632	8,314	405	420	825	..	..	..	6,798	5,381	12,179
I	71	48	119	1,356	945	2,301	4,560	3,719	8,279	474	422	896	..	..	..	6,461	5,134	11,595
II	51	45	96	1,263	969	2,232	4,665	3,618	8,283	432	367	799	..	..	..	6,411	4,999	11,410
III	34	36	70	934	727	1,661	4,196	3,045	7,241	400	342	742	..	..	..	5,564	4,150	9,714
IV	23	21	44	271	142	413	4,179	3,002	7,181	493	415	908	..	..	..	4,966	3,580	8,546
V	16	12	28	27	18	45	3,117	2,359	5,476	460	395	855	..	..	..	3,620	2,784	6,404
VI	7	4	11	..	..	..	2,236	1,607	3,843	489	397	886	62	35	97	2,794	2,043	4,837
VII	..	..	..	..	..	..	..	..	..	1,686	1,210	2,896	504	559	1,063	2,190	1,769	3,959
VIII	..	..	..	..	..	..	..	..	..	1,038	606	1,644	649	533	1,182	1,687	1,139	2,826
IX	..	..	..	..	..	..	..	..	..	..	..	..	980	640	1,620	980	640	1,620
X	..	..	..	..	..	..	..	..	..	..	..	..	771	375	1,146	771	375	1,146
XI	..	..	..	..	..	..	..	..	..	..	..	..	178	72	250	178	72	250
XII	..	..	..	..	..	..	..	..	..	..	..	..	170	56	226	170	56	226
Non formal	..	..	..	136	167	303	123	358	481	11	64	75	..	..	..	346	483	829
Total	533	466	999	5,474	4,120	9,594	2,7758	21,340	49,098	5,888	4,638	10,526	3,314	2,270	5,584	43,043	32,728	75,771

Source: Education Division, Thimphu

TABLE 3.8: NUMBER OF STUDENTS BY GRADE, 1986 TO 1995

Grade	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Primary grades	49,485	51,948	55,340	61,575	63,643	46,517	51,411	56,773	60,089	64,685
Pre-primary	18,431	15,579	14,323	16,042	15,155	13,408	12,786	12,815	11,621	12,179
I	9,814	13,094	13,313	13,756	13,151	8,708	10,836	11,662	12,088	11,595
II	6,760	7,365	9,423	10,798	11,385	7,087	8,265	9,739	10,710	11,410
III	5,361	5,867	6,490	7,754	8,684	6,136	6,157	7,643	8,895	9,714
IV	3,957	4,257	5,048	5,815	6,888	4,905	5,753	5,848	7,187	8,546
V	3,029	3,158	3,728	4,046	4,527	3,467	4,148	5,034	5,262	6,404
VI	2,133	2,628	3,015	3,364	3,853	2,807	3,466	4,032	4,326	4,837
Junior high grades	2,203	2,107	2,419	2,793	3,112	2,590	3,044	3,887	5,244	6,785
VI(a)	-	-	-	-	-	-	-	-	-	-
VII	1,132	1,107	1,277	1,552	1,659	1,381	1,660	2,215	3,326	3,959
VIII	1,071	1,000	1,142	1,241	1,453	1,209	1,384	1,672	1,918	2,826
High school grades	764	872	1,037	1,165	1,258	1,305	1,338	1,434	2,055	2,766
IX	408	528	558	642	698	720	714	840	1,354	1,620
X	356	344	479	523	560	585	624	594	701	1,146
Total students	52,452	54,927	58,796	65,533	68,013	50,412	55,793	62,094	67,388	74,236

Note: High school excludes students of class XI and XII of Yangchenphug High School
(a) Grade VI is in junior level. Figures now included under primary levelSource: Education Division, Ministry of Health and Education, Thimphu



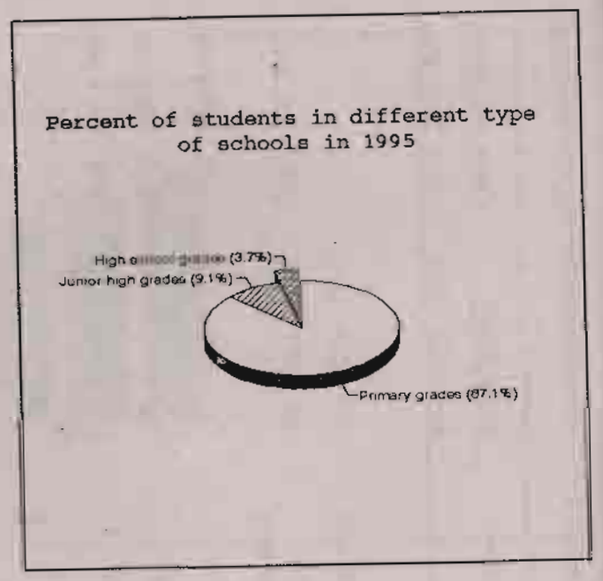


TABLE 3.9: NUMBER OF STUDENTS ENROLED, PROMOTEES, REPEATERS AND DROPOUTS BY SEX AND GRADE, 1995

Details	PP	I	II	III	IV	V	VI	VII	VIII	IX	X	Total
Boys												
Enrolment	6,798	6,461	6,411	5,564	4,966	3,620	2,794	2,190	1,687	980	771	42,242
Promotees	5,206	5,329	4,776	4,259	3,216	2,530	2,011	1,569	924	769	0	30,589
Repeaters	1,329	1,255	1,082	788	707	404	264	179	118	56	2	6,184
Dropouts	104	208	282	147	224	144	147	201	95	67	0	1,619
Girls												
Enrolment	5,381	5,134	4,999	4,150	3,580	2,784	2,043	1,769	1,139	640	375	31,994
Promotees	4,202	4,268	3,683	3,099	2,503	1,790	1,582	1,051	595	375	0	23,148
Repeaters	917	932	731	467	481	281	253	187	88	45	0	4,382
Dropouts	122	204	235	142	67	124	80	139	98	42	n.a	1,253
All students												
Enrolment	12,179	11,595	11,410	9,714	8,546	6,404	4,837	3,959	2,826	1,620	1,146	74,236
Promotees	9,408	9,597	8,459	7,358	5,719	4,320	3,593	2,620	1,519	1,144	0	53,737
Repeaters	2,246	2,187	1,813	1,255	1,188	685	517	366	206	101	2	10,566
Dropouts	226	412	517	289	291	268	227	340	193	109	0	2,872

Note: Promotees and dropout figures are imputations
Source: Education Division, Thimphu

TABLE 3.10: THE IMPUTED PERCENT OF DROPOUT AND REPEATERS BETWEEN 1994 AND 1995.

Class	Boys		Girls		Total	
	Repeaters	Dropouts	Repeaters	Dropouts	Repeaters	Droupouts
PP	20.02%	1.57%	17.50%	2.33%	18.91%	1.90%
I	18.48%	3.06%	17.25%	3.77%	17.93%	3.38%
II	17.62%	4.59%	15.71%	5.05%	16.80%	4.79%
III	15.17%	2.83%	12.59%	3.83%	14.10%	3.25%
IV	17.05%	5.40%	15.77%	2.20%	16.50%	4.04%
V	13.13%	4.68%	12.80%	5.65%	12.99%	5.08%
VI	10.90%	6.07%	13.21%	4.18%	11.92%	5.23%
VII	9.18%	10.31%	13.58%	10.09%	11.00%	10.22%
VIII	10.38%	8.36%	11.27%	12.55%	10.74%	10.06%
IX	6.28%	7.51%	9.74%	9.09%	7.46%	8.05%
X	0.39%	0.00%	0.00%	0.00%	0.29%	0.00%
Total	15.89%	4.16%	15.13%	4.33%	15.57%	4.23%

Source: Education Division, Thimphu

TABLE 3.11: MONTHLY STIPEND FOR BOARDERS IN DIFFERENT EDUCATIONAL INSTITUTIONS, 1994 AND 1995 (a)

Institutions /Schools	1994			1995		
	Boarders (persons)	Monthly stipend (Nu.per person)	Total (Nu.)	Boarders (Persons)	Monthly stipend (Nu.per person)	Total (Nu.)
Junior High schools						
Haa Junior High School	262	90	23580	281	90	252900
Daga Junior High School	117	90	10530	102	90	91800
Bjakar Junior High School	195	90	17550	..	..	..
Trongsa Junior High School	179	90	16110	270	90	243000
Yebilaptsa Junior High School	263	90	23670	304	90	273600
Tangmachu Junior High School	231	90	20790	317	90	285300
Paro Junior High School	236	90	21240	303	90	272700
Pemagatshel Junior High School	175	90	15750	152	90	136800
Nganglam Junior High School	266	90	23940	291	90	261900
Trashigang Junior High School	281	90	25290	281	90	252900
Wamrong Junior high School	133	90	11970	240	90	216000
Dremetse Junior High School	..	..	..	174	90	156600
Rangthangwoong Junior High School	..	..	..	229	90	206100
High schools						
Chhukha High School	302	120	36240	327	120	392400
Drugyel High School	354	120	42480	347	120	416400
Punakha High School	626	120	75120	604	120	724800
Jigme Sherubling High School	520	120	62400	553	120	663600
Zhemgang High School	299	120	35880	326	120	391200
Mongar High School	350	120	42000	350	120	420000
Bjkar High School	..	..	..	228	120	273600
Other institutions						
Sherubtse College	533	600	319800	508	600	304800
Simtokha Rigney School	427	180	76860	427	180	768600
Royal Technical Institute	233	300	69900	239	300	717000
Royal Bhutan Polytechnic	191	450	85950	226	450	101700
National Institute of Education						
Bachelors and post graduate course	158	800	126400	93	800	744000
Primary teachers training course	44	700	30800	64	700	448000
Teacher Training College	62	700	43400	108	700	756000
National Institute for the Disabled	..	..	..	30	120	36000
All institutions	6437	5440	1257650	7344	5650	13466200

Note: Lhuntse Junior High School is re-named as Tangmachu Junior High School since 1995. (a) Stipend is for ten months school session. Source: Education Division, Thimphu

CHAPTER 4: HUMAN RESOURCES

INTRODUCTION

The economy of Bhutan is characterized by the predominance of people engaged in self employment, particularly those working on their own land. There is also a good deal of small cottage industry often undertaken in the home. The number of persons working for wages is relatively small.

Statistics on human resources are designed to measure the involvement of people in economic activity. Economic activity refers to the production of economic goods and services and includes persons who are self employed (e.g. farmers operating their own land) as well as persons who work for wages (i.e. employees).

Broadly, a statistical system for human resources or labour should cover topics such as size and characteristics of the labour force, employment, wage rates and conditions of work. Labour statistics may be obtained from three main sources:

a) Household surveys whereby information is obtained from the individual about his or her employment, earning and other aspects of their working activities.

b) Employer surveys whereby information on number of persons employed and wage levels is obtained from employers.

c) Administrative source, whereby various aspects of labour statistics are obtained from administrative sources (e.g. civil service employee data obtained from civil service employment were obtained from administrative records).

TABLE 4.1: PERCENTAGE OF POPULATION ACCORDING TO ECONOMIC ACTIVITY BY AGE AND SEX, 1984

Age group	Agriculture	Government service	Business	Others	No occupation
Male					
Less than 15	7.0	-	-	1.0	92.0
15 - 19	54.7	2.0	*	3.5	39.7
20 - 24	70.9	11.1	1.5	4.0	12.5
25 - 29	76.7	13.8	2.0	4.4	3.1
30 - 34	82.0	11.1	1.7	4.3	0.8
35 - 39	84.4	7.7	2.4	4.7	*
40 - 44	87.7	5.9	2.3	3.6	*
45 - 54	90.5	3.3	1.6	3.6	1.0
55 - 64	88.1	1.0	0.9	4.0	6.0
65 and over	71.1	1.5	*	0.9	26.0
All ages	52.5	3.9	0.9	2.8	39.9
Age 15 - 64	78.4	6.5	1.4	4.0	9.6
Female					
Less than 15	9.2	-	-	0.2	90.7
15 - 19	87.8	*	*	0.4	11.0
20 - 24	95.7	1.0	1.1	*	2.1
25 - 29	98.0	*	*	*	0.7
30 - 34	98.4	*	*	*	*
35 - 39	99 1	*	*	*	*
40 - 44	99.2	*	*	*	-
45 - 54	98.4	*	*	*	1.2
55 - 64	91.1	*	*	*	8.5
65 and over	73.2	*	*	-	26.1
All ages	61.5	0.3	0.3	0.2	37.8
Age 15-64	95.4	0.4	0.5	0.2	3.6
Total persons					
Less than 15	8.2	-	-	0.6	91.3
15 - 19	72.4	1.2	*	1.9	24.4
20 - 24	83.9	5.8	1.3	2.0	7.0
25 - 29	88.0	6.8	1.1	2.2	1.8
30 - 34	90.8	5.4	1.1	2.1	0.6
35 - 39	91.7	3.9	1.4	2.5	0.5
40 - 44	93.5	3.0	1.4	1.9	*
45 - 54	94.4	1.7	1.0	1.9	1.1
55 - 64	89.6	0.6	0.6	2.0	7.2
65 and over	72.1	1.0	*	0.5	26.0
All ages	57.2	2.0	0.6	1.4	38.8
Age 15-64	87.2	3.4	0.9	2.0	6.5

Source: Demographic Sample Survey, CSO, 1984

TABLE 4.2: EMPLOYMENT IN CIVIL SERVICE, BHUTAN, 1990 TO 1995

(numbers)

Ministry/Division	1990	1991	1992	1993	1994	1995
Ministry of Planning	64	69	85	86	86	78
Ministry of Home Affairs	1,138	956	1,006	1,124	1,138	1,189
Home Affairs	76	252	224	n.a	408	442
Dzongkhags	518	471	576	n.a	730	747
Ministry of Finance	528	464	524	653	653	627
Ministry of Communications	1,732	1,487	2,545	2,397	2,534	2,631
Ministry of Social Services (a)	4,445	4,306	4,772	4,707	4,773	4,669
Ministry of Agriculture	2,844	2,192	1,842	2,144	2,281	2,381
Ministry of Foreign Affairs	137	124	141	138	122	127
Ministry of Trade and Industries	845	830	1,016	1,040	1,098	1,050
Special Commission	75	203	162	200	189	140
Other Non-Ministerial Organisations	402	597	639	528	553	674
His Majesty's Secretariat	60	60	55	47	51	48
Royal Civil Service Commission	35	42	43	69	71	49
Royal Audit Authority	83	70	90	93	93	107
Royal Advisory Council	11	10	8	9	10	13
National Assembly	11	12	12	14	14	14
Dratshang Lentshog	..	40	36	n.a	n.a	33
National Women's Association of Bhutan	14	17	35	n.a	n.a	4
Judiciary	114	200	223	218	224	240
Bhutan Olympic Committee	22	18	18	22	21	22
Dzongkhag Development Commission	21	14	18	16	16	17
Royal Institute of Management	31	47	38	40	42	44
Royal Monetary Authority	..	67	63	n.a	n.a	64
National Enviroment Commission	..	..	..	n.a	11	19
Total employees	12,040	11,159	12,732	13,017	13,427	13,566

Note: Registration and Zonal Administration figures are reflected whith Home Affairs. Zonal administration discontinued since 1991

(a) This Ministry is known as Ministry of Health & Education since 1993
Source: Royal Civil Service Commission, Thimphu

TABLE 4.3: PERCENTAGE OF POPULATION AGED 15 YEARS AND OVER BY SEX AND PRINCIPLE ECONOMIC ACTIVITY IN THIMPHU AND PHUNTSHOLING TOWNS, 1991

Economic activity	Male		Female		Persons	
	Persons	Percent	Persons	Percent	Persons	Percent
Thimphu town						
All persons 15 years and over	5350	100.0	4410	100.0	9760	100.0
All persons not employed	1250	23.4	2330	52.9	3580	36.7
All persons employed	4110	76.8	2080	47.2	6190	63.4
Agriculture	280	5.2	850	19.3	1130	11.6
Self-employed	*	*	530	19.8	530	5.4
Paid or unpaid employee	230	4.3	*	*	230	2.4
Non agro organised business	3,780	70.7	1220	27.7	5000	51.2
Self-employed	720	13.5	210	4.8	930	9.5
Paid or unpaid employee	3,070	57.4	1020	23.2	4090	41.9
Cottage activities	*	*	600	13.6	600	6.1
Phuntsholing town						
All persons 15 years and over	1970	100.0	2120	100.0	4090	100.0
All persons not employed	270	13.7	1150	54.2	1420	34.7
All persons employed	1700	86.5	970	45.8	2670	65.3
Agriculture	150	7.6	330	15.6	480	11.7
Self-employed	*	*	330	15.6	330	8.1
Paid or unpaid employee	*	*	*	*	147	3.6
Non agro organised business	1500	76.3	270	12.7	1770	43.3
Self-employed	220	11.2	*	*	220	5.4
Paid or unpaid employee	1280	65.1	220	10.4	1500	36.7
Cottage activities	*	*	380	17.9	380	9.3

Note: Preliminary estimates

Source: Household Income and Expenditure Survey, CSO, Ministry of Planning, Thimphu

CHAPTER 5: LAND USE AND AGRICULTURE

INTRODUCTION

Bhutan is predominantly an agricultural country with agriculture being the main subsistence occupation of the majority of Bhutanese people. For this reason, programs to increase and improve both the quantity and quality of agricultural products and for the country to achieve self sufficiency in food grains and to have a marketable surpluses for sale, are of paramount importance in government planning. Animal husbandry also plays an integral part in the farming system in Bhutan. Farmers keep cattle for draught and milking purposes in addition to a few chickens and pigs for slaughter. At higher altitudes, herds of yaks and sheep are kept on pasture.

Efforts are under way to improve the statistical system for agriculture. During 1988 and 1989 the CSO in conjunction with the department of Agriculture undertook a detailed sample survey to collect information on crop areas and livestock inventories in all dzongkhags. Some data from these survey (together with data from a pilot agriculture census undertaken in Wangduephodrang in 1987) are presented in this chapter. Data from other sources are also presented.

TABLE 5.1: LAND-USE AND VEGETATION TYPES AS PERCENTAGE OF TOTAL AREA OF BHUTAN, 1995

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

TABLE 5.2: AREA OF DZONGKHAGS AS A PERCENTAGE OF TOTAL AREA OF BHUTAN BY TYPE OF LAND COVER, 1995

Dzongkhag	Forests	Pasture	Agriculture	Horticulture	Settlement	Others	Total area
Bjakar	4.5	0.6	0.1	0.0	0.0	1.6	6.8
Chhukha	3.9	0.1	0.4	0.0	0.0	0.1	4.5
Dagana	2.8	0.0	0.4	0.0	0.0	0.1	3.5
Gasa	3.6	0.6	0.0	-	0.0	6.8	11.0
Haa	3.4	0.3	0.1	0.0	0.0	0.5	4.3
Lhuntse	5.4	0.2	0.3	-	0.0	1.2	7.2
Mongar	4.3	0.0	0.5	-	0.0	0.0	4.9
Punakha	2.2	0.0	0.1	0.0	0.0	0.1	2.4
Paro	2.1	0.2	0.2	0.0	0.0	0.7	3.2
Pemagatshel	0.7	0.0	0.6	0.0	0.0	0.0	1.3
Samdrupjongkhar	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
Wangduephodrang	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	0.1	0.1	15.7	100.0

Note: "-" Indicates land cover which is not observed/recorded;
"0.0" Indicates figures less than 0.05% or equal to 0.

Source: Ministry of Agriculture, Thimphu

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

(percent)

Dzongkhag	Altitude at Dzongkhag centre	Altitude zones (metres)											Total area (%)
	(metres)	0-600	600-1200	1200-1800	1800-2400	2400-3000	3000-3600	3600-4200	4200-4800	4800-5400	5400-6000	6000-6600	> 6600	
Bjakar	2,690	0.0	0.0	0.0	0.4	10.6	26.2	25.7	18.4	16.3	2.2	0.2	0.0	100
Chhukha	2,220	7.7	17.2	20.8	20.4	18.7	11.8	3.1	0.1	0.0	0.1	0.0	0.0	100
Dagana	1,520	4.0	15.7	22.0	24.3	20.7	8.7	3.7	1.0	0.0	0.0	0.0	0.0	100
Gasa	3,659	0.0	0.0	0.1	0.9	2.5	4.8	11.2	21.9	28.6	21.1	7.4	1.4	100
Haa	2,712	0.8	3.6	7.3	16.1	24.0	27.9	17.6	2.6	0.1	0.0	0.0	0.0	100
Lhuntse	1,460	0.0	0.9	6.8	14.3	19.6	17.0	15.7	16.7	8.4	0.5	0.0	0.0	100
Mongar	1,620	3.1	17.9	27.1	23.3	16.0	11.2	1.5	0.0	0.0	0.0	0.0	0.0	100
Paro	2,280	0.0	0.0	0.0	6.3	25.3	24.8	18.6	21.3	3.5	0.1	0.0	0.0	100
Pemagatshel	1,200	7.9	39.0	39.7	13.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Punakha	1,220	0.0	0.0	17.8	26.5	21.8	15.5	12.6	5.7	0.1	0.0	0.0	0.0	100
Samdrupjongkhar	160	25.6	27.6	23.1	14.4	6.5	2.4	0.3	0.0	0.0	0.0	0.0	0.0	100
Samtse	390	17.0	25.5	24.3	18.8	11.0	2.5	0.7	0.0	0.0	0.1	0.0	0.0	100
Sarpang	210	31.1	29.4	21.1	14.6	2.9	0.7	0.2	0.0	0.0	0.0	0.0	0.0	100
Thimphu	2,320	0.0	0.0	1.0	5.0	16.3	18.8	18.6	27.3	10.9	1.4	0.5	0.1	100
Trashigang	1,040	0.2	4.9	15.8	22.2	20.6	18.0	16.0	2.3	0.0	0.0	0.0	0.0	100
Trashiyangtse	1,830	0.0	2.3	6.7	16.5	23.4	18.8	15.5	13.4	3.2	0.2	0.0	0.0	100
Trongsa	2,180	0.0	2.9	10.4	19.5	28.8	21.2	12.4	4.7	0.1	0.0	0.0	0.0	100
Tsirang	1,620	7.3	31.4	30.1	19.8	7.6	3.2	0.5	0.0	0.0	0.0	0.0	0.0	100
Wangduephodrang	1,260	0.1	3.0	9.0	13.5	17.8	19.2	12.7	12.5	11.1	1.1	0.0	0.0	100
Zhemgang	1,916	9.5	27.1	28.0	17.9	9.7	5.1	2.1	0.5	0.0	0.0	0.0	0.0	100

TABLE 5.4: AREA OF DZONGKHAGS AS A PERCENTAGE OF TOTAL AREA OF BHUTAN BY ALTITUDE ZONES, 1995

(percent)

Dzongkhag	Altitude zones (metres)						Total
	0-600	600-1200	1200-1800	1800-2400	2400-3000	3000-3600	0-3600
Bjakar	0.0	0.0	0.0	0.0	0.7	1.8	2.5
Chhukha	0.3	0.8	0.9	0.9	0.8	0.5	4.3
Dagana	0.1	0.5	0.8	0.8	0.7	0.3	3.3
Gasa	0.0	0.0	0.0	0.1	0.3	0.5	0.9
Haa	0.0	0.0	0.2	0.3	0.7	1.0	2.2
Lhuntse	0.0	0.1	0.5	1.0	1.4	1.2	4.2
Mongar	0.2	0.9	1.3	1.1	0.8	0.5	4.8
Punakha	0.0	0.0	0.4	0.6	0.5	0.4	2.0
Paro	0.0	0.0	0.0	0.2	0.8	0.8	1.8
Pemagatshel	0.1	0.5	0.5	0.2	0.0	0.0	1.3
Samdrupjongkhar	1.5	1.6	1.3	0.8	0.4	0.1	5.7
Samtse	0.7	1.0	1.0	0.7	0.4	0.1	3.9
Sarpang	1.8	1.7	1.2	0.8	0.2	0.0	5.7
Thimphu	0.0	0.0	0.0	0.2	0.8	0.9	2.0
Trashigang	0.0	0.3	0.9	1.3	1.2	1.0	4.7
Trashiyangtse	0.0	0.1	0.2	0.6	0.8	0.7	2.4
Trongsa	0.0	0.1	0.5	0.9	1.3	1.0	3.7
Tsirang	0.1	0.5	0.5	0.3	0.1	0.1	1.6
Wangduephodrang	0.0	0.3	0.9	1.4	1.8	1.9	6.3
Zhemgang	0.5	1.4	1.5	0.9	0.5	0.3	5.2
Bhutan	5.3	9.8	12.6	13.4	14.3	13.2	68.6

(continued).....

TABLE 5.4: (continuation) AREA OF DZONGKHAGS AS A PERCENTAGE OF TOTAL AREA OF BHUTAN BY ALTITUDE ZONES, 1995

(percent)

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

"0.0" Indicates figures recorded is above 0% but less than 0.05% Note: "-" Indicates land cover which is not observed/recorded.

Source: Ministry of Agriculture, Thimphu

TABLE 5.5: AVERAGE MONTHLY TEMPERATURE AT VARIOUS STATIONS BY DZONGKHAG, 1995

(degrees celsius)

Dzongkhag and station	Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		Month											
Thimphu													
Kawangjangsa	Maximum	10.8	11.8	16.6	20.1	25.6	23.5	27.4	25.4	23.1	22.4	18.3	14.0
	Minimum	-3.1	0.7	4.4	5.8	12.8	14.8	16.2	14.6	13.8	9.7	4.0	-1.3
Lumitsawa	Maximum	11.3	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
	Minimum	8.5	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Gidakom	Maximum	12.6	7.8	18.3	20.7	25.3	25.1	24.6	24.8	23.7	23.2	20.4	15.2
	Minimum	-2.0	1.1	6.8	5.5	12.4	15.8	16.1	15.9	14.0	8.1	2.8	0.6
Yusipang	Maximum	9.4	10.3	11.2	15.9	19.3	22.9	21.1	21.0	21.9	17.8	n.a	n.a
	Minimum	-2.7	-0.5	-0.1	5.0	9.4	15.8	13.1	13.8	13.1	11.1	n.a	n.a
Taba	Maximum	n.a	12.4	18.2	20.8	25.8	23.6	24.4	24.9	21.4	21.9	19.2	14.1
	Minimum	n.a	0.5	4.3	8.0	19.0	18.3	18.0	17.9	13.9	7.8	1.5	0.5
Chhukha													
Chhukha	Maximum	10.7	11.1	11.8	15.0	22.4	25.7	24.1	23.6	21.4	21.5	18.6	13.0
	Minimum	9.5	10.2	10.6	12.2	16.7	21.8	19.0	17.9	16.6	16.4	15.6	10.9
Chapcha	Maximum	5.8	8.5	8.8	9.7	12.6	14.8	14.8	n.a	n.a	n.a	n.a	n.a
	Minimum	2.3	3.3	2.6	5.0	7.5	10.3	10.8	n.a	n.a	n.a	n.a	n.a
Gedu	Maximum	9.4	9.5	12.9	19.3	18.6	18.6	18.8	19.5	19.0	17.2	15.4	10.6
	Minimum	5.4	5.9	9.4	12.4	14.6	16.2	16.9	16.9	16.3	14.2	10.6	6.1
Tala	Maximum	13.0	13.6	17.1	20.4	21.6	22.6	22.0	23.0	22.4	21.6	18.5	15.3
	Minimum	6.1	7.1	11.4	13.8	16.4	18.9	18.4	18.7	17.5	15.7	11.9	7.4
Haa													
Namjeyling	Maximum	5.9	6.3	12.3	14.3	19.4	19.4	19.3	19.4	17.2	16.0	11.8	10.1
	Minimum	-3.0	2.7	2.1	2.8	10.8	14.7	14.5	14.5	12.7	8.7	1.4	-1.4
Paro													
Drugyel Dzong	Maximum	n.a	n.a	16.7	20.3	26.3	26.1	27.8	26.9	23.9	18.9	17.7	15.4
	Minimum	n.a	n.a	2.4	3.2	10.1	13.6	14.0	13.2	12.3	6.2	-1.6	-2.8
Samtse													
NIE	Maximum	19.1	20.9	24.6	28.9	28.3	26.9	26.9	27.5	27.4	26.8	23.9	20.4
	Minimum	14.2	15.9	19.5	22.0	23.9	24.8	24.6	24.8	24.3	22.3	19.6	15.9
Dagana													
Drujeygang	Maximum	16.9	n.a	22.1	27.7	29.1	29.5	29.0	30.2	29.9	27.9	25.6	20.1
	Minimum	7.3	n.a	13.9	15.6	19.1	19.6	19.6	19.7	19.5	17.6	13.0	10.9
Punakha													
Punakha Dzong	Maximum	8.2	12.7	16.0	24.2	27.5	33.5	32.9	32.4	30.3	30.0	26.2	19.9
	Minimum	3.9	7.9	11.6	13.0	15.5	22.8	22.4	16.2	18.8	17.3	15.0	10.1
Shelgana	Maximum	16.4	16.0	23.1	27.1	30.5	29.3	29.4	29.0	28.0	26.3	23.4	18.7
	Minimum	6.8	7.3	11.1	9.5	15.8	17.6	17.3	17.1	16.2	11.8	7.3	5.6
Wangduephodrang													
CARD	Maximum	16.5	17.4	22.4	26.6	30.3	28.8	27.4	28.1	26.3	26.4	22.7	17.6
	Minimum	4.7	21.9	11.0	12.4	17.7	21.1	19.6	20.2	19.0	14.0	9.5	8.2
Samtengang	Maximum	14.4	15.6	20.4	25.5	28.7	27.8	27.1	28.5	26.6	26.2	22.2	15.9
	Minimum	2.5	4.5	8.4	10.7	15.1	17.7	17.1	17.1	15.9	11.3	7.6	5.5
Nobding	Maximum	15.1	14.0	17.1	20.7	23.2	21.8	21.4	21.8	21.4	21.8	21.1	19.0
	Minimum	-1.0	1.4	4.1	7.0	12.3	15.0	13.8	13.8	13.0	8.8	4.5	2.5
Phobjekha	Maximum	7.8	7.8	13.4	15.3	19.7	n.a	19.9	20.6	n.a	17.4	14.9	9.1
	Minimum	-5.9	-2.6	-0.2	1.1	8.9	n.a	11.8	10.6	n.a	3.0	-1.9	-2.8
Basochhu	Maximum	18.7	20.3	24.1	27.2	29.6	27.9	25.1	26.4	25.3	23.7	19.8	16.2
	Minimum	9.3	10.0	13.9	15.6	20.8	22.1	21.3	22.3	21.4	18.7	15.1	12.1
Zhemgang													
Yebilaptsa	Maximum	20.4	21.6	20.0	29.5	30.2	29.2	29.7	30.0	28.9	28.8	n.a	19.4
	Minimum	7.8	10.7	8.1	15.6	20.2	21.5	21.4	21.5	20.2	16.3	n.a	10.8

(continued)....

TABLE 5.5: (continuation)AVERAGE MONTHLY TEMPERATURE AT VARIOUS STATIONS BY DZONGKHAG, 1995

Dzongkhag and station	Temperature (degrees celsius)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		Month											
Trongsa	Maximum	13.5	13.7	17.6	22.2	23.3	22.5	23.3	24.3	23.6	23.4	22.2	21.6
	Minimum	1.1	3.1	6.3	6.8	12.8	15.2	15.8	15.5	14.7	11.7	4.0	3.4
Kuenga Rabten	Maximum	25.1	22.0	15.0	25.0	23.9	25.5	26.1	26.1	24.7	20.3	13.6	8.4
	Minimum	10.0	8.9	9.8	11.0	9.6	11.6	12.3	13.3	16.3	13.8	13.5	7.8
Chendebji	Maximum	4.7	4.8	9.3	12.8	15.8	16.1	16.2	16.1	14.8	13.5	10.9	n.a
	Minimum	-5.5	-2.5	0.2	0.2	7.6	14.3	10.5	9.9	8.9	3.6	-1.4	n.a
Langthel	Maximum	21.8	23.5	24.4	25.3	28.6	29.6	n.a	n.a	30.7	29.8	28.9	26.0
	Minimum	19.2	19.4	20.4	16.0	17.5	20.3	n.a	n.a	24.8	20.0	21.9	18.0
Bjakar													
Ura	Maximum	n.a	n.a	n.a	19.5	21.5	21.8	21.7	21.6	20.7	18.2	16.4	15.8
	Minimum	n.a	n.a	n.a	7.7	7.0	12.2	12.3	12.0	7.6	3.7	-3.3	-4.1
Chhumeth	Maximum	n.a	n.a	18.5	21.3	25.6	25.5	25.8	25.6	23.6	22.7	19.4	n.a
	Minimum	n.a	n.a	2.8	5.1	11.7	15.7	15.7	15.1	13.7	7.2	1.8	n.a
Chamkhar	Maximum	9.6	11.6	16.9	19.8	22.1	22.7	24.0	22.6	21.0	19.8	16.7	12.1
	Minimum	-5.6	1.8	3.8	2.1	9.8	13.6	15.1	14.5	12.0	6.7	-0.2	0.1
Trashigang													
Khaling	Maximum	16.7	12.2	24.2	27.3	23.4	23.0	24.0	23.1	23.4	21.5	20.0	14.0
	Minimum	1.6	2.8	6.3	8.5	12.3	15.3	16.2	15.5	15.3	9.9	6.6	3.1
Wamrong	Maximum	n.a	8.9	9.9	7.1	7.0	5.2	4.6	10.6	12.3	17.0	17.8	11.8
	Minimum	n.a	4.0	6.6	6.9	4.5	3.8	6.3	9.2	8.5	11.0	11.8	3.4
Radhi	Maximum	n.a	n.a	23.9	23.7	26.7	28.1	26.0	27.2	26.6	27.3	25.2	21.1
	Minimum	n.a	n.a	11.8	13.4	17.3	19.3	19.4	19.3	17.9	15.0	10.4	7.8
Thrimshing	Maximum	17.3	19.0	22.3	26.4	27.6	28.2	28.0	28.7	29.5	26.9	22.9	18.0
	Minimum	0.5	2.7	7.9	10.6	15.6	17.2	18.0	17.6	15.9	12.4	7.7	5.8
Mongar													
Yadhi	Maximum	15.5	14.8	13.2	21.9	21.3	24.4	21.5	24.9	23.8	22.6	18.6	14.5
	Minimum	2.9	5.5	4.7	10.3	18.1	17.7	17.7	18.1	16.8	13.3	8.8	5.8
Tsakaling	Maximum	n.a	n.a	22.4	25.8	27.1	26.8	25.4	27.6	26.7	27.8	24.7	22.1
	Minimum	n.a	n.a	10.7	13.2	16.4	18.2	18.4	18.3	16.2	15.0	9.4	9.5
Lingmethang	Maximum	20.4	23.0	27.4	29.3	32.0	32.0	30.0	33.0	30.6	n.a	26.8	22.4
	Minimum	8.4	10.6	14.2	17.1	21.8	22.7	22.5	22.4	20.6	n.a	13.2	11.4
Trashiyangtse													
Trashiyangtse	Maximum	13.3	14.5	18.7	22.1	24.8	28.4	28.1	27.6	n.a	23.4	n.a	n.a
	Minimum	1.8	4.9	8.4	9.1	14.1	18.4	18.1	17.6	n.a	11.8	n.a	n.a
Yallang	Maximum	9.9	10.9	15.6	17.9	20.4	20.4	21.0	21.4	20.1	n.a	15.8	11.1
	Minimum	2.2	3.9	7.7	9.0	14.0	14.7	16.0	15.8	14.8	n.a	7.2	4.3
Lhuntse													
Dungkhar	Maximum	14.1	14.1	18.6	20.2	22.4	22.2	22.8	23.8	21.7	20.6	18.5	11.9
	Minimum	1.6	3.1	6.7	8.8	12.9	17.1	17.4	17.3	16.1	12.4	7.5	4.4
Tangmachhu	Maximum	12.5	13.4	17.9	22.7	24.7	26.7	24.7	24.4	24.2	22.5	19.3	15.4
	Minimum	3.8	6.2	9.2	10.6	15.6	18.2	17.5	18.3	17.1	12.0	8.4	7.4
Pemagatshel													
Yurung	Maximum	n.a	n.a	19.5	22.8	23.5	24.2	24.4	25.5	24.5	22.8	20.3	n.a
	Minimum	n.a	n.a	11.0	10.4	14.2	15.8	15.9	15.8	14.7	11.9	12.0	n.a
Dungmein	Maximum	14.8	16.1	19.9	24.2	24.9	25.9	25.9	26.7	26.5	24.5	19.9	15.8
	Minimum	5.7	6.3	10.3	13.1	17.7	19.0	19.5	19.3	17.8	13.9	9.9	7.4
Samdrupjongkhar													
Airong	Maximum	14.9	14.8	19.4	23.8	24.8	24.4	23.7	25.4	27.5	24.8	19.3	14.4
	Minimum	8.9	13.7	13.0	16.7	18.3	18.7	17.6	18.4	20.2	17.6	13.2	9.5
Dechheling	Maximum	14.5	17.1	n.a	23.5	23.8	25.1	24.8	26.4	25.0	24.5	22.5	n.a
	Minimum	7.5	10.0	n.a	15.1	19.5	21.2	21.2	21.3	20.6	17.1	12.1	n.a
Sarpang													
Sarpang	Maximum	21.5	22.3	25.1	29.9	29.6	29.5	29.2	31.5	29.8	30.9	28.0	23.4
	Minimum	11.3	12.8	16.1	21.7	22.0	23.5	24.7	23.5	21.9	19.3	15.9	13.3
Tsirang													
Sunkosh Dobani	Maximum	23.7	25.1	30.4	33.6	33.8	31.7	31.2	33.3	33.0	n.a	29.5	24.5
	Minimum	8.1	10.4	14.3	18.5	22.8	23.4	22.8	22.6	22.1	n.a	13.7	11.1

Source: Meteorology Unit, Division of Power, Thimphu

TABLE 5.6: TOTAL MONTHLY RAINFALL AT EXISTING STATIONS IN EACH DZONGKHAG, 1995

(millimeters)

Dzongkhag and station	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thimphu													
Gidakom	35.2	28.6	37.2	13.7	31.0	57.6	190.8	111.0	138.7	5.4	122.6	8.5	780.3
Taba	n.a	34.7	23.4	9.2	16.4	123.6	205.4	225.2	171.2	2.2	108.0	0.0	919.3
Agriculture office													
Yusipang	31.4	37.0	18.8	16.5	21.0	98.5	49.5	56.0	95.0	35.0	n.a	n.a	458.7
Chhukha													
Chhukha	31.8	118.6	36.6	67.6	139.8	298.5	272.6	207.5	208.7	19.7	184.2	8.8	1,594.4
Tala	32.6	148.2	98.6	110.4	371.9	445.6	554.4	224.6	271.3	32.0	4.0	0.0	2,293.6
Gedu	248.8	262.0	107.2	116.0	680.0	833.0	658.0	586.1	385.8	73.2	129.3	16.2	4,095.6
Chapchha	29.1	54.2	44.4	12.0	66.8	160.8	134.2	n.a	n.a	n.a	n.a	n.a	501.5
Haa													
Namjeyling	68.2	72.8	35.4	32.0	37.9	118.5	239.6	173.9	233.4	18.0	131.0	38.0	1,198.7
Paro													
Drugyal Dzong	n.a	n.a	0.0	205.0	360.0	458.7	686.7	412.0	306.3	52.0	16.5	0.0	2,497.2
Samtse													
NIE	21.2	98.0	34.0	81.4	631.5	644.0	598.6	599.4	474.6	236.6	105.8	14.4	3,539.5
Dorokha	n.a	n.a	68.9	120.7	224.2	69.9	563.9	52.8	183.1	11.8	86.3	11.4	1,393.0
Tsirang													
Sunkosh Dobani	8.1	36.8	21.2	0.0	68.6	325.0	307.2	307.8	360.0	n.a	91.8	4.0	1,530.5
Dagana													
Drujeygang	12.4	n.a	26.0	5.0	196.0	440.0	420.7	241.0	24.6	4.4	15.0	0.0	1,385.1
Tashithang	0.0	33.0	24.0	0.0	42.0	n.a	n.a	n.a	284.0	4.2	120.0	10.0	517.2
Punakha													
Shelgana	64.8	108.5	8.4	17.2	47.6	158.2	337.6	303.5	202.8	17.0	90.0	13.0	1,368.6
Wangduephodrang													
Nobding	38.0	121.2	17.6	41.6	66.8	313.4	508.6	277.8	146.5	47.4	87.6	11.6	1,678.1
Phobjikha	5.0	6.0	6.5	55.0	39.0	n.a	329.3	158.4	n.a	6.2	77.0	n.a	682.4
Samtengang	19.0	16.6	108.0	59.0	314.9	429.2	604.5	647.8	582.0	88.0	107.2	114.0	3,090.2
Wangdue CARD	15.2	17.5	13.8	4.9	7.7	102.9	154.5	112.0	123.0	6.4	86.0	6.2	650.1
Bachhu	9.2	37.9	14.8	6.2	38.5	130.1	262.7	95.5	116.3	5.8	71.0	n.a	788.0
Sarpang													
Sarpang	5.2	75.0	53.4	31.4	429.6	917.3	790.1	657.0	361.4	46.9	81.0	89.1	3,537.4
Zhemgang													
Panbang	19.4	82.4	39.6	102.4	579.2	328.5	309.6	355.6	194.1	106.6	100.4	12.5	2,230.3
Yebilaptsa	22.8	33.4	25.4	36.2	80.8	288.8	190.7	272.8	260.8	6.4	n.a	5.4	1,223.5

(continued).....

TABLE 5.6: (continuation) TOTAL MONTHLY RAINFALL AT EXISTING STATIONS IN EACH DZONGKHAG, 1995

(millimeters)

Dzongkhag and station	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Trongsa													
Kuengarabten	40.0	33.0	10.0	20.0	44.0	28.0	11.0	42.0	126.2	8.0	65.0	30.0	457.2
Langthel	34.0	39.0	30.0	49.0	90.5	151.8	n.a	n.a	159.2	46.0	93.0	44.0	736.5
Trongsa	12.2	73.6	30.1	96.0	81.2	244.8	344.4	275.0	188.7	40.3	15.2	10.8	1,412.3
Bjakar													
Chamkhar	16.3	24.3	14.2	31.0	35.9	113.5	76.2	148.5	131.9	38.6	81.4	50.0	761.8
Chhumey	n.a	n.a	70.0	179.0	348.3	532.4	733.3	590.8	340.0	237.5	0.0	n.a	3,031.3
Ura	n.a	n.a	n.a	8.0	33.6	99.2	140.0	186.0	183.6	10.0	45.0	0.0	705.4
Trashigang													
Khaling	30.0	84.0	26.6	239.0	137.8	167.5	302.4	322.0	156.5	0.0	85.2	0.0	1,551.0
Radhi	n.a	n.a	80.0	87.0	85.8	638.0	170.5	155.8	675.0	20.0	96.0	0.0	2,008.1
Thrimshing	17.2	40.9	11.0	116.0	116.8	323.2	455.2	347.1	232.6	18.2	39.6	3.8	1,721.6
Wamrong	27.0	67.2	28.0	42.5	203.5	390.7	563.2	368.0	358.5	78.3	83.2	0.0	2,210.1
Tashiyangtse													
Yallang	0.0	65.9	43.7	128.2	127.7	193.5	308.7	250.2	151.2	n.a	53.9	n.a	1,323.0
Tashiyangtse	24.5	50.7	29.6	104.3	63.2	174.8	262.5	267.4	n.a	6.2	n.a	n.a	983.2
Mongar													
Lingmethang	22.8	24.1	16.4	24.2	54.7	168.4	318.7	221.8	128.4	n.a	85.2	6.4	1,071.1
Yadi	15.0	36.7	43.7	187.8	60.0	132.6	309.2	238.3	130.0	6.0	79.6	10.6	1,249.5
Tsakaling	n.a	n.a	18.3	91.2	94.5	146.5	389.2	218.7	142.5	5.0	26.0	18.9	1,150.8
Lhuntse													
Dungkhar	0.0	20.0	19.0	86.2	114.9	258.2	328.4	282.0	219.6	83.5	88.0	0.0	1,499.8
Tangmachu	10.5	34.8	15.5	69.6	52.6	136.4	232.9	144.6	124.0	7.1	6.0	14.5	848.5
Pemagatshel													
Dungmain	106.4	52.8	41.1	103.2	406.7	618.7	689.6	475.8	464.4	10.5	104.5	46.5	3,120.2
Yurung	n.a	n.a	27.2	61.8	252.0	448.6	580.8	450.8	679.6	4.6	82.8	n.a	2,588.2
Samdrupjongkhar													
Airong	39.0	90.0	57.0	27.2	318.3	997.0	979.0	395.0	374.5	119.0	135.0	0.0	3,531.0
Dechenling	10.1	46.3	n.a	125.0	456.5	597.0	838.5	190.2	212.7	150.0	80.0	n.a	2,706.3

Source: Meteorology Unit, Division of Power, Thimphu

TABLE 5.7: IRRIGATION SCHEMES CONSTRUCTED IN DZONGKHAGS, 1991/92 TO 1994/95

Dzongkhag	1992/93		1993/94		1994/95	
	New construction		New construction		New construction	
	Length of channel (Km)	Command area (hec.)	Length of channel (Km)	Command area (hec.)	Length of channel (Km)	Command area (hec.)
Thimphu	0.00	0.00	0.00	0.00	0.00	0.00
Chhukha	2.72	99.00	0.59	38.00	0.00	0.00
Paro	0.00	0.00	0.00	0.00	1.56	85.00
Haa	0.00	0.00	1.50	44.50	0.00	0.00
Samtse	0.00	0.00	0.00	0.00	0.00	0.00
Tsirang	0.00	0.00	0.00	0.00	0.00	0.00
Dagana	0.00	0.00	0.00	0.00	0.00	0.00
Punakha	0.50	8.90	0.00	0.00	0.00	0.00
Wangduephodrang	0.00	0.00	0.00	0.00	0.00	0.00
Bjakar	0.00	0.00	0.00	0.00	0.00	0.00
Sarpang	0.00	0.00	0.00	0.00	0.00	0.00
Zhemgang	0.00	0.00	2.97	-	2.22	120.52
Trongsa	0.00	0.00	0.00	0.00	0.00	0.00
Lhuntse	0.00	0.00	0.00	0.00	0.00	0.00
Mongar	2.20	19.43	0.00	0.00	3.60	57.73
Pemagatshel	0.00	0.00	0.00	0.00	1.20	24.29
Samdrupjongkhar	0.00	0.00	0.00	0.00	0.00	0.00
Trashigang	0.00	0.00	4.15	425.00	7.74	287.44
Trashiyangtse	0.00	0.00	5.20	65.60	0.84	10.12
Gasa	0.00	0.00	0.00	0.00	0.00	0.00
Bhutan	5.42	127.33	14.41	573.10	17.16	585.10

Source: Ministry of Agriculture, Thimphu

TABLE 5.8: QUANTITY OF PESTICIDES SUPPLIED TO FARMERS, BHUTAN 1986/87 TO 1994/95

(Kilograms or litres)

Period	Insecticide	Fungcide	Weedicide	Acaricide	Rodenticide	Others	Total
1986/87	11,656	2,964	228	0	18	47	14,913
1987/88	23,610	5,741	1,355	0	515	500	31,721
1988/89	33,440	5,214	271	0	347	1,128	40,400
1989/90	57,843	5,259	14,785	0	144	3,473	81,504
1990/91	30,841	2,538	58,180	95	90	140	91,884
1991/92	20,498	2,868	60,400	26	195	2,329	86,316
1992/93	16,066	1,405	57,389	50	113	48	75,071
1993/94	6,435	923	88,046	44	205	531	96,184
1994/95	6,128	563	89,554	12	63	6,846	103,166

Source: Ministry of Agriculture, Thimphu

TABLE 5.9: HOUSEHOLDS BY SIZE OF LAND HOLDING IN EACH DZONGKHAG, 1988/89

Dzongkhag	Size of land holding (hectares)								
	0.01-0.49	0.50-0.99	1.00-1.49	1.50-1.99	2.00-2.99	3.00-4.99	5 & over	Land holders	All holders
Bjakar	110	160	150	*	180	180	260	1,130	1,170
Chhukha	170	230	580	350	550	600	790	3,270	3,290
Dagana	*	240	240	220	360	480	190	1,790	1,790
Gasa (a)									
Haa	120	190	170	*	110	*	220	920	930
Lhuntse	410	570	410	250	300	340	200	2,480	2,480
Mongar	570	1,220	1,020	660	450	270	100	4,300	4,300
Paro	170	400	440	360	440	360	130	2,280	2,320
Pemagatshel	230	750	680	420	260	110	*	2,490	2,500
Punakha	250	420	480	280	230	*	120	1,850	1,860
Samdrupjongkhar (b)	170	590	550	610	1,010	820	350	4,100	4,110
Samtse	390	860	1,020	920	1,790	1,590	1,060	7,640	7,640
Sarpang	200	400	710	900	1,610	1,010	730	5,570	5,580
Thimphu	490	540	320	160	150	110	*	1,800	1,830
Trashigang	1,730	3,190	2,440	1,450	1,790	990	970	12,560	12,600
Trashiyantse(c)									
Trongsa	150	240	300	120	160	170	150	1,290	1,320
Tsirang	140	750	1,040	750	1,420	1,180	440	5,710	5,710
Wangduephodrang	600	780	540	270	210	*	*	2,470	2,590
Zhemgang	*	*	180	270	400	480	400	1,830	1,830
Bhutan	5,300	10,750	10,550	7,450	10,810	8,210	5,710	59,180	59,430

Note (a) Figures included with Punakha (b) For Samdrupjongkhar, size data were not available for an estimated 920 holders which are excluded from the table. (C) Figures included with Trashigang.

Source : Agronomic Survey (1988, 1989), CSO, Ministry of Planning, Thimphu.

TABLE 5.10: LANDUSE IN AGRICULTURE ('000 ACRE) 1995.

Land type	Area	%
Wet land	95.8	12.3
Dry land	241.1	31.1
Tsheri land	218.2	28.1
Orchard/plantt.	14.1	1.8
Mixed/plantt.	207.6	26.7
Total	776.8	100

Source:Ministry of Agriculture, Thimphu.

TABLE 5.11: LAND UNDER AGRICULTURE USE (IN'000 ACRE) BY DZONGKHAG, 1995.

Dzongkhag	Wet land	Dry land	Tsheri pangshing	Orchard plantation	Mixed plantation	Total area
Bjaka	0.20	13.63	0.05	0.02	0.05	13.96
Chhukha	3.80	14.05	4.50	1.04	18.97	42.36
Dagana	5.24	11.81	11.53	3.78	14.94	47.30
Gasa	0.37	0.37	0.32	-	0.82	1.88
Haa	0.25	5.51	1.95	0.27	0.20	8.18
Lhuntse	2.32	5.51	8.13	-	15.31	31.27
Mongar	1.56	17.49	14.57	-	13.36	46.98
Paro	5.80	9.04	0.07	1.28	3.14	19.34
Pemagatshel	-	7.85	49.25	0.02	0.74	57.87
Punakha	8.03	1.04	0.02	0.07	2.27	11.44
Samdrupjongkhar	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	10.84
Trashigang	4.10	39.33	23.24	-	12.67	80.00
Trashiyangtse	4.99	11.51	2.89	-	8.35	27.74
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
Wangduephodrang	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: LUPP, Ministry of Agriculture

TABLE 5.12: AREA AND PRODUCTION OF DIFFERENT CROPS,1995

Crop	Area (`000 Acre)	Yield (Kg/Acre)	Production (`000)
Paddy(a)	111.4	968	107.9
Maize	137.1	549	75.4
Buckwheat	18	357	6.4
Wheat	23.6	454	10.8
Barley	10.9	445	4.9
Millet	25.5	359	9.2
Mustard	11.8	311	3.7
Potato	13.9	3113	43.3
Vegetable	14.8	1503.	22.3
Legumes	4.1	515	2.1
Chilli	1.7	525	0.9
Ginger	2.8	1598	4.5
Orange	19.9	3877	77
Apple	4.9	1907	9.3
Cardamom	17.2	230	4
Arecanut	0.3	3870	1.1

(a) Production estimate based on the total land area available for paddy cultivation and not on the actual harvested area

Source: LUPP, Ministry of Agriculture

TABLE 5.13: AREA, PRODUCTION AND YIELD OF MAJOR CROPS BY DZONGKHAG, 1995.

Dzongkhag	Rice			Potato			Wheat		
	Area (ha.)	Prodtn. (tonnes)	Yield/ha. (Kg.)	Area (ha.)	Prodtn. (tonnes)	Yield/ha. (Kg.)	Area (ha.)	Prodtn. (tonnes)	Yield/ha (Kg.)
Bjakar	0	0	0	201	2,449	12,184	526	572	1,087
Chhukha	1,757	5,474	3,115	837	7,034	8,403	527	543	1,030
Dagana	2,729	5,999	2,198	27	176	6,518	121	177	1,462
Gasa	165	326	1,975	10	56	5,600	84	74	880
Haa	151	338	2,238	60	504	8,400	394	399	1,012
Lhuntse	2,139	4,662	2,179	64	387	6,046	309	331	1,071
Mongar	926	2,071	2,236	398	2,164	5,437	392	457	1,167
Paro	2,670	8,194	3,068	625	5,253	8,404	1,320	1,435	1,087
Pemagatshel	47	104	2,212	146	902	6,178	331	337	1,018
Punakha	3,348	11,745	3,508	24	214	8,916	649	755	1,163
Samdrupjongkhar	2,822	5,722	2,027	116	656	5,655	293	384	1,310
Samtse	5,295	9,680	1,828	94	601	6,393	392	326	831
Sarpang	4,017	8,141	2,026	251	1,800	7,171	374	357	954
Thimphu	1,825	4,869	2,667	165	1,306	7,915	458	607	1,325
Trashigang	2,862	6,580	2,299	791	5,474	6,920	1,126	1,183	1,050
Trashiyangtse	2,784	6,395	2,297	299	2,070	6,923	211	222	1,052
Trongsa	2,685	5,239	1,951	55	652	11,854	323	347	1,074
Tsirang	2,551	4,749	1,861	409	2,663	6,511	393	453	1,152
Wangduephodrang	4,345	13,744	3,163	963	8,346	8,666	817	1,212	1,483
Zhemgang	1,968	3,845	1,953	96	618	6,437	528	576	1,090
Bhutan	45,086	107,877		5,631	43,325		9,568	10,747	

continues...

TABLE 5.13: (continuation) AREA, PRODUCTION AND YIELD OF MAJOR CROPS BYDZONGKHAG, 1995.

Dzongkhag	Buckwheat			Mustard			Barley		
	Area (ha.)	Prodtn. (tonnes)	Yield/ha. (Kg.)	Area (ha.)	Prodtn. (tonnes)	Yield/ha. (Kg.)	Area (ha.)	Prodtn. (tonnes)	Yield/ha. (Kg)
Bjakar	980	1,124	1,146	118	77	652	440	544	1,236
Chhukha	394	439	1,114	202	189	935	473	527	1,114
Dagana	557	468	840	567	496	874	168	221	1,315
Gasa	68	53	779	13	9	692	38	33	868
Haa	172	183	1,063	159	153	962	204	213	1,044
Lhuntse	113	85	752	72	41	569	37	34	918
Mongar	301	296	983	169	121	715	455	485	1,065
Paro	219	245	1,118	167	159	952	303	341	1,125
Pemagatshel	350	270	771	288	170	590	212	212	1,000
Punakha	134	160	1,194	191	149	780	132	145	1,098
Samdrupjongkhar	637	323	507	485	384	791	176	190	1,079
Samtse	308	154	500	284	159	559	77	64	831
Sarpang	366	291	795	438	338	771	104	116	1,115
Thimphu	38	42	1,105	83	79	951	143	176	1,230
Trashigang	843	813	964	305	177	580	534	524	981
Trashiyangtse	335	325	970	137	79	576	252	247	980
Trongsa	376	297	789	52	37	711	194	210	1,082
Tsirang	480	302	629	540	469	868	16	15	937
Wangduephodrang	203	161	793	225	176	782	268	352	1,313
Zhemgang	416	412	990	287	224	780	180	200	1,111
Bhutan	7,290	6,443		4,782	3,686		4,406	4,849	

Continued...

TABLE 5.13: (Continuation) AREA, PRODUCTION AND YIELD OF MAJOR CROPS BY DZONGKHAG, 1995.

Dzongkhag	Maize			Millet			Vegetables		
	Area (ha.)	Prodtn. (tonnes)	Yield/ha (Kg.)	Area (ha.)	Prodtn. (tonnes)	Yield/h (Kg.)	Area (ha.)	Prodtn. (Tonnes)	Yield/ha (Kg)
Bjakar	12	20	1,666	0	0	0	251	923	3,678
Chhukha	1,537	1,807	1,175	392	462	1,178	398	1,786	4,487
Dagana	6,188	8,715	1,408	1,046	931	890	189	586	3,100
Gasa	2	2	1,000	4	4	1,000	13	36	2,769
Haa	193	223	1,155	39	46	1,179	77	339	4,419
Lhuntse	1,866	2,586	1,385	194	173	891	312	1,232	3,951
Mongar	3,975	7,465	1,877	252	285	1,130	554	1,711	3,091
Paro	118	145	1,228	62	71	1,145	451	2,207	4,893
Pemagatshel	1,959	3,148	1,606	170	173	1,017	364	1,437	3,947
Punakha	104	116	1,115	54	46	851	156	582	3,730
Samdrupjongkhar	4,885	7,846	1,606	646	417	645	327	1,094	3,345
Samtse	8,696	6,447	741	3,033	2,628	866	641	1,765	2,753
Sarpang	7,328	8,184	1,116	2,111	1,745	826	368	1,337	3,633
Thimphu	41	56	1,365	41	48	1,170	187	696	3,721
Trashigang	8,577	14,842	1,730	871	947	1,087	712	2,643	3,712
Trashiyangtse	2,155	3,728	1,729	170	184	1,082	190	669	3,521
Trongsa	714	964	1,350	95	69	726	158	630	3,994
Tsirang	3,973	5,029	1,265	824	651	790	243	754	3,102
Wangduephodrang	111	152	1,369	35	35	1,000	306	1,544	5,039
Zhemgang	3,039	3,905	1,284	280	244	871	94	286	3,029
Bhutan	55,473	75,380		10,319	9,159		5,991	22,257	

(continued).....

TABLE 5.13: AREA, PRODUCTION AND YIELD OF MAJOR CROPS BY DZONGKHAG, 1995.

Dzongkhag	Legumes			Chili			Ginger		
	Area (ha)	Prodtn. (tonnes)	Yield/ha (kg.)	Area (ha)	Prodtn. (tonnes)	Yield/ha(kg)	Area (ha)	Prodtn. (tonnes)	Yield/ha(kg)
Bjakar	98	170	1727	5	8	1538	0	0	0
Chhukha	28	43	1535	27	28	1048	14	68	5000
Dagana	62	77	1245	11	16	1428	5	21	4038
Gasa	2	2	1333	0	0	0	0	0	0
Haa	8	13	1585	7	10	1470	4	15	3750
Lhuntse	126	126	998	38	54	1421	1	5	5000
Mongar	233	261	1120	46	60	1307	3	15	4687
Paro	77	119	1543	60	90	1495	0	0	0
Pemagatshel	145	179	1234	42	53	1258	10	54	5346
Punakha	23	31	1347	25	29	1178	0	0	0
Samdrupjongkhar	94	119	1271	49	48	981	77	225	2981
Samtse	122	154	1259	15	23	1564	798	2959	3708
Sarpang	121	154	1269	17	17	1011	204	1058	5186
Thimphu	16	134	8375	902	3606	4000	0	0	0
Trashigang	255	316	1241	121	151	1245	5	20	4166
Trashiyangtse	86	107	1244	14	16	1142	0	0	0
Trongsa	16	26	1625	57	77	1360	0	3	7500
Tsirang	70	76	1082	20	20	995	19	60	3208
Wangduephodrang	41	75	1847	83	127	1537	0	0	0
Zhemgang	9	12	1276	9	12	1276	0	0	0
Bhutan	1632	2194		1548			1140	4503	0

(continued)....

TABLE 5.13: (continuation) AREA, PRODUCTION AND YIELD OF MAJOR CROPS BY DZONGKHAG, 1995.

Dzongkhag	Orange			Apple			Cardamom		
	Area (ha.)	Prodtn. (tonnes)	Yield/ha. (Kg.)	Area (ha.)	Prodtn. (tonnes)	Yield/ha. (Kg.)	Area (ha.)	Prodtn. (tonnes)	Yield/ha. (Kg)
Bjakar	0	0	0	71	247	3,488	0	0	0
Chhukha	571	5,649	9,886	12	48	4,000	898	513	571
Dagana	479	4,362	9,112	1	4	4,000	1,168	669	572
Gasa									
Haa	55	421	7,654	112	385	3,452	74	42	567
Lhuntse	12	99	8,181	13	40	2,985	0	0	0
Mongar	41	430	10,436	15	43	2,905	0	0	0
Pemagatshel	246	3,040	12,357	3	9	3,333	5	4	740
Punakha	62	444	7,149	16	57	3,540	49	37	755
Samdrupjongkhar	587	5,083	8,657	1	5	4,166	73	37	508
Samtse	2,493	20,944	8,402	0	0	0	1,398	608	434
Sarpang	2,432	26,715	10,986	1	3	3,000	1,732	1,050	606
Thimphu	31	38	1,221	38	48	1,269	0	0	0
Trashigang	80	905	11,355	30	152	5,016	5	4	816
Trashiyangtse	22	260	11,607	13	70	5,384	1	1	714
Trongsa	13	153	11,679	29	145	4,965	412	244	592
Tsirang		327	9,636	1	4	4,000	888	571	643
Wangduephodrang	46	512	11,203	20	90	4,615	0	0	0
Zhemgang	426	3,474	8,154	2	8	4,000	265	197	742
Bhutan	8,055	76,935		1,103	5,708		6,968	3,977	

Source: LUPP, Ministry of Agriculture

TABLE 5.14: QUANTITY OF IMPROVED POTATO SEEDS PLANTED AND PRODUCTION BY VARIETY AND REGION, 1992/93 TO 1994/95

(metric tonnes)

Location/region	Desiree			K. Jyoti			Yusikap		
	1992/93	1993/94	1994/95	1992/93	1993/94	1994/95	1992/93	1993/94	1994/95
Quantity planted	161.05	156.39	156.09	95.2	82.47	75.37	90.7	86.33	85.98
Phujikha farm	8.15	6.74	6.74	4.40	4.72	1.27	4.70	4.78	4.78
Trashigang	18.35	20.25	20.15	34.95	34.45	33.25	45.50	35.20	35.10
Pemagatshel	4.00	4.00	4.00	14.00	14.00	13.75	10.00	10.00	10.00
Bumtha	32.60	31.70	31.70	22.00	18.85	16.95	21.35	19.95	19.95
Phubjikha	97.95	93.70	93.50	19.85	10.45	10.15	9.15	16.40	16.15
Quantity produced	414.19	414.94	447.02	216.66	188.78	156.6	238	237.9	240.74
Phujikha farm	33.54	33.54	35.97	11.38	11.38	15.75	34.00	34.00	28.29
Trashigang	15.70	15.70	41.55	42.85	42.85	67.70	95.40	95.30	93.10
Pemagatshel	10.70	10.70	8.15	28.70	28.70	30.90	22.10	22.10	20.95
Bumtha	74.05	74.05	86.05	84.93	57.05	13.25	53.15	53.15	56.55
Phubjikha	280.20	280.95	275.30	48.80	48.80	29.00	33.35	33.35	41.85
Seed to production	2.57	2.65	2.86	2.28	2.29	2.08	2.62	2.76	2.80
Phujikha farm	4.12	4.98	5.34	2.59	2.41	12.40	7.23	7.11	5.92
Trashigang	0.86	0.78	2.06	1.23	1.24	2.04	2.10	2.71	2.65
Pemagatshel	2.68	2.68	2.04	2.05	2.05	2.25	2.21	2.21	2.10
Bumtha	2.27	2.34	2.71	3.86	3.03	0.78	2.49	2.66	2.83
Phubjikha	2.86	3.00	2.94	2.46	4.67	2.86	3.64	2.03	2.59

Source: Ministry of Agriculture, Thimphu

TABLE 5.15: PERENNIAL CROPS BY ZONE, 1988/89

('000 trees)

Crop	Thimphu	Zone I	Zone II	Zone III	Zone IV	Total
Temperate fruits	55.3	109.2	65.2	59.9	104.0	393.6
Apples	49.7	93.6	13.4	47.0	31.8	235.5
Apricots	0.8	1.5	4.9	0.7	3.2	11.1
Peaches	2.0	7.6	29.3	5.9	32.4	77.2
Pears	1.1	2.8	13.0	3.5	7.8	28.2
Plums	0.5	0.8	3.4	0.8	5.6	11.1
Walnut	-	-	-	1.9	17.4	19.3
Mangosteen	-	-	-	-	2.4	2.4
Sub-tropical fruits	6.9	1,328.5	729.2	1,112.9	466.8	3,644.3
Oranges	4.6	1,148.3	504.8	762.1	175.4	2,595.2
Lemons	0.3	74.5	9.1	23.5	3.1	110.5
Bananas	1.1	86.7	182.8	286.6	258.2	815.4
Guavas	0.7	9.3	25.2	10.4	15.6	61.2
Mangoes	-	3.3	2.3	9.9	3.2	18.7
Jack fruit	-	3.1	3.0	4.0	2.2	12.3
Litchi	-	-	-	3.8	0.7	4.5
Papaya	-	-	-	3.1	2.1	5.2
Persimmons	-	-	-	-	1.9	1.9
Other tree crops	-	5,883.7	5,400.7	4,407.1	60.1	15,751.6
Cardamom(b)	-	5,610.4	5,318.3	4,054.5	20.5	15,003.7
Areconut	-	262.9	-	347.3	34.6	644.8
Tea	-	8.0	2.8	5.3	0.5	16.6

Source: Agronomic Survey, CSO, Ministry of Planning, Thimphu

TABLE 5.16: HOLDERS BY SIZE OF LIVESTOCK HOLDING, 1988/89

('000 holders)

Number of livestock	Cattle	Yak	Buffalo	Pig	Goat	Sheep	Horse	Donkey	Chicken
Zero	9.2	62.5	62.7	29.6	47.7	57.7	46.9	60.7	12.7
1 - 2	8.2	*	0.6	24.9	7.5	2.4	14.3	3.0	14.6
3 - 4	10.9	0.2	0.3	7.0	5.7	1.2	2.0	0.1	13.2
5 - 9	23.1	0.1	0.3	2.2	2.6	1.3	0.6	*	13.7
10 - 14	8.1	*	*	0.2	0.2	0.4	*	*	5.1
15 - 19	2.4	0.2	*	*	*	*	*	*	2.1
20 - 29	1.5	0.1	*	*	*	0.2	*	*	1.6
30 & Over	0.5	0.5	*	*	*	0.1	*	*	0.8
Total	63.9	63.6	63.9	63.9	63.7	63.3	63.8	63.8	63.8

(percentage of all holders)

Zero	14.4	97.8	98.1	46.3	74.6	90.3	73.4	95.0	19.9
1 - 2	12.8	*	0.9	39.0	11.7	3.8	22.4	4.7	22.8
3 - 4	17.1	0.3	0.5	11.0	8.9	1.9	3.1	0.2	20.7
5 - 9	36.2	0.2	0.5	3.4	4.1	2.0	0.9	*	21.4
10 - 14	12.7	*	*	0.3	0.3	0.6	*	*	8.0
15 - 19	3.8	0.3	*	*	*	*	*	*	3.3
20 - 29	2.3	0.2	*	*	*	0.3	*	*	2.5
30 & Over	0.8	0.8	*	*	*	0.2	*	*	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Agronomic Survey, CSO, Ministry of Planning, Thimphu

TABLE 5.17: IMPORTS AND DISTRIBUTION OF FOOD ITEMS BY FOOD CORPORATION OF BHUTAN, 1986/87 TO 1994/95

(Tonnes)

Commodity	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
Imports									
Rice	11,282.00	16,750.00	11,600.00	9,900.00	8,776.00	10,301.30	10,087.50	10,960.95	11,145.01
Wheat	3,350.00	5,767.00	4,990.00	2,834.00	1,450.00	1,469.90	1,912.00	2,983.47	2,883.71
Sugar	3,574.00	4,039.00	3,616.00	3,040.00	3,447.00	2,539.50	3,855.50	3,259.50	360.00
Salt	3,516.00	5,035.00	6,495.00	4,619.00	4,318.00	3,520.90	4,886.70	0.00	0.00
Oil	874.00	1,280.00	400.00	340.00	270.00	559.90	492.70	493.27	489.56
Sales									
Rice	11,761.00	16,700.00	11,197.00	8,895.00	8,203.00	10,504.50	10,068.70	10,455.82	11,232.99
Wheat	3,346.00	5,595.00	4,544.00	2,964.00	1,327.00	1,363.50	1,964.20	1,401.81	1,423.57
Sugar	3,731.00	4,078.00	3,490.00	3,039.00	3,001.00	3,143.30	4,012.70	3,214.34	3,525.10
Salt	3,513.00	5,050.00	4,050.00	4,887.00	4,497.00	4,301.00	3,872.90	480.61	64.20
Oil	516.00	1,082.00	435.00	416.00	237.00	301.80	423.60	597.41	380.43

Source: Food Corporation of Bhutan.

TABLE 5.18: QUANTITY OF AGRICULTURAL PRODUCE HANDLED BY FOOD CORPORATION OF BHUTAN, 1988/89 TO 1994/95

Commodity	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
Potatoes	14,275.70	13,881.00	9,886.00	13,196.30	12,422.69	15,096.33	16,662.90
Vegetables	n.a	n.a	n.a	n.a	1,103.73	1,366.37	1,633.94
Apples	431.80	325.30	94.00	688.00	1,406.47	498.89	489.16
Oranges	2,373.80	2,138.20	3,275.00	14,180.70	23,633.50	1,590.49	5,423.37
Cardamom	n.a	n.a	n.a	n.a	515.84	441.35	81.49
Ginger	n.a	n.a	n.a	n.a	722.50	480.07	611.00
Arecanut	n.a	n.a	n.a	n.a	134.32	183.63	192.57
Supari(dried doma)	n.a	n.a	n.a	n.a	0.00	0.00	0.49
Dry chilli	n.a	n.a	n.a	n.a	74.28	43.16	107.21
Kidney bean(rajma)	n.a	n.a	n.a	n.a	38.03	72.20	51.01
Soya bean	n.a	n.a	n.a	n.a	248.72	203.48	314.68
Pulses	n.a	n.a	n.a	n.a	6.94	5.22	2.14
Mustard	n.a	n.a	n.a	n.a	5.75	5.86	0.14
Pipla (wild)	n.a	n.a	n.a	n.a	0.00	8.08	1.83
Chirota (wild)	n.a	n.a	n.a	n.a	0.00	0.00	6.28
Lemon	n.a	n.a	n.a	n.a	188.79	108.31	54.21
Apricot	n.a	n.a	n.a	n.a	0.05	0.00	0.04
Peach	n.a	n.a	n.a	n.a	0.30	0.68	1.40
Plum	n.a	n.a	n.a	n.a	2.53	0.12	0.98
Pear	n.a	n.a	n.a	n.a	0.00	0.08	0.25
Garlic	n.a	n.a	n.a	n.a	0.08	0.12	0.00
Dry bean	n.a	n.a	n.a	n.a	2.02	0.00	0.00

Note: 1991/92 refer to 13 months period (June to June).The rest is 12 months period July to June.Conversion of units used are; 1) 1 paun orange=80 fruits = 8.50 kg 2) 1 paun lemon = 80 fruits= 4.00 kgs; and 3) 1 paun lemon = 80 fruits = 3.00 kgs.

Source: Food Corporation of Bhutan

TABLE 5.19: VALUE OF AGRICULTURAL PRODUCE AUCTIONED BY AUCTION YARDS, BHUTAN, 1992/93 AND 1994/95

(millions Nu.)

Auction yards	1992/93	1993/94	1994/95
Phuentsholing	64.38	47.96	57.73
Samtse	19.96	8.73	10.00
Gelephu	18.24	14.58	1.72
Samdrupjongkha	19.65	22.24	28.51
Sarpang	24.45	2.77	2.70
Bhutanghat	6.76	0.00	0.00
Kalikhola	6.69	0.00	0.00
Sipsoo	10.90	1.28	1.50
Chengmari	3.73	0.00	0.00
Gomtu	1.16	0.00	0.00
Nganglam	6.57	1.76	2.99
Bangtar	0.69	0.00	0.21
Mathanguri	1.82	0.83	2.22
Daifam	0.00	0.00	0.42
Total value	184.996	100.152	107.994

Source: Food Corporation of Bhutan

TABLE 5.20: PRODUCTION OF LOGWOOD, 1986/87(a) TO 1995

('000 cubic metres)

Item	1986/87	1987/88	1988/89	1989	1990	1991	1992	1993	1994	1995
Logwood	149.1	83.7	89.4	434.1	202.7	350.1	235.2	164.0	944.2	943.9
Commercial logwood	118.1	76.9	83.4	54.3	48.9	40.1	49.2	n.a	n.a	58.4
Construction and other uses	31.0	6.8	6.0	379.8	153.8	310.0	185.9	165.0	944.3	885.6
Rural construction	n.a	n.a	n.a	n.a	n.a	n.a	93.2	69.3	758.0	429.3
Urban construction	n.a	n.a	n.a	n.a	n.a	n.a	92.7	94.7	159.9	456.2
Government construction	n.a	n.a	n.a	n.a	n.a	n.a	-	-	26.4	0.1
Others	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	..
Firewood	3.5	10.5	1.6	2.2	3.0	4.2	5.3	n.a	n.a	n.a
Total	152.6	94.2	91.0	436.3	205.7	354.3	240.4	164.0	944.2	943.9

Note: (a) Years refer to 1 April to 31 March while 1987/88 refer to fifteen months period April toJune
For 1988/89 is for 12 months period July to June. Figures exclude collection of firewood by individuals
"!" these figure is included with urban construction
Source: Forestry Services Division, Thimphu

TABLE 5.21: NUMBER OF LIVESTOCK BY TYPE AND DZONGKHAG, 1995

Dzongkhag	Cattle	Yak	Mithun	Buffalo	Sheep	Goat	Pig	Horse	Mule	Donkey	Poultry
Bjakar	9859	4196	2236	0	6372	1	11	1452	129	6	2016
Chhukha	19590	0	644	27	829	4331	3184	0	32	9	13220
Dagana	10834	0	738	228	809	3169	2091	469	54	0	9074
Gasa	543	3384	145	0	67	0	176	267	175	11	578
Haa	7493	5175	206	0	96	110	1319	900	388	7	3479
Lhuntse	10883	256	4402	0	352	24	1914	1333	175	25	9070
Mongar	18106	0	9722	0	72	197	4897	3183	565	21	13643
Paro	12062	1209	1209	0	80	95	3754	1256	342	6	5045
Pemagatshel	5125	0	2757	0	0	169	1802	562	391	11	5015
Punakha	7686	0	1582	0	0	39	1839	805	28	2	55386
Samdrupjongkhar	15705	0	5375	0	226	995	3412	2012	283	39	14989
Samtse	51242	0	1582	951	5433	17351	2195	747	220	2	29141
Sarpang	15579	0	366	0	843	3988	1241	603	2	0	12100
Thimphu	7240	9249	794	0	1050	0	1303	987	0	0	2727
Trashigang	23026	7817	22071	0	6588	49	6818	4524	651	25	21785
Trashiyangtse	9958	330	3294	0	142	45	3332	1438	264	7	6503
Trongsa	8541	0	2296	0	3191	0	133	482	65	4	3832
Tsirang	9504	0	56	0	852	3890	1014	247	1	0	4248
Wangdiphodrang	18659	4348	3383	0	7436	145	4705	2271	103	17	7380
Zhemgang	12039	0	3917	0	0	502	2551	1364	307	5	9763
Bhutan	273674	35964	66775	1206	34438	35100	47691	24902	4175	197	228994

Source: Animal Husbandry Division

TABLE 5.22 NUMBER OF LIVESTOCK BY BREED, BHUTAN, 1986 TO 1995

Type of livestock	1986	1 987	1988	1989	1990	1991	1992	1993	1994	1995
Cattle	340,262	356,956	357,400	303,500	307,700	275,000	240,604	218,600	246,303	273,67
Local cattle	330,432	343,251	n.a	n.a	n.a	n.a	218,524	n.a	213,342	243,48
Crossbred jersey	9,830	13,705	n.a	n.a	n.a	n.a	22,080	n.a	26,853	25,648
Crossbred	0	0	n.a	n.a	n.a	n.a	n.a	n.a	6,108	4,542
Horse	23,641	26,007	25,768	26,100	25,100	25,200	21,631	24,400	22,915	24,830
Local	23,167	25,136	n.a	n.a	n.a	n.a	19,424	n.a	18,597	23,421
Improved	474	871	n.a	n.a	n.a	n.a	1,670	n.a	1,578	1,409
Not specified	0	0	n.a	n.a	n.a	n.a	537	n.a	2,740	0
Sheep	43,771	36,353	46,600	47,800	45,200	36,000	31,018	20,100	31,882	34,438
Local	41,471	34,239	n.a	n.a	n.a	n.a	24,759	n.a	24,235	n.a
Improved	2,300	2,114	n.a	n:a	n.a	n.a	5,151	n.a	6,343	n.a
Not specified	0	0	n.a	n.a	n.a	n.a	1,108	n.a	1,304	n.a
Pig	88,613	70,306	65,700	63,285	60,100	54,000	47,295	39,000	45,968	47,691
Local	86,145	66,540	n.a	60,386	n.a	n.a	40,008	n.a	32,231	n.a
Improved	2,468	3,766	n.a	2,899	n.a	n.a	3,691	n.a	4,728	n.a
Not specified	0	0	n.a	0	0	n.a	3,596	n.a	9,009	n.a
Poultry	211,258	218,021	237,200	210,700	214,800	170,800	140,807	94,800	157,663	228,99
Local	202,795	203,057	n.a	n.a	n.a	n.a	116,333	n.a	116,744	n.a
Improved	8,463	14,964	n.a	n.a	n.a	n.a	12,655	n.a	13,137	n.a
Not specified	0	0	n.a	n.a	n.a	n.a	11,819	n.a	27,782	n.a
Mithun cross	#	#	#	46,400	51,644	60,500	69,500	n.a	53,514	65,394
Yak	35,694	30,100	35,639	37,100	33,035	31,500	30,241	n.a	36,761	36,075
Buffalo	5,037	5,184	4,344	4,700	4,300	2,600	925	n.a	1,513	1,206
Mule	-	-	-	2,334	3,767	n.a	3,516	n.a	4,183	4,175
Donkey	-	-	-	196	220	n.a	171	n.a	111	197
Goat	!	40,900	36,700	32,500	36,600	25,100	14,500	20,000	26,731	35,100

Note: 1991 and 1993 figures are imputations by CSO
!" figures included in sheep, "#" in cattle and "-" in horse

Source: Crop & Livestock Services Division, Thimphu.

TABLE 5.23: DETAILS OF PROTECTED AREAS IN BHUTAN, BY YEAR OF ESTABLISHMENT AND AREA

Name of Area	Establishment Year	Area(sq.Km)	Percent of total
Existing /Revised Protected Areas			
Torsa Strict Nature Reserve	1993	644	1.61
Jigme Dorji National Park	1993	4,200	10.48
Black Mountain National Park	1993	1,400	3.49
Thrumshingla National Park	1993	768	1.65
Royal Manas National Park	1993	1,000	2.50
Sakteng Wildlife Reserve	1993	650	1.62
Kulongchu Wildlife Reserve	1993	1,300	2.80
Phibsoo Wildlife Reserve	1993	278	0.69
Khaling/Neoli Wildlife Reserve	1993	273	0.68
All protected areas	..	10,513	26.23

Source: Forest Division, Ministry of Agriculture, Thimphu

CHAPTER 6: INDUSTRIES

INTRODUCTION

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 is 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 Gedu Wood Manufacturing Corporation, Bhutan Board Products Ltd.,the first chemical plant, Bhutan Carbide and Chemicals Ltd. established during 1988 etc. Besides Bhutan Agro Industries Ltd., there are a number of other small manufacturing plants concentrated in the food processing. Cottage industries also play a prominent role with its good timber resources and favourable agricultural conditions, there is ample scope for expansion of the manufacturing sector specially in these areas.

As the industrial sector grows in Bhutan, statistics on industry will become increasingly important. The CSO will be giving special attention to the development of statistical systems to meet the important needs for industrial statistics in the future.

TABLE 6.1: NUMBER OF INDUSTRIAL ESTABLISHEMNTS BY SECTOR, BHUTAN, 1984 TO 1995

Sector	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Production & manufacturing	94	104	119	136	153	161	175	189	226	256	303	336
New registration	19	10	15	17	17	8	14	14	37	30	47	15
Existing establishments	75	94	104	119	136	153	161	175	189	226	256	321
Services	43	45	49	56	68	82	101	124	164	209	1,506	1785
New registration	4	2	4	7	12	14	19	23	40	45	1,297	140
Existing establishments	39	43	45	49	56	68	82	101	124	164	209	1645
Contract	105	111	118	131	205	244	298	349	544	662	921	1085
New registration	1	6	7	13	74	39	54	51	195	118	259	127
Existing establishments	104	105	111	118	131	205	244	298	349	544	662	958
All sectors	242	260	286	323	426	487	574	662	934	1,127	2,730	3206

Source: Industries Division, Thimphu

TABLE 6.2: NUMBER OF LICENSED FIRMS IN MANUFACTURING AND MINING INDUSTRIES BY SECTOR, 1986 AND 1989

Industry	1986				1989			
	Public	Joint	Private	Total	Public	Joint	Private	Total
Mining	4	n.a	5	9	2	1	8	11
Manufacturing	10	n.a	330	340	16	5	136	157
Food processing/milling	4	n.a	245	249	7	1	30	38
Textiles and Clothing	-	n.a	5	5	1	0	6	7
Wood and Paper Products	2	n.a	53	55	5	2	75	82
Chemical Products	1	n.a	11	12	1	2	17	20
Mineral Products	2	n.a	4	6	1	0	6	7
Other	1	n.a	12	13	1	0	2	3
Total mining and manufacturing	14	n.a	335	349	18	6	144	168

Source: Industries Division, Thimphu

TABLE 6.3: NUMBER OF INDUSTRIES BY SECTOR, SIZE AND TYPE, BHUTAN, 1986 TO 1995

Industrial establishments	1986	1989	1990	1991	1992	1993	1994	1995
Sector								
Private	335	144	710	n.a	n.a	n.a	n.a	3169
Joint	14	18	20	n.a	n.a	n.a	n.a	11
Public	n.a	6	12	n.a	n.a	n.a	n.a	26
Size								
Large scale	n.a	n.a	499	n.a	n.a	18	30	31
Medium scale	n.a	n.a	23	n.a	n.a	16	22	32
Small scale	n.a	n.a	19	n.a	n.a	148	142	177
Cottage	n.a	n.a	201	n.a	n.a	947	693	650
Mini scale	..	..	..	n.a	n.a	..	922	1,231
Other (Contract)	..	..	..	n.a	n.a	..	921	1,085
Type								
Production & Manufacturing	340	157	266	189	226	258	303	336
Agro based	n.a	n.a	64	n.a	n.a	63	72	81
Forest based	n.a	n.a	131	n.a	n.a	117	151	167
Mineral based	9	11	33	n.a	n.a	38	29	35
Others	n.a	n.a	38	n.a	n.a	40	51	53
Contract	n.a	n.a	395	349	544	662	921	1,085
Services	n.a	n.a	81	124	164	209	1,506	1,785
All industries	349	168	742	662	934	1,129	2,730	3,206

Source: Industries Division, Thimphu

TABLE 6.4: NUMBER OF CONTRACT FIRMS AND INDUSTRIES BY SIZE AND DZONGKHAG, 1995.

	Class of contract firms					Scale of industries				
	A	B	C	Petty	Total	Small	Medium	Large	Cottage	Total
Bjakar	1	2	4	38	45	0	0	0	16	16
Chhukha	5	4	17	59	85	24	12	10	23	69
Dagana	0	0	0	13	13	0	0	0	0	0
Gasa	0	0	0	3	3	0	0	0	0	0
Haa	0	0	1	25	26	1	0	0	4	5
Lhuntse	0	0	2	17	19	0	0	0	0	0
Mongar	1	0	3	42	46	3	0	0	13	16
Paro	0	0	3	49	52	8	0	0	16	24
Pemagatshel	0	0	0	14	14	0	0	0	2	2
Punakha	0	0	3	11	14	0	0	0	0	0
Samdrupjongkhar	5	2	8	34	49	8	1	3	18	30
Samtse	0	0	1	46	47	6	3	4	13	26
Sarpang	1	0	5	59	65	8	0	1	15	24
Thimphu	20	11	20	360	411	32	0	2	54	88
Trashigang	1	3	2	42	48	3	0	0	11	14
Trashiyangtse	0	0	1	16	17	0	0	0	5	5
Trongsa	0	0	2	23	25	0	0	0	3	3
Tsirang	0	0	0	14	14	0	0	0	2	2
Wangduephodrang	0	0	0	39	39	1	1	0	2	4
Zhemgang	0	0	0	53	53	0	0	0	8	8
Bhutan	34	22	72	957	1085	94	17	20	205	336

Note: Size of establishments are determined by their working or input capitals Cottage with Nu. 0.5 millions or less. Small is Nu. 0.5 to 5.0 millions or less,medium is Nu. 5.0 to 20.0 millions, Large with Nu. 20.0 millions or more

Source: Ministry of Trade and Industry, Thimphu

TABLE 6.5: NUMBER OF INDUSTRIES BY TYPE AND DZONGKHAG, 1995

Dzongkhag	Agro based	Forest based	Mineral based	Services	Contract	Others	All types
Bjakar	2	14	0	50	45	0	111
Chhukha	18	27	6	273	85	18	427
Dagana	0	0	0	24	13	0	37
Gasa	0	0	0	0	3	0	3
Haa	1	4	0	13	26	0	44
Lhuntse	0	0	0	6	19	0	25
Mongar	2	10	1	47	46	3	109
Paro	5	15	2	99	52	2	175
Pemagatshel	0	2	0	17	14	0	33
Punakha	0	0	0	14	14	0	28
Samdrupjongkhar	9	13	5	156	49	3	235
Samtse	9	4	10	67	47	3	140
Sarpang	13	8	2	209	65	1	298
Thimphu	13	47	8	609	411	20	1108
Trashigang	3	9	0	68	48	2	130
Trashiyangtse	1	4	0	9	17	0	31
Trongsa	0	3	0	23	25	0	51
Tsirang	2	0	0	49	14	0	65
Wangduephodrang	1	1	1	27	39	1	70
Zhemgang	2	6	0	25	53	0	86
Bhutan	81	167	35	1,785	1,085	53	3,206

Source: Ministry of Trade and Industry, Thimphu

TABLE 6.6: NUMBER OF MINING AND MANUFACTURING INDUSTRIES BY EMPLOYMENT SIZE, 1989

	Employment size (persons)						
Industry	1-5	6-9	10-19	20-49	50-99	100+	
Mining and quarring	2	0	0	5	0	4	11
Manufacturing	35	21	62	22	6	11	157
Food, beverage and tobacco	17	5	10	1	1	4	38
Textile, wearing apparel etc.	1	1	2	2	0	1	7
Wood, wood products and furniture	7	5	39	16	1	3	71
Pulp, paper and printing	3	3	3	1	1	0	11
Chemical, rubber and plastics	5	7	4	1	1	2	20
Non-metalic mineral products	2	0	2	0	2	1	7
Metal products and other	0	0	2	1	0	0	3
Total mining and manufacturing	37	21	62	27	6	15	168

Source: Ministry of Trade & Industries, Thimphu

CHAPTER 7: TRANSPORT AND COMMUNICATION

INTRODUCTION

Traditionally the principle means of transport in Bhutan has been foot paths and mules tracks and these will continue to play an important role into the future. The development of the motor roads network was initiated in 1961 with the commencement of work on the construction of the first road from Phuentsholing to Paro and Thimphu. The importance of road transport has grown with the expansion of the road network, and there are now extensive bus services between the most centers in the kingdom. Civil aviation arrived in Bhutan with the establishment of Druk Air Corporation and its commencement of operations in 1983 on the Paro to Calcutta sector. Services were extended to cover Paro to Dhaka sector in 1986; Paro to Delhi in 1988; Paro to Bangkok and Paro to Kathmandu in 1989.

Postal and other communication facilities were limited prior to 1962. Since then an extensive postal service has been developed so that the majority of the population now have reasonable access to mail services. Telephone services have also been considerably expanded and telex exchanges installed in Thimphu and Phuntsholing. An extensive civil wireless system also exist servicing many remote centers.

TABLE 7.1: LENGTH OF ROADS BY TYPE, BHUTAN, 1987 TO 1995

(kilometres)

Type of road	1987	1988	1989	1990	1991	1992	1993	1994	1995
Black topped	1,703	1,725	1,761	1,801	1,913	1,897	1,914	1,981	1,981
National highway	1,378	1,385	1,393	1,399	1,419	1,404	1,418	1,467	1,467
Dzongkhag roads	210	217	230	256	351	299	299	299	299
Feeder roads	115	123	138	146	143	193	197	215	215
Non-black topped	462	548	519	535	506	565	654	1,056	1,127
National highway	72	70	60	54	70	87	109	60	63
Dzongkhag roads	237	248	258	240	92	144	144	144	144
Feeder roads	153	230	201	241	344	334	401	852	920
All roads	2,165	2,273	2,280	2,336	2,419	2,462	2,568	3,037	3,108

Source: Public Work Divison, Thimphu

TABLE 7.2: ROAD NETWORK BY TYPE AND DZONGKHAG, BHUTAN, 1995

(km. length)

Dzongkhag	National Highway	District Road	Feeder Road	All Roads
Bjakar	122.00	-	85.60	207.60
Chukha	160.00	22.00	101.00	283.00
Dagana	22.00	87.00	13.00	122.00
Gasa	-	-	1.50	1.50
Haa	15.00	11.00	44.95	70.95
Lhuntse	-	47.00	10.00	57.00
Mongar	177.00	20.00	36.76	233.76
Paro	104.00	51.00	49.78	204.78
Pemagatshel	-	23.00	22.68	0.00 45.68
Punakha	12.00	-	68.72	
Samdrupjongkhar	59.00	48.00	19.46	126.46
Samtse	-	84.00	40.00	124.00
Sarpang	110.00	-	233.30	343.30
Thimphu	102.00	-	186.46	288.46
Trashigang	141.00	10.00	93.55	244.55
Trashiyangtse	-	40.00	8.00	48.00
Trongsa	145.00	-	1.35	146.35
Tsirang	64.00	-	24.00	88.00
Wangduephodrang	119.00	-	74.72	193.72
Zhemgang	178.00	-	19.90	197.90
Bhutan	1530.00	443.00	1134.73	3107.73

Source : Public Works Divison, Thimphu

TABLE 7.3: NUMBER AND LENGTH OF BRIDGES BY TYPE, BHUTAN, 1995

Type of bridges	Numbers	Length (metres)
Reinforced concrete	47	1001
Prestressed concrete	3	246
Bailey bridge	50	1703
Bailey suspension	7	678
Hemilton and steel	7	251
RCC slab of RSJ	22	226
Wooden deck/RSJ	3	107
UNIDO modular	17	262
RCC submersible	4	184
All bridges	160	4658

Source: Public Works Division, Thimphu

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

Dzongkhag	Plan Periods				All Plan periods
	I - IV	Vth	VI	VII	(I - VII)
Bjakar	1	7	3	2	13
Chhukha	3	5	1	2	11
Dagana	2	2	2	2	8
Gasa	0	0	2	2	4
Ha	3	6	1	3	13
Lhuntse	3	4	2	1	10
Mongar	9	5	2	1	17
Paro	3	8	3	2	16
Pemagatshel	2	7	2	1	12
Punakha	3	4	1	0	8
Samdrupjongkha	10	13	6	1	30
Samtse	9	15	2	0	26
Sarpang	9	8	5	0	22
Thimphu	0	1	3	1	5
Trashigang	7	12	2	0	21
Trashiyangtse	3	6	4	1	14
Trongsa	4	6	3	1	14
Tsirang	6	4	1	1	12
Wangduephodrang	2	10	5	2	19
Zhemgang	1	5	4	3	13
Bhutan	80	128	54	26	288

Source: Division of Roads, Thimphu

TABLE 7.5: NUMBER OF REGISTERED VEHICLES BY TYPE AND REGION, 1990 TO 1995.

Region	Heavy	Light	2-whellers	Taxi	Others	All
1990 total	3,059	4,372	4,100	385	..	11,916
Thimphu	1,604	3,092	3,678	338	..	8,712
Gaylegphug	143	598	0	14	..	755
Phuentsholing	1,279	671	371	33	..	2,354
Samdrupjongkhar	33	11	51	0	..	95
1991 total	3,259	4,857	4,681	447	..	13,244
Thimphu	1,671	3,471	4,100	378	..	9,620
Gaylegphug	143	598	0	14	..	755
Phuentsholing	1,406	780	520	55	..	2,761
Samdrupjongkhar	39	8	61	0	..	108
1992 total	3,424	5,282	5,028	534	..	14,268
Thimphu	1,726	3,829	4,345	428	..	10,328
Gaylegphug	143	598	0	14	..	755
Phuentsholing	1,516	847	622	92	..	3,077
Samdrupjongkhar	39	8	61	0	..	108
1993 total (a)	1,557	3,082	4,046	289	..	8,974
Thimphu	470	2,006	2,490	190	..	5,156
Gaylegphug	214	180	345	n.a	..	739
Phuentsholing	718	748	884	98	..	2,448
Samdrupjongkhar	155	148	327	1	..	631
1994 total	655	2,246	3,001	172	80	6,154
Thimphu	480	2,056	2,573	171	80	5,360
Gaylegphug	150	142	313	-	..	605
Phuentsholing	n.a	n.a	n.a	n.a	n.a	n.a
Samdrupjongkhar	25	48	115	1	..	189
1995 total	1,512	3,316	4,300	340	38	9,400
Thimphu	539	2,291	2,896	221	34	5,981
Gaylegphug	135	172	349	..	3	659
Phuentsholing	801	826	1,014	119	..	2,760
Samdrupjongkhar	37	27	41	..	1	106

Note: The decrease since 1993 is due to change in definitions of registration system since the year. Unlike previous years the figures reflect only vehicles in running condition.
(a) Includes figures from first few months of 1994

Source: Division of Revenue and Customs, Thimphu

TABLE 7.6: NUMBER OF NEW MOTOR VEHICLE DRIVING LICENCES ISSUED (a) BY TYPE OF VEHICLE,1986 TO 1995

(numbers)

Licence for	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Two Wheelers	179	324	163	465	103	523	159	328	371	225
Light	531	507	373	691	606	665	316	586	461	281
Medium	18	39	41	57	52	51	19	45	48	67
Heavy	131	187	65	63	50	77	21	74	45	19
Other(b)	44	34	82	132	161	76	n.a	n.a	66	27
All vehicles	903	1,091	724	1,408	972	1,392	515	1,033	991	619

(a) The figures refer to new licences issued during the year (not including renewals). The figures do not refer to the total number of licensed drivers.
(b) Includes road rollers, tractors and bulldozers.

TABLE 7.7: DETAILS OF PUBLIC ROAD TRANSPORT SERVICES, 1990 TO 1995

Details	1990	1991	1992	1993	1994	1995
Number of operators	15	15	15	15	14	15
Number of service routes (a)	68	66	67	72	65	67
Distance run ('000 kms)	3,484	4,668	4,484	4,581	4,180	3107
Passengers carried ('000	1,009	1,178	1,336	1,388	995	1,021
Direct	742	820	880	901	729	786
Local	267	358	456	488	265	235
Loads carried ('000 kgs)	755	1,154	1,155	1,275	4,314	119
Services suspended (route days)	815	1,196	1,467	2,278	1,427	1,038

Note: (a) Service route imply bus services one round trip station to station. for e.g. Phuentsholing to Thimphu Thimphu to Phuentsholing

Source: Royal Bhutan Police and Surface Transport Division, Ministry of Communications, Thimphu

TABLE 7.8: NUMBER OF MOTOR VEHICLE ACCIDENTS BY TRAFFIC DIVISION, 1987 TO 1995.

Traffic division	1987	1988	1989	1990	1991	1992	1993	1994	1995
Thimphu	144	142	154	105	107	127	176	207	133
Punakha Division No.II	35	24	14	20	26	11	22	20	26
Phuentsholing	23	14	38	40	19	30	13	16	46
Samtse	8	7	7	8	5	3	2	6	10
Gelephu	17	7	19	23	9	12	16	8	5
Tsirang	8	3	9	5	5	9	5	4	7
Trongsa	9	12	19	27	14	23	21	20	6
Samdrupjongkha	15	25	21	14	15	21	17	21	21
Trashigang	11	14	10	6	13	11	5	7	6
Monggar	5	6	8	4	6	8	6	3	9
Bhutan	275	254	299	252	219	255	283	312	269

Note: Tsimalakha traffic division is replaced by Punakha Division No.II since 1995

Source: Royal Bhutan Police, Thimphu

TABLE 7.9: CAUSES OF MOTOR VEHICLE ACCIDENTS BY TRAFFIC DIVISION, BHUTAN, 1995

(numbers)

Traffic division	Mechanical fault	Drunk driving	Bad weather	Without licence	Other causes	All causes
Thimphu	5	18	8	25	39	95
Punakha	10	n.a	n.a	3	7	20
Phuentsholing	12	6	7	2	13	40
Samtse	n.a	n.a	n.a	n.a	n.a	..
Gelephu	n.a	n.a	n.a	n.a	3	3
Tsirang	3	1	1	2	1	8
Trongsa	3	n.a	n.a	2	3	8
Samdrupjongkha	3	1	1	1	5	11
Trashigang	1	n.a	1	n.a	1	3
Mongar	n.a	n.a	n.a	n.a	n.a	..
Bhutan	37	26	18	35	72	188

Note: A total of 81 accidents were unspecified and is excluded here
Source: Royal Bhutan Police, Thimphu

TABLE 7.10: MOTOR VEHICLE ACCIDENTS BY TRAFFIC DIVISION BY MONTH, BHUTAN, 1995

(numbers)

Traffic division	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Thimphu	11	15	11	8	15	13	12	5	10	10	12	11	133
Punakha	4	n.a	2	1	3	3	4	n.a	1	5	3	n.a	26
Phuentsholing	1	3	3	5	3	4	4	5	2	6	4	6	46
Samtse	1	1	1	2	n.a	3	n.a	n.a	n.a	n.a	1	1	10
Gelephu	n.a	3	n.a	n.a	1	n.a	n.a	n.a	n.a	n.a	n.a	1	5
Tsirang	n.a	n.a	2	2	2	n.a	n.a	n.a	n.a	1	n.a	n.a	7
Trongsa	n.a	1	1	n.a	n.a	n.a	1	1	1	1	n.a	n.a	6
Samdrupjongkha	3	3	2	5	1	1	n.a	2	n.a	1	2	1	21
Trashigang	n.a	2	n.a	1	n.a	n.a	n.a	1	n.a	n.a	n.a	2	6
Mongar	n.a	1	1	1	1	1	n.a	n.a	2	1	n.a	1	9
Bhutan	20	29	23	25	26	25	21	14	16	25	22	23	269

Source: Royal Bhutan Police, Thimphu

TABLE 7.11: NUMBERS OF PASSENGERS CARRIED AND REVENUE EARNED BY DRUK AIR FLIGHTS BY SECTOR,1989 TO 1995

Sector	1989	1990	1991	1992	1993	1994	1995
Paro to Calcutta	1,782	1,745	1,390	977	1,140	1,335	1,826
Calcutta to Paro	1,555	1,366	1,209	932	1,077	1,170	1,533
Paro to Bangkok	843	1,558	2,488	2,689	2,766	3,634	3,937
Bangkok to Paro	927	1,763	2,544	2,980	2,914	3,677	3,879
Paro to Dhaka	152	398	620	726	795	829	596
Dhaka to Paro	211	482	676	722	777	803	563
Paro to Delhi	2,593	3,189	2,710	2,843	2,853	2,779	3,042
Delhi to Paro	2,547	3,324	3,026	2,859	2,857	2,737	3,122
Paro to Kathmandu	513	1,059	1,846	2,181	2,271	2,151	1,998
Kathmandu to Paro	502	947	1,635	2,132	2,158	2,000	1,790
Total passengers (a)	11,625	15,831	18,144	19,041	19,608	21,115	22,286
Revenue (Nu.in millions)	58.07	62.85	70.97	112.10	241.47	188.337	210
during fiscal year	1988/89	1989/90	1990/91	1991/92	1992/93(b)	1993/94	1994/95

(a) Number of passangers include only paying passangers
(b) Revenue earned for 18 months (July 1992 to December 1993)

Source: Druk Air Corporation, Thimphu

TABLE 7.12: NUMBER OF FLIGHTS MADE BY DRUK AIR BY SECTOR, 1989 TO 1995

Sector	1989	1990	1991	1992	1993	1994	1995
Paro to Calcutta	131	62	53	57	72	105	111
Calcutta to Paro	129	63	53	56	71	104	108
Paro to Bangkok	40	56	98	101	113	157	158
Bangkok to Paro	40	56	98	101	113	153	156
Paro to Dhaka	48	55	91	62	53	52	52
Dhaka to Paro	48	55	91	66	53	59	52
Paro to Delhi	95	98	102	111	106	102	109
Delhi to Paro	95	99	102	111	106	102	112
Paro to Kathmandu	35	54	102	119	107	102	71
Kathmandu to Paro	36	55	102	118	104	102	64
All sectors	697	653	892	902	898	1,038	993

Source: Druk Air Corporation, Thimphu

TABLE 7.13: TELEPHONE CONNECTION CAPACITY BY EXCHANGE, 1989 TO 1995

(numbers)

Exchange (Switch type)	1989	1990	1991	1992	1993	1994	1995	Existing Lines as of Dec. 1995
Tsimakothi(SxS)	50	50	50	50	50	50	50	48
Gelephu(TS/LS)	100	100	100	100	100	480	328	189
Haa(SxS)	50	50	50	50	50	50	50	38
Paro(SxS)	100	100	100	100	200	200	200	200
Phuentsholing(MAX III)	400	400	900	900	900	900	900	819
Punakha(SxS)	35	20	20	50	50	50	50	50
Samdrupjongkha(LS/TS)	100	100	100	100	100	816	664	217
Samtse(SxS)	100	100	100	100	100	100	100	86
Sarpang(DRMASS)	50	50	50	50	50	128	109	64
Thimphu LS/INTS/MS(NEAX 61	1,000	3,000	3,000	3000	3000	3000	3896	3085
Trashigang TS/LS(NEAX 61 E)	35	35	35	35	35	784	528	100
Trongsa TS/LS(NEAX 61 E)	35	35	35	35	35	616	336	101
Wangduephodrang(SxS)	50	50	50	50	100	100	100	87
Jakar(RLU)	–	–	–	–	–	216	132	133
Zhemgang(RLU)	–	–	–	–	–	216	200	59
Damphu(RLU)	–	–	–	–	–	656	632	45
Dagana(DRMASS)	–	–	–	–	–	64	62	45
Mongar(RLU)	–	–	–	–	–	420	420	70
Lhuntse(DRMASS)	–	–	–	–	–	64	46	33
Kanglung(DRMASS)	–	–	–	–	–	64	58	56
Trashiyangtse(DRMASS)	–	–	–	–	–	64	42	35
Pemagatshel(RLU)	–	–	–	–	–	116	116	46
Total capacity	2,105	4,090	4,590	4,620	4,770	9,154	9,019	5,606

Note: 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 by step switch.
Source: Telecommunication Division, Thimphu

TABLE 7.14: NUMBER OF TELEPHONE TRUNK CIRCUITS, BHUTAN, 1995

Sector	Type of connection	Existing circuits	Installed circuits
Thimphu - London (BT)	Satellite	8	512 KB
Thimphu - Singapore (ST)	Satellite	8	512 KB & 2 SCPC
Thimphu - Japan (KDD)	Satellite	6	512 KB
Thimphu - India	N.B.A Microwave	53	72
Thimphu - Phuentsholing	N.B.A Microwave	36	48
Thimphu - Trongsa	34 Mb Digital Microwave	30	30
Thimphu - Gelephu	34 Mb Digital Microwave	30	30
Thimphu - Trashigang	34 Mb Digital Microwave	30	30
Thimphu - Samdrupjongkha	34 Mb Digital Microwave	15	30
Thimphu - Paro	DRCS	4	..
Thimphu - Paro Airport	DRCS	12	..
Thimphu - Tsimakothi	DRCS	2	..
Thimphu - Wangduephodrang	DRCS	2	..
Thimphu - Lobesa	DRCS	14	..
Thimphu - Punakha	DRCS	2	..
Trongsa - Trashigang	34 Mb Digital Microwave	30	30
Trongsa - Gelephu	34 Mb Digital Microwave	30	30
Trongsa - Samdrupjongkha	34 Mb Digital Microwave	30	30
Gelephu - Trashigang	34 Mb Digital Microwave	15	30
Trashigang - Samdrupjongkha	34 Mb Digital Microwave	30	30
Paro - Haa	Physical Line 2 pairs Trunk		..
Samtse - Banarhat (India)	Physical Line 2 pairs Trunk		..
Phuentsholing - India (via Thimphu)	N.B.A Microwave	2	..
Phuentsholing - India (via Hashimara)	UHF	5	..
All sectors	..	398	1926

Note: DRCS stands for Digital Radio Concentrator System and N.B.A stands for Narrow Band Analogue.

Source: Division of Telecommunication, Thimphu

TABLE 7.15: NUMBER OF TRUNK LINES, CONNECTION CAPACITIES AND SETS IN USE, 1986 TO 1995

Details	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Trunk lines										
Satellite	n.a	n.a	n.a	n.a	6	3	6	3	19	23
Microwave	n.a	n.a	n.a	n.a	39	12	30	39	565	331
Analogue	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	101
Digital	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	105
Digital radio concentrator system	n.a	n.a	n.a	n.a	..	16	14	10	11	73
DRMASS	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	224
Physical lines										
Number of lines	n.a	n.a	n.a	n.a	15	12	12	12	4	4
Distance (km)	943	943	754	754	559	442	442	442	45	n.a
Connection capacity	1,945	1,945	1,990	2,105	4,090	4,590	4,620	4,770	9,154	9,019
Telephone sets in use	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	4,609	5,606

Note: DRMASS stands for digital radio multiple access system.

Source: Division of Telecommunication, Thimphu

TABLE 7.16: NUMBER OF TELEPHONE TRUNK CALLS BY TYPE, 1988 TO 1995

(thousands)

Type of call	1988	1989	1990	1991	1992	1993	1994	1995
Domestic calls	86	146	218	362	365	371	n.a	n.a
International calls	22	148	176	229	373	432	n.a	n.a
India	18	97	116	147	232	281	n.a	n.a
Other	4	51	60	82	141	151	n.a	n.a
All calls	108	294	394	591	738	803	n.a	n.a

Source: Division of Telecommunication, Thimphu

TABLE 7.17: TELECOMMUNICATION TRAFFIC IN MINUTES AND REVENUE EARNINGS,BHUTAN, 1993 TO 1995

Details	1993	1994	1995
Type of call			
Domestic calls (minutes)	1,850,000	1,970,000	2,100,000
International calls (minutes)	392,653	400,000	427,800
India	300,000	430,000	444,180
Other countries	n.a	n.a	n.a
Total calls	2,542,653	2,800,000	2,971,980
Revenue earnings (millions Nu.)	56.19	60.00	96.00

Source: Division of Telecommunications, Thimphu

TABLE 7.18: NUMBER OF COMMUNICATION FACILITIES, 1980 TO 1995

Postal infrastructure	1980	1985	1990	1991	1992	1993	1994	1995
General Post Offices	2	2	2	2	2	2	2	2
Post Offices	52	53	59	59	59	59	56	55
Branch Post Offices	27	29	25	25	22	22	23	21
Agency Post Offices	..	..	..	..	..	17	20	25
Telegraph or Fax Offices	8	9	8	8	8	8	17	17
Wireless Stations(a)	28	36	39	39	47	47	52	..
Hydromet Stations(b)	5	8	27	27	27	28	11	n.a

Note: WT. Stations are merged with Telecommunication Division with effect from July 1995
(a) Includes 3 stations installed at New Delhi, Dhaka and Kalimpong
(b) includes 17 part time observations between 1990 and 1993
Source: Division of Posts, Telegraphs & Civil Wireless, Thimphu

TABLE 7.19: VOLUME OF POSTAL MAIL TRAFFIC BY DESTINATION, 1980 TO 1995

('000 items)

Type of service	1980	1985	1990	1991	1992	1993	1994	1995
Domestic	2,865	5,934	2,190	2,299	1,483	855	1,426	1,414
International	1,284	3,821	1,709	1,801	356	314	462	482
Dispatch	n.a	n.a	n.a	n.a	148	159	219	228
Receipt	n.a	n.a	n.a	n.a	207	155	243	255
Total mail items	4,149	9,755	3,899	4,099	1,839	1,169	1,888	1,896

Source: Division of Posts, Telegraphs and Civil Wireless, Thimphu

TABLE 7.20: VOLUME OF MAIL HANDLED BY TYPE OF ARTICLE AND DESTINATION, 199

('000 numbers)

	Grand Total	Domestic	International		
			Total	Inward	Outward
Letters	1851.00	1393.50	457.50	240.50	217.00
Ordinary letter	1323.60	987.30	336.30	176.80	159.50
Registered items	132.24	73.50	58.74	31.28	27.46
Postcards					
Printed matter/packets	572.51	426.40	146.11	77.75	68.36
Parcels	3.07	1.59	1.48	1.07	0.41
Monetary items	0.00	n.a	..	n.a	n.a
Express mail service (EMS)	3.64	1.48	2.16	1.46	0.70
Messages					
Telegraphic message	1.10	0.40	0.70	0.30	0.4
Facsimile message	2.24	0.43	1.81	0.82	0.9
Wireless transmission	0.00	n.a		n.a	n.a
All mail items	2038.39	1491.10	547.29	289.48	257.8

Source: Division of Posts, Telegraphs & Civil Wireless, Thimphu

TABLE 7.21: NUMBER AND VALUE OF MONEY ORDER BY TYPE, 1990 TO 1995

Type	1990	1991	1992	1993	1994	1995
Total money orders						
Number of orders ('000)	15.7	16.0	17.1	13.5	n.a	n.a
Amount of orders ('000 Nu.)	8,480.5	9,856.4	11,267.3	9,571.2	n.a	n.a
Domestic money order						
Number of orders ('000)	15.1	9.0	8.3	6.7	n.a	9.4
Amount of orders ('000 Nu.)	8,311.4	6,057.0	6,282.5	5,895.0	n.a	8,020.3
International money order						
Dispatched						
Number of orders ('000)	0.6	6.4	8.5	6.7	n.a	7.4
Amount of orders ('000 Nu.)	164.1	3,398.2	4,920.7	3,502.6	n.a	7,032.2
Receipts						
Number of orders ('000)	-	0.6	0.3	0.1	n.a	0.2
Amount of orders ('000 Nu.)	5.0	401.2	64.0	173.6	n.a	71.8

Note: (-) stands for numbers less than tenth of a thousand
Source: Division of Posts and Telegraph, Thimphu

CHAPTER 8: ENERGY

INTRODUCTION

The major source of energy in Bhutan has traditionally been firewood which is available in abundant quantities from the country's extensive forests. Firewood still represents a majority 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 Chhukha Hydel Projects in 1986, and the other two units in 1988 Bhutan substantially increased its electricity generation and became a significant exporter of electricity to India.

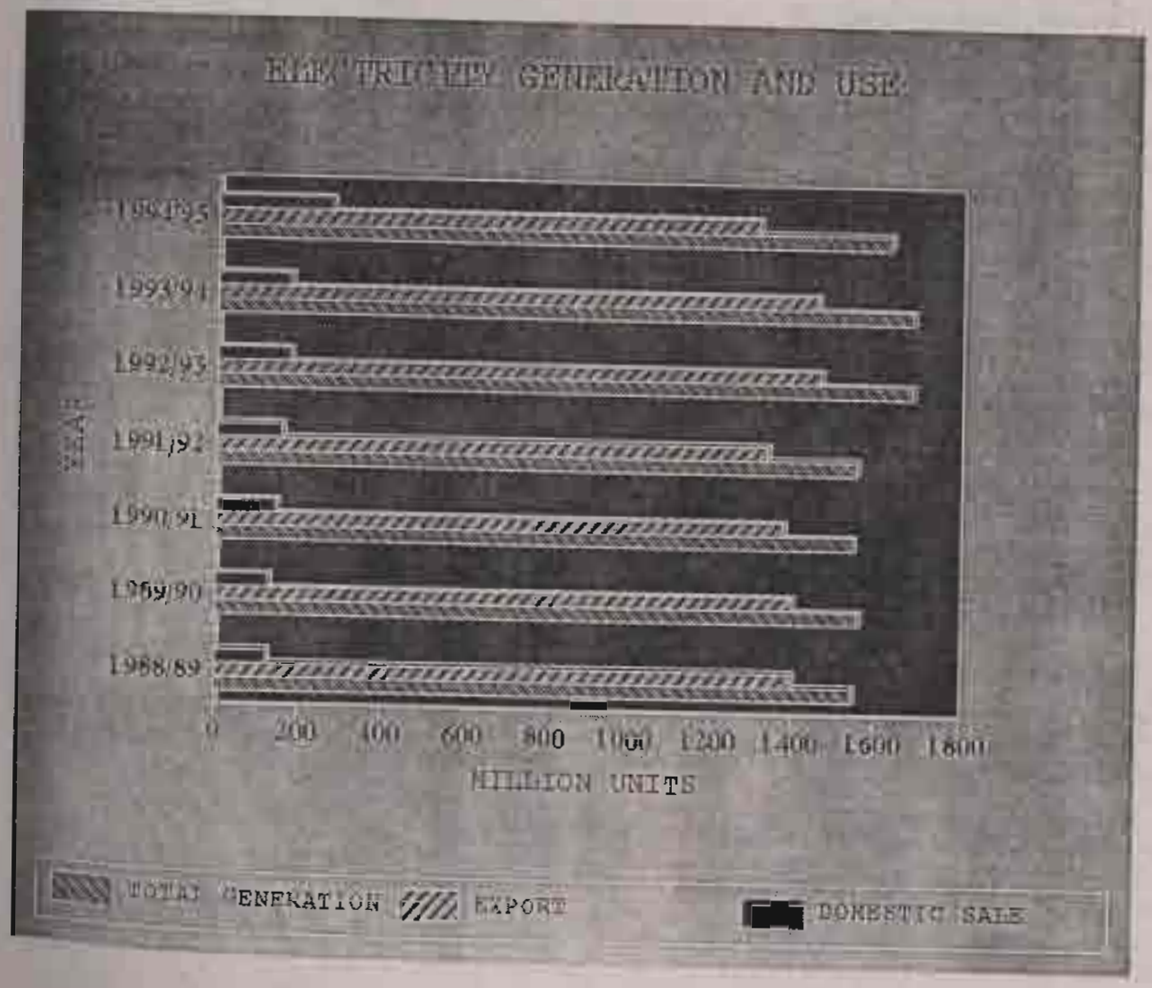


TABLE 8.1: ELECTRICITY GENERATING STATIONS AND THEIR CAPACITIES, 1994/95

Generating stations (Dzongkhag)	Installed capacity (No. XMW)	Generating capacity (MW)	Peak generation (MW)	Energy generated (MU)
Hydro stations (a)	..	**339.300**	..	**1,629.802**
Chhukha	4 X 84.00	336.000	336.000	1,623.914
Gyetsa (Bjakar)	3 X 00.50	1.500	0.450	2.560
Gidakom (Thimphu)	5 X 00.25	0.500	0.000	0.000
Jushina (Thimphu)	4 X 00.09	0.090	0.000	0.000
Chenari (Trashigang)	3 X 00.25	0.250	0.250	1.472
Khaling (Trashigang)	3 X 00.20	0.400	0.285	0.795
Khalangzi (Mongar)	3 X 00.13	0.260	0.258	0.885
Wangduephodrang	3 X 00.10	0.300	0.092	0.176
Micro hydels	..	**1.000**	..	**5.992**
Lhuntse (Lhuntse)	..	0.020	..	n.a
Thinleygang (Thimphu)	..	0.030	..	0.093
Rukubji (Wangduephodrang)	..	0.040	..	0.258
Tangsibi (Trongsa)	..	0.030	..	0.248
Trongsa (Trongsa)	..	0.050	..	0.658
Bubja (Trongsa)	..	0.030	..	1.126
Tamshing (Bjakar)	..	0.030	..	0.119
Ura (Bjakar)	..	0.050	..	0.111
Yadi (Mongar)	..	0.030	..	0.084
Kekhar (Zhemgang)	..	0.020	..	0.069
Surey (Sarpang)	..	0.070	..	0.345
Dumphu (Tsirang)	..	0.200	..	0.846
Tingtibi (Zhemgang)	..	0.200	..	1.339
Dagana (Dagana)	..	0.200	..	0.698
Diesel generation stations	**38**	**13.037**	..	**5.406**
Thimphu	9	3.532	..	0.016
Paro	1	0.088	..	0.000
Phuentsholing	4	0.752	..	0.000
Damphu	2	0.183	..	0.000
Trongsa	1	0.056	..	0.000
Gelephu	2	0.692	..	0.343
Sarpang	1	0.255	..	0.277
Kalikhola	1	0.052	..	0.450
Zhemgang	1	0.080	..	n.a
Dagana	1	0.040	..	n.a
Trashigang	1	0.054	..	0.000
Bjakar	1	0.056	..	0.000
Other diesel stations	**13**	**7.197**	..	**4.320**
Penden Cement Authority Ltd.	4	3.600	..	0.710
Bhutan Board Products Ltd.	1	0.254	..	0.250
Chhukha Hydro Power Corporation	5	2.000	..	0.000
Bhutan Chemical & Carbide Ltd.	2	0.225	..	3.360
Gedu Wood Manufacturing Corporation	1	1.118	..	0.000

Note: The energy generated by micro hydels is the cumulated generation till date. Details for Diesel Generating sets not available for 1994/95.

Source: Division of Power, Thimphu

TABLE 8.2: TOTAL ELECTRICITY GENERATION AND SUPPLY, 1988/89 TO 1994/95

Details	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
Installed capacity (MW)	346.76	348.85	349.57	349.73	349.73	350.11	350.06
Chhukha hydro power	336.00	336.00	336.00	336.00	336.00	336.00	336.00
Other hydro power	5.96	5.56	5.56	6.06	6.06	6.15	6.15
All diesel generators	4.80	7.29	8.01	7.67	7.67	7.96	7.91
Electricity generation (MU)	1,544.00	1,557.00	1,547.57	1,551.92	1,683.89	1,685.81	1,629.98
Chhukha hydro power	1,541.10	1,554.30	1,542.41	1,542.41	1,677.81	1,679.24	1,623.91
Other hydro power	2.70	2.50	5.12	8.20	5.05	5.49	5.89
All diesel generators	0.20	0.10	0.05	1.32	1.04	1.09	0.18
Exports (MU)	1,396.00	1,395.60	1,374.62	1,336.87	1,464.96	1,456.34	1,311.84
Imports (MU)	3.50	3.30	4.44	4.98	5.10	4.62	5.34
Total energy requirement (MU)	143.00	142.30	159.29	186.70	195.26	198.50	298.16
Total energy sales (MU)	123.30	127.60	144.67	159.71	173.82	176.51	275.95
Energy losses (MU)	19.70	14.72	14.62	26.99	21.43	21.99	22.21
Percentage losses (%)	13.80	10.30	9.18	14.45	10.98	11.08	7.45
Peak system demand (MW)	24.00	22.00	22.80	19.22	20.00	33.00	70.42
Length of HT lines (33/11 KV)							
Overhead lines (km)	554.00	624.58	751.04	765.14	764.78	820.14	841.63
Underground lines (km)	8.60	8.60	8.60	8.60	8.60	8.60	8.60
Length of LT lines							
Overhead lines (km)	519.00	560.66	730.31	732.44	733.87	736.89	736.89
Underground lines (km)	28.00	28.00	28.00	28.00	28.00	28.00	28.00

Note: HT= High tension, LT= Low tension
Source: Division of Power, Thimphu

TABLE 8.3: MAJOR TRANSMISSION LINES FOR EVACUATING HYDRO POWER FROM CHHUKHA POWER PLANT, 1993 AND 1995

Station	1993		1994		1995	
	220 KV line(Km)	66 KV line(Km)	220 KV line(Km)	66 KV line(Km)	220 KV line(Km)	66 KV line(Km)
Chhukha - Birpara	71.000 (d/c)	..	71.000(D/C)	..	71.000(d/c)	..
Chhukha - Singhigoan	31.900(s/c)	..	31.9	..	31.9	..
Chhukha - Simtokha	54.900(s/c)	..	54.9	..	54.9	..
Chhukha - Gedu	..	21.000	..	20.100	..	20.100
Gedu - Phuntsholing	..	24.000	..	17.700	..	17.700
Chhukha - Confluence	..	44.000	..	36.700	..	36.700
Confluence - Simtokha	..	15.000	..	18.300	..	18.300
Confluence - Haa	..	33.522	..	33.522	..	33.522
Confluence - Paro	..	24.022	..	24.022	..	24.022
Simtokha - Gomtu	..	26.023	..	26.023	..	26.023
Phuntsholing - Singhigoan	..	27.002	..	27.002	..	27.002
Phuntsholing - Birpara	..	8.380	..	8.380	..	8.380
Total	76(d/c)::109(s/c)	252.949	71(d/c)::86.8(s/c)	241.700	71(d/c)::86.8(s/c)	241.749

Note: d/c stands for double circuit and s/c for single circuit
Source: Division of Power, Thimphu

TABLE 8.4: DETAILS OF DOMESTIC ELECTRICAL ENERGY CONSUMPTION, 1988/89 TO 1994/95

Details	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
Towns electrified (numbers)	20	28	30	36	37	37	38
Villages electrified (numbers)	171	221	254	270	277	282	297
Consumers ('000)	14.1	15.2	18.2	19.6	19.9	19.9	21.8
Sales of energy (million Nu.)	34.5	37.3	36.9	41.8	50.2	68.9	108.0
Per capita energy consumption (Units)	90.0	212.7	235.9	256.1	271.8	323.3	466.3

Source: Division of Power, Thimphu

TABLE 8.5: MONTHLY REVENUE FROM SALE OF ENERGY FROM CHHUKHA HYDROPOWER, 1992 TO 1995

(million Nu.)

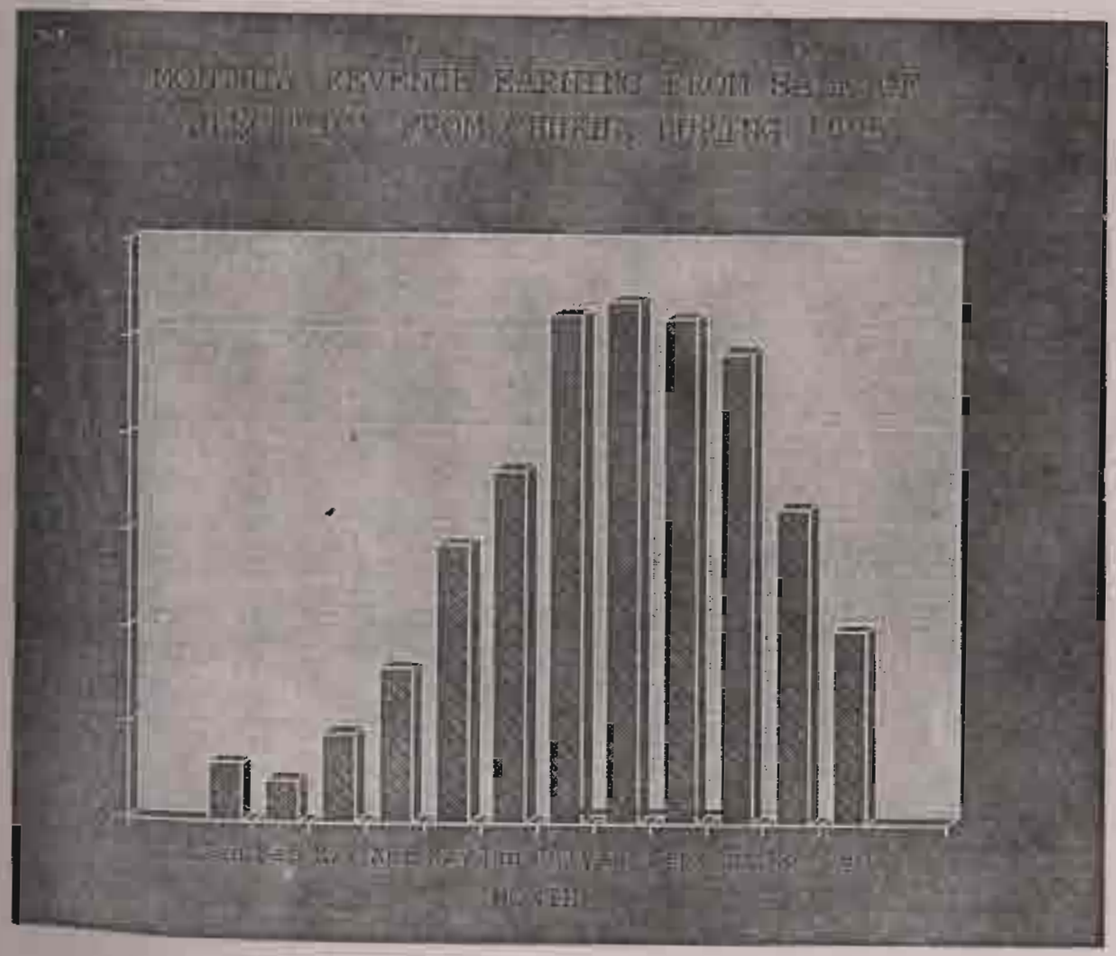
Month	1992			1993			1994			1995		
	Export	Internal	Total	Export	Internal	Total	Export	Internal	Total	Export	Internal	Total
January	12.99	1.72	14.71	12.49	1.51	14.00	18.32	1.83	20.15	12.09	7.61	19.70
February	9.62	1.59	11.21	10.49	1.85	12.34	14.75	1.66	16.41	8.92	7.85	16.77
March	12.08	1.65	13.73	10.00	1.71	11.71	22.09	1.75	23.84	18.34	8.64	26.98
April	13.05	1.49	14.54	21.30	1.62	22.92	30.13	3.44	33.57	31.96	8.55	40.51
May	24.01	1.54	25.55	55.98	1.57	57.55	44.02	1.61	45.63	57.56	8.74	66.30
June	34.54	1.42	35.96	67.18	1.45	68.63	69.67	1.51	71.18	72.88	8.77	81.65
July	54.99	1.35	56.34	59.69	1.41	61.10	71.37	4.46	75.83	105.08	8.03	113.11
August	57.94	1.45	59.39	77.70	1.32	79.02	76.02	4.56	80.58	107.80	9.17	116.97
September	55.08	1.51	56.59	82.49	1.48	83.97	76.55	4.46	81.01	104.24	8.91	113.15
October	44.55	1.58	46.13	75.49	1.49	76.98	56.12	5.98	62.10	97.19	9.47	106.66
November	22.03	1.70	23.73	41.63	1.64	43.27	25.57	7.98	33.55	65.18	9.44	74.62
December	14.26	1.77	16.03	22.86	1.79	24.65	14.41	9.54	23.95	39.84	1.70	41.54
Total	355.1	18.8	373.91	537.3	18.8	556.14	519.02	48.78	567.81	721.08	96.88	817.96

Source: Selected economic indicators (vol. 9 No.4, Dec. 95), Royal Monetary Authority of Bhutan, Thimphu

TABLE 8.6: CONSUMPTION OF ELECTRICITY BY TYPE OF CONSUMER, 1990/91 TO 1994/95

Type of consumer	1990/91	1991/92	1992/93	1993/94	1994/95
Total consumption (MU)	144.665	159.713	173.823	176.509	275.951
Domestic	18.327	18.293	21.500	17.037	16.790
Commercial & Government Offices	10.713	9.871	12.896	17.912	23.600
Industries	110.628	123.928	31.675	136.281	228.200
Bulk supply	4.914	7.397	107.309	4.861	7.021
Public lighting	0.083	0.224	0.443	0.418	0.340
Consumption as percentage					
Domestic	12.669	11.454	12.369	9.652	6.080
Commercial & Government Offices	7.405	6.180	7.419	10.148	8.560
Industries	76.472	77.594	18.223	77.209	82.700
Bulk supply	3.397	4.631	61.735	2.754	2.540
Public lighting	0.057	0.140	0.255	0.237	0.120

Source: Division of Power, Thimphu



CHAPTER 9: TOURISM

LQWURGXFWLRQ

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

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

TABLE 9.1: NUMBER OF ANNUAL TOURIST ARRIVALS TO BHUTAN BY COUNTRY OF RESIDENCE,1989 TO 1995

(Numbers)

Country	1989	1990	1991	1992	1993	1994	1995
America	479	377	544	616	751	734	1,003
Canada	34	377	24	45	42	45	55
USA	445	n.a	509	571	709	689	865
Brazil	0	n.a	11	0	0	0	48
Other America	..	..	..	..	..	..	35
Asia/Pacific	335	459	755	728	791	1,193	1,529
India	0	0	4	0	4	0	n.a
Nepal	0	0	4	0	7	16	6
Other south Asia	0	0	25	0	55	n.a	70
Japan	317	445	631	646	643	1,029	1,192
Korea Republic	0	0	0	26	7	7	25
Thailand	14	0	0	9	7	44	57
Australia	4	14	91	35	63	91	142
New Zealand	0	0	0	12	5	6	37
Europe	621	614	807	1,265	1,323	1,884	2,227
Ireland	0	0	3	0	0	0	6
Sweden	16	0	11	18	15	26	45
United Kingdom	167	n.a	156	269	266	304	418
Italy	10	9	113	135	127	..	202
Spain	0	0	22	43	25	44	22
Austria	4	0	21	105	167	80	200
Belgium	18	0	19	66	23	85	79
France	54	27	109	151	129	219	18
Germany	285	161	269	281	370	566	500
Netherlands	6	0	18	64	58	165	100
Switzerland	13	417	57	73	69	116	218
Europeans unspecified	48	0	9	60	74	279	99
Others not specified	45	88	0	139	119	160	6
Total tourists	1,480	1,538	2,106	2,748	2,984	3,971	4,765

Source: Tourism Authority of Bhutan, Thimphu

TABLE 9.2: TOURIST ARRIVALS BY COUNTRY OF RESIDENCE AND TOURISM REVENUE RECEIPT,1988 TO 1995

Region	1988	1989	1990	1991	1992	1993	1994	1995
Americas	598	479	377	544	616	751	734	1,003
Asia and Pacific	354	335	459	755	728	791	1,193	1,529
Europe	1,068	621	614	807	1,265	1,323	1,884	2,227
Others	179	45	88	-	139	119	160	6
All regions (persons)	1,247	1,480	1,538 ♀	2,106	2,748	2,984	3,971	4,765
Tourism revenue receipts								
Ngultrums (million)	27	25	48	52	77	101	125	n.a
Or								
US Dollars (million)	-	-	-	2	3	3	4	6

(a) Included in other categories in 1988 Source:
Tourism Authority of Bhutan, Thimphu

TABLE 9.3: NUMBER OF TOURIST ARRIVALS BY SEASON AND MONTH, 1988 TO 1995

Season and month	1988	1989	1990	1991	1992	1993	1994	1995
Winter	188	248	343	404	485	374	739	914
November	118	179	205	268	300	168	418	599
December	44	44	103	111	144	67	220	195
January	26	25	35	25	41	139	101	120
Spring	663	412	445	504	729	943	1,092	1,497
February	43	41	34	92	118	232	175	134
March	390	256	146	260	346	587	643	341
April	230	115	265	152	265	124	274	1,022
Summer	233	163	155	189	376	272	587	537
May	140	91	99	110	140	60	373	337
June	31	38	12	32	118	51	115	81
July	62	34	44	47	118	161	99	119
Autumn	1,115	657	595	1,009	1,158	1,395	1,553	1,817
August	147	133	84	181	117	494	301	183
September	298	154	262	402	340	426	465	466
October	670	370	249	426	701	475	787	1,168
Total tourists	2,199	1,480	1,538	2,106	2,748	2,984	3,971	4,765

Source: Tourism Authority of Bhutan, Thimphu

TABLE 9.4: NUMBER OF TOURIST ARRIVALS BY PURPOSE OF VISIT, 1988 TO 1995

Purpose	1988	1989	1990	1991	1992	1993	1994	1995
Tour, holidays and recreation	1,616	1,227	1,288	1,527	2,160	2,706	3,452	3,217
Trekking & mountaineering	583	253	250	579	588	278	519	1,548
Total tourists	2,199	1,480	1,538	2,106	2,748	2,984	3,971	4,765

Source: Tourism Authority of Bhutan, Thimphu

TABLE 9.5: NUMBER OF TOURIST ARRIVALS BY MODE OF TRANSPORT, 1989 TO 1995

Mode of transport	1989	1990	1991	1992	1993	1994	1995
Air	900	n.a	1,895	2,472	2,686	1,053	n.a
Other	580	n.a	211	276	298	2,918	n.a
Total tourists	1,480	1,538	2,106	2,748	2,984	3,971	4,765

Source: Tourism Authority of Bhutan, Thimphu

CHAPTER 10: FOREIGN TRADE

INTRODUCTION

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 a higher imports, so reliance has to be placed on inflows of aid for the financing of imports.

TABLE 10.1: VALUE OF EXPORTS AND IMPORTS, BHUTAN, CALENDAR YEAR FROM 1988 TO 1995

(Nu in Millions)

Trade	1988	1989	1990	1991	1992	1993	1994	1995
Exports	1,042.0	1,132.3	1,192.4	1,478.9	1,738.2	1,990.4	2,082.7	3,349.1
India	989.8	985.9	1,011.3	1,338.0	1,455.8	1,786.0	1,945.8	3,078.9
Third Countries	52.2	146.4	181.1	140.9	282.4	204.4	136.9	270.2
Imports	1,772.7	1,464.7	1,368.0	2,197.2	3,317.1	2,745.3	2,876.4	3,641.9
India	1,108.9	1,214.8	1,143.0	1,651.5	1,745.4	1,930.3	2,051.3	2,630.2
Third Countries	663.8	249.9	225.0	545.7	1,571.7	815.0	825.1	1,011.7
Balance of trade	(730.7)	(332.4)	(175.6)	(718.3)	(1,578.9)	(754.9)	(793.7)	(292.8)
India	(119.1)	(228.9)	(131.7)	(313.5)	(289.6)	(144.3)	(105.5)	448.7
Third Countries	(611.6)	(103.5)	(43.9)	(404.8)	(1,289.3)	(610.6)	(688.2)	(741.5)

Note: Figures within bracket in the Trade balance rows indicate deficit (-).

Source: CSO, Ministry of Planning and Division of Revenue and Customs, Thimphu.

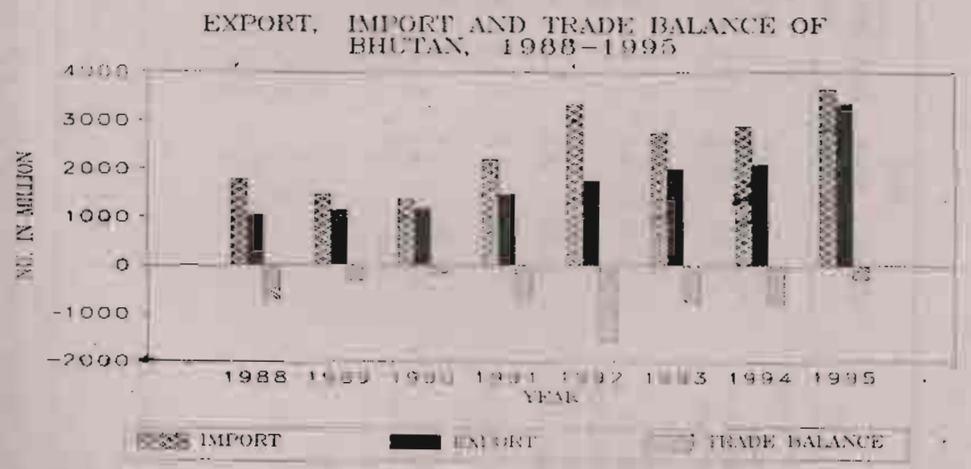


TABLE 10.2: TEN MAJOR COMMODITIES OF EXPORT TO INDIA, CALENDAR YEAR FROM 1991 TO 1995

	1991			1992			1993			1994			1995		
	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank
Exports															
Electric energy	397.25	29.7	1	355.14	24.4	1	537.30	30.1	1	519.23	26.7	1	721.09	23.4	1
Calcium carbide	289.18	21.6	2	350.61	24.1	2	355.58	19.9	2	413.80	0.0	2	497.90	16.2	2
Cement, portland	140.72	10.5	3	132.26	9.1	3	212.86	11.9	3	268.21	13.8	3	278.35	9.0	5
Particle boards	45.37	3.4	6	121.42	8.3	4	165.86	9.3	4	81.07	4.2	5	329.46	10.7	4
Cardamom	34.65	2.6	8	52.43	3.6	5	41.89	2.3	8	67.75	3.5	6	73.81	2.4	6
Saw logs hard, non-coniferous	..	..	..	47.88	3.3	6	..	..	..	55.32	2.8	7	71.76	2.3	7
Block board	88.63	6.6	4	36.56	2.5	7	..	..	..	..	..	..	..	..	..
Mixture of fruit and vegetable juices	41.08	3.1	7	34.91	2.4	8	..	..	..	..	..	..	..	..	..
Atta and maida	31.91	2.4	9	32.82	2.3	9	..	..	..	..	..	..	..	..	..
Sawn timber	46.39	3.5	5	28.73	2.0	10	..	..	..	..	..	..	..	..	..
Plywood	26.27	2.0	10	..	..	..	..	..	..	..	..	..	..	..	..
Saw logs soft, coniferous	..	..	..	..	..	..	52.95	3.0	5	..	..	..	60.65	2.0	10
Mixture of juices	..	..	..	..	..	..	49.07	2.7	6	47.72	2.5	9	..	..	..
Rum	..	..	..	..	..	..	47.73	2.7	7	132.91	6.8	4	65.90	2.1	8
Potato	..	..	..	..	..	..	36.58	2.0	9	..	..	..	61.59	2.0	9
Fuel wood	..	..	..	..	..	..	35.38	2.0	10	..	..	..	..	..	..
Wood sawn hard, non-coniferous	..	..	..	..	..	..	..	..	..	52.01	2.7	8	..	..	..
Orange juice	..	..	..	..	..	..	..	..	..	27.14	1.4	10	..	..	..
Ferro-silicon	..	..	..	..	..	..	..	..	..	..	..	..	339.04	11.0	3

Source : CSO, Ministry of Planning and Division of Revenue and Customs, Thimphu.

TABLE 10.3: TEN MAJOR COMMODITIES OF IMPORT FROM INDIA, CALENDAR YEAR FROM 1991 TO 1995

	1991			1992			1993			1994			1995		
	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank
Imports															
Rice	128.52	7.8	1	96.92	5.6	1	125.38	6.5	1	190.83	9.3	1	217.27	8.3	1
Diesel	81.09	4.9	2	89.88	5.1	2	90.68	4.7	2	100.85	4.9	2	136.14	5.2	3
Wheat	80.78	4.9	3	52.64	3.0	3	44.07	2.3	7	..	..	..	..	..	..
Petrol	43.83	2.7	6	48.01	2.8	4	50.89	2.6	4	51.38	2.5	4	64.04	2.4	5
Industrial plants machinery, spares	..	..	..	44.26	2.5	5	49.32	2.6	5	38.24	1.9	8	142.00	5.4	2
Tyres for buses and trucks	32.32	2.0	9	33.22	1.9	6	..	..	..	..	..	..	..	..	..
M.S. rod/TOR steel	..	..	..	32.58	1.9	7	..	..	..	..	..	..	..	..	..
Cotton fabrics	29.87	1.8	10	32.02	1.8	8	..	..	..	32.83	1.6	10	..	..	..
CG and GI sheet	..	..	..	31.34	1.8	9	..	..	..	..	..	..	..	..	..
Other vegetable oils, n.e.s	..	..	..	29.61	1.7	10	34.66	1.8	10	46.03	2.2	5	61.40	2.3	6
Truck chassis	53.08	3.2	4	..	..	..	..	..	..	..	..	..	..	..	..
Beer	50.64	3.1	5	..	..	..	..	..	..	36.36	1.8	9	47.41	1.8	8
Sugar	41.52	2.5	7	..	..	..	..	..	..	..	..	..	..	..	..
Motor cycles and scooters	33.85	2.0	8	..	..	..	..	..	..	..	..	..	..	..	..
Spirit for distillery	..	..	..	..	..	..	57.04	3.0	3	60.42	2.9	3	75.30	2.9	4
Bodies for motor vehicle, cabs	..	..	..	..	..	..	45.52	2.4	6	..	..	..	..	..	..
Coal	..	..	..	..	..	..	38.45	2.0	8	..	..	..	..	..	..
Bottle and jars	..	..	..	..	..	..	35.01	1.8	9	41.99	2.0	7	..	..	..
Tyres and tubes	..	..	..	..	..	..	..	..	..	45.62	2.2	6	..	..	..
Mustard oil, refined	..	..	..	..	..	..	..	..	..	..	..	..	57.90	2.2	7
Trucks diesel	..	..	..	..	..	..	..	..	..	..	..	..	46.61	1.8	9
Wood charcoal	..	..	..	..	..	..	..	..	..	..	..	..	45.81	1.7	10

Source: CSO, Ministry of Planning and Division of Revenue & Customs, Thimphu

TABLE 10.4: TEN MAJOR COMMODITIES OF EXPORT TO THIRD COUNTRIES, CALENDAR YEAR FROM 1991 TO 1995

	1991			1992			1993			1994			1995		
	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank
Exports															
Oranges	44.56	31.6	1	184.69	65.4	1	148.92	72.9	1	58.77	42.9	1	99.21	36.7	1
Apples	35.94	25.5	2	38.31	13.6	2	32.09	15.7	2	51.67	37.8	2	49.54	18.3	2
Cardamom	29.78	21.1	3	13.05	4.6	3	..	..	..	..	..	..	..	..	..
Dolomite powder chips and lumps	4.53	3.2	4	4.52	1.6	6	0.59	0.3	10	..	..	..	..	..	..
Portland cement	4.14	2.9	5	3.67	1.3	9	4.01	2.0	5	1.82	1.3	8	4.33	1.6	10
Boulders	3.99	2.8	6	..	..	..	1.25	0.6	7	5.80	4.2	4	..	..	
Coal	3.65	2.6	7	4.13	1.5	8	..	..	..	..	..	..	17.47	6.5	4
Fruit products	3.01	2.1	8	2.79	1.0	10	..	..	..	..	..	..	..	..	..
Limestone chips	2.45	1.7	9	..	..	..	..	..	..	2.07	1.5	7	6.52	2.4	6
Gingers	2.44	1.7	10	..	..	..	..	..	..	..	..	..	..	..	..
Sawn timber	..	..	..	8.48	3.0	4	1.10	0.5	8	..	..	..	..	..	..
Philatilic stamps	..	..	..	8.21	2.9	5	7.79	3.8	3	6.76	4.9	3	..	..	
Stone ballast	..	..	..	4.17	1.5	7	..	..	..	..	..	..	..	..	..
Mixed fruit juice	..	..	..	..	..	..	4.13	2.0	4	4.25	3.1	5	6.09	2.3	8
Broom handles	..	..	..	..	..	..	1.26	0.6	6	..	..	..	..	..	..
Mushroom, fresh	..	..	..	..	..	..	0.99	0.5	9	..	..	..	6.16	2.3	7
Calcium carbide	..	..	..	..	..	..	..	..	..	2.71	2.0	6	..	..	..
Handicrafts	..	..	..	..	..	..	..	..	..	1.58	1.2	9	..	..	..
Stone chips	..	..	..	..	..	..	..	..	..	0.66	0.5	10	..	..	..
Ferro-silicon	..	..	..	..	..	..	..	..	..	..	..	..	30.83	11.4	3
Quartzite	..	..	..	..	..	..	..	..	..	..	..	..	15.36	5.7	5
Saw logs, hard	..	..	..	..	..	..	..	..	..	..	..	..	5.00	1.9	9

TABLE 10.5: TEN MAJOR COMMODITIES OF IMPORT FROM THIRD COUNTRIES, CALENDAR YEAR FROM 1991 TO 1995

	1991			1992			1993			1994			1995		
	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank
Imports															
Agriculture equipments	161.82	29.7	1	76.12	4.9	6	13.76	1.7	10	104.12	12.6	3	..	..	..
Passanger motor cars	73.62	13.5	2	69.50	4.4	7	56.01	6.9	3	125.25	15.2	2	55.16	5.5	3
Power project equip.	68.96	12.6	3	..	..	..	..	..	..	..	..	..	..	..	..
Cold rolled ennealal sheet	18.80	3.4	4	..	..	..	..	..	..	..	..	..	..	..	..
Soyabean oil	14.38	2.6	5	..	..	..	..	..	..	..	..	..	..	..	..
Dry fish	15.19	2.8	6	..	..	..	..	..	..	..	..	..	..	..	..
Equipment for furniture manufacture project	11.70	2.1	7	..	..	..	..	..	..	..	..	..	..	..	..
Vegetable oil	9.96	1.8	8	..	..	..	..	..	..	..	..	..	..	..	..
Spare parts for motor vehicle	9.88	1.8	9	..	..	..	22.12	2.7	4	17.65	2.1	10	25.24	2.5	10
Hydro meteorological equipments	8.68	1.6	10	..	..	..	..	..	..	..	..	..	..	..	..
Aircraft	..	..	..	575.31	36.6	1	..	..	..	..	..	..	..	..	..
Equipments and accessories	..	..	..	153.85	9.8	2	..	..	..	..	..	..	..	..	..
Equipment for tele-communication	..	..	..	152.68	9.7	3	214.46	26.3	1	135.82	16.5	1	286.53	28.3	1
Spare parts for aircraft	..	..	..	89.69	5.7	4	..	..	..	..	..	..	35.95	3.6	9
MVA Elken fesi furnace equipment	..	..	..	83.91	5.3	5	178.26	21.9	2	..	..	..	..	..	..
Laboratory equipments	..	..	..	22.76	1.5	9	..	..	..	..	..	..	88.02	8.7	2
Laxfire extinguishers, etc	..	..	..	20.68	1.3	10	..	..	..	..	..	..	..	..	..
Fertilizers	..	..	..	..	..	..	54.57	6.7	4	..	..	..	..	..	..
Aircraft engine	..	..	..	..	..	..	33.82	4.1	5	..	..	..	..	..	..
Personal effects	..	..	..	..	..	..	23.06	2.8	6	..	..	..	..	..	..
Palm oil	..	..	..	..	..	..	16.54	2.0	8	..	..	..	..	..	..
Decorative paper	..	..	..	..	..	..	14.03	1.7	9	..	..	..	..	..	..
Aircraft tool and gauges,parts	..	..	..	..	..	..	..	..	..	63.85	7.7	4	35.95	3.6	8
Machhinery for treating wood	..	..	..	..	..	..	..	..	..	50.09	6.1	5	..	..	..
Parts of bulldozer angle dozer	..	..	..	..	..	..	..	..	..	31.66	3.8	6	..	..	..
Household goods	..	..	..	..	..	..	..	..	..	27.57	3.3	7	..	..	..
Advertising materials	..	..	..	..	..	..	..	..	..	24.02	2.9	8	..	..	..
Coinsn new issue	..	..	..	..	..	..	..	..	..	19.25	2.3	9	..	..	..
Spare parts		..	..	41.18	2.6	8	..	..	..	..	..	..	..	..	..
Parts of computer	..	..	..	..	..	..	..	..	..	..	..	..	51.86	5.1	4
Photocopying apperatus	..	..	..	..	..	..	..	..	..	..	..	..	48.12	4.8	5
Computer CD ROM	..	..	..	..	..	..			..	..	..		40.04	4.0	6
Packing paper for bakery	..	..	..	..	..	..	..	..	..	..	..	..	38.28	3.8	7

TABLE 10.6 : VALUE AND ITS PERCENTAGE SHARE OF EXPORTS TO SIX SELECTED COUNTRIES EACH YEAR, CALENDAR YEAR FROM 1991 TO 1995

	1991			1992			1993			1994			1995		
	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank
India	1,338.00	90.47	1	1,455.84	83.75	1	1,785.98	89.73	1	1,945.79	93.43	1	3,078.95	91.93	1
Bangladesh	121.51	8.22	2	270.68	15.57	2	191.68	9.63	2	127.64	6.13	2	201.12	6.01	2
Singapore	14.73	1.00	3	..	..	..	..	..	..	..	..	..	..	..	..
Netherland	1.76	0.12	4	0.98	0.06	4	1.26	0.06	4	..	..	..	..	..	..
Austria	..	..	..	..	..	..	..	..	..	..	..	..	2.75	0.08	6
Germany	0.37	0.03	5	1.20	0.07	3	0.37	0.02	6	..	..	..	4.09	0.12	5
Thailand	0.11	0.01	6	..	..	..	..	..	..	..	..	..	..	..	..
Nepal	..	..	..	0.66	0.04	5	1.24	0.06	5	0.89	0.04	4	19.55	0.58	4
Japan	..	..	..	0.43	0.02	6	1.42	0.07	3	0.01	0.00	5	34.64	1.03	3
U.S.A	..	..	..	..	..	..	..	..	..	1.38	0.07	3	..	..	..
Spain	..	..	..	..	..	..	..	..	..	0.01	0.00	6	..	..	..
Other countries	2.40	0.16	..	8.44	0.49	..	8.38	0.42	..	6.95	0.33	..	8.02	0.24	..
All countries	1,478.88	100.00	..	1,738.23	100.00	..	1,990.33	100.00	..	2,082.67	100.00	..	3,349.13	100.00	..

Source: CSO, Ministry of Planning and Division of Revenue & Customs, Thimphu

TABLE 10.7: VALUE AND ITS PERCENTAGE SHARE OF IMPORTS TO TEN SELECTED COUNTRIES EACH YEAR, CALENDAR YEAR FROM 1991 TO 1995

	1991			1992			1993			1994			1995		
	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank
India	1651.53	75.2	1	1745.42	52.6	1	1930.35	70.3	1	2051.26	71.3	1	2630.22	72.2	1
Japan	322.67	14.7	2	357.27	10.8	3	360.63	13.1	2	396.92	13.8	2	412.01	11.3	2
Germany	67.13	3.1	3	94.19	2.8	5	43.35	1.6	5	61.32	2.1	5	70.76	1.9	5
Canada	20.18	0.9	4	..	..	..	..	..	..	..	..	..	..	..	..
Denmark	18.10	0.8	5	56.41	1.7	6	21.90	0.8	7	84.73	2.9	3	111.87	3.1	4
Norway	15.84	0.7	6	260.53	7.9	4	183.96	6.7	3	13.02	0.5	10	..	..	..
Singapore	14.15	0.6	7	20.25	0.6	8	35.01	1.3	6	38.83	1.4	6	194.00	5.3	3
U.S.A	13.81	0.6	8	28.07	0.8	7	..	..	..	36.78	1.3	7	12.69	0.3	8
Hongkong	..	..	..	..	..	..	..	..	..	..	..	..	10.85	0.3	10
Korea, south	12.20	0.6	9	..	..	..	..	..	..	..	..	..	..	..	..
Australia	11.74	0.5	10	..	..	..	..	..	..	..	..	..	..	..	..
U.K	..	..	..	684.18	20.6	2	72.51	2.6	4	77.64	2.7	4	57.50	1.6	7
Malaysia	..	..	..	..	..	..	16.54	0.6	8	..	..	..	..	..	..
China	..	..	..	..	..	..	..	..	..	..	..	..	11.29	0.3	9
Netherland	..	..	..	17.59	0.5	9	15.84	0.6	9	18.74	0.7	9	..	..	..
Austria	..	..	..	6.23	0.2	10	13.81	0.5	10	23.61	0.8	8	..	..	..
Thailand	..	..	..	..	..	..	..	..	..	..	..	..	60.84	1.7	6
Other countries	49.86	2.3	..	46.93	1.4	..	51.42	1.9	..	73.50	2.6	..	69.88	1.9	..
All countries	2197.21	100.0	..	3317.07	100.0	..	2745.32	100.0	..	2876.35	100.0	..	3641.92	100.0	..

Source : CSO, Ministry of Planning and Division of Revenue and Customs, Thimphu

CHAPTER 11: BALANCE OF PAYMENTS

INTRODUCTION

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 travellers; and capital movements (such as loans and investments). The balance between imports and exports is measured by the trade balance. A more comprehensive picture of the balance of payments situations is obtained by including services and transfers to provide a measure of the current account balance.

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 Bank of Bhutan, together with information on imports and exports. Efforts are under way to improve the data on a number of areas.

INTERNATIONAL CURRENCY RESERVE
1988/89 to 1995/96

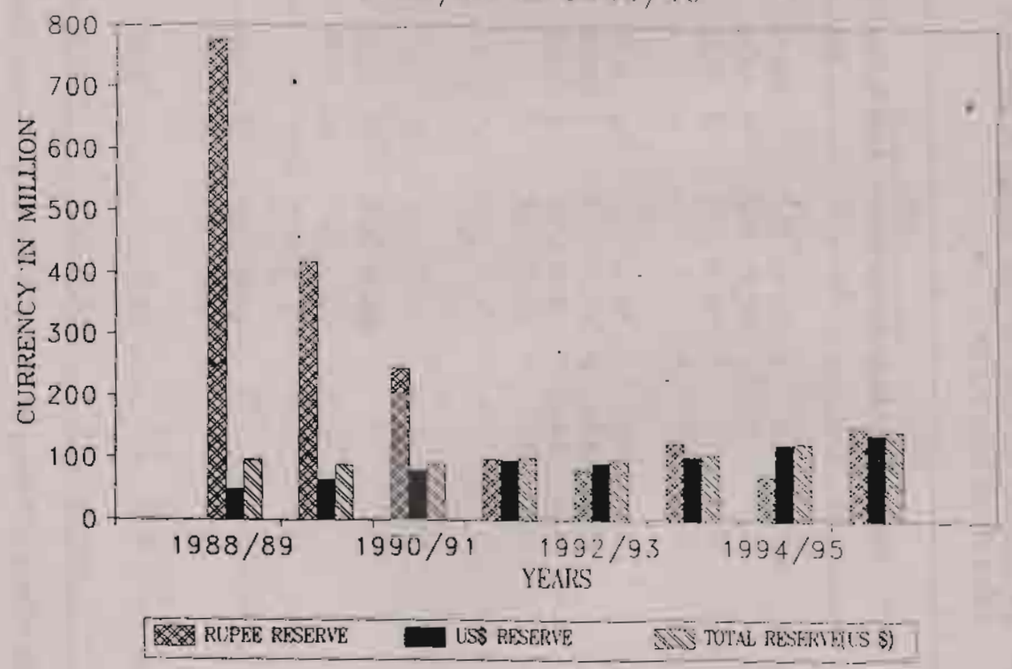


TABLE 11.1: BALANCE OF PAYMENTS ESTIMATES, FY 1988/89 TO 1994/95

(millions Nu.)

Item	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96 (Rev.)
Exports,fob	1,040.74	1,132.33	1,308.49	1,631.95	1,837.25	1,990.33	2,196.68	3,349.13
India	989.25	985.93	1,129.57	1,465.13	1,522.18	1,785.98	2,059.81	3,078.95
Other	51.49	146.40	178.92	166.82	315.07	204.35	136.87	270.18
Imports,cif	1,874.51	(1,613.9	(1,525.4	(2,148.53	(3,470.86)	(2,914.20)	(3,053.18)	(3,802.34)
India	(1,204.7	(1,318.8	(1,254.9	(1,814.14	(2,086.26)	(2,065.90)	(2,228.09)	(2,790.52)
Other	(669.81)	(295.13)	(270.53)	(334.39)	(1,384.60)	(848.30)	(825.09)	(1,011.82)
Trade balance	(833.77)	(481.61)	(216.96)	(516.58)	(1,633.61)	(923.87)	(856.50)	(453.21)
India	(215.45)	(332.88)	(125.35)	(349.01)	(564.08)	(279.92)	(168.28)	(288.43)
Other	(618.32)	(148.73)	(91.61)	(167.57)	(1,069.53)	(643.95)	(688.22)	(741.64)
Services & transfer	365.50	478.46	464.85	583.48	705.00	845.47	886.45	995.70
India	218.48	231.63	228.68	235.12	201.37	224.93	215.93	282.26
Other	147.02	246.83	236.17	348.36	504.16	622.47	670.52	713.44
Services & transfer	(603.20)	(472.26)	(561.16)	(706.44)	(1,025.07)	(1,177.11)	(1;101.49)	(1,814.94)
India	(394.35)	(265.09)	(342.16)	(402.50)	(495.85)	(591.34)	(497.66)	(776.14)
Other	(208.85)	(207.17)	(219.00)	(303.94)	(529.22)	(585.77)	(603.83)	(1,038.80)
Current account	(1,071.4	(475.41)	(313.27)	(639.54)	(1,953.15)	(1,253.58)	(1,071.54)	(1,272.45)
India	(391.32)	(366.34)	(238.83)	(516.39)	(858.56)	(646.33)	(450.01)	(205.45)
Other	(680.15)	(109.07)	(74.44)	(123.15)	(1,094.59)	(607.25)	(621.53)	(1,067.00)
Foreign aid	1,155.15	763.61	1,037.36	990.19	1,586.73	1,780.55	1,692.71	2,396.50
India	868.63	548.06	730.43	554.64	700.03	849.24	805.65	682.09
Other	286.52	215.55	306.93	435.55	886.70	931.31	887.06	1,714.41
Other loans	336.57	(42.14)	(51.98)	213.70	465.94	158.78	(70.98)	(77.50)
India	-	-		286.00	347.83	229.68	0.00	0.00
Other	336.57	(42.14)	(51.98)	(72.30)	118.11	(70.90)	(70.98)	(77.50)
Foreign Direct	-	-	7.68	22.32	-	-	-	-
India	-	-	-	-	-	-	-	-
Other	-	-	7.68	22.32	-	-	-	-
Errors and omissions	(71.93)	(298.09)	(317.38)	80.23	280.66	(293.04)	(109.31)	(190.77)
India	(389.38)	(540.16)	(664.09)	(472.40)	(207.29)	(387.15)	(409.94)	(397.05)
Other	317.45	242.07	346.71	552.63	487.95	94.11	300.63	206.28
Overall balance	348.32	(52.03)	362.41	666.90	380.18	392.71	440.88	855.78
India	(87.93)	(358.44)	(172.49)	(148.15)	(17.99)	45.44	(54.30)	79.59
Other	260.39	306.41	534.90	815.05	398.17	347.27	495.18	776.19

Source: Royal Monetary Authority, Thimphu

TABLE 11.2: GROSS INTERNATIONAL RESERVES, 1988/89 TO 1995/1996

Money reserves	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
Rupee reserves (million)	776.90	418.40	246.00	97.80	79.81	125.25	70.95	150.54
Royal Monetary Authority	81.05	14.85	25.77	10.86	30.07	33.45	33.38	33.96
Bank of Bhutan	695.83	403.59	220.18	86.94	49.74	91.80	37.57	116.58
Convertible currency (million US $)	50.10	65.00	78.78	95 96	91.86	102.93	123.35	140.81
Royal Monetary Authority (a)	47.57	62.46	76.66	93.32	87.48	98.69	119.07	135.47
Royal Government	-	-	-	-	-	-	-	-
Bank of Bhutan	2.49	2.53	2.11	2.64	4.37	4.23	4.27	6.08
Royal Insurance Corporation	0.03	0.01	0.01	0.00	0.01	0.01	0.01	0.03
All reserves (million US $)	97.08	88.98	90.39	99.74	94.40	106.92	125.61	190.10

Note: Fiscal Year for 1987/88 is from April 1 to June 30; starting July 1988/89 is from July 1 to June 30.
(a) Including reserve tranche position in the Fund
Source: Royal Monetary Authority, Thimphu

TABLE 11.3: MONTHLY AVERAGE EXCHANGE RATES, NGULTRUMS PER US DOLLAR, 1985 TO 1995

Month	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
January	12.62	12.28	13.04	13.06	15.11	16.97	18.83	25.92	26.16	31.37	31.37
February	12.94	12.37	13.07	13.07	15.25	17.00	18.85	25.93	26.20	31.37	31.38
March	12.96	12.29	12.94	13.00	15.48	17.12	19.24	25.89	31.26	31.37	31.65
April	12.49	12.40	12.81	13.20	15.73	17.28	19.94	25.89	31.31	31.37	31.41
May	12.55	12.48	12.69	13.31	16.12	17.32	20.58	25.89	31.33	31.37	31.42
June	12.46	12.61	12.84	13.77	16.46	17.43	21.06	25.89	31.40	31.37	31.40
July	12.03	12.51	13.03	14.09	16.44	17.42	25.58	25.89	31.37	31.37	31.38
August	11.94	12.58	13.10	14.25	16.61	17.38	25.81	25.89	31.37	31.37	31.59
September	12.18	12.69	13.02	14.49	16.76	17.87	25.88	25.89	31.37	31.37	33.26
October	12.03	12.85	13.06	14.74	16.86	18.05	25.87	25.89	31.37	31.37	34.56
November	12.09	13.09	12.99	14.98	16.94	18.09	25.89	25.89	31.37	31.39	34.75
December	12.16	13.17	12.95	15.05	16.94	18.12	25.88	26.16	31.37	31.39	34.95
Calendar	12.37	12.61	12.96	13.92	16.23	17.50	22.74	25.92	30.49	31.37	32.43
Fiscal year	11.89	12.24	12.79	12.97	15.15	16.97	18.74	25.86	27.77	31.37	31.41
	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95

Source: Royal Monetary Authority, Thimphu

CHAPTER 12: MONEY, BANKING AND FINANCE

INTRODUCTION

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 most commonly used until 1974 when the government first issued Ngultrum notes, Bhutan's official currency The monetary sector has grown since then with increasing economic development, improvement in transport and communication facilities and greater urbanization, though the barter economy continues to be important. The monetary sector in Bhutan comprises the Royal Monetary Authority, Bhutan's Central Bank, and the Bank of Bhutan, the country's only commercial bank. The non bank financial institutions are the Royal Insurance Corporation of Bhutan and the Units Trust of Bhutan. In addition, a new non bank financial institution, the Bhutan Development Finance Corporation was established during 1988 to provide long term loans for development purposes.

A statistical system for the money, banking and finance sector has been developed by the Royal Monetary Authority. The main element of the system is the monetary survey which is a consolidation of the accounts of the Royal Monetary and the Bank of Bhutan showing the financial relationship between the two 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 12.1: MONETARY SURVEY (a), ROYAL MONETARY AUTHORITY AND BANK OF BHUTAN, 1988 TO 1995

(million Nu.)

Item	End of year							
	1988	1989	1990	1991	1992	1993	1994	1995
Total assets	1,133.8	1,449.6	1,630.6	2,563.8	3,031.5	3,839.2	4,369.8	5,397.8
Foreign assets (net)	1,384.4	1,446.2	1,487.5	2,480.0	1,882.5	2,811.2	3,194.9	4,428.5
Rupee	658.4	575.5	307.7	179.1	(313.0)	(379.2)	(507.3)	(98.0)
Convertible Foreign Currency	726.0	870.7	1,179.9	2,300.9	2,195.5	3,190.4	3,702.2	4,526.6
Domestic credit	(250.5)	3.4	143.1	83.8	1,149.0	1,028.0	1,174.9	969.2
Claims on Government (net)	(398.8)	(216.5)	(125.9)	(287.1)	(46.9)	(256.4)	164.7	(321.1)
Claims on Government corporations	32.4	27.6	53.2	64.8	770.1	795.6	560.8	534.6
Claims on joint Corporations	..	..	..	..	..	..	238.9	229.2
Claims on private sector	115.9	192.2	215.9	306.1	425.8	488.8	485.0	521.5
Claims on NMFIs	..	..	..	..	..	..	55.0	5.0
Total liabilities	1,133.8	1,449.6	1,630.6	2,563.7	3,031.5	3,839.3	4,369.7	5,397.8
Liquidity-Broad money (M2)	723.7	976.6	1,078.8	1,397.9	1,587.0	1,953.3	2,395.0	3,257.8
Money supply-Narrow money (M1	412.0	546.3	539.6	749.7	840.9	833.1	1,044.0	1,331.5
Currency outside banks	149.1	188.1	194.1	246.0	345.0	346.0	347.5	432.4
Demand deposits	263.0	358.2	345.4	503.7	495.9	487.1	696.5	889.9
Quasi-money	311.6	430.2	539.3	648.2	746.1	1,120.2	1,351.0	1,926.4
Money Market Instrument (RMA Bill)	..	..	..	..	..	..	600.0	550.0
Other items (net)	410.2	473.0	551.8	1,165.8	1,444.6	1,886.0	1,374.7	1,589.9

(a) Revised data, excluding rupees in circulation
Source: Royal Monetary Authority and Bank of Bhutan

TABLE 12.2: FINANCIAL DETAILS OF ROYAL INSURANCE CORPORATION OF BHUTAN, 1986 TO 1995

Item	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Assets total	269.5	354.5	467.8	610.5	769.6	983.8	675.3	791.3	868.1	1,012.
Reserves	2.5	0.8	6.1	2.8	2.6	(16.2)	1.9	18.2	9.6	24.5
Foreign Assets	..	..	..	..	..	..	..	..	0.4	0.6
Rupee	..	..	..	..	..	..	..	..	..	0.0
Others	..	..	..	..	..	..	..	..	0.4	0.6
Investment total (a)	267.1	353.8	461.7	607.7	767.0	1,000.0	674.7	773.1	..	..
Claims on Government enterprises	18.1	14.9	28.6	23.3	24.7	20.9	20.1	21.7	22.4	41.5
Claims on private sector	150.3	233.2	319.2	392.3	514.4	672.5	498.6	614.5	667.1	670.4
Claims on deposit money banks	71.0	75.2	83.6	151.7	190.0	272.6	115.5	94.6	150.3	262.0
Claims on NFIs	7.0	7.0	7.0	8.8	2.5	0.0	0.0	0.0	18.3	13.1
Real estate	20.7	23.4	23.4	31.6	35.4	34.0	40.5	42.3	..	..
Liabilities total	269.5	354.5	467.8	610.5	769.6	983.9	675.3	792.0	868.1	1,012.
General Insurance reserve funds	6.9	6.9	10.1	15.9	21.7	58.1	61.2	73.6	72.4	41.6
Life fund	9.0	9.2	12.2	15.1	19.0	21.0	23.8	70.0	23.8	0.0
Government employee fund	171.3	210.8	254.2	312.8	368.0	402.5	505.8	589.0	690.0	765.1
Group Insurance Fund	..	..	..	..	..	..	..	..	60.7	71.0
Credit from DMB	..	..	..	..	..	..	..	..	0.0	0.0
Unit Trust of Bhutan fund	92.1	145.4	209.9	247.6	318.3	407.0	0.0	0.0	0.0	0.0
Capital accounts	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	43.8	45.1
Other items (net)	(21.8)	(29.7)	(30.5)	7.1	30.6	83.3	72.5	47.4	(23.4)	89.3

Note: NFIs stands for Non monetary financial institutes
(a) Including Unit Trust of Bhutan funds

Source: Royal Monetary Authority of Bhutan, Thimphu

TABLE 12.3: FINANCIAL DETAILS OF UNIT TRUST OF BHUTAN, 1986 TO 1995

(millions Nu.)

Item	End of year									
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Assets total	100.3	150.2	215.3	297.2	378.9	549.1	729.0	632.0	683.8	599.3
Reserves	-	-	0.2	0.2	0.3	0.4	0.5	7.8	14.7	13.8
Invesments through RICB	91.4	145.4	209.9	247.6	318.3	438.9	0.0	0.0	0.0	0.0
Claims on private sector	8.9	4.7	5.2	49.4	60.3	109.8	728.4	624.2	538.6	486.1
Claims on joint sector	..	..	..	..	..	..	..	..	8.8	0.9
Claims on deposit money banks (Fixed deposits)	..	..	..	..	..	..	..	..	121.6	98.6
Claims on other NBFIs	..	..	..	..	..	..	..	..	..	0.0
Liabilities total	100.3	150.2	215.2	297.2	378.9	549.1	729.0	632.0	683.8	599.3
Deposits under unit shares	86.8	125.3	187.8	253.8	321.5	472.8	572.8	474.7	402.8	366.9
Deposits under fixed term units	..	..	..	..	..	..	..	..	67.9	94.6
Recurring deposits	..	..	..	..	..	..	..	..	19.3	0.0
Provident fund	..	..	..	..	..	..	..	..	0.0	6.3
Credit from deposit money banks	..	..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Credit from RMA	..	..	..	..	..	..	..	..	0.0	0.0
Capital accounts	5.4	5.3	6.7	10.8	13.8	2.8	2.5	42.5	55.4	86.1
Other items(net)	8.1	13.1	20.7	32.7	43.6	73.5	153.7	114.8	138.4	45.5
Call loans	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	..

(a) RICB stands for Royal Insurance Corporation of Bhutan

Source: Royal Monetary Authority of Bhutan, Thimphu

TABLE 12.4: MONEY AND BANKING DETAILS OF BHUTAN DEVELOPMENT FINANCE CORPORATION,1992 TO 1995

(millions Nu.)

Item	1992	1993	1994	1995
Assets total	124.8	175.3	297.3	349.9
Reserves	3 3	3.8	22.7	19.0
Foreign assets	0.0	0.0	0.0	0.0
Rupees	0.0	0.0	0.0	0.0
Others	0.0	0 0	0.0	0.0
Claims on Government	0.0	0.0	0.0	0.0
Claims on Government Corporations	0.0	0.0	4.9	4.8
Claims on joint corporations	2 3	2.8	0.0	0.0
Claims on private sector	103.6	147.5	230.0	301.5
Claims on DMBs(a)	0.0	0.0	0.0	9 0
Claims on other NBFIs(b)	15.6	21.2	39.7	15.5
Liabilities total	124.8	175.3	297.2	349.9
Foreign liabilities	37.3	75.3	94.9	104.7
Credit from RMA	50.0	20.7	50.0	0.0
Credit from DMB	0.0	24.3	0.0	0.0
Credit from other NBFIs	0.0	0.0	0.0	0.0
Grants	7.9	14.3	0.0	0.0
Capital account	34.4	39.9	155.6	169.0
Other items net	(4.8)	0.8	(3.3)	76.3

Note: The summary exclude Agriculture Credit Program
(a) Deposits other than demand deposit
(b) represents purchase of unit shares of UTB

Source: Royal Monetary Authority, Thimphu

TABLE 12.5: MONEY AND BANKING OF ROYAL MONETARY AUTHORITY OF BHUTAN (RMA), 1986 TO 1995

(million Nu.)

Item	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Assets total	320.4	506.5	720.5	930.6	1,418.9	2,457.0	2,241.9	3,126.2	3,595.1	4,395.0
Foreign assets	303.6	482.7	696.6	840.7	1,144.8	2,268.1	2,027.2	2,944.7	3,533.2	4,337.2
Indian rupee	9.4	15.7	15.6	33.2	16.0	28.6	21.7	59.3	24.6	27.6
Convertible Foreign Currency	294 2	467.0	681.0	807.5	1,128.8	2,239.5	2,005.5	2,885.4	3,508.6	4,309.5
Claims on deposit money banks	16.8	23.8	23.9	29.5	38.6	47.7	43.7	107.8	309.0	2.8
Claims on Government	0.0	0.0	0.0	60.4	235.5	141.2	171.0	73.7	0.0	50.0
Claims on NMFIs	..	..	..	..	..	..	..	..	55.0	5.0
Liabilities total	320.3	506.5	720.5	930.6	1,419.0	2,457.0	2,241.9	3,126.3	3,595.1	4,395.0
Reserve money	259.2	432.6	384.3	691.2	1,259.6	1,592.7	1,256.5	1,364.9	1,286.8	2,149.7
With RMA	168.5	329 1	235 2	503.5	1,065 5	1,346.7	911.5	1,018.9	..	..
Currency outside banks	90 7	103 5	149.1	187.7	194.1	246.0	345.0	346.0	347.5	432.4
Foreign Liabilities	..	..	..	..	..	.	—	..	616.8	161.1
Rupee	.	—	..	..	..	..	..	..	616.8	161.1
Others	.	..	—	..	..	..	..	..	0.0	0.0
Government deposits	19.4	9.4	180.3	77.5	65.0	116.4	20.2	25.4	29.8	28.6
RMA Bills Outstanding	..	..	..	..	..	..	..	..	600.0	550.0
Capital Account	..	..	..	..	..	..	..	..	40.2	88.1
Other items (net)	41.7	64.6	155 8	161.9	94.4	747.9	965.2	1,736.0	1,021.5	1,417.6

Source: Royal Monetary Authority, Thimphu

TABLE 12.6: MONEY AND BANKING, BANK OF BHUTAN, 1986 TO 1995

(million Nu.)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Assets total	768.1	1,054.9	1,129.2	1,416.9	1,741.8	1,975.	2,238.9	2,726.	2,984.1	3,921.7
Reserve with RMA	143.1	310.4	244.2	501.7	1,009.4	1,252.	827.9	1,001.	1,416.4	2,382.4
Foreign assets	433.8	637.0	733.8	692.9	460.8	348.8	212.5	434.3	278.5	252.5
Rupee	407.9	606.0	688.8	629.7	409.7	287.3	22.6	129.3	84.9	35.4
Other	25.9	30.9	45.0	63.2	51.1	61.5	190.0	305.0	193.6	217.4
Claims on Government	104.2	11.8	2.9	2.5	2.6	2.6	2.5	6.5	4.6	1.5
Claims on Government Corporations	19.7	13.5	35.4	27.6	53.2	64.8	770.1	795.6	560.8	534.6
Claims on joint Corporations	..	..	..	..	..	..	..	..	238.9	229.2
Claims on private sector	67.3	82.3	115.9	192.2	215.9	306.1	425.8	488.8	485.0	521.5
Liabilities total	768.1	1,054.9	1,129.2	1,416.9	1,741.8	1,975.	2,238.9	2,726.	2,984.1	3,921.7
Demand deposit (a)	186.3	213.3	263.0	358.2	345.4	503.7	495.9	487.1	696.5	889.9
Time deposit	212.6	223.4	289.1	415.1	515.2	622.2	691.1	1,054.	1,266.8	1,822.1
Foreign currency	9.1	12.3	22.5	15.1	24.0	26.0	55.0	65.2	84.2	104.3
Foreign liabilities	37.3	42.7	46.0	87.4	118.0	137.0	357.2	567.8	0.0	0.0
Rupee	37.3	42.7	46.0	87.4	118.0	136.9	357.2	567.8	0.0	0.0
Other	..	..	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Government deposits	117.8	307.1	221.4	201.8	299.1	314.5	200.3	311.3	139.5	344.0
Credit from RMA	..	..	..	..	..	..	..	..	..	..
Capital accounts	150.1	175.9	176.9	229.2	240.1	236.0	533.9	329.6	323.6	371.0
Other items (net)	54.8	80.3	110.3	110.0	199.9	169.0	(94.4)	(89.5)	473.4	390.4

(a) savings deposits included in demand deposits

Source: Royal Monetary Authority, Thimphu

TABLE 12.7: INVESTMENTS OF FINANCIAL INSTITUTIONS BY INDUSTRY(a), AMOUNTS OUTSTANDING, 1988 TO JUNE 1995

(millions Nu.)

	1988	1989	1990	1991	1992	1993	1994	1995
Agriculture	21.3	26.5	35.9	55.4	86.4	92.2	10.2	112.9
Bank of Bhutan	3.8	4.9	5.4	4.0	6.1	6.0	4.9	4.5
Royal Insurance Corporation of Bhutan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bhutan Development Finance Corporation	17.5	21.6	30.5	51.4	80.2	86.1	5.2	108.3
Unit Trust of Bhutan	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Industry, Manufacturing	119.5	147.7	220.4	307.1	452.1	585.0	793.7	857.6
Bank of Bhutan	49.2	53.7	78.4	105.5	163.1	222.6	264.5	382.4
Royal Insurance Corporation of Bhutan	69.5	85.3	124.3	167.8	124.6	151.7	240.5	163.3
Bhutan Development Finance Corporation	0.8	8.7	17.7	33.8	57.1	91.4	97.5	116.9
Unit Trust of Bhutan	0.0	0.0	0.0	0.0	107.4	119.3	191.2	195.0
Building and construction	240.1	272.3	294.9	344.3	473.6	518.4	550.3	526.8
Bank of Bhutan	15.6	16.2	18.7	24.7	79.3	92.0	91.6	86.0
Royal Insurance Corporation of Bhutan	224.5	256.1	276.2	319.6	246.9	272.4	290.7	280.2
Bhutan Development Finance Corporation	0.0	0.0	0.0	0.0	0.8	0.8	7.8	0.0
Unit Trust of Bhutan	0.0	0.0	0.0	0.0	146.5	153.2	160.2	160.6
Trade and commerce	78.0	127.8	181.7	254.9	328.1	356.8	365.0	415.2
Bank of Bhutan	38.5	61.6	76.0	108.2	155.1	168.4	196.3	198.8
Royal Insurance Corporation of Bhutan	38.8	66.2	105.7	146.7	112.9	137.6	119.3	134.3
Bhutan Development Finance Corporation	0.7	0.0	0.0	0.0	2.1	4.3	5.1	39.2
Unit Trust of Bhutan	0.0	0.0	0.0	0.0	58.0	46.5	44.3	42.9
Transport	41.3	56.0	96.6	126.8	751.0	736.0	663.6	617.7
Bank of Bhutan	10.2	22.8	39.2	57.7	665.8	646.7	587.7	552.9
Royal Insurance Corporation of Bhutan	31.1	33.2	57.4	69.1	50.2	55.6	47.2	45.4
Bhutan Development Finance Corporation	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.9
Unit Trust of Bhutan	0.0	0.0	0.0	0.0	35.1	33.7	28.0	18.5
Personal and other loans	93.0	167.2	166.8	249.7	281.9	252.5	269.7	233.9
Bank of Bhutan	73.7	102.6	93.0	117.7	184.0	144.8	102.7	120.2
Royal Insurance Corporation of Bhutan	14.1	15.2	13.5	22.5	18.5	15.6	47.2	25.5
Bhutan Development Finance Corporation	5.2	49.4	60.3	109.8	17.4	20.7	34.8	11.6
Unit Trust of Bhutan	0.0	0.0	0.0	0.0	61.9	71.4	85.0	76.6
Total	593.2	797.5	996.3	1,338.2	2,373.0	2,540.9	2,652.5	2,764.1

(a) Includes Royal Monetary Authority, Bank of Bhutan, Royal Insurance Corporation of Bhutan, Unit Trust of Bhutan and the Agricultural Credit Programme (b) Personal loans, public welfare loans and others

Source: Royal Monetary Authority, Thimphu

TABLE 12.8: INTEREST RATES FOR DEPOSITS IN FINANCIAL INSTITUTIONS, 1985 TO 1995

(percent per annum)

Type of deposit	1985	1987	1988	1989	1990	1991	1992	1993	1994	1995
Savings	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Fixed deposits for										
3 to 6 months	6.5	6.5	6.5	6.5	6.5	6.5	8.0	8.0	8.0	8.0
6 to 9 months	8.0	8.0	8.0	8.0	8.0	8.0	9.0	9.0	8.0	8.0
9 to 12 months	8.0	8.0	8.0	8.0	8.0	8.0	9.0	9.0	8.0	8.0
12 to 24 months	8.5	9.0	9.0	9.0	9.0	9.0	10.0	10.0	10.0	10.0
24 to 36 months	9.0	10.0	10.0	10.0	10.0	10.0	11.0	11.0	10.0	10.0
36 to 60 months	10.0	11.0	11.0	11.0	11.0	11.0	13.0	13.0	11.0	11.0
60 months and over	11.0	11.0	11.0	11.0	11.0	11.0	13.0	13.0	11.0	11.0
UTB fixed term										
3 to 12 months	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	8.5	8.5
12 to 36 months	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	10.5	10.5
Over 36 months	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	11.5	11.5
UTB Unit shares (a)	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	11.7	10.0

(a) withdrawals within 1 year are subject to service charge of 2 % on the principal

Source: Bank of Bhutan

TABLE 12.9: INTEREST RATES AND REPAYMENT PERIOD BY SECTOR AND TYPE OF LOAN, FINANCIAL INSTITUTIONS (a), 1995

Sector	Interest Rate (% p.a.)	Repayment period (Years)
Export finance (convertible currency areas)	13	1
General trade	16	3
Buses and trucks	14	5
Other passanger vehicles	16	5
Agriculture and Livestock	14	10
Manufacturing Industry	14	10
Housing	15	20
Service Industries (includes tourism, contract services, and other service activities)	14	5
Personal loans	16	5
Equity finance	14	5
Working capital	15	1

(a) Rates applicable since August 22, 1994

Source: Royal Monetary Authority, Thimphu

CHAPTER 13: PUBLIC FINANCE

INTRODUCTION

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 to be taken up by the system of cash taxes based on the type of land holding.

The first budget on modern lines was presented by the Ministry of Finance 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.

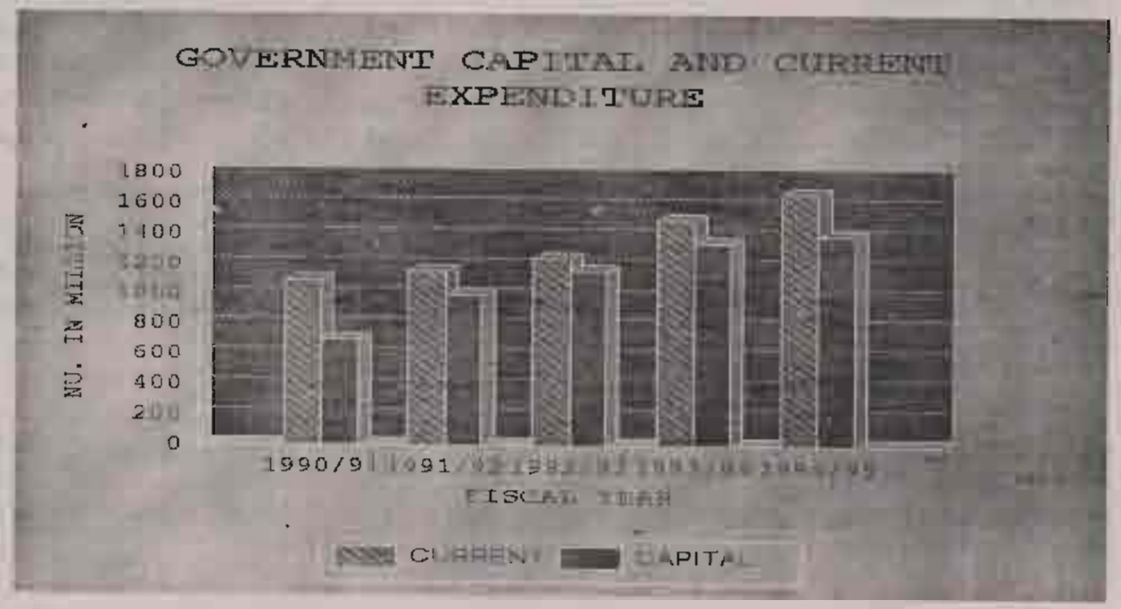


TABLE 13.1: CURRENT BUDGETARY EXPENDITURE OF THE GOVERNMENT BY MINISTRY/AGENCY 1981/82 TO 1994/95

(millions Nu.)

Ministry/Non-ministerial	1981/82 (actual)	1985/86 (actual)	1990/91 (actual)	1991/92 (actual)	1992/93 (actual)	1993/94 (Revised)	1994/95 (Revised)
Ministries	135.6	350.3	709.6	801.1	839.6	846.1	975.9
Home Affairs	12.6	24.1	77.1	80.8	90.9	103.2	115.5
Finance	19.4	82.3	81.8	78.2	76.0	79.4	82.3
Communication & Tourism	9.5	18.1	99.4	141.6	143.8	142.5	164.7
Planning	1.0	2.6	5.2	9.4	7.1	8.1	6.3
Social Services	51.8	137.6	158.6	224.0	215.0	197.0	216.8
Agriculture	26.4	50.7	119.6	111.6	130.8	153.8	168.3
Foreign Affairs	7.9	21.9	51.3	72.7	74.5	84.3	85.1
Trade and Industries	7.0	13.0	116.6	82.7	101.4	77.9	136.9
Non Ministerial organisations	27.6	29.2	68.5	74.6	81.6	81.7	94.0
Special Commission	1.2	9.8	8.3	7.9	7.4	7.4	9.7
Central Monastic Secretariat	-	0.6	25.9	28.1	30.5	32.9	35.2
Royal Monetary Authority	-	-	-	-	-	-	-
Social and Cultural Division	0.3	0.4	-	-	-	-	-
His Majesty's Secretariat	1.1	4.7	4.7	4.8	5.7	4.0	4.5
Science and Technology	-	0.3	-	-	-	-	-
Royal Civil Service	0.5	1.1	3.1	3.7	4.1	4.7	4.8
Royal Audit Authority	1.0	2.2	4.9	6.4	6.5	6.4	7.8
Royal Advisory Council	1.0	1.8	2.0	2.0	2.4	2.3	2.7
National Assembly	0.6	1.6	1.2	2.5	3.2	3.7	2.4
Urban Development	1.2	1.0	-	-	-	-	-
National Women's Association	-	0.3	2.2	2.2	2.0	-	-
National Environment Commission						-	4.9
Judiciary	1.7	5.1	11.2	12.5	13.1	13.9	16.5
Bhutan Olympic Committee	-	0.3	2.4	2.7	3.7	2.6	3.3
Druk Air Corporation	0.2	-	-	-	..	-	-
Tourism Corporation	7.4	-	-	-	..	-	-
Bhutan Govt. Transport Service	11.4	-	-	-	..	-	-
Dzongkhag Development	-	-	2.8	1.7	3.1	3.7	2.4
Zonal Administration, Chhukha	-	-	17.8	-	..	-	-
Zonal Administration, Tsirang	-	-	9.5	-	..	-	-
Zonal Administration,	-	-	14.9	17.6	6.7	-	-
Zonal Administration, Gelephu	-	-	14.2	-	..	-	-
Dzongkhags	6.6	61.7	168.2	170.3	186.3	228.4	304.8
Dzongkhag Administration,	-	-	-	-	-	-	-
Common public expenditure	n.a	n.a	79.6	88.9	126.5	334.4	292.2
Total current expenditure	169.8	441.2	1082.3	1152.4	1240.7	1490.7	1666.9

Note: 1981/82 & 1985/86 refer to 12 month period 1 April to 31 March
Source: National Budget and Aid Coordination Division, Thimphu

TABLE 13.2: BUDGETARY DEVELOPMENT EXPENDITURE OF THE GOVERNMENT BY MINISTRY, 1988/89 TO 1994/95

(Nu. In million)

Ministerial/non ministerial organizations	1988/89 (actual)	1989/90 (actual)	1990/91 (actual)	1991/92 (actual)	1992/93 (actual)	1993/94 (Revised)	1994/95 (Revised)
Ministries	601.8	657.3	593.2	788.0	1,083.4	1151.014	1195.741
Home Affairs	14.22	21.92	19.77	27.17	90.63	63.390	27.826
Finance	11.83	18.47	21.08	14.49	13.15	24.363	16.172
Communication & Tourism	253.80	250.31	123.39	172.53	564.01	253.103	414.521
Planning	0.50	11.21	4.93	2.49	6.67	3.339	0.387
Social Services	83.58	128.34	133.37	275.49	83.86	186.019	167.646
Agriculture	128.93	128.41	213.78	260.11	274.88	453.101	509.033
Foreign Affairs	2.85	0.98	1.68	1.80	0.86	0.945	3.946
Trade and Industries	106.13	97.66	75.19	33.87	49.30	166.754	56.210
Non ministerial organizations	12.97	20.60	12.73	7.50	9.14	39.515	44.541
Special Commission	3.71	5.29	3.30	3.73	3.19	4.326	5.159
Central Monastic Secretariat	4.72	8.98	5.16	2.88	3.31	5.901	5.047
Royal Monetary Authority	-	-	-	-	-	-	-
Social And Culture Division	-	-	-	-	-	-	-
Royal Secretariat (HM)	0.20	0.97	0.39	0.04	0.00	0.060	0.153
Science and Technology	-	-	-	-	-	-	-
Royal Civil Service Commission	0.37	1.80	0.81	0.11	0.73	10.377	0.940
Royal Audit Authority	0.45	2.19	0.33	0.03	0.04	0.327	2.714
Royal Advisory Council	0.01	0.02	0.03	0.07	-	-	0.156
National Assembly	1.21	0.02	0.04	0.04	0.04	0.630	1.361
Urban Dev. Corp.	-	-	-	-	-	-	-
Nat. Women's Association	0.77	0.21	0.76	0.13	0.19	-	-
Judiciary	1.11	0.78	1.72	0.24	1.11	0.657	1.489
Bhutan Olympic Committee	0.02	0.01	0.11	0.00	0.00	0.444	0.485
Dzongkhag Dev.Commission	0.40	0.32	0.07	0.21	0.53	0.681	0.154
SAARC Conference complex	-	-	-	-	-	-	-
Punakha Dz. Renovation Service						16.112	24.115
National Environment Commission						-	2.768
Zonal Administration, Chhukha	4.33	5.56	1.23	-	..	..	-
Zonal Administration, Tsirang	4.02	8.55	0.21	-	..	..	-
Zonal Administration, Yongphula	1.61	5.03	1.22	0.04	..	..	-
Zonal Administration, Gelephu	3.38	6.19	1.81	-	0.19	..	-
Dzongkhags	-	-	33.0	106.8	48.5	47.910	86.827
Dzongkhag administration, Thimphu	1.23	3.13	-	-	..	..	-
Common public expenses	439.0	34.4	45.3	84.3	15.4	101.683	64.772
Total development expenses (c)	1,068.4	740.7	688.7	986.6	1,156.6	1340.122	1391.881

(a) Expenditure in 1987/88 and 1988/89 includes lending and equity to public and joint sector corporations.

Source: National Budget and Aid Coordination Division, Thimphu

CHAPTER 14: PLAN OUTLAYS

INTRODUCTION

Development planning in Bhutan can be traced back to the year 1961 when the first Five Year Plan (1961/62 to 1965/66) was drawn up. Initially, a self contained development secretariat was established to implement the plan. At the time of preparation of the third plan in 1971, the Planning Commission 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 Ministry of Finance. The Commission was however, invested with responsibilities for the formulation of development plans and allocations of investment 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 Sixth Five Year Plan was successfully completed in 1991/92. The Sixth Five Year Plan (1987/88 to 1991/92) layed emphasis towards attaining the objective of economic self reliance with progressively higher rates of growth and greater distributional equity among various sectors and regions. At the same time, it will lay renewed emphasis on the preservation and promotion of traditional values and ideals.

TABLE 14.1: OUTLAYS OF DEVELOPMENT PLANS, FIRST PLAN TO SEVENTH PLAN

(Nu. In millions)

Sector	1st Plan (actual)	2nd Plan (actual)	3rd Plan (actual)	4th Plan (actual)	5th Plan (a) (revised)	6th Plan (revised)	7th Plan (budget)
Agriculture	1.9	21.6	58.3	259.0	419.4	880.5	709.0
Food Corporation of Bhutan	-	-	-	-	135.5	106.5	-
Animal Husbandry	1.5	5.8	24.2	61.5	162.4	331.0	327.9
Forestry	3.2	6.9	28.4	110.3	229.9	418.2	479.0
Power	1.5	9.1	30.1	50.5	340.5	1,247.9	390.0
Trade and Industries	1.1	1.0	25.2	175.0	323.3	1,276.1	838.9
Geological Survey	-	-	-	-	-	35.3	153.8
Public Works Department	62.9	70.5	84.6	128.3	787.5	887.2	1,213.7
Road Transport/Aviation	7.5	12.0	9.5	-	26.3	48.8	95.3
Post & Telegraph	0.5	5.9	11.4	16.9	65.8	68.1	163.8
Telecommunications	-	-	14.8	37.3	33.7	133.8	1,088.9
Tourism	-	-	14.1	12.5	29.1	-	-
Druk Air	-	-	-	-	-	391.0	-
Education	9.4	35.7	90.0	134.6	519.1	778.8	1,738.0
Health	3.1	16.7	38.1	54.6	237.5	399.1	1,035.5
Information and Broadcasting	0.1	1.4	4.0	11.0	36.1	95.9	96.0
Urban Development	-	-	-	-	187.3	248.7	709.4
General Government	-	-	-	-	1,114.9	1,973.8	6,196.1
Dzongkhags	-	-	-	-	-	238.5	355.4
Other	14.4	15.6	42.5	54.7	-	-	-
Total outlay	107.2	202.2	475.2	1,106.2	4,648.3	9,559.2	15,590.7

Note: Small differences exist between outlays shown in this table & budgetary expenditures shown in tables 14.1 and 14.2 because some expenditures will not be reflected in development plans 1st to 5th (Statistical Year Book 1985) and reviews of the sixth plan

(a) Figures exclude Chhukha Hydel Project (Fifth Plan outlay Nu. 2,430 million)

Source: Ministry of Planning, Thimphu

TABLE 14.2: OUTLAYS OF DEVELOPMENT PLANS, PERCENTAGE BY CATEGORY, FIRST PLAN TO SEVENTH PLAN(a)

(percent)

Sector	1st Plan	2nd Plan	3rd Plan	4th Plan	5th Plan	6th Plan	7th Plan
Agriculture	1.8	10.7	12.3	23.4	9.0	9.2	4.5
Food Corporation of Bhutan	-	-	-	-	2.9	1.1	-
Animal Husbandry	1.4	2.9	5.1	5.6	3.5	3.5	2.1
Forestry	3.0	3.4	6.0	10.0	4.9	4.4	3.1
Power	1.4	4.5	6.3	4.6	7.3	13.1	2.5
Trade and Industries	1.0	0.5	5.3	15.8	7.0	13.3	5.4
Geological Survey	-	-	-	-	-	0.4	1.0
Public Works Department	58.7	34.9	17.8	11.6	16.9	9.3	7.8
Road Transport/Aviation	7.0	5.9	2.0	-	0.6	0.5	0.6
Post & Telegraph	0.5	2.9	2.4	1.5	1.4	0.7	1.1
Telecommunications	-	-	3.1	3.4	0.7	1.4	7.0
Tourism	-	-	3.0	1.1	0.6	-	-
Druk Air	-	-	-	-	-	4.1	-
Education	8.8	17.7	18.9	12.2	11.2	8.1	11.1
Health	2.9	8.3	8.0	4.9	5.1	4.2	6.6
Information and Broadcasting	0.1	0.7	0.8	1.0	0.8	1.0	0.6
Urban Development	-	-	-	-	4.0	2.6	4.6
General Government	-	-	-	-	24.0	20.6	39.7
Dzongkhags	-	-	-	-	-	2.5	23.0
Other	13.4	7.7	8.9	4.9	-	-	-
Total outlay	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) See footnotes to Table 14.1.

Source: Ministry of Planning, Thimphu

TABLE 14.3: FINANCIAL OUTLAYS DURING SEVENTH PLAN BY SECTOR, 1992 TO 1997

(Nu. In millions)

Sector	Current	Capital	Total	Percent of total
Agriculture Ministry	1,158.1	1,275.6	2,433.6	15.6
Secretariat	318.5	599.2	917.7	5.9
Agriculture	375.7	333.3	709.0	4.5
Animal Husbandry	230.3	97.6	327.9	2.1
Forestry	233.5	245.5	479.0	3.1
Ministry of Trade & Industries	722.4	680.0	1,402.4	9.0
Secretariat	19.6	0.0	19.6	0.1
Power	390.0	0.0	390.0	2.5
Trade and Industries Division	258.9	580.0	838.9	5.4
Geological and Mines Division	53.8	100.0	153.8	1.0
Ministry of Communication	1,008.6	1,675.7	2,684.3	17.2
Secretariat	26.7	0.0	26.7	0.2
Public Works Department	522.8	690.9	1,213.7	7.8
Civil Aviation	19.3	76.0	95.3	0.6
Post and Telegraph	143.6	20.2	163.8	1.1
Telecommunications	231.3	857.6	1,088.9	7.0
Information and Broadcasting	65.0	31.0	96.0	0.6
Ministry of Health & Education	1,867.3	1,658.9	3,526.2	22.6
Secretariat	43.3	0.0	43.3	0.3
Education	1,055.0	683.0	1,738.0	11.1
Health	559.6	475.9	1,035.5	6.6
Works & Housing Division	209.4	500.0	709.4	4.6
Ministry of Home affairs	190.9	119.8	310.7	2.0
Secretariat	77.4	27.0	104.4	0.7
Survey of Bhutan	113.5	92.8	206.3	1.3
Ministry of Foreign Affairs	400.5	0.0	400.5	2.6
Ministry of Planning	75.1	30.7	105.8	0.7
Secretariat	52.7	0.0	52.7	0.3
Central Statistical Organisation	2.0	27.6	29.6	0.2
National Enviroment Secretariat	20.4	3.1	23.5	0.2
Ministry of Finance	1,978.6	0.0	1,978.6	12.7
Secretariat and Division	756.6	0.0	756.6	4.9
Debt servicing	1,221.9	0.0	1,221.9	7.8
Royal Civil Service Commission	23.3	1,300.0	1,323.3	8.5
Secretariat	23.3	0.0	23.3	0.1
HRD Programme	0.0	1,300.0	1,300.0	8.3
Other Organisations	880.1	189.8	1,069.9	6.9
Dzongkhag administration	305.4	50.0	355.4	2.3
All sectors	8,610.3	6.980.4	15,590.6	100.0

Source: Ministry of Planning, Thimphu

TABLE 14.4: DZONGKHAG WISE SIXTH FIVE YEAR PLAN OUTLAY, 1987 TO 1992

(Nu. in millions)

Dzongkhags	Current	Capital	Total
Bumthang	7.129	4.750	11.879
Chirang	12.592	1.270	13.862
Chukha	13.702	1.800	15.502
Dagana	6.800	2.775	9.575
Gaylegphug	15.570	1.410	16.980
Haa	6.786	0.350	7.136
Lhuntshi	6.882	2.400	9.282
Mongar	8.401	1.750	10.151
Paro	8.869	3.620	12.489
Punakha	13.226	7.838	21.064
Pema Gatshel	7.123	1.230	8.353
Samchi	16.370	1.733	18.103
Samdrup Jongkhar	14.869	1.945	16.814
Shemgang	9.801	2.015	11.816
Tashigang	16.027	4.055	20.082
Thimphu	10.943	0.600	11.543
Tongsa	8.808	4.480	13.288
Wangdiphodrang	8.253	2.350	10.603
Total of Dzongkhags	192.151	46.371	238.522

TABLE 14.5: DZONGKHAG WISE SEVENTH FIVE YEAR PLAN OUTLAY, 1992 TO 1997

(Nu. in millions)

Dzongkhag	Current	Capital	Total
Bumthang	214.117	196.095	410.212
Chirang	133.228	414.285	547.513
Chhukha	229.979	2174.821	2404.800
Dagana	83.491	86.043	169.534
Gasa	0.000	0.000	0.000
Haa	59.974	99.253	159.227
Lhuntse	86.094	123.435	209.529
Mongar	244.134	2009.736	2253.870
Paro	258.431	301.648	560.079
Pemagatshel	81.546	233.729	315.275
Punakha	98.401	107.435	205.836
Samchi	205.204	204.710	409.914
Samdrupjongkhar	218.169	1954.123	2172.292
Sarbhang	266.112	341.965	608.077
Shemgang	348.400	193.250	541.650
Tashigang	372.445	546.567	919.012
Tashiyangtse	76.133	98.845	174.978
Thimphu	771.568	779.479	1551.047
Tongsa	153.051	199.546	352.597
Wangdiphodrang	167.670	1554.576	1722.246
Total	4068.147	11619.541	15687.688

Note: Budget allocations for Central Programmes have been included under Current expenditure in case of Agriculture and Livestock sectors.

CHAPTER 15: GROSS DOMESTIC PRODUCT

INTRODUCTION

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

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

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

TABLE 15.1: GROSS DOMESTIC PRODUCT AT FACTOR COST IN CURRENT PRICES BY KIND OF ACTIVITY, 1980 TO 1995

(Nu. In millions)

Activity	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Agriculture, livestock, forestry and fishing	621.4	1236.2	1399.2	1623.5	1746.3	1924.3	2094.9	2305.1	2460.5	2801.9	3427.1	3897.6
Agriculture	309.9	580.6	644.4	715.3	829.8	937.7	1057.6	1180.8	1363.0	1526.6	1814.6	2043.2
Livestock	139.2	276.0	322.1	372.3	395.9	441.2	474.8	528.6	487.4	545.9	703.5	805.5
Forestry and logging	172.3	379.6	432.7	535.9	520.6	545.4	562.5	595.7	610.1	729.4	909.0	1048.9
Fishing	-	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	6.8	20.2	37.4	37.0	33.4	41.8	44.8	90.0	98.8	102.3	172.4	193.1
Manufacturing	35.8	128.3	137.1	204.7	226.5	302.5	396.7	499.5	647.4	752.3	875.2	1088.8
Electricity and gas	2.5	6.8	96.6	377.0	388.0	391.0	384.7	384.4	445.3	560.9	574.2	1058.7
Construction	88.5	290.5	267.5	349.9	309.0	365.4	398.7	359.7	595.1	616.8	787.2	930.7
Wholesale, retail trade, hotels and restaurants	121.5	203.0	234.1	248.2	258.5	282.3	321.6	382.9	479.7	551.2	647.2	730.7
Transport, storage and communications	47.9	104.1	114.2	126.0	180.6	235.6	346.7	398.5	471.2	587.4	638.0	687.6
Finance, insurance and real estate	70.2	149.3	170.7	210.5	263.9	306.9	378.0	409.4	438.8	457.7	468.2	503.0
Community, social services (government)	120.4	262.2	350.8	416.0	507.8	525.1	540.5	564.4	608.9	645.0	709.2	751.4
Less: Imputed bank service charges	-20.0	-51.0	-49.0	-62.0	-63.1	-67.0	-58.4	-51.8	-68.1	-68.0	-148.2	-231.0
Gross domestic product	**1095.0**	**2349.6**	**2758.6**	**3530.8**	**3850.9**	**4307.9**	**4848.2**	**5342.1**	**6177.9**	**7007.4**	**8150.5**	**9610.7**
Annual growth rate (%)	..	..	**17.4**	**28.0**	**9.1**	**11.9**	**12.5**	**10.2**	**15.6**	**13.4**	**16.3**	**17.9**

Source: CSO, Ministry of Planning, Thimphu

TABLE 15.2: GROSS DOMESTIC PRODUCT AT FACTOR COST IN 1980 PRICES BY KIND OF ACTIVITY, 1980 TO 1995

(Nu. in millions)

Activity	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Agriculture, livestock, forestry and fishery	621.4	833.9	881.0	925.8	939.7	962.9	992.8	1024.6	1004.0	1040.2	1081.2	1108.2
Agriculture	309.9	411.6	436.3	458.1	485.6	514.7	530.9	544.8	555.6	563.9	578.7	585.1
Livestock	139.2	168.6	177.4	184.5	191.5	201.7	212.2	221.3	201.6	226.1	227.6	234.4
Forestry and logging	172.3	253.7	267.3	283.2	262.6	246.5	249.7	258.5	246.8	250.2	274.9	288.7
Fishing	-	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	6.8	12.6	22.2	21.6	19.0	21.7	19.3	27.4	23.5	26.2	32.7	34.8
Manufacturing	35.8	75.4	71.0	105.0	110.3	129.2	158.1	186.7	208.8	218.9	233.0	269.7
Electricity and gas	2.5	6.0	60.4	229.0	225.1	222.3	204.1	200.4	210.0	232.0	258.8	365.6
Construction	88.5	169.0	141.8	152.3	129.0	136.2	136.8	116.2	168.5	178.0	221.5	243.0
Wholesale and retail trade, hotels and restaurants	121.5	132.4	143.4	142.4	129.2	133.6	134.7	145.1	160.7	163.8	170.2	178.0
Transport, storage and communications	47.9	79.4	83.9	91.3	122.1	142.4	172.1	182.0	192.3	234.6	241.5	242.6
Finance, insurance and real estate	70.2	110.1	126.2	135.7	141.0	162.9	212.2	208.8	215.4	238.1	245.4	263.2
Community, social and personal services(government)	120.4	126.0	168.6	200.0	210.0	217.0	223.3	233.2	251.6	266.5	293.0	310.5
Less: Imputed bank service charges	-20.0	-25.0	-24.0	-30.0	-31.8	-41.1	-28.8	-21.0	-28.1	-45.0	-61.2	-95.4
Gross domestic product	**1095.0**	**1519.8**	**1674.5**	**1973.1**	**1993.6**	**2087.1**	**2224.6**	**2303.4**	**2406.6**	**2553.3**	**2716.1**	**2920.1**
Annual growth rate (%)	..	**3.7**	**10.2**	**17.8**	**1.2**	**4.7**	**6.6**	**3.5**	**4.5**	**6.1**	**6.4**	**7.5**

Source: CSO, Ministry of Planning, Thimphu

TABLE 15.3: COMPOUND GROWTH RATE OF GROSS DOMESTIC PRODUCT DURING FIFTH, SIXTH AND SEVENTH PLAN

(percent)

Activities	Growth rate in current prices			Growth rate in 1980 prices		
	Vth Plan (1980-1987)	VIth Plan (1987-1991)	VIIth Plan* (1992-1997)	Vth Plan (1980-1987)	VIth Plan (1987-1991)	VIIth Plan* (1992-1997)
Agriculture, livestock and forestry and fishing	17.6	9.2	15.5	6.7	2.6	3.2
Agriculture proper	15.8	13.4	14.0	6.9	4.4	1.9
Livestock production	18.3	9.2	16.9	4.2	5.6	4.7
Forestry and logging	20.2	2.7	17.8	8.3	-0.3	4.6
Fishing	-	-	-	-	-	-
Mining and quarrying	40.6	24.9	26.0	20.1	6.1	14.0
Manufacturing	30.8	25.0	19.7	3.7	15.5	8.9
Electricity and gas	107.7	0.5	29.1	86.2	-3.3	16.0
Construction	24.8	0.7	16.3	1.6	-6.5	14.7
Wholesale, retail trade, hotels and restaurants	14.0	11.4	14.8	0.4	0.5	3.5
Transport, storage and communications	19.0	33.4	15.0	8.9	18.8	7.5
Finance, insurance and real estate	19.4	18.4	8.3	9.5	11.4	7.1
Community, social and personal services	23.8	7.9	9.4	6.8	3.9	7.1
Gross domestic product	**20.3**	**10.9**	**15.9**	**6.8**	**3.9**	**6.5**

* Figures for 1996/97 are projected

Source: CSO, Ministry of Planning, Thimphu

TABLE 15.4: PERCENTAGE COMPOSITION OF GROSS DOMESTIC PRODUCT BY VARIOUS ACTIVITIES, 1980 TO 1995

(percent)

Activities	1980	1985	1989	1991	1992	1993	1994	1995
Agriculture sector	55.8	51.5	42.7	42.7	39.4	39.6	41.3	39.6
Agriculture proper	27.8	24.2	21.6	21.9	21.8	21.6	21.9	20.8
Livestock production	12.5	11.5	9.7	9.8	7.8	7.7	8.5	8.2
Forestry and logging	15.5	15.8	11.5	11.0	9.8	10.3	11.0	10.7
Fishing	-	-	-	-	-	-	-	-
Mining and quarrying	0.6	0.8	0.9	1.7	1.6	1.4	2.1	2.0
Manufacturing	3.2	5.3	8.1	9.3	10.4	10.6	10.5	11.1
Electricity and gas	0.2	0.3	7.8	7.1	7.1	7.9	6.9	10.8
Construction	7.9	12.1	8.1	6.7	9.5	8.7	9.5	9.5
Wholesale, retail trade, hotels & restaurants	10.9	8.5	6.6	7.1	7.7	7.8	7.8	7.4
Transport, storage and communications	4.3	4.3	7.1	7.4	7.5	8.3	7.7	7.0
Finance, insurance and real estate	6.3	6.2	7.7	7.6	7.0	6.5	5.6	5.1
Community, social and personal services	10.8	10.9	11.0	10.4	9.7	9.1	8.5	7.6
Gross domestic product	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 15.5: GROSS DOMESTIC CAPITAL FORMATION BY MAJOR COMPONENTS, 1980 TO 1995

(Nu. in millions)

Components	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
In current prices												
Construction	229.6	631.8	644.8	743.8	723.5	830.4	916.6	855.6	1214.0	1311.6	1556.2	1913.3
Machinery and equipment (a)	100.8	371.1	458.3	505.9	784.5	743.1	769.0	926.0	1348.7	2087.0	2314.8	2468.1
Gross fixed capital formation	330.4	1002.9	1103.1	1249.7	1508.0	1573.5	1685.6	1781.6	2562.7	3398.6	3871.0	4399.4
Increase in stock (a)	14.7	81.6	32.0	-161.5	10.4	-121.1	-33.9	-71.3	351.0	-102.0	229.3	155.7
Gross domestic capital formation	345.1	1084.5	1135.1	1088.2	1518.4	1452.4	1651.7	1710.3	2913.7	3296.6	4100.3	4555.1
In 1980 prices												
Construction	229.6	366.6	244.0	319.9	296.8	298.0	306.6	278.7	360.2	392.7	461.8	465.4
Machinery and equipment	100.8	257.8	307.4	332.7	487.3	426.4	419.7	463.5	674.4	640.7	723.0	626.4
Gross fixed capital formation	330.4	624.4	551.4	652.6	784.1	724.4	726.3	742.2	1034.6	1033.4	1184.8	1091.8
Increase in stock (b)	14.7	53.4	22.1	-90.0	4.8	-53.8	-9.2	-17.2	113.3	-30.2	74.0	50.2
Gross domestic capital formation	345.1	677.8	573.5	562.6	788.9	670.6	717.1	725.0	1147.9	1003.2	1258.8	1142.0

(a) Includes additions to livestock treated as fixed capital
(b) Excludes addition to livestock treated as fixed capital

Source: CSO, Ministry of Planning, Thimphu

TABLE 15.6: SHARE OF GROSS DOMESTIC CAPITAL FORMATION IN GDP AT MARKET PRICES, 1980 TO 1995

(Nu. in millions)

Components	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Gross domestic product at market prices	1112.9	2391.4	2801.6	3607.5	3933.7	4381.6	4961.0	5501.5	6353.9	7192.2	8501.1	9968.1
Gross domestic fixed capital formation	330.4	1002.9	1103.1	1249.7	1508.0	1573.5	1685.6	1781.6	2562.7	3398.6	3871.2	4399.1
Gross domestic capital formation	345.1	1084.5	1135.1	1088.2	1518.4	1452.4	1651.7	1710.3	2913.7	3296.6	4100.1	4555.1
Share in Gross domestic product (percent)												
Gross domestic fixed capital formation	29.7	41.9	39.4	34.6	38.3	68.9	34.0	32.4	47.3	47.3	45.5	44.1
Gross domestic capital formation	31.0	45.4	40.5	30.2	38.6	33.1	33.3	31.1	45.9	45.8	48.2	45.7

TABLE 15.7: GROSS AND NET CAPITAL FORMATION, 1980 TO 1995

(Nu. in millions)

Components	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
In current prices												
Gross domestic capital formation	345.1	1084.5	1135.1	1088.2	1518.4	1452.4	1651.6	1710.6	2913.7	3296.6	4100.1	4555.1
Consumption of fixed capital (depreciation)	61.2	137.6	191.6	330.6	362.3	399.0	451.0	503.6	590.7	670.0	846.0	1126.0
Net domestic capital formation	283.9	946.9	943.5	757.6	1156.1	1053.4	1200.6	1207.0	2323.0	2626.6	3254.1	3429.1
Im 1980 prices												
Gross domestic capital formation	345.1	677.8	573.5	562.6	788.9	670.6	727.1	724.7	1034.7	1033.4	1184.8	1091.8
Consumption of fixed capital (depreciation)	61.2	93.6	121.9	197.4	201.8	215.0	217.7	225.0	237.0	249.9	268.2	293.0
Net domestic capital formation	283.9	584.2	451.6	365.2	587.1	455.6	509.4	499.7	797.7	783.5	916.6	798.8

Source: CSO, Ministry of Planning, Thimphu

TABLE 15.8: GROSS AND NET DOMESTIC PRODUCT AND RELATED AGGREGATES, 1980 TO 1995

(Nu. in million)

Aggregates	1980	1987	1988	1989	1990	1991	1992	1993	1994	1995
In current prices										
Net domestic product at factor cost	1034	3200	3489	3909	4397	4839	5587	6337	7305	8485
Add: Consumption of fixed capital	61	331	362	399	451	504	591	670	846	1126
Gross domestic product at factor cost	1095	3531	3851	4308	4848	5342	6178	7007	8151	9611
Add: Indirect taxes, less of subsidies (a)	18	77	83	74	134	159	176	185	351	358
Gross domestic product at market prices	1113	3608	6934	4382	4983	5502	6355	7192	8501	9968
Add: Net factor income from abroad	-200	-350	-344	-172	-326	-491	-734	-875	-914	-1198
Gross national product at market prices	913	3258	3589	4210	4657	5011	5621	6317	7587	8770
In 1980 prices										
Net domestic product at factor cost	1034	1776	1792	1872	2007	2078	2161	2300	2448	2627
Add: Consumption of fixed capital	62	197	202	215	218	225	237	250	268	293
Gross domestic product at factor cost	1095	1973	1994	2087	2225	2303	2398	2549	2716	2920

(a) Excludes excise refunds from Government of India
Source: CSO, Ministry of Planning, Thimphu

TABLE 15.9: ESTIMATES OF FINAL CONSUMPTION EXPENDITURE, GROSS DOMESTIC SAVINGS AND SAVINGS IN CURRENT PRICES, 1980 TO 1995

(Nu. in millions)

Details	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Revenue receipts	101.7	257.5	340.1	841.7	805.0	953.0	1,020.0	985.7	1,493.0	1,567.9	1,685.5	1850.7
Consumption expenditure	1024.5	2067.6	2550.3	2996.6	3246.1	3374.0	3532.7	4244.1	4996.2	4800.3	5679.1	6301.1
Government	275.9	560.9	576.3	633.6	641.1	879.0	948.7	1015.1	1215.2	1241.0	1426.1	1745.1
Private	748.6	1506.7	1974.0	2363.0	2605.0	2495.0	2584.0	3229.0	3781.0	3559.3	4253.0	4556.0
Savings	-105.1	6.5	-63.9	355.2	490.4	1000.4	1360.7	1070.6	960.8	1876.1	2312.4	2885.1
Government	-174.2	-303.4	-236.2	208.1	163.9	74.0	71.3	-29.4	277.8	-333.3	259.6	106.0
Private	69.1	309.9	172.3	147.1	326.5	926.4	1289.4	1100.0	683.0	2209.4	2052.8	2779.1
Gross domestic savings	-105.1	6.5	-63.9	355.2	490.4	1000.4	1360.7	1070.6	960.8	1876.1	2312.4	2885.1
Gross domestic capital formation	345.1	1084.5	1135.1	1088.2	1518.4	1452.4	1651.7	1710.6	2913.8	3296.6	4100.4	4555.1
Net capital inflow	450.2	1078.0	1199.0	733.0	1028.0	452.0	291.0	640.0	1953.0	1420.5	1788.0	1670.0

Source: CSO, Ministry of Planning, Thimphu

CHAPTER 16: PRICES

INTRODUCTION

The only price statistics currently compiled in Bhutan relate to the Consumer Price Index, often referred to as the CPI. The CPI has been produced by the CSO twice a year since December 1979. 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 in 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 basket 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 a greater effect on the CPI than a price change for furniture.

The CPI is presented as Index Numbers, where the indices are measured relative to the base of June 1979 = 100.0 Price change is estimated by measuring change in the Index numbers.

TABLE 16.1: CONSUMER PRICE INDICES FOR FOOD AND NON-FOOD COMPONENTS, BHUTAN, 1989 TO 1995

(December 1979 = 100)

Item	Weight	1989		1990		1991		1992		1993		1994		1995		(%)	
	(%)	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	80-95	79-95
Index																	
Food	72.31	208.4	218.3	225.6	236.1	251.6	271.6	301.2	316.0	335.4	336.0	342.5	347.9	367.7	392.2	..	..
Non-food	27.69	258.4	273.4	299.2	306.5	331.6	336.2	360.1	387.2	426.6	443.3	484.8	519.1	532.2	556.6	..	..
Total	100.00	222.3	233.6	246.0	255.6	273.7	289.5	317.5	355.7	360.6	365.7	381.9	395.3	413.2	437.7	..	..
Percentage change on the previous year																	
Food	72.31	8.7	8.1	8.2	8.1	11.5	15.1	19.7	16.3	11.4	6.3	2.1	3.5	7.3	12.7	9	8.7
Non-food	27.69	9.7	9.1	15.8	12.1	10.8	9.7	8.6	15.2	18.5	14.5	13.7	17.1	9.8	7.2	11.1	11:6
Total	100.00	9.1	8.5	10.7	9.4	11.3	13.3	16.0	16.0	13.6	8.9	5.9	8.1	8.2	10.7	9.7	9.6
Percentage change on the previous period																1979-95	
Food	72.31	3.3	4.7	3.3	4.6	6.6	8.0	10.9	4.9	6.1	0.2	1.9	1.7	5.7	6.7	4.4	..
Non-food	27.69	3.1	5.8	9.4	2.4	8.2	1.4	7.1	7.5	10.2	3.9	9.4	7.1	2.5	4.6	5.5	..
Total	100.00	3.2	5.1	5.3	3.9	7.1	5.8	9.7	5.7	7.4	1.4	4.4	3.5	4.5	5.9	4.7	..

Source: CSO, Ministry of Planning, Thimphu

TABLE 16.2: CONSUMER PRICE INDICES FOR MAJOR ITEMS, BHUTAN, 1989 TO 1995

(December 1979 = 100)

Item	Weight	1989		1990		1991		1992		1993		1994		1995	
	(%)	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
Cereals	37.77	186.4	197.9	206.6	212.1	226.4	240.7	278.9	291.0	304.4	308.1	322.9	326.9	341.3	358.8
Pulses	0.67	251.3	261.8	266.4	288.4	296.3	322.0	313.7	307.0	328.5	255.8	355.7	410.7	441.1	511.5
Vetetables	2.43	279.3	272.1	238.5	224.3	278.2	331.0	291.0	290.7	358.1	392.4	344.7	403.9	454.2	477.6
Fruits	0.04	277.1	254.3	276.1	285.4	303.4	331.4	313.5	473.6	551.9	433.5	643.6	478.8	641.1	506.6
Edible oil and fats	2.87	202.7	209.1	246.2	293.4	311.4	333.5	337.4	323.4	314.1	316.7	310.6	309.8	329.0	332.2
Spices	5.10	253.5	271.3	267.2	278.4	302.7	374.5	456.2	550.0	520.8	579.5	518.6	476.5	536.4	596.8
Milk and its products	7.07	254.7	262.9	273.1	278.9	287.6	309.4	352.6	338.4	336.1	350.1	339.3	362.3	372.2	447.5
Other food and intoxicants	16.36	214.0	221.4	288.7	249.2	261.9	272.8	288.3	293.7	349.2	328.2	338.5	345.5	364.5	374.2
Fuel and lighting	3.65	161.5	165.5	214.6	216.7	216.7	216.7	216.7	216.7	222.2	222.2	225.6	225.6	235.1	235.1
Clothing and footwear	21.20	269.8	287.6	311.8	320.2	350.0	354.7	378.3	411.4	453.6	143.0	532.6	575.2	586.5	616.8
Stationary & personal effects	0.62	241.4	246.9	262.4	278.2	296.8	294.1	299.8	364.5	363.1	358.6	384.1	407.2	416.7	441.0
Miscellaneous goods & services	1.57	322.9	331.7	344.9	338.4	349.3	350.5	428.0	404.6	460.7	475.9	469.6	486.8	503.6	508.3
Furniture and utensils	0.65	265.3	300.5	286.5	314.2	365.8	407.0	462.9	530.8	666.5	619.2	511.4	521.5	604.4	621.9
Total	100.00	222.3	233.6	246.0	255.6	273.7	289.5	317.5	335.7	360.6	365.7	381.9	395.3	413.2	437.7

Source: CSO, Ministry of Planning, Thimphu

TABLE 16.3: CONSUMER PRICE INDICES FOR MAJOR ITEMS, BHUTAN, 1989 TO 1995

(percentage change on the previous period)

Item	Weight	1989		1990		1991		1992		1993		1994		1995		Average
	(%)	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	1979-93
Cereals	37.77	3.7	6.2	4.4	2.7	6.7	6.3	15.9	4.3	4.6	1.2	4.8	1.3	4.4	5.1	4.1
Pulses	0.67	7.6	4.0	1.7	8.3	2.7	8.7	-2.6	-2.1	7.0	2.2	5.9	15.5	7.4	16.0	5.2
Vetetables	2.43	2.1	-2.6	-12.4	-5.9	24.0	19.0	-12.1	-0.1	23.2	9.6	-12.2	17.2	12.5	5.2	5.0
Fruits	0.04	8.8	-8.2	8.6	3.4	6.3	9.2	-5.4	51.1	16.5	-21.5	48.5	-25.6	33.9	-21.0	5.2
Edible oil and fats	2.87	-3.5	3.2	17.7	19.2	6.2	7.1	1.2	-4.1	-2.9	0.8	-1.9	-0.2	6.2	1.0	3.8
Spices	5.10	-8.5	7.0	-1.5	4.2	8.7	23.7	21.8	20.6	-5.3	2.2	-2.5	-8.1	12.6	11.3	5.7
Milk and its products	7.07	2.1	3.2	3.9	2.1	3.1	7.6	5.2	3.9	-0.7	4.2	-3.1	6.8	2.7	20.2	4.8
Other food and intoxicants	16.36	7.8	3.5	3.3	9.0	5.1	4.2	5.7	1.9	18.9	-6.0	3.1	2.1	5.5	2.7	4.2
Fuel and lighting	3.65	0.5	2.5	29.7	1.0	0.0	0.0	0.0	0.0	2.5	0.0	1.5	0.0	4.2	0.0	2.7
Clothing and footwear	21.20	2.7	6.6	8.4	2.7	9.3	1.3	6.7	8.8	10.3	4.9	11.9	8.0	2.0	5.2	5.9
Stationary & personal effects	0.62	4.2	2.3	6.3	6.0	6.7	-0.9	1.9	21.6	-0.4	-1.2	7.1	6.0	2.3	5.8	4.7
Miscellaneous goods and services	1.57	9.6	-0.4	4.0	-1.9	3.2	0.3	22.1	-5.5	13.9	3.3	-1.3	3.7	3.5	0.9	5.2
Furniture and utensils	0.65	7 7	13.3	-4.7	9.7	16.4	11.3	13.7	14.7	25.6	-7.1	-17.4	2.0	15.9	2.9	5.9
Total	100.00	3.2	5.1	5.3	3.9	7.1	5.8	9.7	5.7	7.4	1.4	4.4	3.5	4.5	5.9	4.7

Source: CSO, Ministry of Planning, Thimphu

TABLE 16.4: CONSUMER PRICE INDICES FOR MAJOR ITEMS, BHUTAN, 1989 TO 1995

(percentage change over the previous year)

Item	Weight	1989		1990		1991		1992		1993		1994		1995		growth(%)	
	(%)	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
Cereals	37.77	7.4	10.1	10.8	7.2	9.6	13.5	23.2	20.9	9.1	5.9	6.1	6.1	5.7	9.7	8.7	8.3
Pulses	0.67	22.1	12.1	6.0	10.2	11.2	11.6	5.9	-4.7	4.7	9.4	8.3	22.3	24.0	24.5	9.5	10.7
Vetetables	2.43	36.7	-0.5	-14.6	-17.6	16.6	47.6	4.6	-12.2	23.1	35.0	-3.8	2.9	31.8	18.3	11.1	10.3
Fruits	0.04	0.0	-0.1	-0.4	12.2	9.9	16.1	3.3	42.9	76.1	-8.5	16.6	10.5	-0.4	5.8	13.2	10.7
Edible oil and fats	2.87	-5.6	-0.4	21.5	40.3	26.5	13.7	8.3	-3.0	-6.9	-2.1	-1.1	-2.2	5.9	7.2	7.8	7.8
Spices	5.10	4.3	1.2	5.4	2.6	13.3	34.6	50.7	46.8	14.2	3.3	-0.4	-10.4	3.4	25.3	11.5	11.8
Milk and its products	7.07	11.3	5.4	7.2	6.1	5.3	11.0	13.2	9.4	3.2	3.4	0.9	3.5	9.7	23.5	9.1	9.8
Other food and intoxicants	16.36	9.8	11.6	6.9	12.5	14.5	9.5	10.1	7.7	21.1	11.7	-3.1	5.3	7.7	8.3	8.5	8.6
Fuel and lighting	3.65	10.0	3.0	32.9	30.9	1.0	0.0	0.0	0.0	2.5	2.5	1.5	1.5	4.2	4.2	7.3	5.5
Clothing and footwear	21.20	9.1	9.5	15.6	11.3	212.2	10.8	8.1	16.0	19.9	15.7	17.4	20.8	10.1	7.2	11.4	12.0
Stationary & personal effects	0.62	7.9	6.6	8.7	12.6	13.1	5.7	1.0	23.9	21.1	-1.6	5.8	13.5	8.5	8.3	9.4	9.7
Miscellaneous goods and services	1.57	16.9	9.2	6.3	2.0	1.3	3.6	22.5	15.4	7.6	17.6	1.9	2.3	7.2	4.4	11.8	10.7
Furniture and utensils	0.65	10.5	22.0	8.0	4.5	27.2	29.5	26.6	30.4	44.0	16.7	-23.3	-15.8	18.2	19.3	12.6	12.1
Total	100.00	9.1	8.5	10.7	9.4	11.3	13.3	16.0	16.0	13.6	8.9	5.9	8.1	8.2	10.7	9.7	9.7

Source: CSO, Ministry of Planning, Thimphu

TABLE 16.5: CONSUMER PRICE INDICES FOR FOOD ITEMS, BHUTAN, 1989 TO 1995

(December 1979=100)

Item	Weight	1989		1990		1991		1992		1993		1994		1995	
	(%)	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
Cereals	37.77	186.4	197.9	206.6	212.1	226.4	240.7	278.9	291.0	304.4	308.1	322.9	326.9	341.3	358.8
Pulses	0.67	251.3	261.8	266.4	288.4	296.3	322.0	313.7	307.0	328.5	335.8	355.7	410.7	441.1	511.5
Vetetables	2.43	279.3	272.1	238.5	224.3	278.2	311.0	291.0	290.7	358.1	392.4	344.7	403.9	454.2	477.6
Fruits	0.04	277.1	254.3	276.1	285.4	303.4	311.4	313.5	473.6	551.9	433.5	643.6	478.8	641.1	506.6
Edible oil and fats	2.87	202.7	209.1	246.2	293.4	311.4	333.5	337.4	323.4	314.1	316.7	310.6	309.8	329.0	332.2
Spices	5.10	253.5	271.3	267.2	278.4	302.7	374.5	456.2	550.0	520.8	532.1	518.6	476.5	536.4	596.9
Milk and its products	7.07	254.7	261.9	273.1	278.9	287.6	309.4	325.6	338.4	366.1	350.1	339.3	362.3	372.2	447.5
Sugar	1.03	207.6	221.5	249.8	249.6	251.7	253.9	272.8	272.6	279.0	313.3	396.5	367.3	387.6	387.9
Beverages	1.34	242.7	243.4	311.4	324.9	340.0	395.5	432.9	395.9	426.2	432.2	447.7	461.4	495.0	494.7
Meat and fish	9.10	242.1	247.9	244.1	278.6	297.2	301.8	317.8	325.5	416.3	364.1	369.8	376.9	402.2	416.3
Eggs	0.19	222.1	227.7	262.8	243.0	244.7	274.0	260.8	305.7	305.0	322.9	333.3	325.8	330.7	351.4
Intoxicants	3.38	146.8	159.2	166.8	170.8	172.8	179.6	188.8	201.6	206.4	223.6	236.0	249.2	252.8	256.4
Tobacco	1.32	166.4	173.8	174.4	170.1	176.9	200.5	207.3	219.8	233.0	254.0	227.6	241.5	243.6	254.7
Total	72.31	208.4	218.3	225.6	236.1	251.6	271.6	301.2	316.0	335.4	336.0	342.5	347.9	367.7	392.2

Source: CSO, Ministry of Planning, Thimphu

TABLE 16.6: CONSUMER PRICE INDICES FOR FOOD ITEMS, BHUTAN, 1989 TO 1995

(percent change over the preceeding year)

Item	Weight	1989		1990		1991		1992		1993		1994		1995		growth(%)	
	(%)	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	June	Dec
Cereals	37.77	7.4	10.1	10.8	7.2	9.6	13.5	23.2	20.9	9.1	5.9	6.1	6.1	5.7	9.7	8.7	8.3
Pulses	0.67	22.1	12.1	6.0	10.2	12.2	11.6	5.9	-4.7	4.7	9.4	8.3	22.3	24.0	24.5	9.5	10.7
Vetetables	2.43	36.7	-0.5	-14.6	-17.6	16.6	47.6	4.6	-12.2	23.1	35.0	-3.8	2.9	31.8	18.3	11.1	10.3
Fruits	0.04	0.0	-1.0	-4.0	12.2	9.9	16.1	3.3	42.9	76.1	-8.5	16.6	10.5	-0.4	5.8	13.2	10.7
Edible oil and fats	2.87	-5.6	-4.0	21.5	40.3	6.5	13.7	8.3	-3.0	-6.9	-2.1	-1.1	-2.2	5.9	7.2	7.8	7.8
Spices	5.10	4.3	1.2	5.4	2.6	13.3	34.6	50.7	46.8	14.2	-3.3	-0.4	-10.4	3.4	25.3	11.5	9.8
Milk and its products	7.07	11.3	5.4	7.2	6.1	5.3	11.0	13.2	9.4	3.2	3.4	0.9	3.5	9.7	23.5	9.1	9.8
Sugar	1.03	18.1	17.9	20.3	12.7	0.8	1.7	8.4	7.4	2.3	15.0	42.1	17.2	-2.2	5.6	6.4	8.8
Beverages	1.34	14.5	10.2	28.3	33.5	9.2	21.7	27.3	0.1	-1.5	9.2	5.1	6.8	10.6	7.2	10.8	10.5
Meat and fish	9.10	9.3	11.0	0.8	12.4	21.7	8.3	6.9	7.9	31.0	11.8	-11.2	3.5	8.7	10.5	9.6	9.3
Eggs	0.19	2.4	2.1	18.3	6.7	-6.9	12.8	6.6	11.6	17.0	5.7	9.3	0.9	-0.8	7.9	7.3	8.2
Intoxicants	3.38	2.8	11.2	13.6	7.3	3.6	5.2	9.3	12.2	9.3	10.9	14.3	11.4	7.1	2.9	5.1	6.1
Tobacco	1.32	20.6	16.2	4.9	-2.1	1.4	17.9	17.2	9.6	12.4	15.5	-2.3	-4.9	7.0	5.4	7.8	6.0
Total	72.31	8.7	8.1	8.2	8.1	11.5	15.1	19.7	16.3	11.4	6.3	2.1	3.5	7.3	12.7	9.0	8.9

Source: CSO, Ministry of Planning, Thimphu

TABLE 16.7: CONSUMER PRICE INDICES FOR FOOD ITEMS, BHUTAN, 1989 TO 1995

(percent change over the preceding period)

Item	Weight (%)	1989 Jun	1989 Dec	1990 Jun	1990 Dec	1991 Jun	1991 Dec	1992 Jun	1992 Dec	1993 Jun	1993 Dec	1994 Jun	1994 Dec	1995 Jun	Average Dec 1979-95
Cereals	37.77	3.7	6.2	4.4	2.7	6.7	6.3	15.9	4.3	4.6	1.2	4.8	1.3	4.4	5.1	4.1
Pulses	0.67	7.6	4.2	1.7	8.3	2.7	8.7	-2.6	-2.1	7.0	2.2	5.9	15.5	7.4	16.0	5.2
Vetetables	2.43	2.1	-2.6	-12.4	-5.9	24.0	19.0	-12.1	-0.1	23.2	9.6	-12.2	17.2	12.5	5.2	5.0
Fruits	0.04	8.8	-8.2	8.6	3.4	6.3	9.2	-5.4	51.1	16.5	-21.5	48.5	-25.6	33.9	-21.0	5.2
Edible oil and fats	2.87	-3.5	3.2	17.7	19.2	6.2	7.1	1.2	-4.1	-2.9	0.8	-1.9	-0.2	6.2	1.0	3.8
Spices	5.10	-5.5	7.0	-1.5	4.2	8.7	23.7	21.8	20.6	-5.3	2.2	-2.5	-8.1	12.6	11.3	5.7
Milk and its products	7.07	2.1	3.2	3.9	2.1	3.1	7.6	5.2	3.9	-0.7	4.2	-3.1	6.8	2.7	20.2	4.8
Sugar	1.03	10.5	6.7	12.8	-0.1	0.9	0.9	7.5	-0.1	2.4	12.3	26.5	-7.4	5.5	0.1	4.3
Beverages	1.34	9.9	0.3	27.9	4.4	4.6	16.3	9.5	-8.5	7.7	1.4	3.6	3.1	7.3	-0.1	5.1
Meat and fish	9.10	8.4	2.4	-1.5	14.1	6.7	1.6	5.3	2.4	27.9	-12.5	1.6	1.9	6.7	3.5	4.6
Eggs	0.19	-0.5	2.5	15.4	-7.5	0.7	12.0	-4.8	17.2	-0.2	5.9	3.2	-2.2	1.5	6.2	4.0
Intoxicants	3.38	2.5	8.4	4.8	2.4	1.2	3.9	5.1	6.8	2.4	8.3	5.5	5.6	1.4	1.4	3.0
Tobacco	1.32	11.3	4.5	0.4	-2.5	4.0	13.4	3.4	6.1	6.0	9.0	-10.4	6.1	0.8	4.6	3.0
Total	72.31	3.3	4.7	3.3	4.6	6.6	8.0	10.9	4.9	6.1	0.2	1.9	1.6	5.7	6.7	4.4

Source: CSO, Ministry of Planning, Thimphu

TABLE 16.8: QUARTERLY PRICE INDICES FOR FOOD ITEMS, THIMPHU TOWN, 1989 TO 1995

(December 1979 = 100)

Period	Cereals and pulses	Vegetables and fruits	Other food items	Total food items
Quarter ending:				
1989				
March	172.8	261.8	228.3	198.0
June	178.0	290.0	235.1	204.6
September	180.3	292.8	239.3	207.7
December	182.5	284.9	245.9	211.3
1990				
March	189.8	267.7	254.6	218.2
June	198.4	286.6	275.8	232.2
September	201.7	263.2	261.7	227.6
December	202.9	316.4	280.6	237.7
1991				
March	210.8	375.1	294.1	249.7
June	213.6	473.4	297.3	256.1
September	227.7	447.8	300.6	264.5
December	235.7	527.4	313.6	277.1
1992				
March	258.4	534.4	316.7	291.5
June	280.5	548.1	337.6	312.8
September	285.1	550.8	344.9	318.4
December	285.1	607.3	383.6	335.8
1993				
March	300.9	814.7	395.1	356.9
June	304.9	819.0	402.0	362.0
September	312.0	760.9	404.1	364.8
December	320.4	925.0	411.8	379.2
1994				
March	325.5	762.3	412.2	375.7
June	335.8	857.0	441.5	396.6
September	350.7	827.2	435.1	401.5
December	357.9	1,007.3	452.8	419.1
1995				
March	359.6	1,203.7	465.6	432.3
June	383.0	1,427.1	481.1	459.9
September	414.5	1,775.6	507.0	500.9
December	452.7	1,680.1	517.7	527.4

Source: CSO, Ministry of Planning, Thimphu

TABLE 16.9: QUARTERLY PRICE INDICES FOR FOOD ITEMS, THIMPHU TOWN, 1989 TO 1995

(percentage change over the preceeding quarter)

Period	Cereals and pulses	Vegetables and fruits	Other food item	Total food item
Quarter ending:				
1989				
March	1.5	0.5	0.7	1.1
June	3.0	10.8	3.0	3.3
September	1.3	1.0	1.8	1.5
December	1.2	-2.7	2.8	1.7
1990				
March	4.0	-6.0	3.5	3.3
June	4.5	7.1	8.3	6.4
September	1.7	-8.2	-5.1	-2.0
December	0.6	20.2	7.2	4.4
1991				
March	3.9	18.6	4.8	5.0
June	1.3	26.2	1.1	2.6
September	6.6	-5.4	1.1	3.3
December	3.5	17.8	4.3	4.8
1992				
March	9.6	1.3	1.0	5.2
June	8.6	2.6	6.6	7.3
September	1.6	0.5	2.2	1.8
December	0.0	10.3	11.2	5.5
1993				
March	5.5	34.2	3.0	6.3
June	1.3	0.5	1.7	1.4
September	2.3	-7.1	0.5	0.8
December	2.7	21.6	1.9	3.9
1994				
March	1.6	-17.6	0.1	0.8
June	3.2	12.4	7.1	5.6
September	4.4	-3.5	-1.5	1.2
December	2.0	21.8	4.1	4.4
1995				
March	0.5	19.5	2.8	3.1
June	6.5	18.6	3.3	6.4
September	8.2	24.4	5.4	8.9
December	9.2	-5.4	2.1	5.3

Source: CSO, Ministry of Planning, Thimphu

CHAPTER 17: CRIME

INTRODUCTION

Bhutan had been a very peaceful country in the past and incidence of crime was rare. But in the recent past, crimes have become noticeable. This chapter presents the crime statistics including other offenses recorded with the Royal Bhutan Police. The nature and type of crime reported here reflects on the peace and security of the community. The content and coverage of the chapter should improve in our subsequent issues.

TABLE 16.1: CRIME REPORTS BY NATURE OF CRIME, BHUTAN, 1986 TO 1995

(numbers)

Nature of crime	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Crime against human body	492	654	627	726	711	461	533	551	550	542
Sexual offence	31	35	26	34	39	35	41	35	47	52
Crime against property	548	716	667	811	802	737	1,008	956	893	785
Moter vehicle accident	244	313	387	475	383	276	310	354	335	334
Forest offence	19	27	21	30	13	11	11	17	13	7
Antiques	2	1	4	2	26	49	113	128	104	90
Fire incidents	43	65	58	60	63	60	44	44	48	59
Others	108	123	175	177	190	141	128	122	118	154
All crimes	1,487	1,934	1,965	2,315	2,227	1,770	2,188	2,207	2,108	2,023

Source: Royal Bhutan Police, Thimphu

TABLE 17.2: DETAILS OF CRIME AGAINST HUMAN BODY, BHUTAN, 1986 TO 1995

(numbers)

Details	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Murder	8	7	12	14	20	12	27	19	20	16
Attempted murder	11	11	14	10	11	9	12	15	19	10
Dacoity with murder	-	-	-	-	4	1	2	-	3	1
Robbery with murder	-	-	-	-	-	1	1	1	-	-
Suspect homicide	-	-	-	1	-	-	-	-	-	-
Homicide murder	-	-	-	1	1	-	-	-	-	2
Suspect murder	-	1	1	-	2	-	1	-	-	2
Infanticide	-	-	-	1	1	-	-	-	-	-
Unnatural death	4	18	39	41	42	23	10	31	24	24
Accidental death	43	29	15	31	30	18	46	32	23	42
Sudden death	-	-	-	-	-	1	-	-	-	-
Drowning	16	11	21	18	20	23	12	18	22	29
Suicide	23	33	27	29	34	28	19	24	29	26
Attempted suicide	2	9	8	19	6	5	12	8	13	7
Assault	356	481	470	540	494	312	355	385	373	367
Abduction	13	15	14	9	14	9	2	-	2	2
Kidnapping	7	2	-	1	14	6	5	3	2	1
Poisoning	8	5	2	4	3	1	14	4	4	1
Contempt of lawful	-	1	-	1	3	1	-	6	8	1
Wrongful confinement	-	2	-	-	-	-	1	1	-	n.a
Affray	-	1	-	3	3	3	3	-	7	3
Accidental injury	-	1	-	-	-	-	-	-	-	1
Querreling	-	1	-	-	-	-	1	-	-	n.a
Black magic	-	4	4	1	1	-	1	1	1	1
Defamation	-	-	-	-	1	2	4	1	-	1
Against the will	-	-	-	-	2	-	-	-	-	n.a
Wrongful restraint	-	-	-	-	-	-	-	2	-	n.a
Grevious hurt	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	2
All crimes against human body	491	632	627	724	706	455	528	551	550	539

Source: Royal Bhutan Police, Bhutan

TABLE 17.3: DETAILS OF SEXUAL OFFENCES, BHUTAN, 1986 TO 1995

(Numbers)

Details	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Rape	14	6	8	7	4	19	11	9	14	10
Attempted rape	-	5	6	7	10	6	8	8	5	9
Adultry	11	19	10	8	10	6	7	8	5	8
Incest	-	-	-	3	2	-	-	1	1	-
Molestation	-	-	-	-	-	-	-	1	-	2
Elopment	6	3	-	9	11	4	12	6	15	15
Eve teasing	-	-	2	-	2	-	-	-	2	2
Unnatural offence	-	1	-	-	-	-	2	-	1	-
Conjugal	-	1	-	-	-	-	-	-	-	-
Prostitution	-	-	-	-	-	-	1	1	2	6
Robbery cum rape	-	-	-	-	-	-	-	1	-	-
Dacoity cum rape	-	-	-	-	-	-	-	-	2	-
All sexual offences	31	35	26	34	39	35	41	35	47	52

Source: Royal Bhutan Police, Thimphu

TABLE 17.4: DETAILS OF CRIME AGAINST PROPERTY, BHUTAN, 1986 TO 1995

(numbers)

Details	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Theft	442	539	441	501	501	354	534	427	383	383
Burglary	8	17	28	118	110	93	86	109	126	126
House breaking	8	11	30	13	18	11	6	7	4	4
Robbery	11	8	13	16	15	48	73	60	45	28
Dacoity	-	6	9	15	21	74	128	139	108	58
Pick pocketing	7	11	6	19	9	3	5	13	12	6
Cheating	28	27	36	33	31	26	38	22	29	18
Loss of property	12	16	32	16	25	26	33	52	40	36
Forgery	6	1	12	5	2	3	5	8	6	3
Criminal breach of trust	1	17	6	3	7	1	10	18	8	14
Embezzlement	4	4	2	4	2	4	-	4	2	5
Counterfeit of coin/notes	1	1	-	-	2	-	-	1	5	1
Misappropriation	5	5	-	2	-	-	3	1	1	6
Cattle lifting	2	12	14	24	16	50	25	28	41	29
Mischief	8	15	22	28	27	24	36	28	26	45
Extortion	2	4	-	2	2	1	3	4	7	7
Scooter theft	-	-	1	1	-	-	-	-	6	2
Theft of vehicle	-	-	-	-	6	4	2	12	8	-
Hijacking	-	-	-	-	-	7	11	9	12	4
Food adulteration	-	-	1	1	-	-	-	-	-	n.a
Attempted to robbery	-	-	1	-	-	2	1	3	5	2
Illegal tresspass	1	6	5	2	-	-	-	1	1	n.a
Attempted to theft	2	7	1	4	1	1	-	-	4	n.a
Monetary	-	8	-	-	3	1	4	-	-	n.a
Suspect theft	-	1	-	-	-	1	1	-	4	n.a
House tresspass	-	-	-	-	2	2	3	2	1	2
Trafficking in fair sex	-	-	-	2	-	-	-	-	-	n.a
Attempted to dacoity	-	-	2	-	1	-	1	4	3	n.a
Criminal tresspass	-	-	4	1	1	-	-	3	6	1
Counterfeit of currency	-	-	1	-	-	-	-	-	-	n.a
Bribery	-	-	-	1	-	1	-	-	-	n.a
Weight and measurers	-	-	-	-	-	-	-	1	-	n.a
Smuggling	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	4
Conspiracy	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	1
All crimes against property	548	716	667	811	802	737	1,008	956	893	785

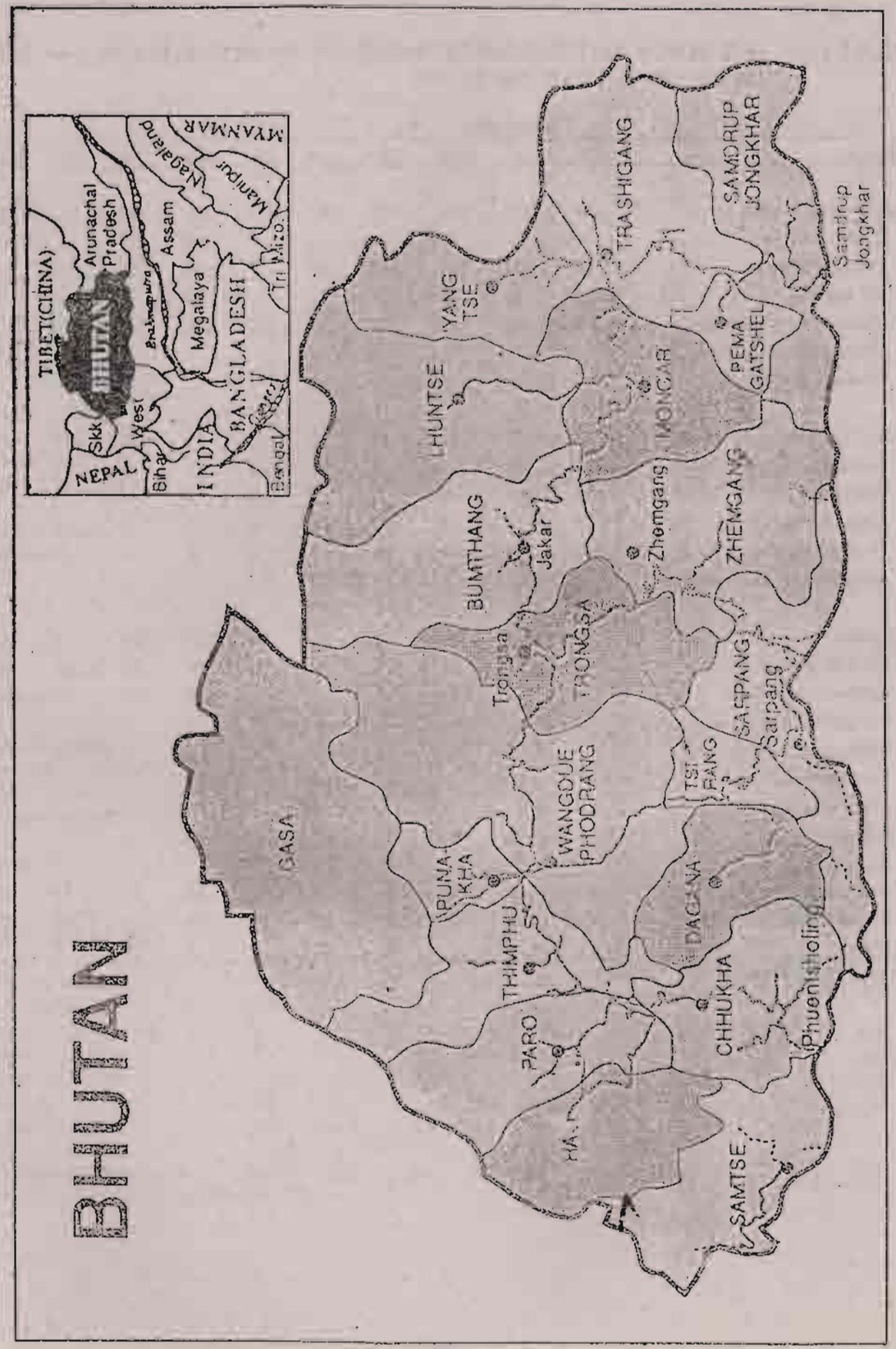
Source: Royal Bhutan Police, Thimphu

TABLE 17.5: DETAILS OF MOTOR VEHICLE, ANTIQUES, FOREST OFFENCES AND FIRE INCIDENTS, BHUTAN 1986 TO 1995

(numbers)

Details	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Motor vehicle offences	244	313	387	475	383	276	310	354	335	334
Cycle accidents	-	-	2	-	-	3	1	-	-	1
Traffic voilation	20	21	115	144	104	37	25	62	23	48
Hit and run	3	25	16	31	20	15	29	9	25	16
Motor vehicle accident	221	267	254	299	258	220	255	283	283	261
Motor vehicle accident (fatal)	-	-	-	1	-	-	-	-	4	8
Accident pay loader	-	-	-	-	1	1	-	-	-	-
Forest offences	19	27	21	30	13	11	11	17	13	7
Hunting	-	3	-	2	1	2	1	2	1	-
Poaching	11	9	8	8	5	5	1	9	4	2
Illegal fishing	8	12	8	19	4	1	1	2	5	1
Theft of forest product	-	3	3	1	3	3	8	4	3	4
Smuggling of forest product	-	-	2	-	-	-	-	-	-	-
Antiques	2	1	4	2	26	49	113	128	104	90
Theft of antique	2	1	4	1	20	36	24	32	17	10
Chhoeten vandalism	-	-	-	-	4	9	87	92	83	77
Smuggling of antique	-	-	-	-	1	-	1	1	3	1
Smuggling of musk	-	-	-	1	-	1	-	1	1	2
Musk antique	-	-	-	-	-	1	-	-	-	-
Musk trapping	-	-	-	-	1	1	-	-	-	-
Antique	-	-	-	-	-	1	1	2	-	-
Fire accident	43	65	58	60	63	60	44	44	48	59
Fire accident	43	65	58	60	52	52	37	33	40	52
Arson	-	-	-	-	11	8	7	11	8	7

Source: Royal Bhutan Police, Thimphu



ANNEX I

ADMINISTRATIVE UNITS WITH THEIR STANDARD SPELLINGS, 1995

I. Thimphu Dzongkhag
Gewogs:
1. Bapisa
2. Chang
3. Dagala
4. Genye
5. Kawang
6. Mewang
7. Teopisa
(a) Lingshi Dungkhag
8. Lingzhi
9. Naro
10. Soe

II. Chhukha Dzongkhag
Gewogs:
1. Bongo
2. Chapchha
3. Dungna
4. Getana
5. Geyle
6. Hyachho
7. Metab
(a) Phuentsholing Dungkhag
8. Balujora
9. Dala
10. Logchina
11. Phuentsholing

III. Ha Dzongkhag
Gewogs:
1. Bji
2. Uesu
3. Katsho
4. Sama
5. Sangbe

IV. Paro Dzongkhag
Gewogs:
1. Dogar
2. Doteahari
3. Doteng
4. Hungrey
5. Lango
6. Lungnyi
7. Naji
8. Shaba
9. Tsento
10. Wangchang

V. Samtse Dzongkhag
Gewogs:
1. Pagli
2. Samtse
3. Tading
(a) Chengmari Dungkhag
4. Charghare
5. Chengmari
6. Gumaune
7. Nainital
(b) Dorokha Dungkhag
8. Denchhukha
9. Dorokha
10. Dumtoe
11. Mayona
(c) Sipsu Dungkhag
12. Bangra
13. Biru
14. Lahireni
15. Sipsu
16. Tendru

VI. Tsirang Dzongkhag
Gewogs:
1. Tsirangdrangra
2. Dunglegang
3. Gozeling
4. Kikhothang
5. Patale
6. Phuentenchhu
7. Semjong
8. Tshokhana
(a) Lamidangra Dungkhag
9. Beteni
10. Chunautte
11. Gorigang
12. Lamidrangra

VII. Daga Dzongkhag
Gewogs:
1. Drugegang
2. Kabdzingkha
3. Khilpara
4. Lajap
5. Tsangkha
6. Tsera
(a) Dagapela Dungkhag
7. Dorona
8. Emeri
9. Gozhing
10. Suntali
11. Trashiding

VIII. Punakha Dzongkhag
Gewogs:
1. Chhubu
2. Goenshari
3. Guma
4. Hjimena
5. Kabjisa
6. Lingmukha
7. Shengana
8. Talo
9. Teowang
10. Dzomma

IX. Gasa Dzongkhag
Gewogs:
1. Goenkhame
2. Goenkhatoe
3. Laya
4. Lungnana

X. Wangduephodrang Dzongkhag
Gewogs:
1. Athang
2. Daga
3. Dangchhu
4. Gangte
5. Gase Tsho gom
6. Gase Tsho om
7. Bjena
8. Kazhi
9. Nahi
10. Nyisho
11. Phang yur
12. Phobji
13. Ruepisa
14. Sephu
15. Thedtso

ADMINISTRATIVE UNITS WITH THEIR STANDARD SPELLINGS, 1995 (Continuation)

XI. Bjaka Dzongkhag
Gewogs:
1. Chhoekho
2. Chhume
3. Tang
4. Ura

XII. Sarpang Dzongkhag
Gewogs:
1. Doban
2. Hiley
3. Leopani
4. Sarpangtar
5. Senge
(a) Geylephug Dungkhag
6. Bhur
7. Danabari
8. Gelephu
9. Lalai
10. Serzhong
11. Surey
12. Taklai
(b) Kalikhola Dungkhag
13. Deorali
14. Kalikhola
10. Nichula

XIII. Zhemgang Dzongkhag
Gewogs:
1. Bardo
2. Nangkor
3. Shingkhar
4. Trong
(a) Panbang Dungkhag
5. Bjoka
6. Ngangla
7. Phangkhar

XIV. Trongsa Dzongkhag
Gewogs:
1. Bjakteng
2. Korphu
3. Langthi
4. Nubi
5. Tangsibji

XV. Lhuntshi Dzongkhag
Gewogs:
1. Gangzur
2. Jare
3. Khoma
4. Kurteo
5. Menbi
6. Minji
7. Metsho
8. Tsenkhar

XVI. Monggar Dzongkhag
Gewogs:
1. Chaskhar
2. Drametse
3. Gungdue
4. Kengkhar
5. Monggar
6. Ngatshang
7. Saleng
8. Silambi
9. Thangrong
10. Tsakaling
11. Tsamang

XVII. Pemagatsel Dzongkhag
Gewogs:
1. Chongshing
2. Dungme
3. Chhimung
4. Khar
5. Shumar
6. Yurung
7. Zobe
8. Khangma

XVIII. Samdrup Jongkha Dzongkhag
Gewogs:
1. Orong
2. Gomdar
(a) Dechhenling Dungkhag
3. Dechhenling
4. Norbugang
(b) Bangtar Dungkhag
5. Bakuli
6. Dalim
7. Martshala
8. Samrang

(c) Daifam Dungkhag
9. Hastinapur
10. Shingkharlauri
11. Serthig

XIX. Trashigang Dzongkhag
Gewogs:
1. Bartsham
2. Bidung
3. Kanglung
4. Phongme
5. Radi
6. Samkhar
7. Shongphu
8. Udzorong
9. Yangnyer
(a) Sakteng Dungkhag
10. Mera
11. Sakteng
(b) Thrimshing Dungkhag
12. Kangpara
13. Thrimshing
(c) Wamrong Dungkhag
14. Khaling
15. Lumang
16. Nanong

XX. Yangtse Dzongkhag
Gewogs:
1. Khamdang
2. Tomzhangtshen
3. Teotsho
4. Yalang
5. Yangtse
6. Ramjar
7. Bumdeling
8. Jamkhar

Total dzongkhags = 20
Total gewogs = 197

Source: Ministry of Home Affairs, Thimphu

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