STATISTICAL YEARBOOK OF BHUTAN

1996

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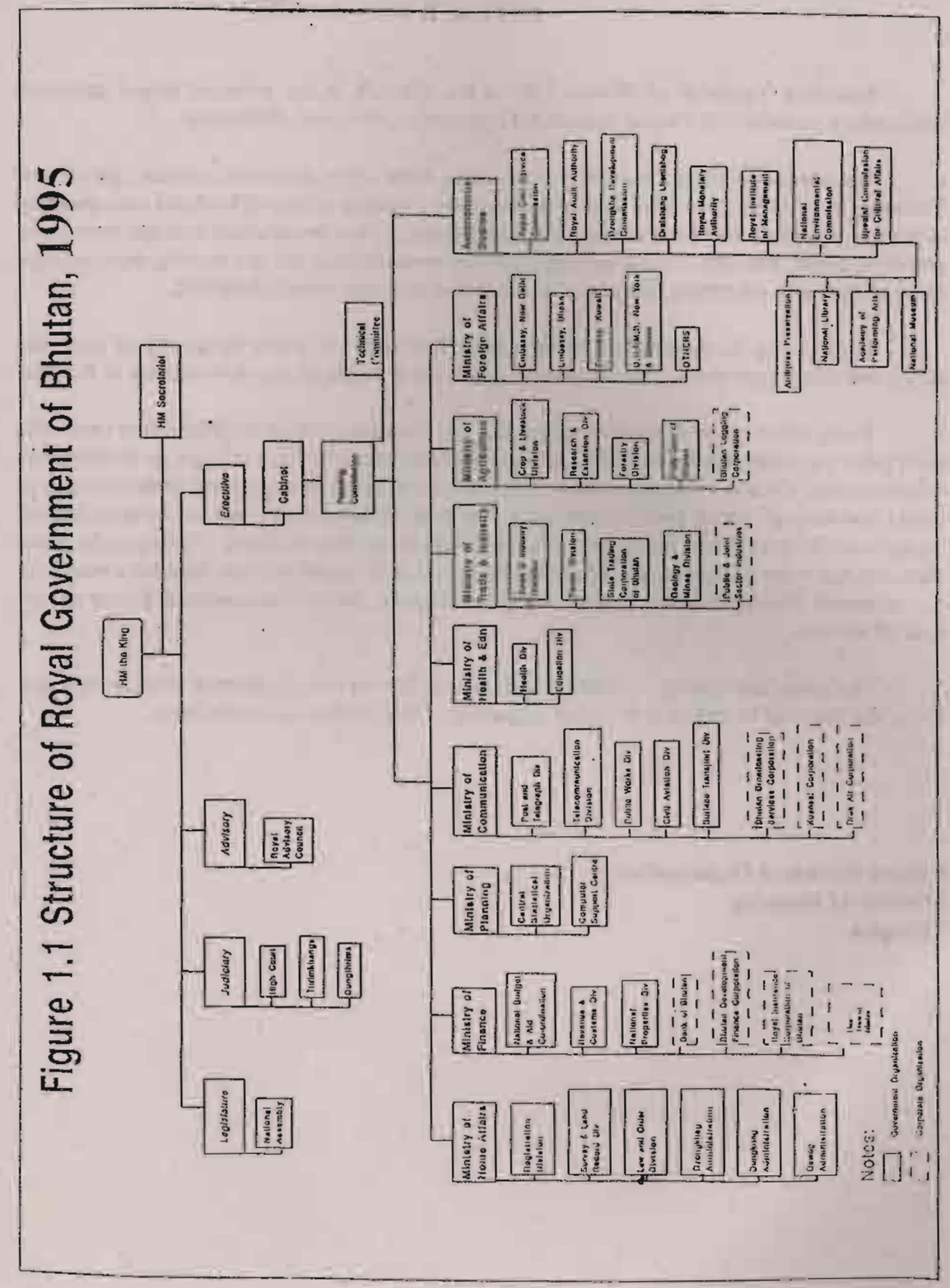

Figure 1.1 Structure of Royal Government of Bhutan, 1995

BHUTAN AT A GLANCE

POPULATION		
Population 1996 (projected)	numbers	600,000
Urban population 1993 (estimate)	Percent	14.5
Area of Bhutan	sq. km.	46,500
Population density	persons/sq. km.	13
Birth rate 1994	per 1000 population	39.9
Death rate 1994	per 1000 population	9.0
Infant mortality 1994	per 1000 live birth	70.7
Life expectancy 1994		
Males	years	66.0
Females	years	66.2
Health 1996		
Population per doctor	numbers	5,825
Population per hospital bed	numbers	556
Education 1996		
Number of schools		300
Number of students		84,157
Number of teachers		2,517
Agriculture and Forestry 1996		
Agriculture land	% of total area	7.7
Forested land	% of total area	72.5
Transport and Communication 1996		
Road length	km	3,375.65
Energy 1995/96		
Electricity generation	MU	1,972.18
Electricity sale	MU	342.79
Electricity export	MU	1,564.04
Balance of Payments 1995/96		
Value of exports	million Nu.	3,349.13
Value of imports	million Nu.	-3,802.34
Trade balance	million Nu.	-453.21
Current account balance	million Nu.	-1,272.45
Overall balance	million Nu.	855.78
International reserves		
Rupees	million Rs.	150.54
Convertible currency	million US $	140.81
National Accounts Statistics		
Agricultural share to GDP 1996	%	38.6
GDP Real growth 1996	%	6.1
Consumer Price Index		
Change Dec 1995 to Dec 1996	%	8.3
Average change 1979 to 1996	%	9.6

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 ones. 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 meters 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 meters) 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. The

third Druk Gyalpo, Jigme Dorji Wangchuck began a campaign of modernization and expansion of Bhutan's government and society based on the accomplishments of his two predecessors in uniting the country under a strong central authority. Hence, the National Assembly consisting of representatives of the people, the Monastic order and Civil administration was reestablished in 1953. The present Druk Gyalpo, His Majesty King Jigme Singye Wangchuck acceded to the throne in 1972. His Majesty the king is the head of state 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.

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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 unless otherwise footnoted
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.
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.

SOME UNITS OF MEASUREMENT

Numbering (UK)

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

A. Length Measurement

1. Metric equivalents

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

Abbreviations

mm	= millimetre
cm	= centimetre
m	= metre
dm	= decimetre
hm	= hectometre

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 vitals 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 in the child-bearing age (15 to 44 or 49).

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

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

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

Life expectancy at birth: The numbers of years a newborn infant would live if prevailing patterns of mortality at the time of birth were to stay the same throught the child's life.

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.

Maternal mortality rate: The annual number of deaths of women from pregnancy-related causes

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, 1996

Age group	Persons			Percent		
	Total	Male	Female	Total	Male	Female
0 - 4	92,702	46,454	46,248	15.5	7.7	7.7
5 - 9	86,905	43,152	43,753	14.5	7.2	7.3
10 - 14	72,699	36,818	35,881	12.1	6.1	6.0
15 - 19	53,948	27,364	26,584	9.0	4.6	4.4
20 - 24	47,637	23,667	23,970	7.9	3.9	4.0
25 - 29	40,890	20,454	20,436	6.8	3.4	3.4
30 - 34	36,693	18,515	18,178	6.1	3.1	3.0
35 - 39	33,613	17,365	16,248	5.6	2.9	2.7
40 - 44	28,329	14,606	13,723	4.7	2.4	2.3
45 - 49	22,778	11,818	10,960	3.8	2.0	1.8
50 - 54	21,606	11,121	10,485	3.6	1.9	1.7
55 - 59	19,117	9,879	9,238	3.2	1.6	1.5
60 - 64	17,556	9,061	8,495	2.9	1.5	1.4
65 - 69	10,588	5,212	5,376	1.8	0.9	0.9
70 - 74	7,200	3,606	3,594	1.2	0.6	0.6
75 +	7,739	3,878	3,861	1.3	0.6	0.6
All ages	600,000	302,970	297,030	100.0	51.0	49.0

Note: Estimates based on the population projection report prepared by Dr. Chowdary, March 1996.

Source: CSO, Ministry of Planning

TABLE 1.2: SUMMARY OF POPULATION INDICATORS, 1990 TO 1996

Population Indicators	1990	1991	1992	1993	1994	1995	1996
Sex Ratio (males per 100 females)	102.5	102.3	102.1	102.0	104.1	104.1	102.0
Age Composition (%)							
0 - 14	100.0	100.0	100.0	100.0	100.0	100.0	100.0
15 - 49	39.2	38.9	38.7	38.6	39.2	39.2	42.1
50 - 59	47.3	47.7	47.9	48.0	47.3	47.3	44.0
60 +	6.6	6.6	6.7	6.8	6.6	6.6	6.8
	6.9	6.8	6.7	6.6	6.9	6.9	7.1
Median age(years)	20.5	20.5	20.6	20.6	20.5	20.5	19.4
Dependency Ratio	67.4	68.8	68.4	68.6	69.6	69.6	78.3
Child dependency	6.8	7.7	7.6	7.5	7.8	7.8	7.9
Old age dependency	74.2	76.4	76.0	76.1	77.4	77.4	86.2
Total dependency	10.1	11.1	11.0	11.0	11.3	11.3	10.1
Index of aging							

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	Female
0 - 14	99.9	99.8	-	-	-	-	-	-	100.0	100.
15 - 19	92.1	73.4	7.7	25.5	-	-	-	-	100.0	100.
20 - 24	54.5	30.1	43.8	64.8	1.5	4.4	-	-	100.0	100.
25 - 29	26.8	12.4	70.0	80.5	2.4	5.7	-	1.4	100.0	100.
30 - 34	13.1	8.4	82.8	81.3	1.9	7.3	2.3	3.1	100.0	100.
35 - 39	10.0	5.5	85.8	84.9	1.8	5.7	2.5	3.9	100.0	100.
40 - 44	7.6	6.3	87.9	81.4	1.7	5.3	2.8	7.0	100.0	100.
45 - 49	6.9	6.9	86.8	78.7	1.4	5.4	5.0	9.1	100.0	100.(
50 +	6.5	4.2	75.4	58.8	2.3	4.8	15.7	32.2	100.0	100.(
All ages	57.8	52.0	38.0	39.0	1.0	2.8	3.2	6.2	100.0	100.(

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**
Mortility		
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)		
Males	47.5	66.1
Females	45.8	66.0
	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 1996

Facilities	1988	1989	1990	1991	1992	1993	1994	1995	1996
Number of hospitals	28	26	26	26	26	26	26	26	28
Number of basic health units	69	69	71	74	75	79	84	84	145
Number of dispensaries	46	46	44	43	43	41	42	44	n.a
Number of indigenous hospitals	1	1	1	1	1	1	1	1	1
Number of indigenous dispensaries	6	6	6	6	6	7	8	11	10
Number of doctors	138	157	157	109	106	88	100	112	103
Persons per doctor	9,700	9,100	n.a	n.a	n.a	n.a	n.a	5,196	5,825
Number of hospital beds	932	944	944	914	954	979	970	970	1,080
Persons per hospital bed	1,500	1,500	n.a	n.a	n.a	n.a	n.a	600	556
Doctors per 10,000 persons	1	1	n.a	n.a	n.a	n.a	n.a	1.9	1.7
Hospital bed per 10,000 persons	7	7	n.a	n.a	n.a	n.a	n.a	17	18
Population covered by health care (%)	65	65	65	90	70	n.a	90	90	90
Population access to safe drinking water (%)	n.a	38	38	54	54	n.a	35	43	45
Women attended by trained personnel during child birth (%)	n.a	16	21	25	25	36	25	79	78

Note: Includes doctors in adminstrative services, non-nationals and expatriates.

Source: Health Division, Thimphu

TABLE 2.2: TYPE OF HEALTH FACILITIES IN DZONKHAGS, 1996

(numbers)

Dzongkhag	Hospitals	Basic health unit	Outreach clinic
Bjakar	1	3	23
Chhukha	2	8	39
Dagana	0	5	16
Gasa	0	3	7
Haa	1	3	15
Lhuntse	1	7	27
Mongar	1	13	55
Paro	1	3	19
Pemagatshel	1	4	24
Punakha	1	5	12
Samtse	3	4	0
Samdrupjongkha	2	11	38
Sarpang	2	5	0
Thimphu	4	4	25
Trashigang	3	17	56
Trashiyangtse	1	3	20
Trongsa	1	4	23
Tsirang	1	1	0
Wangduephodrang	1	7	23
Zhemgang	1	13	32
Bhutan	28	123	454

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

Source: Annual Health Report,Health Division,Ministry of Health and Education, Thimphu.

TABLE 2.3: HEALTH PERSONNEL BY CATEGORY, 1988 TO 1996

(numbers)

Health personnel	1988	1989	1990	1991	1992	1993	1994	1995	1996
Doctors	138	157	157	109	106	88	100	112	103
Health Assistants	100	119	117	115	116	100	99	105	99
Basic health workers	97	91	114	127	119	125	137	137	158
Sister and nurses	303	317	325	316	323	329	342	340	352
Other technicians	178	144	182	239	251	133	136	168	185
Indigenous physicians	10	12	12	14	14	19	29	19	21
Indigenous compounders	9	10	10	8	8	11	15	11	16
Village health workers (VHW)	..	..	n.a	n.a	n.a	1,413	1,058	1,085	1,275

Note: Including expatriates

Source: Health Division, Thimphu

TABLE 2.4: NUMBER OF PATIENTS TREATED IN BASIC HEALTH UNITS BY DISEASE, SEX AND AGE, BHUTAN, 1996

Disease	Age below 1			Age 1 to 4			Age 5 to 14			Age 15 and above			All ages	
	Male	Female	Persons	Male	Female	Persons	Male	Female	Persons	Male	Female	Persons	Persons	Percen
Diarrhoea/Dysentery	2,337	2,647	4,984	6,787	6,451	13,238	9,295	8,839	18,134	14,826	11,571	26,397	62,753	13.5
Respiratory tract infection	3,097	3,462	6,559	7,048	7,404	14,452	13,666	14,534	28,200	36,891	36,615	73,506	122,717	26.3
Worms	74	105	179	3,348	3,552	6,900	6,096	6,100	12,196	8,116	9,095	17,211	36,486	7.8
Skin infection	1,423	1,694	3,117	4,709	4,798	9,507	9,753	9,108	18,861	18,342	15,442	33,784	65,269	14.0
Malaria/P.U.O	77	70	147	399	402	801	1,334	1,185	2,519	3,251	2,306	5,557	9,024	1.9
Conjunctivitis	858	937	1,795	2,118	2,517	4,635	4,507	4,724	9,231	13,276	14,890	28,166	43,827	9.4
Otitis media	541	631	1,172	1,356	1,262	2,618	1,983	1,862	3,845	1,762	1,817	3,579	11,214	2.4
Nutritional deficiency	127	171	298	621	704	1,325	1,355	1,528	2,883	4,369	7,271	11,640	16,146	3.5
Peptic ulcer syndrome	12	5	17	88	197	285	964	1,389	2,353	10,776	12,381	23,157	25,812	5.5
Disease of teeth and gum	12	25	37	162	245	407	1,001	1,015	2,016	4,406	4,441	8,847	11,307	2.4
Urinary tract infection and nephritis	19	24	43	173	194	367	375	538	913	2,155	2,939	5,094	6,417	1.4
Injuries	77	79	156	773	863	1,636	2,638	2,005	4,643	8,227	4,121	12,348	18,783	4.0
Sexually transmitted diseases	..	..	..	..	..	..	9	10	19	490	262	752	771	0.2
Other childhood diseases	19	34	53	101	149	250	394	355	749	103	91	194	1,246	0.3
Diseases of female genital tract	..	1	1	..	10	10	..	70	70	..	1,342	1,342	1,423	0.3
Complication of pregnancy & child birth peuperum	..	..	..	..	..	..	..	15	15	..	979	979	994	0.2
Others	161	181	342	600	789	1,389	2,893	3,013	5,906	11,655	12,283	23,938	31,575	6.8
All diseases	8,834	10,066	47,183	57,820	143,620	170,373	363,751	445,334	665,535	1,018,746	137,846	276,491	465,764	100.0

Source: Health Division, Thimphu

TABLE 2.5: PATIENTS TREATED IN BASIC HEALTH UNITS BY DISEASE, BHUTAN, 1990 TO 1996

Disease	Persons ('000)							Percent						
	1990	1991	1992	1993	1994	1995	1996	1990	1991	1992	1993	1994	1995	1996
Diarrhoea/Dysentery	78.7	53.6	55.9	53.9	65.1	63.1	62.8	15.1	15.0	14.0	12.4	13.6	14.2	13.5
Respiratory tract infection	104.0	75.6	89.6	94.2	106.5	113.6	122.7	20.0	21.2	22.5	21.7	22.2	25.6	26.3
Worms	55.3	39.3	39.4	41.8	43.4	39.6	36.5	10.6	11.0	9.9	9.6	9.1	8.9	7.8
Skin infection	69.9	51.2	58.2	63.9	70.0	66.4	65.3	13.4	14.3	14.6	14.7	14.6	14.9	14.0
Malaria/P.U.O	41.8	25.7	29.3	37.3	39.2	9.3	9.0	8.0	7.2	7.3	8.6	8.2	2.1	1.9
Conjunctivitis	35.9	25.9	30.2	37.7	43.1	38.0	43.8	6.9	7.3	7.6	8.7	9.0	8.6	9.4
Otitis media	10.8	7.8	8.8	9.9	10.3	10.4	11.2	2.1	2.2	2.2	2.3	2.1	2.3	2.4
Nutritional deficiency	26.2	14.7	13.6	13.9	16.0	14.6	16.2	5.0	4.1	3.4	3.2	3.3	3.3	3.5
Peptic ulcer syndrome	22.3	14.6	17.0	18.7	21.1	22.5	25.8	4.3	4.1	4.3	4.3	4.4	5.1	5.5
Disease of teeth and gum	9.5	7.0	9.0	9.1	10.4	9.8	11.3	1.8	2.0	2.3	2.1	2.2	2.2	2.4
Urinary tract infection and nephretis	8.5	5.5	5.5	6.2	6.5	6.7	6.4	1.6	1.5	1.4	1.4	1.4	1.5	1.4
Injuries	22.4	13.8	16.4	17.6	18.2	17.7	18.8	4.3	3.9	4.1	4.1	3.8	4.0	4.0
Sexually transmitted diseases	1.4	1.3	1.5	1.0	0.7	0.7	0.8	0.3	0.4	0.4	0.2	0.1	0.1	0.2
Childhood diseases	2.5	1.2	2.1	1.8	2.4	1.9	1.3	0.5	0.3	0.5	0.4	0.5	0.4	0.3
Disease of female genital tract	1.5	1.3	1.2	1.3	1.2	1.3	1.4	0.3	0.4	0.3	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	1.0	0.3	0.3	0.3	0.3	0.2	0.2	0.2
Others	28.4	17.7	19.9	24.4	24.3	27.8	31.6	5.5	5.0	5.0	5.6	5.1	6.3	6.8
All diseases	520.4	357.3	398.8	433.7	479.5	444.4	465.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Health Division, Thimphu

TABLE 2.6: PATIENTS TREATED IN HOSPITALS FOR VARIOUS DISEASES BY SEX AND AGE, BHUTAN, 1996

(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	2,658	1,998	2,539	2,306	2,576	2,519	4,835	3,576	1,854	1,417	14,462	11,816	26,278	5.94
Viral & other intestinal infection	1,962	1,997	3,130	3,023	3,665	3,441	5,258	3,922	1,930	1,393	15,945	13,776	29,721	6.71
Tuberculosis	28	21	115	158	187	213	505	508	272	210	1,107	1,110	2,217	0.50
Children's diseases	27	75	248	319	580	565	322	253	148	128	1,325	1,340	2,665	0.60
Tonsillitis	16	15	228	253	822	990	1,964	1,663	533	405	3,563	3,326	6,889	1.56
Scabies	471	483	939	1,102	1,642	1,895	2,352	1,946	1,234	855	6,638	6,281	12,919	2.92
Hepatitis	19	14	38	30	48	45	175	154	68	36	348	279	627	0.14
Malaria	121	158	283	404	570	727	1,537	1,180	514	348	3,025	2,817	5,842	1.32
Gonorrhoea	..	..	..	..	44	34	653	261	91	36	788	331	1,119	0.25
Intestinal worms	100	124	1,388	1,455	2,260	2,340	2,626	2,317	1,071	784	7,445	7,020	14,465	3.27
Other infections	87	93	343	371	720	780	1,111	881	558	387	2,819	2,512	5,331	1.20
Neoplasms	..	..	1	4	8	7	43	51	78	60	130	122	252	0.06
Endocrine, metabolic and nutritional diseases	261	259	864	672	691	818	1,213	1,157	813	621	3,842	3,527	7,369	1.66
Anaemia	124	109	233	285	720	940	1,515	3,018	809	954	3,401	5,306	8,707	1.97
Mental disorders	...	...	5	9	92	56	215	184	35	53	347	302	649	0.15
Diseases of the eye	626	747	1,310	1,467	2,451	2,690	5,265	3,981	1,861	1,561	11,513	10,446	21,959	4.96
Diseases of the ear	257	293	1,007	917	1,354	1,360	1,545	1,200	435	270	4,598	4,040	8,638	1.95
Diseases of the nervous system	122	116	173	221	477	504	1,007	879	400	328	2,179	2,048	4,227	0.95
Diseases of the circulatory system	38	43	73	99	323	338	2,582	2,090	1,961	1,474	4,977	4,044	9,021	2.04
Acute repiratory infections	2,543	2,743	5,488	5,523	6,243	6,660	11,706	10,193	3,350	3,059	29,330	28,178	57,508	12.99

continues...

TABLE 2.6(continuation): PATIENTS TREATED IN HOSPITALS FOR VARIOUS DISEASES BY SEX AND AGE, BHUTAN, 1996

(numbers)

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
Other diseases of the respiratory system	1,220	1,103	2,210	2,060	2,140	2,485	4,384	3,791	2,364	1,940	12,318	11,379	23,697	5.35
Disease of the teeth & gum	16	23	181	301	2,822	2,692	4,147	3,974	1,653	1,359	8,819	8,349	17,168	3.88
Peptic ulcer & gastritis	182	141	483	549	1,218	1,469	6,779	7,123	3,835	3,295	12,497	12,577	25,074	5.66
Other diseases of the digestive system	332	263	476	493	1,199	1,484	2,094	2,231	1,512	1,513	5,613	5,984	11,597	2.62
Diseases of the urinary system	15	14	110	144	469	557	1,600	2,192	840	652	3,034	3,559	6,593	1.49
Diseases of male genital organs	6	..	32	..	137	..	674	..	302	..	1,151	..	1,151	0.26
Diseases of breast	..	..	..	1	..	23	..	597	..	156	..	777	777	0.18
Diseases of female genital organs	..	1	..	92	..	232	..	3,041	..	793	..	4,159	4,159	0.94
Pregnancy, childbirth and the puerperium	..	..	..	..	..	18	..	2,922	..	8	..	2,948	2,948	0.67
Diseases of the skin	1,567	1,705	3,320	3,573	5,283	5,187	9,919	6,923	3,227	2,341	23,316	19,729	43,045	9.72
Diseases of the musculo-skeletal system	14	18	100	108	770	726	6,730	4,363	2,702	2,369	10,316	7,584	17,900	4.04
Acute abdomen	8	16	50	80	188	245	529	603	183	143	958	1,087	2,045	0.46
Fever of unknown origin	536	559	843	1,053	1,619	1,626	3,688	2,803	1,154	758	7,840	6,799	14,639	3.31
Headache	17	21	287	317	1,247	1,557	4,743	4,484	2,200	1,974	8,494	8,353	16,847	3.81
Other symptoms and signs	231	271	587	665	921	1,070	2,321	2,294	1,657	1,352	5,717	5,652	11,369	2.57
Injuries	186	282	871	857	2,239	1,647	6,053	3,202	1,277	658	10,626	6,646	17,272	3.90
All diseases	13,790	13,705	27,955	28,911	45,725	47,940	100,090	89,957	40,921	33,690	228,481	214,203	442,684	100

Source: Health Division, Thimphu

TABLE 2.7: NUMBER OF PATIENTS REPORTED IN DIFFERENT HOSPITALS, 1990 TO 1996

(thousand patients)

Hospital	1990	1991	1992	1993	1994	1995	1996
Government hospitals							
Bjakar	4.4	9.4	10.4	10.0	9.1	10.7	9.7
Tsirang	20.3	73.8	38.7	18.3	15.1	12.0	11.2
Geylegphug	46.6	77.1	70.0	69.6	62.1	56.1	13.2
Pemagatshel	7.6	11.0	9.6	5.5	7.8	6.4	6.7
Paro	40.1	28.5	18.9	24.0	29.4	29.9	19.4
Phuntsholing	33.1	34.6	34.9	41.4	33.4	23.9	26.6
Samdrupjongkhar	25.8	17.7	25.6	28.0	26.2	17.7	17.4
Samtse	22.1	23.1	29.9	20.7	20.2	18.5	14.1
Sarpang	46.6	n.a	n.a	38.0	..	..	18.4
Sibsoo	9.4	9.5	8.4	6.6	5.9	6.1	5.6
Thimphu	145.0	5.5	5.1	19.0	5.8	6.8	6.7
Trashigang	28.6	17.7	20.9	19.0	17.8	17.6	23.0
Tshimalakha	20.5	24.6	20.6	21.4	24.1	20.5	21.0
Trongsa	7.0	6.9	6.4	7.1	7.7	7.2	7.3
Leprosy mission hospitals							
Gidakom	10.0	8.7	9.0	9.9	11.9	10.5	9.5
Lhuntshi	7.0	8.7	9.6	8.5	7.5	4.7	5.1
Mongar	11.0	11.8	12.1	10.6	10.2	13.1	17.8
Riserboo	3.6	5.2	7.9	6.4	8.7	9.5	9.4
Yebilaptsa(Zhemgang)	6.2	6.8	7.7	8.3	7.2	6.5	6.3
Army hospitals							
Lungtenphug	n.a	n.a	n.a	0.0	n.a	n.a	n.a
Wangdiphodrang	28.5	29.0	24.2	32.1	25.8	23.3	24.5
Yonphula	7.0	15.2	10.5	7.8	9.8	11.9	11.0
Imtrat (Haa)	24.1	23.3	30.1	23.6	25.4	20.9	19.6
Others							
Dantak (Deothang)	24.1	56.5	n.a	0.0	n.a	n.a	n.a
IBFH (Thimphu)	56.9	44.6	51.5	55.7	64.2	56.0	64.2
Project hospitals							
Gomtu	26.1	33.2	38.3	34.3	36.4	34.0	27.8
Indigenous hospital	15.8	33.4	33.5	33.1	26.3	n.a	n.a
Indigenous dispensary	17.0	71.4	77.1	40.8	41.4	n.a	n.a
All hospitals(b)	694.4	687.2	610.9	599.4	539.4	423.6	395.5

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

Source: Health Division, Thimphu

TABLE 2.8: NUMBER OF INDIVIDUALS COVERED BY IMMUNIZATION ACTIVITIES, 1986 TO 1996

Immunization	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
BCG	28,469	28,158	24,830	26,881	20,099	18,454	16,597	16,732	21,891	14,435	20,799
DPT1	21,556	25,456	21,819	23,718	19,639	18,363	16,710	16,427	21,125	n.a	n.a
DPT3	14,846	21,358	17,939	21,810	17,763	15,730	14,888	15,059	19,759	12,643	18,525
OPV1	20,927	25,355	21,455	24,113	19,764	18,167	16,307	16,973	21,627	n.a	n.a
OPV3	14,179	21,281	17,497	22,241	17,933	15,688	14,702	15,337	19,344	12,476	18,293
Measles	17,076	21,514	16,872	21,293	13,991	13,716	12,438	12,238	18,499	11,075	18,216
TT1	4,912	8,365	8,883	11,480	10,342	7,926	7,073	6,672	8,441	n.a	n.a
TT2	2,395	4,948	5,244	7,497	7,361	5,475	4,847	4,529	13,712	8,505	14,892

Source: Health Division, Thimphu

TABLE 2.9: INCIDENCE OF E.P.I. DISEASES FOR CHILDREN BELOW AGE 15, BHUTAN, 1989 TO 1996

(numbers)

DISEASE	1989	1990	1991	1992	1993	1994	1995	1996
Diptheria								
Incidence	0	0	3	2	0	0	0	0
Deaths	0	0	0	0	0	0	0	0
Measles								
Incidence	554	299	441	103	505	683	148	9
Deaths	1	5	0	1	3	0	0	0
Pertussis								
Incidence	4	2	8	9	0	0	5	0
Deaths	0	0	0	0	0	0	0	0
Poliomyelitis								
Incidence	0	0	0	0	0	0	0	0
Deaths	0	0	0	0	0	0	0	0
Tetanus								
Incidence	0	0	4	0	0	0	0	0
Deaths	0	0	0	0	0	0	0	0
Neonatal tetanus								
Incidence	2	1	0	2	0	1	0	0
Deaths	2	1	0	1	0	1	0	0
Tuberculosis								
Incidence	437	22	129	140	101	311	269	3
Deaths	2	0	1	4	2	0	5	0
All EPI diseases								
Incidence	997	324	585	256	606	995	422	12
Deaths	5	6	1	6	5	1	5	0

Note: EPI stands for expanded program on Immunization

Source: Health Division, Thimphu

TABLE 2.10: DETAILS OF CHILD GROWTH MONITERING IN IMMUNIZATION CLINICS, BHUTAN, 1986 TO 1996

Details	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Children weighed (numbers)	n.a	n.a	n.a	n.a	n.a	n.a	18,499	20,501	18,229	14,800	16,467
Child malnutrition (numbers)	9,030	15,502	8,334	10,804	12,115	11,093	10,746	9,248	7,136	4,751	4,525
Degree I	n.a	n.a	n.a	n.a	n.a	n.a	7,676	6,510	4,930	3,176	3,139
Degree II	n.a	n.a	n.a	n.a	n.a	n.a	2,236	2,028	1,605	1,268	924
Degree III	953	2,020	876	1,145	2,967	767	834	710	601	307	462
Child malnutrition (%)	n.a	n.a	n.a	n.a	n.a	n.a	58	45	39	32	28

Source: Health Division, Thimphu

TABLE 2.11: DETAILS OF MATERNAL AND CHILD HEALTH CARE SERVICES, 1986 TO 1996

(persons)

Type of care	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Maternal health care attendence(a)											
Antenatal	18,532	26,662	29,425	33,324	40,616	38,064	40,310	51,321	12,785	11,614	40,269
Postnatal	22,803	37,476	34,277	36,406	45,916	40,289	42,182	45,262	9,874	89,793	25,299
Deliveries attended											
Home	800	2,170	1,838	2,258	2,450	2,206	2,667	2,680	n.a	1,379	1,327
Hospital/Basic Health Units	3,007	2,491	3,086	3,598	3,513	3,287	3,392	3,371	n.a	5,244	4,825
Total deliveries	3,807	4,661	4,924	5,846	5,963	5,438	6,059	6,051	14,864	6,623	6,152
Child health care attendance											
First visit	23,996	33,240	26,090	35,784	29,450	23,954	22,081	22,962	n.a	n.a	n.a
Re-visit	90,754	163,161	136,450	151,526	180,410	147,819	159,190	165,249	n.a	n.a	n.a
Total attendance	114,750	196,401	162,540	187,310	209,860	171,773	181,271	188,211	n.a	n.a	n.a
Malnourished children (b)											
All malnourished	9,030	15,502	8,334	10,807	12,155	11,093	10,746	9,248	7,136	4,751	4,525
Third degree	953	2,020	876	1,145	2,967	767	834	710	601	307	462

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

Source: Health Division, Thimphu

TABLE 2.12: DETAILS OF MATERNAL HEALTH CARE ACTIVITIES BY DZONGKHAG, 1990 TO 1996

(numbers)

Dzongkhag	1990	1991	1992	1993	1994	1995	1996
Bjakar	1,139	894	1,302	408	345	228	866
Antenatal	1,608	872	1,625	n.a	118	193	491
Postnatal	58	87	255	407	424	199	270
Reported deliveries	10	95	109	114	75	162	255
Trained deliveries							
Chhukha	3,052	3,466	3,731	1,335	1,063	993	4,356
Antenatal	3,526	4,449	4,087	n.a	1,080	904	3,086
Postnatal	26	45	262	1,333	1,018	395	350
Reported deliveries	3	337	260	600	283	390	331
Trained deliveries							
Dagana	1,260	751	715	445	304	247	588
Antenatal	3,947	2,226	1,886	n.a	398	322	605
Postnatal	371	269	105	446	287	211	184
Reported deliveries	121	67	33	58	44	98	122
Trained deliveries							
Gasa	..	..	n.a	57	31	43	75
Antenatal	..	..	n.a	n.a	73	8	1
Postnatal	..	..	n.a	56	31	7	6
Reported deliveries	..	..	n.a	5	17	3	6
Trained deliveries							
Haa	753	790	694	235	153	125	355
Antenatal	401	321	221	n.a	208	47	263
Postnatal	57	15	96	235	163	29	97
Reported deliveries	12	4	32	275	29	29	96
Trained deliveries							
Lhuntse	1,773	1,503	1,581	465	370	355	763
Antenatal	1,268	1,462	1,548	n.a	429	287	983
Postnatal	369	263	193	460	404	405	375
Reported deliveries	22	31	21	207	39	333	375
Trained deliveries							
Mongar	3,433	2,239	3,414	981	871	870	2,159
Antenatal	1,796	2,019	2,835	n.a	845	847	2,445
Postnatal	105	396	689	988	1,172	973	1,094
Reported deliveries	78	151	237	652	190	664	843
Trained deliveries							

continues...

TABLE 2.12 (continuation): DETAILS OF MATERNAL HEALTH CARE ACTIVITIES BY DZONGKHAG, 1990 TO 1996

(numbers)

Dzongkhag	1990	1991	1992	1993	1994	1995	1996
Paro							
Antenatal	1,590	1,616	1,128	536	520	237	1,260
Postnatal	1,788	1,826	1,780	n.a	100	223	109
Reported deliveries	n.a	n.a	113	540	521	194	33
Trained deliveries	n.a	77	110	54	121	184	16
Pemagatshel							
Antenatal	1,143	885	933	470	272	327	904
Postnatal	4,702	4,005	4,206	n.a	430	393	2,943
Reported deliveries	116	219	282	470	437	147	535
Trained deliveries	8	60	59	381	135	84	324
Punakha							
Antenatal	1,901	1,438	1,806	495	388	294	1,279
Postnatal	839	786	561	n.a	300	44	166
Reported deliveries	269	134	105	507	761	92	154
Trained deliveries	45	51	39	71	85	63	129
Samdrupjongkhar							
Antenatal	2,546	2,030	2,305	1,032	784	903	2,106
Postnatal	361	2,049	2,947	n.a	849	730	3,375
Reported deliveries	165	174	260	1,021	941	500	723
Trained deliveries	70	93	139	429	218	332	507
Samtse							
Antenatal	1,971	2,073	2,450	1,378	908	803	2,612
Postnatal	2,081	1,557	2,264	n.a	733	622	923
Reported deliveries	35	5	255	1,384	783	50	132
Trained deliveries	25	240	255	263	311	50	132
Sarpang							
Antenatal	3,821	3,264	2,469	721	734	660	3,379
Postnatal	3,102	2,662	1,556	n.a	286	363	709
Reported deliveries	191	n.a	234	741	753	86	133
Trained deliveries	114	293	234	126	90	86	94
Thimphu							
Antenatal	8,280	9,830	10,225	2,491	2,385	2,508	12,066
Postnatal	4,292	5,465	3,693	n.a	704	710	1,403
Reported deliveries	60	119	1,181	2,516	2,430	853	167
Trained deliveries	33	1,160	1,128	1,107	1,359	818	148

continues...

TABLE 2.12 (continuation): DETAILS OF MATERNAL HEALTH CARE ACTIVITIES BY DZONGKHAG, 1990 TO 1996

(numbers)

Dzongkhag	1990	1991	1992	1993	1994	1995	1996
Trashigang	4,751	3,834	4,852	1,375	1,136	1,053	2,837
Antenatal	1,075	4,187	5,486	n.a	1,210	1,138	2,628
Postnatal	632	941	1,475	1,385	1,507	1,266	895
Reported deliveries	168	251	503	457	269	883	649
Trained deliveries							
Trashiyangt e	n.a	n.a	646	696	381	227	627
Antenata.	n.a	n.a	511	n.a	257	228	789
Postnatal	n.a	n.a	184	700	782	290	185
Reported deliveries	n.a	n.a	8	196	30	282	162
Trained deliveries							
Trongsa	990	664	813	358	445	296	701
Antenatal	2,059	1,076	1,903	n.a	259	245	917
Postnatal	111	38	24	354	258	245	243
Reported deliveries	55	34	21	85	61	192	196
Trained deliveries							
Tsirang	2,656	1,545	745	345	352	372	756
Antenatal	2,023	996	622	n.a	492	438	767
Postnatal	205	17	47	333	589	122	42
Reported deliveries	135	84	47	40	58	122	42
Trained deliveries							
Wangduephodrang	1,774	3,052	2,200	1,034	880	607	1,650
Antenatal	1,170	1,188	1,248	n.a	661	635	1,214
Postnatal	246	234	153	1,041	1,051	264	284
Reported deliveries	46	181	108	281	272	214	222
Trained deliveries							
Zhemgang	1,548	1,257	1,510	892	463	406	930
Antenatal	2,981	2,734	2,763	n.a	442	416	1,482
Postnatal	117	70	169	882	551	295	250
Reported deliveries	35	78	72	335	52	254	176
Trained deliveries							

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

Source: Health Division, Thimphu

TABLE 2.13: DETAILS OF COMPLICATIONS DURING PREGNANCY, DELIVERY AND PUERPERIUM, BHUTAN, 1996

Complications	Numbers	Percent
Pregnancy of mothers		
Abortions	1,230	68.0
Antepartum haemorrhage	170	9.4
Hypertensive diseases	36	2.0
Anaemia	145	8.0
Hepatitis	832	46.0
Malaria	19	1.1
Others	20	1.1
	8	0.4
Labour/delivery		
Obstructed labour	312	17.3
Transverse lie	59	3.3
Brech	21	1.2
Ruptured uterus	80	4.4
Hypertensive diseases	3	0.2
Prematurity	29	1.6
Others	35	1.9
	85	4.7
Puerperium		
Postpartum hamorrhage	266	14.7
Retained	61	3.4
Placenta	146	8.1
Pyxeria	20	1.1
Others	24	1.3
	15	0.8
All complications	1,808	100

Source: Health Division, Thimphu

TABLE 2.14: FAMILY PLANNING ACCEPTORS BY TYPE OF METHOD, BHUTAN 1986 TO 1996

(persons)

Method	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Vasectomy	414	552	897	1,961	1,120	685	231	714	2,043	1,263	1,930
Minilap	428	470	379	506	301	177	68	172	355	n.a	n.a
Intra uterine device (IUD)	896	665	619	757	987	986	637	687	930	759	1,602
Pills	6,355	6,036	5,663	7,168	5,675	7,721	9,572	9,936	7,496	8,794	8,917
Condoms	2,846	1,099	897	1,476	2,049	6,777	7,529	6,568	4,877	5,635	7,411
Injection DMPA	81	78	48	125	50	453	6,448	6,662	7,748	9,278	12,065
All methods	11,020	8,900	8,503	11,993	10,182	16,799	24,485	24,739	23,449	25,729	31,925

Source: Health Division, Thimphu

TABLE 2.15: NUMBER OF USERS OF FAMILY PLANNING METHODS BY TYPE BY DZONGKHAG, 1996

Dzongkhag	Family planning methods					All methods
	Sterilisation	IUD	DMPA	Pills	Condom	
Bjakar	12	46	299	181	242	780
Chhukha	59	28	200	519	381	1,187
Daga	342	16	239	735	65	1,397
Gasa	0	0	49	47	27	123
Haa	0	2	167	140	99	408
Lhuntse	24	10	239	169	234	676
Mongar	64	118	1,548	962	971	3,663
Paro	47	38	307	287	172	851
Pemagatshel	35	28	343	108	157	671
Punakha	3	21	274	112	149	559
Samdrupjongkha	413	87	732	482	767	2,481
Samtse	215	64	323	439	361	1,402
Sarpang	273	112	993	716	387	2,481
Zhemgang	0	33	445	448	398	1,324
Thimphu	191	821	1,466	684	920	4,082
Trashigang	47	72	2,357	789	1,248	4,513
Trashiyangtse	0	1	194	240	77	512
Trongsa	34	47	971	220	152	1,424
Tsirang	46	31	292	126	154	649
Wangduephodrang	125	27	627	1,513	450	2,742
Bhutan	1,930	1,602	12,065	8,917	7,411	31,925

Source: Health Division, Thimphu

TABLE 2.16: DETAILS OF LEPROSY PATIENTS, LEPROSY CONTROL PROGRAMME, BHUTAN, 1987 TO 1996

(persons)

Details	1987	1988(c)	1989	1990	1991	1992	1993	1994	1995	1996
Patients at beginning of year	1,674	1,018	601	405	245	201	156	127	113	117
New cases detected	88	69	57	58	54	53	45	57	32	37
Relapse cases	6	11	3	12	1	2	1	1	3	2
Released from control(a)	534	447	282	209	91	55	72	61	35	41
Lost to control(b)	18	30	14	11	9	12	10	5	3	0
Patients at the end of year	1,183	601	353	249	201	162	127	113	117	111
Deaths	33	20	12	7	5	5	1	4	0	0

Note: (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 2.17: NUMBER OF BLOOD SLIDE EXAMINATIONS FOR MALARIA AND MALARIOMETRIC INDICES, BHUTAN, 1988 TO 1996

Details	1988	1989	1990	1991	1992	1993	1994	1995	1996
Total blood films examined (numbers)	51,164	71,653	33,973	67,699	73,986	80,980	97,425	83,899	80,777
Blood film detected negative	39,850	52,491	24,476	45,573	45,086	52,588	58,524	n.a	n.a
Blood films detected positive	11,314	19,162	9,497	22,126	28,900	28,392	38,901	23,195	17,446
Plasmodium vivax	n.a	n.a	n.a	8,988	14,808	15,337	22,427	15,655	10,601
Plasmodium falciparum	n.a	n.a	n.a	12,966	13,910	12,779	15,998	7,236	6,845
Mixed infections	n.a	n.a	n.a	172	182	276	476	304	n.a
Malariometric indices									
Annual blood slide examination rate	n.a	n.a	n.a	19.3	12.1	23.1	27.8	23.9	23.1
Slide positive rate	n.a	n.a	n.a	32.7	39.0	35.0	39.9	27.6	22.0
Annual parasite incidence	n.a	n.a	n.a	63.2	82.6	81.1	111.1	66.2	49.8
Slide falciparum rate	n.a	n.a	n.a	19.4	19.0	16.1	16.4	8.9	8.5
Positive falciparum rate (%)	n.a	n.a	n.a	59.3	49.2	45.9	41.1	32.5	39.0
Deaths due to malaria (numbers)	n.a	n.a	n.a	n.a	54	62	n.a	n.a	n.a

Source: Health Division, Thimphu

TABLE 2.18: NUMBER OF TUBERCULOSIS CASES BY TYPE, BHUTAN, 1993 TO 1996

(persons)

Year	Cases diagnosed and treated			Total deaths
	Pulmonary	Extra Pulmonary	Total cases	
1993	3,224	1,034	4,258	40
1994	1,427	393	1,820	23
1995	1,038	270	1,308	62
1996	942	329	1,271	51

Source: Health Division, Thimphu

TABLE 2.19: WATER AND SANITATION FACILITIES BY TYPE AND BY DZONGKHAG, 1996

(numbers)

Dzongkhag	Houses	Latrines	Houses with piped water	Animal sheds	Garbage pits	Kitchen Gardens
Bjakar	1,225	993	873	1,181	1,126	1207
Chhukha	4,195	2,923	1,856	1,553	1,111	2314
Dagana	1,224	2,490	1,020	2,050	1,556	2190
Gasa	374	301	79	205	228	303
Haa	1,097	754	606	267	244	793
Lhuntse	2,407	1,836	1,171	268	622	1985
Mongar	4,865	4,562	2,759	1,696	2,227	3824
Paro	2,860	1,839	1,178	145	316	1063
Pemagatshel	2,417	1,966	1,895	1,562	207	1786
Punakha	1,748	1,559	1,222	1,191	697	1258
Samdrupjongkha	5,566	4,080	2,200	3,067	2,265	3311
Samtse	7,866	4,246	4,053	3,825	0	4764
Sarpang	3,404	2,415	437	2150	401	2965
Shemgang	2,000	1,801	1,171	672	942	1728
Thimphu	2,298	1,392	720	668	308	1663
Trashigang	5,854	7,498	2,005	1,731	1,175	6251
Trashiyangtse	3,138	2,453	1,211	1,913	758	2203
Trongsa	1,340	1,337	958	249	528	1176
Tsirang	2,645	1,782	217	1,952	1037	1790
Wangduephodrang	3,097	2,434	1,216	1,655	2,004	2529
Bhutan	59,620	48,661	26,847	28,000	17,752	45,103

Source: Annual Health Bulletin 1996, Health Division, Thimphu

TABLE 2.20: NUMBER OF PATIENT TREATED OUTSIDE BHUTAN IN INDIA BY SEX AND CASUALTIES, 1989/90 TO 1996/97.

(numbers)

Year	Recovered		Dead	
	Male	Female	Male	Female
1989-90	122	132	—	—
1990-91	154	118	1	—
1991-92	175	147	1	1
1992-93	132	112	—	2
1993-94	123	108	—	1
1994-95	126	114	2	1
1995-96	194	188	1	1
1996-97	215	201	2	—
Total	1,241	1,120	7	6

Source: Ministry of Health and Education, 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.

Number of students in different type of schools, 1986 to 1996(see table 3.9)

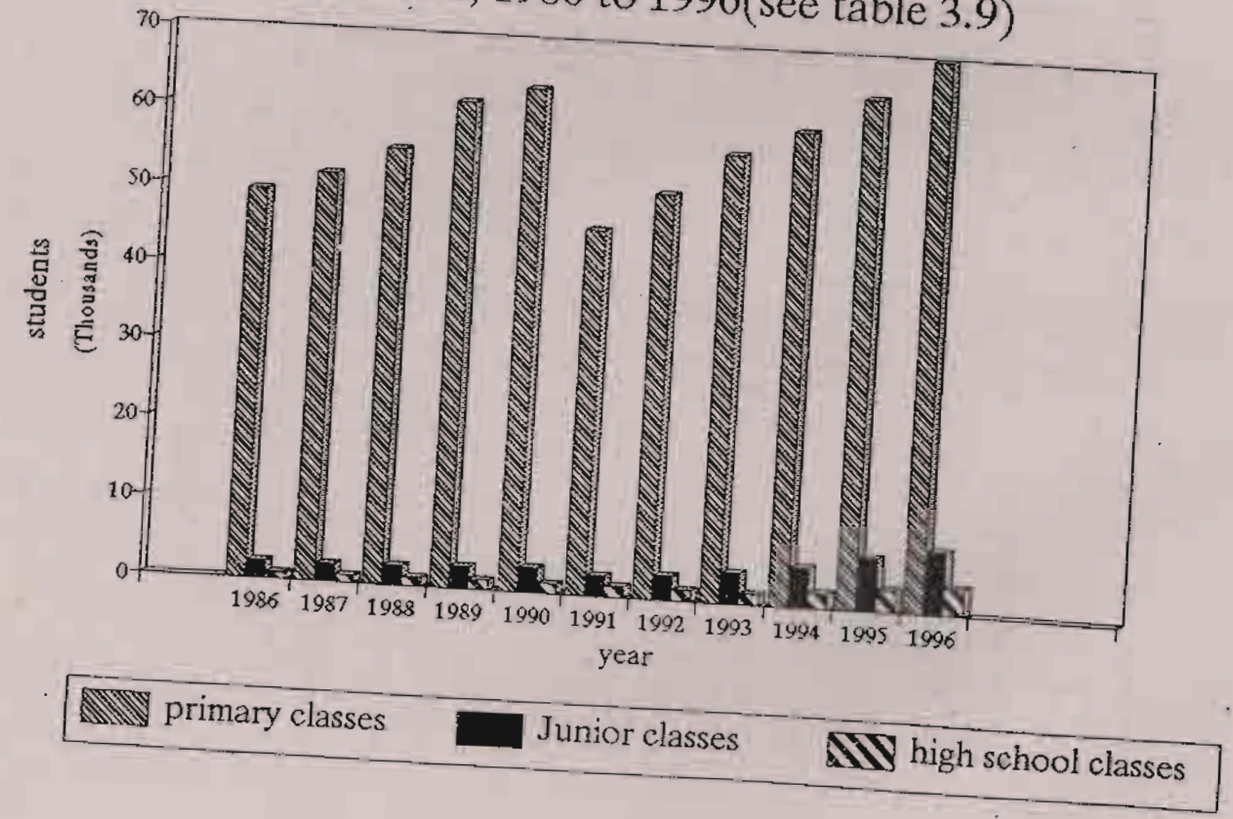


TABLE 3.1: NUMBER OF SCHOOLS AND INSTITUTIONS, STAFF AND STUDENTS, BHUTAN 1996

Details	Community schools	Primary schools	Junior schools	High schools	Private schools	Other institutes	Total
Number of infrastructure	101	154	20	10	7	8	300
Total staff							
Teaching staff	225	1,374	380	274	61	203	2,517
Nationals	222	1,127	276	188	54	145	2,012
Non Nationals	3	247	104	86	7	58	505
Non teaching staff	7	249	86	122	18	157	639
Nationals	5	247	84	110	12	128	586
Non Nationals	2	2	2	12	6	29	53
Number of students	9,257	53,095	12,491	6,271	1,248	1,795	84,157
Males	5,264	29,933	6,926	3,528	668	1,336	47,655
Females	3,993	23,162	5,565	2,743	580	459	36,502
Student to teacher ratio	41	39	33	23	20	9	33

Note: Institutions include 1 Sanskrit Patshala having 2 national teacher

Source: Education Division, Thimphu

TABLE 3.2: NUMBER OF EDUCATIONAL INSTITUTIONS, TEACHERS AND STUDENTS, BHUTAN, 1977 TO 1996

Year	Infrastructure			Teachers			Students			
	Schools	Institutes	Total	Schools	Institutes	Total	Schools	Institutes	Total	
1977	114	8	122			769		465	20,438	
1981	142	8	150			1,219		1,105	33,043	
1982	158	12	170			1,263		2,058	42,122	
1983	166	28	94			1,520		2,035	45,817	
1984	171	30	101			1,655		2,439	48,767	
1985	175	31	206			1,668		2,660	51,835	
1986	177	n.a	..			1,934		n.a	..	
1987	178	n.a	..			2,038		n.a	..	
1988	180	7	187			2,208		1,761	60,557	
1989	188	7	195			2,398		1,787	67,852	
1990	192	8	200			2,435		2,341	70,354	
1991	244	8	252			2,153		1,693	52,105	
1992	261	7	268			2,146		1,520	57,370	
1993	267	7	274			2,084		1,524	63,662	
1994	279	7	286			2,208		1,732	70,886	
1995	281	7	288			2,224		1,772	77,276	
1996	292	8	300			2,314		1,795	84,157	

Source: Education Division, Thimphu

TABLE 3.3: NUMBER OF EDUCATIONAL FACILITIES BY TYPE AND DZONGKHAG, 1996

Dzongkhag	Private schools	Community schools	Primary schools	Junior schools	High schools	Other institutes	Total
Bumthang	0	3	4	0	1	0	8
Chhukha	2	9	11	1	1	1	25
Dagana	0	2	2	1	0	0	5
Gasa	0	1	1	0	0	0	2
Haa	0	0	6	0	1	0	7
Lhuntse	0	5	9	1	0	0	15
Mongar	0	15	11	1	1	0	28
Paro	0	2	8	2	1	1	14
Pemagatshel	0	7	6	1	0	0	14
Punakha	0	3	5	1	1	0	10
Samdrupjongkhar	0	8	13	1	0	1	23
Samtse	0	0	7	1	0	1	9
Sarpang	0	4	3	1	0	1	9
Thimphu	5	2	12	3	2	1	25
Trashigang	0	19	21	2	1	2	45
Trashiyangtse	0	8	6	1	0	0	15
Trongsa	0	3	5	1	0	0	9
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	101	154	20	10	8	300

Source: Education Division, Thimphu

TABLE 3.4: NUMBER OF TEACHERS IN EDUCATIONAL INSTITUTIONS BY NATIONALITY, BHUTAN, 1994 TO 1996

Institutions	1994			1995			1996		
	National	Foreigner	Total	National	Foreigner	Total	National	Foreigner	Total
Schools									
Community School	1,604	603	2,207	1695	528	2223	1867	507	2314
Primary School	205	18	223	218	10	228	222	3	225
	1,037	351	1,388	1049	307	1,356	1127	247	1374
Junior School	212	135	347	230	112	342	276	164	380
High School	105	92	197	153	93	246	188	86	274
Private School	45	7	52	45	6	51	54	7	61
Specialised/Professional Institutes	139	72	211	136	64	200			
Sherubtse College	13	39	52	13	32	45	13	30	43
National Institute of Education	22	5	27	21	4	25	21	3	24
Teachers Training Centre	15	1	16	19	0	19	20	..	20
Royal Bhutan Polytechnic	24	13	37	24	14	38	30	14	44
Royal Technical Institute	28	14	42	25	14	39	28	11	39
National Trade Training Institute	n.a	n.a	n.a	n.a	n.a	n.a			
Semtokha Rigzhung Institute	27	0	27	24	0	24	25	..	25
National Institute for the Disabled (NID)	9	0	9	9	0	9	6	..	6
Sanskrit Patshala	1	0	1	1	0	1	2	..	2
Total teachers	1,743	675	2,418	1831	592	2423	2012	505	2517

Source: Education Division, Thimphu

TABLE 3.5: NUMBER OF EDUCATIONAL FACILITIES, TEACHERS AND STUDENTS BY DZONGKHAG, APRIL 1996

Dzongkhag	Educational facilities	Teachers			Students		
		Total	National	Non national	Total	Girls	Boys
Bumthang	8	70	59	11	2,719	1,302	1,417
Chhukha	25	203	157	46	7,027	3,101	3,926
Dagana	5	38	34	4	1,446	655	791
					0		
Gasa	2	9	9	0	277	95	182
Haa	7	69	57	12	2,412	1,139	1,273
Lhuntse	15	76	67	9	2,256	848	1,408
Mongar	28	147	115	32	5,435	2,281	3,154
Paro	14	159	141	18	5,799	2,767	3,032
Pemagatshel	14	76	63	13	3,053	1,224	1,829
Punakha	10	103	78	25	3,402	1,457	1,945
Samdrupjongkhar	23	146	97	49	5,855	2,183	3,672
Samtse	9	83	66	17	2,793	1,188	1,605
					0		
Sarpang	9	64	54	10	2,565	1,213	1,352
Thimphu	25	414	334	80	14,473	7,089	7,384
Trashigang	45	270	219	51	8,986	3,599	5,387
					0		
Trashiyangtse	15	77	63	14	2,681	1,021	1,660
Trongsa	9	60	50	10	2,152	1,080	1,072
Tsirang	4	20	18	2	1,094	463	631
					0		
Wangduephodrang	15	104	86	18	3,973	1,866	2,107
Zhemgang	18	126	100	26	3,964	1,472	2,492
					0		
Bhutan	300	2,314	1,867	447	82,362	36,043	46,319

Source: Education Division, Thimphu

TABLE 3.6: NUMBER OF ENROLMENT IN EDUCATIONAL INSTITUTIONS, BHUTAN, 1991 TO 1996

Institutions	1991	1992	1993	1994	1995	1996
Schools						
Community school	50,412	55,793	62,138	69,133	75,483	82,362
Primary school	5,576	7,239	8,350	9,425	9,655	9,257
	34,807	38,973	42,139	45,937	49,064	53,095
Junior high schools	7,065	6,503	8,138	8,870	10,469	12,491
High schools	2,964	3,078	3,511	4,185	5,296	6,271
Private schools	n.a	n.a	n.a	716	999	1,248
Other institutions						
Sherubtse college	1,693	1,577	1,524	1,753	1,793	1,795
National Institute of Education	383	395	338	533	508	445
Teachers Training College	185	127	131	160	165	189
	66	61	74	146	164	177
Royal Bhutan Polytechnic	164	142	155	191	226	239
Royal Technical Institute	275	295	280	233	226	265
Semtokha Rigzhung Institute	562	530	516	436	440	393
National Institute for the Disabled (NID)	24	27	30	33	30	27
Sanskrit patshala	n.a	n.a	n.a	21	21	60
Natioanl trade training institute	34	..	..	..	13	..
All institutions	52,105	57,370	63,662	70,886	77,276	84,157

Source: Education Division, Thimphu.

TABLE 3.7: NUMBER OF STUDENT IN HIGH SCHOOLS AND BELOW BY DZONGKHAG AND TYPE OF SCHOOL, 1996.

Dzongkhag	Private schools			Community schools			Primary schools			Junior schools			High schools			All schools		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Bumthang	..	..	..	138	133	271	972	984	1,956	..	..	..	307	185	492	1,417	1,302	2,719
Chhukha	364	313	677	518	374	892	2,572	2,029	4,601	134	117	251	338	268	606	3,926	3,101	7,027
Dagana	..	..	..	227	177	404	310	258	568	254	220	474	..	..	..	791	655	1,446
Gasa	..	..	..	57	8	65	125	87	212	..	..	..	..	..	..	182	95	277
Haa	..	..	..	52	69	121	962	844	1,806	..	..	..	259	226	485	1,273	1,139	2,412
Lhuntse	..	..	..	437	332	769	666	415	1,081	305	101	406	..	..	..	1,408	848	2,256
Mongar	..	..	..	829	694	1,523	1,680	1,163	2,843	313	231	544	332	193	525	3,154	2,281	5,435
Paro	..	..	..	65	87	152	1,972	1,742	3,714	694	674	1,368	301	264	565	3,032	2,767	5,799
Pemagatshel	..	..	..	592	442	1,034	744	433	1,177	493	349	842	..	..	..	1,829	1,224	3,053
Punakha	..	..	..	113	112	225	1,069	814	1,883	331	270	601	432	261	693	1,945	1,457	3,402
Samtse	..	..	..	..	..	..	1,193	806	1,999	412	382	794	..	..	..	1,605	1,188	2,793
Samdrupjongkhar	..	..	..	648	374	1,022	2,738	1,682	4,420	286	127	413	..	..	..	3,672	2,183	5,855
Sarpang (a)	..	..	..	168	178	346	809	715	1,524	375	320	695	..	..	..	1,352	1,213	2,565
Thimphu	304	267	571	122	100	222	5,146	4,711	9,857	1,042	1,095	2,137	770	916	1,686	7,384	7,089	14,473
Trashigang	..	..	..	1,035	627	1,662	3,175	2,181	5,356	723	545	1,268	454	246	700	5,387	3,599	8,986
Trashiyangtse	..	..	..	350	263	613	867	562	1,429	443	196	639	..	..	..	1,660	1,021	2,681
Trongsa	..	..	..	149	178	327	541	528	1,069	382	374	756	..	..	..	1,072	1,080	2,152
Tsirang	..	..	..	204	109	313	427	354	781	..	..	..	..	..	..	631	463	1,094
Wangduephodrang	..	..	..	313	260	573	1,412	1,208	2,620	382	398	780	..	..	..	2,107	1,866	3,973
Zhemgang	..	..	..	104	67	171	1,696	1,055	2,751	357	166	523	335	184	519	2,492	1,472	3,964
Bhutan	668	580	1,248	6,121	4,584	10,705	29,076	22,571	51,647	6,926	5,565	12,491	3,528	2,743	6,271	46,319	36,043	82,362

Note: (a)Total figure excludes 60 students of Surrey Sanskrit Patsala.

Figures may not tally with table 3.8 due to exclusion of 235 preuniversity students of a Sherubtse college, Kanglung.

Source: Education Division, Thimphu

TABLE 3.8: NUMBER OF STUDENTS BY GRADE AND TYPE OF SCHOOL, BHUTAN 1996

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	208	199	407	..	..	..	..	..	..	..	..	..	..	..	..	208	199	407
Pre primary	209	180	389	1,647	1,316	2,963	5,088	4,295	9,383	509	431	940	..	..	..	7,453	6,222	13,675
I	105	70	175	1,244	957	2,201	4,731	3,669	8,400	520	499	1,019	..	..	..	6,600	5,195	11,795
II	47	39	86	1,073	766	1,839	4,661	3,638	8,299	526	473	999	..	..	..	6,307	4,916	11,223
III	44	41	85	855	664	1,519	4,449	3,486	7,935	487	411	898	..	..	..	5,835	4,602	10,437
IV	25	29	54	361	264	625	4,587	3,352	7,939	451	413	864	..	..	..	5,424	4,058	9,482
V	16	14	30	84	26	110	3,709	2,722	6,431	509	471	980	..	..	..	4,318	3,233	7,551
VI	14	8	22	..	..	..	2,708	2,000	4,708	539	536	1,075	..	..	..	3,261	2,544	5,805
VII	..	..	..	..	..	..	..	..	..	1,920	1,367	3,287	586	572	1,158	2,506	1,939	4,445
VIII	..	..	..	..	..	..	..	..	..	1,465	964	2,429	596	653	1,249	2,061	1,617	3,678
IX	..	..	..	..	..	..	..	..	..	..	..	..	1,256	781	2,037	1,256	781	2,037
X	..	..	..	..	..	..	..	..	..	..	..	..	865	530	1,395	865	530	1,395
XI	..	..	..	..	..	..	..	..	..	..	..	..	247	189	436	247	189	436
XII	..	..	..	..	..	..	..	..	..	..	..	..	167	64	231	167	64	231
Non formal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	668	580	1,248	5,264	3,993	9,257	29,933	23,162	53,095	6,926	5,565	12,491	3,717	2,789	6,506	46,508	36,089	82,597

Note : Grade vi exists both in junior and primary school; So figures may not tally by school type in table 3.7 due to inclusion of of 235 preuniversity students of Sherubtse college, Kanglung.
Source: Education Division, Thimphu

TABLE 3.9: NUMBER OF STUDENTS BY GRADE, 1986 TO 1996

Grade	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Primary grades	49,485	51,948	55,340	61,575	63,643	46,517	51,411	56,773	60,089	64,685	69,968
Pre-primary	18,431	15,579	14,323	16,042	15,155	13,408	12,786	12,815	11,621	12,179	13,675
I	9,814	13,094	13,313	13,756	13,151	8,708	10,836	11,662	12,088	11,595	11,795
II	6,760	7,365	9,423	10,798	11,385	7,087	8,265	9,739	10,710	11,410	11,223
III	5,361	5,867	6,490	7,754	8,684	6,136	6,157	7,643	8,895	9,714	10,437
IV	3,957	4,257	5,048	5,815	6,888	4,905	5,753	5,848	7,187	8,546	9,482
V	3,029	3,158	3,728	4,046	4,527	3,467	4,148	5,034	5,262	6,404	7,551
VI	2,133	2,628	3,015	3,364	3,853	2,807	3,466	4,032	4,326	4,837	5,805
Junior high grades	2,203	2,107	2,419	2,793	3,112	2,590	3,044	3,887	5,244	6,785	8,123
VI(a)	-	-	-	-	-	-	-	-	-	-	-
VII	1,132	1,107	1,277	1,552	1,659	1,381	1,660	2,215	3,326	3,959	4,445
VIII	1,071	1,000	1,142	1,241	1,453	1,209	1,384	1,672	1,918	2,826	3,678
High school grades	764	872	1,037	1,165	1,258	1,305	1,338	1,434	2,055	2,766	3,432
IX	408	528	558	642	698	720	714	840	1,354	1,620	2,037
X	356	344	479	523	560	585	624	594	701	1,146	1,395
Total students	52,452	54,927	58,796	65,533	68,013	50,412	55,793	62,094	67,388	74,236	81,523

Note: High school excludes students of class XI and XII and excludes nursery schools, 1074 students either in grades xi, xii of high schools. (a) Grade vi is in junior level as well. Figures now included under primary level.
Source: Education Division, Ministry of Health and Education, Thimphu.

TABLE 3.10: NUMBER OF STUDENTS ENROLED, PROMOTEES, REPEATERS AND DROPOUTS BY SEX AND GRADE, 1996

Details	PP	I	II	III	IV	V	VI	VII	VIII	IX	X	Total
Boys												
Enrolment	7,453	6,600	6,307	5,835	5,424	4,318	3,261	2,506	2,061	1,256	865	45,886
Promotees	5,626	5,277	5,134	4,665	3,847	2,935	2,283	1,841	1,199	837	0	33,644
Repeaters	1,059	974	1,030	701	759	471	326	223	220	57	28	5,848
Dropouts	113	210	247	198	360	214	185	126	268	86	0	2,007
Girls												
Enrolment	6,222	5,195	4,916	4,602	4,058	3,233	2,544	1,939	1,617	781	530	35,637
Promoters	4,504	4,203	4,156	3,517	2,889	2,274	1,708	1,395	729	490	0	25,865
Repeaters	821	691	713	446	541	344	270	231	222	52	40	4,371
Dropouts	56	240	130	187	150	166	65	143	188	98	0	1,423
All students												
Enrolment	13,675	11,795	11,223	10,437	9,482	7,551	5,805	4,445	3,678	2,037	1,395	81,523
Promoters	10,130	9,480	9,290	8,182	6,736	5,209	3,991	3,236	1,928	1,327	0	59,509
Repeaters	1,880	1,665	1,743	1,147	1,300	815	596	454	442	109	68	10,219
Dropouts	169	450	377	385	510	380	250	269	456	184	0	3,430

Note: Promotees and dropout figures are imputations

Source: Education Division, Ministry of Health and Education, Thimphu

TABLE 3.11: MONTHLY STIPEND FOR BOARDERS IN DIFFERENT EDUCATIONAL INSTITUTIONS, 1995 AND 1996 (a)

Institutions	1995			1996		
	Boarders (persons)	Monthly stipend (Nu/person)	Total (Nu.)	Boarders (persons)	Monthly stipend (Nu/person)	Total (Nu.)
Schools						
Junior High schools						
Haa Junior High School	281	90	252,900	..	..	..
Daga Junior High School	102	90	91,800	150	90	135,000
Bjakar Junior High School	..	..	..	..	..	..
Trongsa Junior High School	270	90	243,000	278	90	250,200
Yebilaptsa Junior High School	304	90	273,600	397	90	357,300
Tangmachu Junior High School	317	90	285,300	338	90	304,200
Paro Junior High School	303	90	272,700	334	90	300,600
Pemagatshel Junior High School	152	90	136,800	234	90	210,600
Nganglam Junior High School	291	90	261,900	285	90	256,500
Trashigang Junior High School	281	90	252,900	264	90	237,600
Wamrong Junior high School	240	90	216,000	241	90	216,900
Dremetse Junior High School	174	90	156,600	257	90	231,300
Rangthangwoong Junior High School	229	90	206,100	267	90	240,300
Khuruthang Junior High School	..	..	..	601	90	540,900
High schools						
Yangchenphu High School	..	..	..	..	..	..
Chhukha High School	327	120	392,400	298	120	357,600
Drugyel High School	347	120	416,400	402	120	482,400
Punakha High School	604	120	724,800	494	120	592,800
Jigme Sherubling High School	553	120	663,600	547	120	656,400
Zhemgang High School	326	120	391,200	407	120	488,400
Mongar High School	350	120	420,000	303	120	363,600
Bjkar High School	228	120	273,600	280	120	336,000
Ugyen Dorji High School	..	..	..	339	90	305,100
Other institutions						
Sherubtse College	508	600	3,048,000	445	700	3,115,000
Semtokha Rigzhung Institute	427	180	768,600	391	120	469,200
Royal Technical Institute	239	300	717,000	265	300	795,000
Royal Bhutan Polytechnic	226	450	1,017,000	239	450	1,075,500
National Institute of Education						
Bachelors and post graduate course	93	800	744,000	99	800	792,000
Primary teachers training course	64	700	448,000	79	700	553,000
Teacher Training College	108	700	756,000	153	700	1,071,000
National Institute for the Disabled (NID)	30	120	36,000	27	120	32,400
All institutions	7,344	5,650	13,466,200	8,414	5,900	14,766,800

Note: Lhuntse Junior High School is re-named as Tangmachu Junior High School since 1995. And Haa Jr. High School was up graded to High School and re-named as Ugyen Dorji High School since 1996.

(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, 1992 TO 1996

(numbers)

Ministry/Division	1992	1993	1994	1995	19
Ministry of Planning	85	86	86	78	
Ministry of Home Affairs	1,006	1,124	1,138	1,189	1,1
Home Affairs	224	n.a	408	442	4
Dzongkhags	576	n.a	730	747	7
Ministry of Finance	524	653	653	627	6
Ministry of Communications	2,545	2,397	2,534	2,631	2,1
Ministry of Health & Education	4,772	4,707	4,773	4,669	4,6
Ministry of Agriculture	1,842	2,144	2,281	2,381	2,3
Ministry of Foreign Affairs	141	138	122	127	1
Ministry of Trade & Industry	1,016	1,040	1,098	1,050	1,1
Special Commission	162	200	189	173	1
Other Non-Ministerial Organisations	639	528	553	641	6
His Majesty's Secretariat	55	47	51	48	
Royal Civil Service Commission	43	69	71	49	
Royal Audit Authority	90	93	93	107	1
Royal Advisory Council	8	9	10	13	
National Assembly	12	14	14	14	
National Women's Association of Bhutan	35	n.a	n.a	4	
Judiciary	223	218	224	240	2
Bhutan Olympic Committee	18	22	21	22	
Dzongkhag Development Commission	18	16	16	17	1
Royal Institute of Management	38	40	42	44	9
Royal Monetary Authority	63	n.a	n.a	64	5
National Enviroment Commission	..	n.a	11	19	2
Others	n.a	n.a	n.a	n.a	
Total employees	12,732	13,017	13,427	13,566	13,18

Source: Royal Civil Service Commission, Thimphu

TABLE 4.3: THE DISTRIBUTION 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.

Type of land cover as percent of total area of Bhutan (see table 5.1)

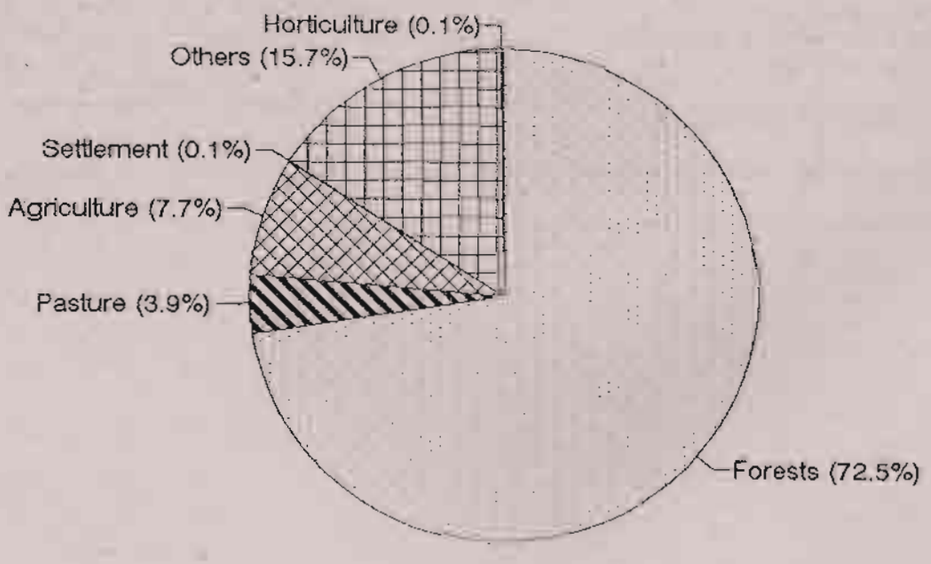


TABLE 5.1: LAND-USE AND VEGETATION TYPES AS PERCENTAGE OF TOTAL AREA OF BHUTAN, 1996

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

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

Source: 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
Bumthang	4.5	0.6	0.1	0.0	0.0	1.6	6.8
Chhukha	3.9	0.1	0.4	0.0	0.0	0.1	4.5
Dagana	2.8	0.0	0.4	0.0	0.0	0.1	3.5
Gasa	3.6	0.6	0.0	-	0.0	6.8	11.0
Haa	3.4	0.3	0.1	0.0	0.0	0.5	4.3
Lhuntse	5.4	0.2	0.3	-	0.0	1.2	7.2
Mongar	4.3	0.0	0.5	-	0.0	0.0	4.9
Punakha	2.1	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 recorded is above 0% but less than 0.05%

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 (metres)	Altitude zones (metres)						Total 0-3600
		0-600	600-1200	1200-1800	1800-2400	2400-3000	3000-360	
Bumthang	2,690	0.0	0.0	0.0	0.4	10.6	26.2	37
Chhukha	2,220	7.7	17.2	20.8	20.4	18.7	11.8	97
Dagana	1,520	4.0	15.7	22.0	24.3	20.7	8.7	95
Gasa	3,659	0.0	0.0	0.1	0.9	2.5	4.8	8
Haa	2,712	0.0	0.8	3.6	7.3	16.1	24.0	52
Lhuntse	1,460	0.0	0.9	6.8	14.3	19.6	17.0	59
Mongar	1,620	3.1	17.9	27.1	23.3	16.0	11.2	99
Paro	2,280	0.0	0.0	0.0	6.3	25.3	24.8	56
Pemagatshel	1,200	7.9	39.0	39.7	13.2	0.2	0.0	100
Punakha	1,220	0.0	0.0	17.8	26.5	21.8	15.5	82
Samdrupjongkhar	160	25.6	27.6	23.1	14.4	6.5	2.4	100
Samtse	390	17.0	25.5	24.3	18.8	11.0	2.5	99
Sarpang	210	31.1	29.4	21.1	14.6	2.9	0.7	100
Thimphu	2,320	0.0	0.0	1.0	5.0	16.3	18.8	41
Trashigang	1,040	0.2	4.9	15.8	22.2	20.6	18.0	82
Trashiyangtse	1,830	0.0	2.3	6.7	16.5	23.4	18.8	68
Trongsa	2,180	0.0	2.9	10.4	19.5	28.8	21.2	83
Tsirang	1,620	7.3	31.4	30.1	19.8	7.6	3.2	99
Wangduephodrang	1,260	0.1	3.0	9.0	13.5	17.8	19.2	63
Zhemgang	1,916	9.5	27.1	28.0	17.9	9.7	5.1	97

continues...

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

(percent)

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

Source: Ministry of Agriculture, Thimphu

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

(percent)

Dzongkhag	Altitude zones (metres)						Total 0-3600
	0-600	600-1200	1200-1800	1800-24000	2400-3000	3000-3600	
Bumthang	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

continues...

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 area (%)
	0-3600	3600-4200	4200-4800	4800-5400	5400-6000	6000-6600	>6600	
Bumthang	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

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

Source: Ministry of Agriculture, Thimphu

TABLE 5.5: AVERAGE MONTHLY TEMPERATURE AT VARIOUS STATIONS BY DZONGKHAG, 1996

(degrees celsius)

Dzongkhag and station	Temperature	Month											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Thimphu													
Kawangjangsa	Maximum	12.5	15.8	20.0	22.4	23.4	25.0	25.9	27.2	24.7	23.0	19.4	18.4
	Minimum	-1.2	-0.4	2.3	4.5	11.0	12.9	15.1	14.5	12.9	7.8	2.5	-4.5
Lumitsawa	Maximum	11.4	n.a	n.a	n.a	23.7	21.6	21.8	23.8	23.0	22.6	22.2	22.4
	Minimum	1.9	n.a	n.a	n.a	16.8	14.2	17.2	16.1	15.9	16.8	15.7	15.4
Gidakom	Maximum	13.3	15.9	22.3	19.7	23.5	24.8	25.1	24.0	24.4	23.0	20.4	17.7
	Minimum	-0.7	1.1	5.9	4.3	14.4	13.7	16.6	16.0	14.4	8.5	3.6	-1.7
Taba	Maximum	11.1	13.8	19.7	22.8	25.8	22.7	22.7	24.7	22.8	21.6	18.5	16.5
	Minimum	0.3	3.4	3.3	4.6	10.2	13.5	15.8	13.9	13.3	8.5	2.7	-3.3
Chhukha													
Chhukha	Maximum	7.4	11.5	14.1	17.8	20.1	19.1	21.1	21.4	19.2	18.1	13.3	9.5
	Minimum	6.6	7.8	9.8	12.6	11.3	12.7	12.8	11.5	11.3	10.3	8.2	4.9
Gedu	Maximum	11.0	13.0	19.0	21.0	22.0	27.0	30.0	28.0	25.0	21.0	22.0	16.0
	Minimum	0.5	5.0	6.0	8.0	11.0	13.0	15.0	16.0	14.0	11.0	6.0	2.0
Tala	Maximum	10.9	15.7	17.8	21.1	21.9	21.5	22.4	23.7	23.1	21.3	17.1	15.5
	Minimum	4.4	7.8	10.9	13.8	15.4	17.3	18.2	18.1	17.4	14.7	10.1	6.8
Haa													
Namjeyling	Maximum	6.8	8.9	13.8	15.7	17.2	18.6	19.6	20.3	17.6	15.9	13.7	12.7
	Minimum	-1.7	0.9	2.9	4.4	10.3	12.1	14.9	14.6	12.6	7.1	1.8	-3.3
Paro													
Drugyel Dzong	Maximum	13.2	16.5	20.9	22.5	19.1	22.2	24.0	24.6	22.4	20.1	26.0	15.9
	Minimum	-3.9	-1.4	-1.7	2.6	9.0	11.2	13.9	13.7	11.8	6.8	14.6	-3.3
Samtse													
NIE	Maximum	18.6	23.0	25.5	29.3	27.7	27.5	27.0	27.9	28.7	28.0	25.1	22.4
	Minimum	14.4	16.7	18.6	21.0	20.5	24.2	23.5	24.4	24.4	20.7	17.4	15.1
Dagana													
Drujeygang	Maximum	25.3	25.1	24.7	26.5	27.2	28.4	29.5	30.0	29.6	26.9	25.8	26.3
	Minimum	10.2	12.2	13.2	14.7	18.5	19.2	19.3	19.5	19.8	15.1	13.8	14.4
Punakha													
Punakha Dzong	Maximum	14.8	18.8	18.9	23.0	27.2	32.4	33.3	33.5	31.3	27.6	24.7	21.4
	Minimum	7.8	10.8	12.1	13.5	15.6	16.6	16.3	18.1	17.4	16.3	14.4	9.0
Shelgana	Maximum	15.5	19.5	24.2	27.8	28.3	28.7	28.7	29.0	30.0	26.0	22.6	20.0
	Minimum	3.6	5.0	7.6	10.6	14.1	16.1	17.4	14.0	16.5	11.7	8.3	2.7

(continues...)

TABLE 5.5(continuation): AVERAGE MONTHLY TEMPERATURE AT VARIOUS STATIONS BY DZONGKHAG, 1996

(degrees celsius)

Dzongkhag and station	Temperature	Month											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wangduephodrang													
CARD	Maximum	16.0	19.7	23.5	26.2	26.5	26.4	16.3	25.9	26.4	25.3	21.6	19.4
	Minimum	6.8	7.3	10.1	12.4	17.7	18.1	19.5	19.0	18.2	13.9	4.9	4.9
Samtengang	Maximum	13.4	18.3	22.5	27.2	26.6	27.2	27.7	28.6	27.1	25.2	22.3	16.7
	Minimum	3.4	5.0	8.4	11.2	14.5	15.5	17.4	17.1	15.5	12.0	8.8	-2.5
Nobding	Maximum	9.0	12.6	17.9	21.5	20.8	23.3	20.8	21.9	21.4	18.3	15.3	13.1
	Minimum	0.7	1.8	4.9	7.7	11.2	12.7	14.6	14.1	12.7	9.7	5.2	1.3
Phobjekha	Maximum	5.7	10.7	14.0	18.0	18.0	19.4	21.4	21.3	19.2	17.3	13.1	11.1
	Minimum	-3.5	-4.1	0.7	2.8	8.0	8.8	12.7	11.3	10.1	4.1	-0.4	-5.9
Basochhu	Maximum	14.8	19.3	23.5	27.9	29.5	28.5	26.4	29.0	27.9	26.5	22.7	20.2
	Minimum	10.8	10.6	12.0	16.0	18.1	19.8	20.3	20.8	18.8	17.0	11.2	8.7
Zhemgang													
Yebilaptsa	Maximum	17.9	22.4	24.7	31.4	31.9	28.7	29.3	30.8	27.9	26.6	23.1	20.6
	Minimum	8.9	10.4	13.3	16.9	16.6	21.1	21.6	21.2	20.1	16.6	12.5	8.9
Trongsa													
Trongsa	Maximum	21.7	21.8	20.1	22.4	21.5	22.5	22.7	23.8	23.2	22.4	18.0	15.6
	Minimum	3.1	2.9	4.7	7.3	11.4	13.4	15.5	14.7	12.8	9.8	5.2	3.0
Kuenga Rabten	Maximum	10.3	10.1	21.5	22.9	25.3	25.4	20.6	18.8	17.8	21.0	18.9	15.4
	Minimum	8.8	8.0	7.6	6.5	11.3	11.3	15.5	11.8	7.4	10.1	7.6	3.7
Chendebji	Maximum	4.0	6.5	9.9	13.8	13.7	16.5	18.2	18.0	16.0	14.2	11.1	n.a
	Minimum	-3.7	-2.6	0.2	1.5	6.2	8.4	11.3	10.1	8.8	4.1	-0.5	n.a
Langthel	Maximum	18.7	20.9	21.8	n.a	23.3	22.8	26.5	28.0	29.2	24.9	25.6	25.2
	Minimum	5.5	9.4	14.8	n.a	18.1	18.0	19.7	22.6	20.8	18.4	14.7	13.0
Bumthang													
Ura	Maximum	10.0	10.2	12.8	n.a	n.a	18.1	19.1	19.2	17.0	16.1	17.0	n.a
	Minimum	-7.1	-1.7	7.8	n.a	n.a	7.7	9.8	9.4	8.6	5.7	-2.8	n.a
Chhumeth	Maximum	n.a	n.a	n.a	21.5	23.1	24.4	n.a	24.1	23.8	22.5	19.0	n.a
	Minimum	n.a	n.a	n.a	5.2	10.0	12.4	n.a	13.4	11.9	6.5	2.8	n.a
Chamkhar	Maximum	10.7	13.5	17.4	20.2	20.9	20.0	21.7	21.7	21.2	18.6	16.2	13.5
	Minimum	-1.8	-1.2	0.7	4.0	8.6	11.1	13.9	14.4	11.1	5.5	1.6	-5.0
Trashigang													
Khaling	Maximum	15.0	14.4	17.8	19.0	19.1	23.6	24.5	24.0	23.5	20.4	18.0	16.2
	Minimum	2.7	2.4	4.9	7.7	10.1	14.6	15.9	14.0	13.4	10.2	7.3	2.9
Wamrong	Maximum	11.3	12.2	15.3	21.7	18.4	20.2	20.9	20.1	n.a	20.2	16.8	16.7
	Minimum	2.2	3.9	6.6	6.7	8.9	11.4	11.4	13.8	n.a	11.5	10.5	7.3
Radhi	Maximum	n.a	n.a	24.2	27.8	25.9	27.2	27.0	28.4	26.2	26.2	23.7	24.7
	Minimum	n.a	n.a	11.6	14.6	16.9	18.3	19.0	19.1	17.9	15.1	11.0	6.7
Thrimshing	Maximum	16.2	19.7	23.5	26.5	27.2	27.8	29.3	28.5	29.4	27.0	23.7	19.1
	Minimum	4.1	5.2	8.8	11.8	11.8	16.7	18.5	18.0	16.0	12.4	10.7	4.7

(continues...)

TABLE 5.5(continuation): AVERAGE MONTHLY TEMPERATURE AT VARIOUS STATIONS BY DZONGKHAG, 1996

(degrees celsius)

Dzongkhag and station	Temperature	Month											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mongar													
Yadhi	Maximum	12.8	13.6	13.5	n.a	21.7	23.5	24.0	25.0	24.9	n.a	n.a	n.a
	Minimum	4.5	6.6	4.5	n.a	16.2	16.5	17.7	18.2	17.5	n.a	n.a	n.a
Tsakaling	Maximum	20.8	22.5	27.7	28.7	26.9	28.2	27.4	29.4	28.1	27.1	23.5	23.4
	Minimum	6.0	7.6	14.3	15.9	17.2	19.4	19.9	19.9	18.4	16.6	11.5	8.7
Lingmethang	Maximum	20.8	24.7	26.6	31.0	31.8	32.6	32.3	36.0	32.6	33.0	30.9	26.5
	Minimum	8.9	10.6	12.0	17.5	20.1	20.8	22.6	22.4	19.9	16.3	13.4	8.4
Trashiyangtse													
Trashiyangtse	Maximum	14.9	19.1	23.8	27.9	n.a	23.1	22.9	24.1	23.4	21.2	17.6	14.8
	Minimum	5.4	5.7	5.8	8.3	n.a	16.0	17.9	17.7	16.4	12.7	9.5	3.8
Yallang	Maximum	9.2	13.4	16.4	n.a	18.8	21.3	22.1	21.6	20.8	18.9	15.7	14.8
	Minimum	1.9	4.6	8.2	n.a	13.0	14.7	16.0	15.8	14.3	13.8	7.7	4.1
Lhuntse													
Dungkhar	Maximum	9.2	14.3	17.5	21.9	20.6	22.7	23.3	24.0	22.3	19.9	16.1	14.9
	Minimum	2.7	4.9	7.5	9.8	13.5	15.1	16.7	15.5	15.2	10.7	9.3	1.3
Tangmachhu	Maximum	12.0	n.a	19.3	23.1	23.0	25.6	25.8	27.1	25.9	20.9	18.9	11.7
	Minimum	4.2	n.a	9.5	12.3	15.2	16.6	19.0	18.8	16.9	12.7	9.8	5.0
Pemagatshel													
Yurung	Maximum	15.6	17.5	18.0	22.8	22.4	24.1	24.2	25.1	24.7	22.2	19.5	16.4
	Minimum	9.5	10.0	12.8	10.4	13.0	14.8	15.4	15.9	14.9	11.1	7.6	4.0
Dungmein	Maximum	14.0	18.1	21.0	25.7	24.8	26.2	26.8	27.5	26.8	24.0	19.4	14.7
	Minimum	5.3	7.1	10.3	13.8	16.3	18.0	19.4	19.2	18.1	13.9	10.1	5.9
Samdrupjongkhar													
Airong	Maximum	12.3	15.5	19.6	23.7	24.6	26.8	25.9	26.2	27.2	25.5	21.6	18.6
	Minimum	7.9	8.8	10.9	16.6	17.1	17.6	18.8	18.5	17.8	15.0	11.1	7.0
Dechheling	Maximum	19.1	n.a	21.3	24.4	23.4	26.6	25.4	25.6	24.6	23.6	20.8	18.5
	Minimum	9.7	n.a	13.3	14.3	18.7	20.0	15.2	15.7	14.5	12.9	12.0	8.0
Nganglam	Maximum	n.a	n.a	n.a	n.a	n.a	28.0	26.6	29.2	28.5	27.3	25.0	21.9
	Minimum	n.a	n.a	n.a	n.a	n.a	19.7	21.1	21.2	20.6	17.2	13.6	10.0
Sarpang													
Sarpang	Maximum	22.6	23.9	27.6	30.1	27.0	31.3	29.2	30.7	30.9	28.4	26.2	24.8
	Minimum	11.5	14.2	17.2	20.5	21.7	24.3	24.6	25.0	24.9	22.7	19.0	14.5
Tsirang													
Sunkosh Dobani	Maximum	22.7	27.1	28.2	32.0	30.1	31.0	30.8	31.1	31.0	29.4	27.1	25.0
	Minimum	9.4	11.0	14.2	18.0	21.3	22.3	22.9	23.3	22.0	18.1	13.7	9.1

end

Source: Meteorology Unit, Division of Power, Thimphu

TABLE 5.6: TOTAL MONTHLY RAINFALL AT EXISTING STATIONS IN EACH DZONGKHAG, 1996

(millimeters)

Dzongkhag and station	Month												Total rain
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thimphu													
Gidakom	26.0	7.5	19.7	3.1	45.9	89.8	94.4	n.a	48.8	29.6	0.0	0.0	364.8
Taba	n.a	21.6	2.2	9.4	16.4	105.2	158.0	183.4	149.8	38.4	0.0	0.0	684.4
Kawang Jangsa	6.0	4.0	2.6	10.6	20.8	123.0	128.3	190.7	154.6	33.3	0.0	0.0	673.9
Chhukha													
Chhukha	51.6	23.0	184.3	252.8	245.5	139.6	439.2	186.0	184.4	43.4	0.0	0.0	1,749.8
Tala	75.6	11.0	22.7	89.9	436.2	335.3	1,049.9	250.2	290.2	185.4	2.2	0.0	2,748.6
Gedu	80.7	123.3	70.1	69.4	698.4	421.3	530.0	270.9	321.1	106.3	21.4	0.0	2,712.9
Haa													
Namjeyling	30.8	10.9	18.2	40.4	72.2	100.2	156.0	211.0	152.9	57.8	0.0	0.0	850.4
Paro													
Drugyal Dzong	0.0	0.0	12.4	21.0	75.6	128.2	235.3	183.0	138.7	167.0	0.0	0.0	961.2
Samtse													
NIE	47.7	10.0	61.6	71.2	592.6	478.2	1,328.9	726.5	622.0	311.0	0.0	0.0	4,249.7
Dorokha	n.a	n.a	6.6	48.1	567.0	447.2	810.6	609.3	251.2	117.9	0.0	0.0	2,857.9
Tsirang													
Sunkosh Dobani	35.6	7.6	16.4	12.0	100.0	260.8	501.8	222.7	161.4	69.6	0.0	0.0	1,387.9
Dagana													
Dagadzong	60.2	62.2	73.0	94.0	126.0	239.0	131.3	240.4	270.0	160.0	150.0	90.0	1,696.1
Drujeygang	0.0	0.0	182.9	212.1	296.0	385.0	559.0	0.0	0.0	100.6	0.0	0.0	1,735.6
Tashithang	46.0	3.0	19.0	15.0	98.0	226.1	299.8	269.0	185.0	48.0	0.0	0.0	1,208.9
Punakha													
Shelgana	30.8	664.0	18.4	59.0	103.3	144.8	240.0	140.0	416.1	82.4	42.8	31.7	1,973.3
Wangduephodrang													
Nobding	0.0	4.1	15.8	23.0	148.8	236.8	387.0	351.4	325.6	66.0	6.7	0.0	1,565.2
Phobjikha	0.0	0.0	36.0	71.0	66.2	295.4	388.9	203.5	300.0	102.1	9.0	0.0	1,472.1
Samtengang	24.2	78.3	67.6	74.1	99.3	168.7	218.5	209.2	177.9	108.0	35.9	30.3	1,292.0
Wangdue CARD	30.1	0.0	7.6	44.8	38.6	93.6	117.8	152.9	85.3	30.8	2.0	0.0	603.5
Bachhu	27.6	7.3	1.9	4.8	52.1	187.2	269.9	135.4	186.7	115.2	0.0	0.0	988.1
Sarpang													
Sarpang	22.1	12.0	17.2	34.1	570.7	694.1	1,913.2	730.6	354.9	175.1	10.5	0.0	4,534.5
Zhemgang													
Panbang	9.4	69.8	13.0	72.9	705.4	1,021.4	1,782.3	498.0	183.8	64.2	6.2	0.0	4,426.4
Yebilaptsa	34.6	8.4	34.4	0.0	0.0	198.0	554.2	154.4	239.0	44.8	0.0	0.0	1,267.8

continues...

TABLE 5.6(continuation): TOTAL MONTHLY RAINFALL AT EXISTING STATIONS IN EACH DZONGKHAG, 1996

(millimeters)

Dzongkhag and station	Month												Total rain
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Trongsa													
Kuengarabten	24.0	20.2	16.0	11.9	115.9	115.9	456.5	210.0	214.3	181.0	0.0	0.0	1,365.7
Langthel	69.0	48.0	142.0	n.a	150.0	108.0	183.0	98.0	86.0	132.0	6.0	22.0	1,044.0
Trongsa	29.0	17.1	27.0	35.1	193.4	274.5	254.0	286.3	184.1	96.3	0.0	0.0	1,396.8
Bumthang													
Chamkhar	23.0	10.0	22.8	33.8	90.8	105.5	180.2	145.5	146.2	79.1	0.0	0.0	836.9
Chhumey	n.a	n.a	n.a	57.0	198.2	268.2	n.a	334.9	414.4	28.3	0.0	n.a	1,301.0
Ura	0.0	0.0	17.0	n.a	n.a	162.0	200.0	142.0	25.0	22.0	0.0	n.a	568.0
Trashigang													
Khaling	8.0	22.0	36.0	0.0	0.0	367.5	663.0	207.0	184.0	91.6	0.0	0.0	1,579.1
Radhi	n.a	n.a	50.1	79.4	153.2	178.7	299.0	178.0	298.0	113.0	0.0	4.0	1,353.4
Thrimshing	16.2	1.4	36.7	15.4	15.4	198.8	387.6	136.4	85.6	48.0	0.0	0.4	941.9
Wamrong	43.8	10.3	60.0	26.4	257.7	505.1	783.3	376.8	n.a	151.6	0.0	1.0	2,216.0
Tashiyangtse													
Yallang	29.2	0.0	48.9	n.a	288.0	138.8	253.5	232.9	81.4	80.7	0.0	0.0	1,153.4
Tashiyangtse	44.0	9.0	23.2	17.0	n.a	206.8	239.2	226.6	111.4	149.0	12.8	3.0	1,042.0
Mongar													
Lingmethang	29.0	2.8	35.2	29.0	107.0	168.2	273.6	160.4	104.0	96.4	0.0	1.6	1,007.2
Yadi	26.4	0.0	25.5	n.a	134.8	193.2	314.2	90.8	100.4	n.a	n.a	n.a	885.3
Tsakaling	7.0	16.8	21.2	124.3	177.8	174.3	231.6	161.8	133.8	112.2	0.0	0.0	1,160.8
Lhuntse													
Dungkhar	41.6	27.4	78.9	97.3	282.8	178.8	355.8	333.2	185.1	139.1	46.0	0.0	1,766.0
Tangmachu	6.7	n.a	21.2	60.4	135.8	139.7	218.9	24.0	55.8	23.8	0.0	0.0	686.3
Pemagatshel													
Dungmain	27.2	99.6	165.5	248.7	363.1	405.8	381.9	267.7	310.1	104.9	4.0	0.0	2,378.5
Yurung	16.0	3.6	78.0	17.6	372.1	523.4	713.9	208.6	141.6	128.0	0.0	0.0	2,202.8
Samdrupjongkhar													
Airong	124.6	136.2	166.2	322.4	366.6	477.7	513.0	322.5	294.9	266.8	62.1	27.4	3,080.4
Dechenling	73.0	n.a	123.4	345.4	744.4	576.6	739.8	324.7	206.2	110.2	56.0	0.0	3,299.7
Nanglam	n.a	n.a	n.a	n.a	n.a	503.6	1684.6	683.2	356.0	162.8	2.6	0.0	3,392.8

end

Source: Meteorology Unit, Division of Power, Thimphu

TABLE 5.7: NUMBER OF AGRICULTURE RESEARCH AND EXTENSION CENTRES, BHUTAN, MARCH 1997

Infrastructure	Numbers
RNR (Common services)	
RNR centres	35
National Resourse Training Institute (NRTI)	1
RNR Research Centres	4
RNR Research sub-stations	6
Soil and Plant Analytical Laboratory	1
Agriculture	
Agriculture Extension Centres	159
Agriculture Seed Production Farms	11
Plant Protection Centres	3
Farm Mechanization Centres	3
Farm Mechanization Training Centres	1
National Mashroom Centres	1
Animal Husbendry	
Veterinary Hospital (including Thimphu Hospital)	21
Livestock Extension Centres	110
Regional Veterinary Laboratories	4
Satellite Veterinary Laboratories	2
Livestock Farms	11
Fodder Seed Production Centres	1
Sub-Tropical Fodder Seed Production sub-centres	1
National Artificial Insemination programme	1
Vaccine Production Centres	1
Royal Veterinary Epidemiology Centre	1
Forestry	
Territorial Division HQs(DFO)	10
Range Offices	35
Beat Offices	53
Forest Training Institute	1
Nature Study Centre	1

Source: Ministry of Agriculture, Thimphu

TABLE 5.8: IRRIGATION SCHEMES CONSTRUCTED IN DZONGKHAGS, 1992/93 TO 1995/96

Dzongkhag	1992/93 New construction		1993/94 New construction		1994/95 New construction		1995/96 New construction	
	Length of channel (Km)	Command area (hec.)	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	0.00	0.00
Chhukha	2.72	99.00	0.59	0.00	0.00	0.00	0.32	37.95
Paro	0.00	0.00	0.00	0.00	1.56	85.00	1.00	83.80
Haa	0.00	0.00	1.50	0.00	0.00	0.00	0.00	0.00
Samtse	0.00	0.00	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	0.00	0.00
Dagana	0.00	0.00	0.00	0.00	0.00	0.00	4.00	27.06
Punakha	0.50	8.90	0.00	0.00	0.00	0.00	0.00	0.00
Wangduephodrang	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bumthang	0.00	0.00	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	0.00	0.00
Zhemgang			2.97	0.00	0.00	0.00	0.61	215.17
Trongsa	0.00	0.00	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	0.00	0.00
Mongar	2.20	19.43	0.00	0.00	0.00	0.00	2.10	86.80
Pemagatshel	0.00	0.00	0.00	0.00	0.00	0.00	0.57	101.21
Samdrupjongkhar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trashigang	0.00	0.00	4.15	0.00	7.74	287.44	2.94	284.00
Trashiyangtse	0.00	0.00	5.20	0.00	0.84	10.12	3.30	32.80
Gasa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bhutan	5.42	127.33	14.41	0.00	17.16	585.10	14.84	868.79

Source: Ministry of Agriculture, Thimphu

TABLE 5.9: QUANTITY OF PESTICIDES SUPPLIED TO FARMERS, BHUTAN 1986/87 TO 1995/96

(Kilograms or litre)

Period	Insecticide	Fungicide	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
1995/96	1,881	2,058	93,244	9	28	7,687	104,907

Source: Ministry of Agriculture, Thimphu

TABLE 5.10: LAND UNDER AGRICULTURAL USE BY DZONGKHAG, 1995

('000 Acres)

Dzongkhag	Wet land	Dry land	Tsheri pangshing	Orchard & plantation	Mixed plantation	Total area
Bumthang	0.20	13.63	0.05	0.02	0.05	13.96
Chhukha	3.80	14.05	4.50	1.04	18.97	42.36
Dagana	5.24	11.81	11.53	3.78	14.94	47.30
Gasa	0.37	0.37	0.32	-	0.82	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	39.99	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, Thimphu.

TABLE 5.11: HOLDERS BY SIZE OF HOLDING IN EACH DZONGKHAG, 1988/89(a)

Dzongkhag	Size of land holding (hectares)										Land holders	All holders
	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					
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(b)												
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 (c)	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(d)												
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

(a) See footnote (a) on Table 5.7. (b) Figures included with Punakha (c) For Samdrupjongkhar, size data were not available for an estimated 920 holders. These have been excluded from the table. (d) Figures included with Trashigang

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

TABLE 5.12: HOLDERS, AREA, PRODUCTION AND YIELD OF MAJOR CROPS BY DZONGKHAG, 1988/89(a).

Dzongkhag	Paddy				Wheat			
	Holders	Area (ha.)	Production (tonnes)	Yield/ha. (Kg.)	Holders	Area (ha.)	Production (tonnes)	Yield/ha. (Kg.)
Bumthang	*	*	*	*	760	260	150	570
Chhukha	1,820	920	950	1,030	1,100	310	220	700
Dagana	1,280	790	1,070	1,360	200	80	40	500
Gasa	!	!	!	!	!	!	!	!
Haa	150	90	80	880	820	460	230	510
Lhuntse	2,010	800	1,640	2,050	580	150	170	1,090
Mongar	2,200	470	470	980	610	130	60	470
Paro	1,790	1,460	2,400	1,640	2,110	1,250	650	520
Pemagatshel	870	120	110	960	960	160	100	630
Punakha	1,680	1,600	4,290	2,670	1,540	420	230	560
Samdrupjongkhar	2,660	2,030	2,910	1,430	460	60	30	490
Samtse	5,850	4,400	5,740	1,310	1,290	250	130	500
Sarpang	4,520	4,690	7,120	1,520	1,010	390	400	1,030
Thimphu	1,240	760	1,850	2,420	1,220	400	260	660
Trashigang	8,420	2,210	4,930	2,230	2,890	490	460	940
Trashiyangtse	#	#	#	#	#	#	#	#
Trongsa	1,160	600	820	1,370	850	270	180	640
Tsirang	4,110	3,050	4,510	1,480	1,880	340	170	490
Wangduephodrang	1,740	1,250	na	na	1,980	790	na	na
Zhemgang	1,540	770	900	1,170	590	200	150	780
Bhutan	43,040	26,010	39,790	24,500	20,850	6,410	3,630	11,080

continues...

TABLE 5.12(continuation): HOLDERS, AREA, PRODUCTION AND YIELD OF MAJOR CROPS BY DZONGKHAG, 1988/89 (a)

Dzongkhag	Maize				Mustard			
	Holders	Area (ha.)	Production (tonnes)	Yield/ha. (Kg.)	Holders	Area (ha.)	Production (tonnes)	Yield/ha. (Kg.)
Bumthang	130	10	20	1,160	*	*	*	*
Chhukha	2,570	1,830	680	370	1,650	300	80	270
Dagana	1,500	2,360	890	380	1,180	320	100	310
Gasa	!	!	!	!	!	!	!	!
Haa	140	70	40	540	*	*	*	*
Lhuntse	2,290	1,140	2,480	2,170	380	70	30	440
Mongar	4,260	2,570	4,530	1,760	450	80	30	400
Paro	*	*	*	*	640	120	50	390
Pemagatshel	2,390	860	920	1,060	330	30	20	600
Punakha	340	80	60	770	1,050	160	50	310
Samdrupjongkhar	4,900	4,700	2,650	560	2,190	690	180	260
Samtse	7,320	7,540	2,490	330	1,670	230	80	340
Sarpang	5,150	6,990	2,650	380	1,630	560	160	280
Thimphu	240	30	10	500	530	70	20	330
Trashigang	11,460	5,810	9,230	1,590	3,780	500	280	550
Trashiyangtse	#	#	#	#	#	#	#	#
Trongsa	970	380	270	720	290	40	10	390
Tsirang	5,550	6,380	2,910	460	3,380	610	170	270
Wangduephodrang	380	60	na	na	1,030	110	na	na
Zhemgang	1,800	1,060	1,250	1,180	430	170	50	290
Bhutan	51,390	41,870	31,080	13,930	20,610	4,060	1,310	5,430

Note: "!" Figues included in Punakha Dzongkhag and "#" in Tashigang Dzongkhag.

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

Table 5.13: ANNUAL CROPS, NUMBER OF HOLDERS HARVESTING EACH CROP AND AREA HARVESTED, BHUTAN, 1988/89

Crop	Number of holders	Percent holders	Crop area (hectares)
Cereals	62,490	96.5	93,060
Rice	43,070	66.5	26,030
Maize	51,470	79.5	41,890
Wheat	20,860	32.2	6,420
Buckwheat	27,170	41.9	7,190
Barley	12,150	18.8	2,580
Millet	27,210	42.0	7,570
Other Cereals	6,620	10.2	1,370
Legumes	17,810	27.5	3,870
Soya beans	11,060	17.1	1,960
Other bean	6,690	10.3	690
Pulses	6,200	9.6	1,220
Oil seeds	21,110	32.6	4,120
Roots and tubers	22,070	34.1	3,720
Potatoes	16,310	25.2	2,460
Ginger	3,550	5.5	360
Radishes	4,700	7.3	240
Turnips	1,950	3.0	150
Tapioca	2,980	4.6	390
Vegetables	8,610	13.3	630
Other crops	1,730	2.7	130
All annual crops	..	..	105,540
Holders with annual crops	62,920	97.1	..
All holders	64,770	100.0	..

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

TABLE 5.14: QUANTITY OF SEED PLANTED AND PRODUCTION OF POTATOES 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	90.7	86.33	85.98	95.2	82.47	75.37
Phujikha farm	8.15	6.74	6.74	4.70	4.78	4.78	4.40	4.72	1.27
Trashigang	18.35	20.25	20.15	45.50	35.20	35.10	34.95	34.45	33.25
Pemagatshel	4.00	4.00	4.00	10.00	10.00	10.00	14.00	14.00	13.75
Bumtha	32.60	31.70	31.70	21.35	19.95	19.95	22.00	18.85	16.95
Phubjikha	97.95	93.70	93.50	9.15	16.40	16.15	19.85	10.45	10.15
Quantity produced	414.19	414.94	447.02	238	237.9	240.74	216.66	188.78	156.6
Phujikha farm	33.54	33.54	35.97	34.00	34.00	28.29	11.38	11.38	15.75
Trashigang	15.70	15.70	41.55	95.40	95.30	93.10	42.85	42.85	67.70
Pemagatshel	10.70	10.70	8.15	22.10	22.10	20.95	28.70	28.70	30.90
Bumtha	74.05	74.05	86.05	53.15	53.15	56.55	84.93	57.05	13.25
Phubjikha	280.20	280.95	275.30	33.35	33.35	41.85	48.80	48.80	29.00
Seed to production ratio	2.57	2.65	2.86	2.62	2.76	2.80	2.28	2.29	2.08
Phujikha farm	4.12	4.98	5.34	7.23	7.11	5.92	2.59	2.41	12.40
Trashigang	0.86	0.78	2.06	2.10	2.71	2.65	1.23	1.24	2.04
Pemagatshel	2.68	2.68	2.04	2.21	2.21	2.10	2.05	2.05	2.25
Bumtha	2.27	2.34	2.71	2.49	2.66	2.83	3.86	3.03	0.78
Phubjikha	2.86	3.00	2.94	3.64	2.03	2.59	2.46	4.67	2.86

Source: Ministry of Agriculture, Thimphu

TABLE 5.15: PERENIAL CROPS BY ZONE, 1988/89

('000 trees)

Crop	Thimphu	Zone I	Zone II	Zone II	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
Jackfruit	-	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/ mule	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
				(percentage of all holders)					
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: NUMBER OF LIVESTOCK BY TYPE AND DZONGKHAG, 1996

('000)

Dzongkhag	Cattle	Yak	Mithun	Buffalo	Sheep	Goat	Pig	Horse	Mule	Donkey	Poultry
Bumthang	5.59	2.50	2.14	0.00	4.69	0.01	0.00	1.42	0.13	0.01	2.49
Chhukha	21.61	0.00	2.60	0.00	1.20	35.22	17.55	0.65	0.08	0.02	15.35
Dagana	6.76	0.00	0.62	0.26	1.57	2.90	1.78	0.39	0.05	0.00	8.04
Gasa	0.60	3.21	0.13	0.00	0.01	0.00	0.25	0.26	0.19	0.01	0.65
Haa	7.23	5.61	0.22	0.00	0.06	0.13	1.12	0.84	0.44	0.01	3.22
Lhuntse	9.81	0.29	4.48	0.00	0.19	0.03	1.76	1.44	0.17	0.02	5.60
Mongar	11.82	0.00	10.72	0.00	0.11	0.33	4.14	1.85	0.40	0.01	16.33
Paro	7.13	4.66	1.27	0.00	0.18	0.06	3.25	1.30	0.24	0.00	4.76
Pemagatshel	3.85	0.00	2.42	0.00	0.00	0.18	1.43	0.56	0.36	0.01	5.93
Punakha	7.33	0.00	1.78	0.00	0.00	0.04	2.31	0.90	0.02	0.01	5.52
Samdrupjongkhar	13.84	0.09	11.78	0.09	0.13	1.03	3.25	1.86	0.41	0.02	15.11
Samtse	37.92	0.00	0.17	1.57	6.04	17.59	3.51	0.90	0.33	0.00	34.45
Sarpang	14.54	0.00	0.47	0.97	0.97	4.81	1.69	0.75	0.00	0.00	0.00
Thimphu	6.06	9.32	1.10	0.00	1.06	0.00	1.41	1.10	0.00	0.00	3.61
Trashigang	20.82	8.81	9.33	0.00	6.63	0.08	7.36	4.48	0.84	0.02	19.40
Trashiyangtse	9.28	0.37	2.85	0.00	0.09	0.07	2.84	1.42	0.22	0.00	6.41
Trongsa	7.72	0.00	2.23	0.00	3.34	0.01	0.20	0.44	0.06	0.00	2.78
Tsirang	5.22	0.00	0.06	0.36	0.86	3.25	0.73	0.21	0.00	0.00	4.46
Wangdiphodrang	16.54	4.24	3.35	0.00	7.36	0.16	4.17	2.31	0.11	0.01	7.20
Zhemgang	10.17	0.00	4.40	0.00	0.00	0.43	1.56	1.46	0.28	0.00	8.91
Bhutan	223.85	39.09	62.10	3.24	34.47	66.32	60.29	24.54	4.32	0.13	170.21

Source: Crops & Livestock Division, Thimphu

TABLE 5.18: NUMBER OF SELECTED LIVESTOCK BY BREED, BHUTAN, 1986 TO 1996

Type of livestock	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cattle	340,262	401,446	304,750	303,742	308,273	..	240,604	..	246,293	267,022	261,970
Local	329,819	387,247	288,197	283,159	286,063	n.a	218,524	n.a	213,332	233,050	223,847
Improved (a)	10,443	14,199	16,553	20,583	22,210	n.a	22,080	n.a	32,961	33,972	38,123
Horse	23,641	27,083	25,768	24,460	22,102	..	21,224	..	22,915	24,902	24,542
Local	23,167	26,112	25,768	23,838	21,069	n.a	18,575	n.a	21,337	23,421	22,717
Improved	474	971	n.a	622	1,033	n.a	2,649	n.a	1,578	1,481	1,825
Sheep	43,771	39,235	46,734	48,044	43,698	..	32,123	..	31,882	34,438	34,465
Local	41,471	37,121	46,734	45,003	38,291	n.a	26,963	n.a	25,539	34,438*	28,841
Improved	2,300	2,114	n.a	3,041	5,407	n.a	5,160	n.a	6,343	..	5,624
Pig	88,613	73,287	65,891	63,285	59,598	..	44,534	..	45,968	47,691	61,010
Local	86,145	69,521	65,891	60,386	55,335	n.a	41,489	n.a	41,240	47,691*	50,355
Improved	2,468	3,766	n.a	2,899	4,263	n.a	3,045	n.a	4,728	..	10,655
Poultry	211,258	229,944	237,048	218,363	218,852	..	133,752	..	157,663	177,994	169,208
Local	202,795	214,980	237,048	203,055	205,097	n.a	121,720	n.a	144,526	177,994*	146,672
Improved	8,463	14,964	n.a	15,308	13,755	n.a	12,032	n.a	13,137	..	22,536
Mithun cross	n.a	n.a	52,727	46,573	51,644	60,500	68,904	n.a	53,514	65,405	53,914
Yak	35,694	40,065	35,639	37,039	33,035	31,500	30,241	n.a	36,761	39,668	37,871
Buffalo	5,037	5,184	4,344	4,700	4,300	2,600	895	n.a	1,513	1,206	2,889
Mule	n.a	n.a	n.a	2,334	3,767	n.a	3,310	n.a	4,183	4,439	4,321
Donkey	n.a	n.a	n.a	196	220	n.a	171	n.a	111	204	132
Goat	31,757	48,055	36,847	32,594	36,909	25,100	14,500	20,000	26,731	35,109	66,320

Note: 1991 and 1993 figures are imputations by CSO.
* Includes both local and improved breeds and (a) includes Jersey plus Brown Swiss.

Source: Crop & Livestock Services Division, Thimphu

TABLE 5.19: IMPORTS AND DISTRIBUTION OF FOOD ITEMS BY FOOD CORPORATION OF BHUTAN, 1987/88 TO 1996

(metric tonnes)

Commodity	1987/88	1988/89	1989/90	1990/91	1991/92	1992	1993	1994	1995	1996
Imports										
Rice	14,000.00	11,599.72	9,900.00	8,775.68	10301.31	11,164.37	8,701.64	12,573.23	11,780.22	13,391.65
Wheat	5,025.00	4,989.96	2,833.55	1,450.00	1469.86	1,671.91	2,359.96	3,494.45	925.00	2,000.00
Sugar	3,138.50	3,616.20	3,040.00	3,446.50	2539.50	3,032.90	3,624.40	3,567.20	3,282.00	3,812.00
Salt	3,241.43	6,759.92	4,618.58	4,318.20	3520.93	4,257.70	3,651.96	0.00	0.00	24.00
Oil	959.76	399.90	339.93	270.44	559.90	0.00	1,971.90	0.00	489.56	493.00
Sales										
Rice	13,354.96	11,196.64	8,895.29	8,199.43	10504.50	10,861.95	9,414.30	11,570.66	11,270.25	8,924.99
Wheat	4,474.99	4,544.43	2,964.26	2,274.87	2998.25	3,380.22	3,186.74	2,790.03	1,453.62	1,513.25
Sugar	3,264.11	3,489.96	3,039.42	3,000.63	3143.32	3,248.40	3,617.00	3,523.74	3,415.18	3,630.16
Salt	4,037.19	4,049.57	4,887.36	4,496.58	4301.01	3,842.54	2,700.76	0.00	0.00	0.53
Oil	856.96	434.62	416.31	281.67	301.85	350.49	564.64	420.15	451.10	214.46

Note: 1988/89 to 1991/92 refers to 13 months period (June to June). Since 1992 the period refers to calander year (January to December).

Source: Food Corporation of Bhutan.

TABLE 5.20: QUANTITY OF AGRICULTURAL PRODUCE HANDLED BY FOOD CORPORATION OF BHUTAN, 1987 TO 1996

(tonnes)

Commodity	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Potatoes	9,991.60	14,377.00	13,881.00	9,885.61	13,196.27	12,189.87	14,847.64	17,132.07	14,603.70	16,478.60
Vegetables	0.00	1,243.00	960.80	994.80	1,217.38	1,029.13	1,258.91	1,736.25	1,136.76	1,970.57
Apples	965.70	591.80	325.20	94.06	687.95	1,406.47	498.89	393.99	519.23	252.95
Oranges	2,455.40	1,936.10	1,981.20	3,274.69	14,180.68	6,585.14	4,915.44	3,134.49	4,010.58	3,639.69
Cardamom	n.a	n.a	n.a	0.00	943.52	628.84	616.78	183.81	86.89	5.84
Ginger	n.a	n.a	n.a	102.99	930.08	766.29	611.40	515.20	719.50	1,023.28
Garlic	n.a	n.a	n.a	0.64	0.21	0.08	0.12	0.00	0.15	0.00
Arecanut	n.a	n.a	n.a	0.00	312.88	91.85	163.63	158.39	192.35	182.52
Supari(dried doma)	n.a	n.a	n.a	0.00	0.00	0.00	0.00	0.00	0.49	0.00
Dry chilli	43.10	57.10	64.40	56.75	33.70	53.53	51.58	97.72	40.82	22.64
Kidney bean(rajma)	0.00	0.00	0.00	55.09	42.68	48.77	69.42	64.79	36.32	69.54
Soya bean	195.70	197.70	295.20	74.51	172.30	210.29	215.31	290.97	90.96	92.36
Pulses	n.a	n.a	n.a	n.a	n.a	0.18	11.14	1.14	3.39	4.70
Mustard	n.a	n.a	n.a	n.a	n.a	n.a	8.20	3.41	0.63	1.31
Pipla (wild)	n.a	n.a	n.a	n.a	n.a	n.a	0.00	9.06	14.79	8.29
Chirota (wild)	n.a	n.a	n.a	n.a	n.a	n.a	0.00	0.00	6.28	1.00
Lemon	n.a	n.a	n.a	n.a	147.70	187.27	110.93	54.10	54.64	47.26
Apricot	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Peach	n.a	n.a	n.a	n.a	n.a	n.a	0.30	0.68	1.40	1.43
Plum	n.a	n.a	n.a	n.a	n.a	n.a	2.53	0.12	0.98	1.91
Pear	n.a	n.a	n.a	n.a	n.a	n.a	0.00	0.08	0.25	0.07
Dry bean	n.a	n.a	n.a	n.a	n.a	12.26	0.00	0.00	0.18	3.63

Note: 1987/88 refer to 15 months period (April to June) while 1990/91 refer to.13 months period (June to June)
Since 1992 FCB had followed calander year (January to December)
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 5.21: DETAILS OF PROTECTED AREAS IN BHUTAN, BY YEAR OF ESTABLISHMENT AND AREA. 1996

Name of Area	Establishment year	Area(sq.Km)	Percent of total area
Existing Protected Areas		10,513	22.61
Torsa Strict Nature Reserve	1993	644	1.38
Jigme Dorji National Park	1974	4,200	9.03
Black Mountain National Park	1993	1,400	3.01
Thrumshingla National Park	1993	768	1.65
Royal Manas National Park	1966	1,000	2.15
Sakteng Wildlife Reserve	1993	650	1.40
Kulongchu Wildlife Reserve	1993	1,300	2.80
Phibsoo Wildlife Reserve	1974	278	0.60
Khaling/Neoli Wildlife Reserve	1974	273	0.59

Source: Forest Division, Ministry of Agriculture, Thimphu

TABLE 5.22: QUANTITY AND VALUE OF FOREST PRODUCTS SUPPLIED BY TYPE AND USERS, 1992/93 TO 1995/96

User and product type	1992/93		1993/94		1994/95		1995/96	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Rural population								
Trees (numbers)	44,853	1,480.1	64,246	4,507.0	84,239	0.77	110,002	2.21
Poles (numbers)	70,924	110.7	68,526	352.1	2,969	0.23	2,743	0.30
Logged timber (cubic metre)	7,885.0	7,885.0	135,872.0	1,916.0	3,913	0.72	228	0.01
Firewood (cubic metre)	13,696.0	111.0	18,298.0	185.0	15,881	0.35	2,864	0.07
Charcoal (kg)	0	0.0	50,900	101.0	347,870	0.07	n.a	..
Bamboos (numbers)	132,826	36.8	238,053	1.2	301,736	0.02	593,839	0.07
Urban population								
Trees (numbers)	1,094	138.0	5,104	2,855.0	42,368	9.96	27,383	6.30
Poles (numbers)	13,847	55.2	8,619	52.0	1,038	0.18	1,541	0.43
Logged timber (cubic metre)	1,644.0	123.0	2,145.0	287.0	13,514	3.96	2,729	0.81
Firewood (cubic metre)	10,339.0	157.0	19,608.2	238.0	41,169	0.62	68,459	0.85
Charcoal (kg)	9,845	154.2	349,260	70.2	292,123	0.05	199,870	0.04
Bamboos (numbers)	112,983	8.5	428,404	36.2	334,567	0.42	300,636	0.09
Government agencies								
Trees (numbers)	506	252.0	1,277	423.0	..	..	..	..
Poles (numbers)	15	0.6	3,973	-	..	..	..	..
Logged timber (cubic metre)	19,541.0	765.0	1,372.0	48.0	..	..	..	..
Firewood (cubic metre)	6,105.0	54.5	13,148.0	64.7	..	..	..	..
Charcoal (kg)	0	0.0	72	-	..	..	..	..
Bamboos (numbers)	0	0.0	210,652	30.2	..	..	..	..
Bhutan								
Trees (numbers)	46,453	1,870.1	70,627	7,785.0	126,606	10.73	137,385	8.51
Poles (numbers)	84,786	166.5	81,118	404.1	4,008	0.41	4,283	0.74
Logged timber (cubic metre)	29,070.0	8,773.0	139,389.0	2,251.0	17,427	4.68	2,957	0.82
Firewood (cubic metre)	30,140.0	322.5	51,054.2	487.7	57,050	0.97	71,323	0.92
Charcoal (kg)	9,845	154.2	400,232	171.2	639,993	0.12	199,870	0.04
Bamboos (numbers)	245,809	45.3	877,109	67.6	636,303	0.45	894,475	0.16

Note: Urban population figures for 1994/95 and 1995/96 includes Govt. agencies and their values were given in million Nu. 1994/95 and 1995/96 units for trees, poles and logged timbers were measured in c.ft.

Source: Forestry Services Division, 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 ESTABLISHMENTS BY SECTOR, BHUTAN, 1985 TO 1996

Sector	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Production & manufacturing	104	119	136	153	161	175	189	226	256	303	336	372
New registration	10	15	17	17	8	14	14	37	30	47	15	36
Existing establishments	94	104	119	136	153	161	175	189	226	256	321	336
Services	45	49	56	68	82	101	124	164	209	1,506	1,785	1,990
New registration	2	4	7	12	14	19	23	40	45	1,297	140	180
Existing establishments	43	45	49	56	68	82	101	124	164	209	1645	1810
Contract	111	118	131	205	244	298	349	544	662	921	1,085	1,343
New registration	6	7	13	74	39	54	51	195	118	259	127	251
Existing establishments	105	111	118	131	205	244	298	349	544	662	958	1092
All sectors	260	286	323	426	487	574	662	934	1,127	2,730	3,206	3,705

Source: Industries Division, Thimphu

TABLE 6.2: NUMBER OF LICENSED FIRMS IN MANUFACTURING AND MINING INDUSTRIES BY SECTOR, 1986, 1989 & 1996.

Industry	1986				1989				1996			
	Public	Joint	Private	Total	Public	Joint	Private	Total	Public	Joint	Private	Total
Mining	4	n.a	5	9	2	1	8	11	0	0	5	5
Manufacturing	10	n.a	330	340	16	5	136	157	7	5	355	367
Food processing/milling	4	n.a	245	249	7	1	30	38	4	0	80	84
Textiles and Clothing		n.a	5	5	1	0	6	7	0	0	1	1
Wood and Paper Products	2	n.a	53	55	5	2	75	82	3	2	193	198 0
Chemical Products	1	n.a	11	12	1	2	17	20	0	1	1	2
Mineral Products	2	n.a	4	6	1	0	6	7	0	1	27	28
Other	1	n.a	12	13	1	0	2	3	0	1	53	54 0
Total mining and manufacturing	14	n.a	335	349	18	6	144	168	7	5	360	372

Source: Industries Division, Thimphu

TABLE 6.3: NUMBER OF INDUSTRIES BY SECTOR, SIZE AND TYPE, BHUTAN, 1986 TO 1996

Industrial establishments	1986	1989	1990	1991	1992	1993	1994	1995	1996
Sector									
Private	335	144	710	n.a	n.a	n.a	n.a	3,169	3,666
Joint	14	18	20	n.a	n.a	n.a	n.a	11	11
Public	n.a	6	12	n.a	n.a	n.a	n.a	26	28
Size									
Large scale	n.a	n.a	499	n.a	n.a	18	30	31	31
Medium scale	n.a	n.a	23	n.a	n.a	16	22	32	32
Small scale	n.a	n.a	19	n.a	n.a	148	142	177	196
Cottage scale	n.a	n.a	201	n.a	n.a	947	693	650	678
Mini scale	..	..	..	n.a	n.a	..	922	1,231	1,425
Other (Contract)	..	..	..	n.a	n.a	..	921	1,085	1,343
Type									
Production & Manufacturing	340	157	266	189	226	258	303	336	372
Agro based	n.a	n.a	64	n.a	n.a	63	72	81	84
Forest based	n.a	n.a	131	n.a	n.a	117	151	167	198
Mineral based	9	11	33	n.a	n.a	38	29	35	35
Others	n.a	n.a	38	n.a	n.a	40	51	53	55
Contract	n.a	n.a	395	349	544	662	921	1,085	1,343
Services	n.a	n.a	81	124	164	209	1,506	1,785	1,990
All industries	349	168	742	662	934	1,129	2,730	3,206	3,705

Source: Industries Division, Thimphu

TABLE 6.4: NUMBER OF CONTRACT FIRMS AND INDUSTRIES BY DZONGKHAG, 1996

Dzongkhag	Class of contract firms					Scale of industries				
	A	B	C	Petty	Total	Small	Medium	Large	Cottage	Total
Bumthang	1	2	4	41	48	3	0	0	39	42
Chhukha	5	4	17	76	102	44	17	14	153	228
Dagana	0	0	0	24	24	0	0	0	4	4
Gasa	0	0	0	3	3	0	0	0	0	0
Haa	0	0	2	27	29	1	0	0	4	5
Lhuntse	0	0	2	18	20	0	0	0	1	1
Mongar	1	0	4	43	48	4	0	0	11	15
Paro	0	0	3	52	55	10	1	0	38	49
Pemagatshel	0	0	0	15	15	0	0	0	4	4
Punakha	0	1	3	27	31	0	0	0	1	1
Samdrupjongkhar	5	2	9	42	58	20	1	3	39	63
Samtse	0	0	1	61	62	13	3	4	21	41
Sarpang	1	0	6	65	72	19	0	1	80	100
Thimphu	20	13	21	501	555	72	9	9	220	310
Trashigang	1	3	3	47	54	4	0	0	10	14
Trashiyangtse	0	0	1	16	17	0	0	0	0	0
Trongsa	0	0	2	23	25	2	0	0	13	15
Tsirang	0	0	0	16	16	0	0	0	15	15
Wangduephodrang	0	0	5	44	49	3	1	0	6	10
Zhemgang	0	0	0	60	60	1	0	0	19	20
Bhutan	34	25	83	1201	1343	196	32	31	678	937

Note: Size of establishments are determined by their 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 BY DZONGKHAG, 1996

Dzongkhag	Agro based	Forest based	Mineral based	Services	Contract	Others	All types
Bumthang	3	15	0	51	48	0	117
Chhukha	18	27	6	286	102	18	457
Dagana	0	0	0	26	24	0	50
Gasa	0	0	0	0	3	0	3
Haa	1	5	0	17	29	0	52
Lhuntse	0	1	0	6	20	0	27
Mongar	3	10	1	50	48	3	115
Paro	5	3	2	117	55	2	199
Pemagatshel	0	2	0	19	15	0	36
Punakha	0	0	0	14	31	0	45
Samdrupjongkhar	8	15	5	175	58	4	265
Samtse	10	5	10	72	62	3	162
Sarpang	13	10	1	226	72	1	323
Thimphu	14	64	9	707	555	21	1370
Trashigang	3	10	0	72	54	2	141
Trashiyangtse	1	4	0	9	17	0	31
Trongsa	0	3	0	26	25	0	54
Tsirang	2	0	0	54	16	0	72
Wangduephodrang	1	2	1	37	49	1	91
Zhemgang	2	7	0	26	60	0	95
Bhutan	84	198	35	1,990	1,343	55	3,705

Source: Ministry of Trade and Industry, Thimphu

TABLE 6.6: NUMBER OF MINING AND MANUFACTURING INDUSTRIES BY EMPLOYMENT SIZE, 1

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

Source: Ministry of Trade & Industries, Thimphu

TABLE 6.7: PERCENTAGE OF EMPLOYEES BY NATIONALITY IN MINING AND MANUFACTURING INDUSTRIES, 1989

Industry	Employees		
	National	Non national	Total
Mining and quarring	30	70	100
Manufacturing	57	43	100
Food, beverage and tobacco	35	65	100
Textile, wearing apparel etc.	81	19	100
Wood, wood products and furniture	59	41	100
Pulp, paper and printing	77	23	100
Chemical, rubber and plastics	50	50	100
Non-metalic mineral products	67	33	100
Metal products and other manufacturing	66	34	100

Source: Ministry of Trade and Industries, Thimphu

TABLE 6.8: PRODUCTION OF MINES AND MINERALS, 1990 TO 1996

Minerals	1990	1991	1992	1993	1994	1995	1996
Dolomites ('000 tonnes or mt)	190.4	273.4	284.8	225.7	206.4	249.3	276.7
Lime stone ('000 tonnes or mt)	138.3	220.0	170.0	205.4	223.2	250.0	297.9
Gypsum ('000 tonnes or mt)	40.0	27.0	25.0	29.6	45.1	52.1	66.6
Slate mines ('000 square feet)	201.3	164.0	30.4	12.3	0.0	92.1	44.1
Coal mines ('000 tonnes or mt)	20.1	44.8	56.2	57.7	55.0	71.1	63.9
Marbles							
Chips ('000 tonnes or mt)	n.a	10.2	8.1	7.5	7.6	16.6	11.1
Slabs ('000 square feet)	n.a	10.0	34.9	19.5	28.6	42.5	35.4
Quartzite ('000 tonnes)	n.a	n.a	n.a	0.2	15.3	49.9	98.1
Talc (tonnes)	n.a	n.a	n.a	0.0	0.2	3.3	9.2
Iron Ore ('000 mt)	n.a	n.a	n.a	n.a	n.a	2.1	4.0
Pink Shale ('000 mt)	n.a	n.a	n.a	n.a	n.a	n.a	1.4

Note: 1994 figures are preliminary; for 1990 to 1992 unit used is metric tonnes and 1993 & 1994 in tonnes.

Source: Geology and Mines Division, Thimphu

TABLE 6.9: PRODUCTION AND USE OF MINES AND MINERALS, BHUTAN, 1993 TO 1996

Minerals	1993			1994			1995			1996		
	Total	Exports	Domestic use	Total	Exports	Domestic use	Total	Exports	Domestic use	Total	Exports	Domestic use
Dolomites ('000 tonnes)	225.7	225.7	0.0	206.4	206.4	0.0	249.3	249.3	0.0	276.7	216.6	60.1
Lime stone ('000 tonnes)	205.4	0.0	205.4	223.2	0.0	223.2	250.0	0.0	250.0	297.9	0.0	297.9
Gypsum ('000 tonnes)	29.6	24.6	5.0	45.1	40.1	5.0	52.1	48.1	4.0	66.6	57.1	9.6
Slate mines ('000 sq. ft.)	12.3	0.0	12.3	0.0	0.0	0.0	92.1	0.0	92.1	44.1	0.0	44.1
Coal mines ('000 tonnes)	57.7	57.7	0.0	55.0	55.0	0.0	71.1	56.9	14.2	63.9	55.3	8.5
Marbles												
Chips ('000 tonnes)	7.5	7.5	0.0	7.6	7.6	0.0	16.6	16.6	0.0	11.1	11.1	0.0
Slabs ('000 sq. ft.)	19.5	n.a	n.a	28.6	n.a	n.a	42.5	42.5	0.0	35.4	3.7	31.7
Quartzite ('000 tonnes)	0.2	0.2	0.0	15.3	0.0	15.3	49.9	20.0	29.9	98.1	39.1	59.0
Talc (tonnes)	0.0	0.0	0.0	0.2	0.2	0.0	3.3	3.3	0.0	9.2	9.2	-0.0
Iron Ore ('000 mt)	n.a	n.a	n.a	n.a	n.a	n.a	2.1	0.0	2.1	4.0	0.0	4.0
Pink Shale ('000 mt)	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	1.4	1.4	0.0

Note: 1994 figures are preliminary

Source: Geology and Mines Division, 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 over the 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.

Number of motor vehicle accidents
1987 to 1996 (see table 7.8)

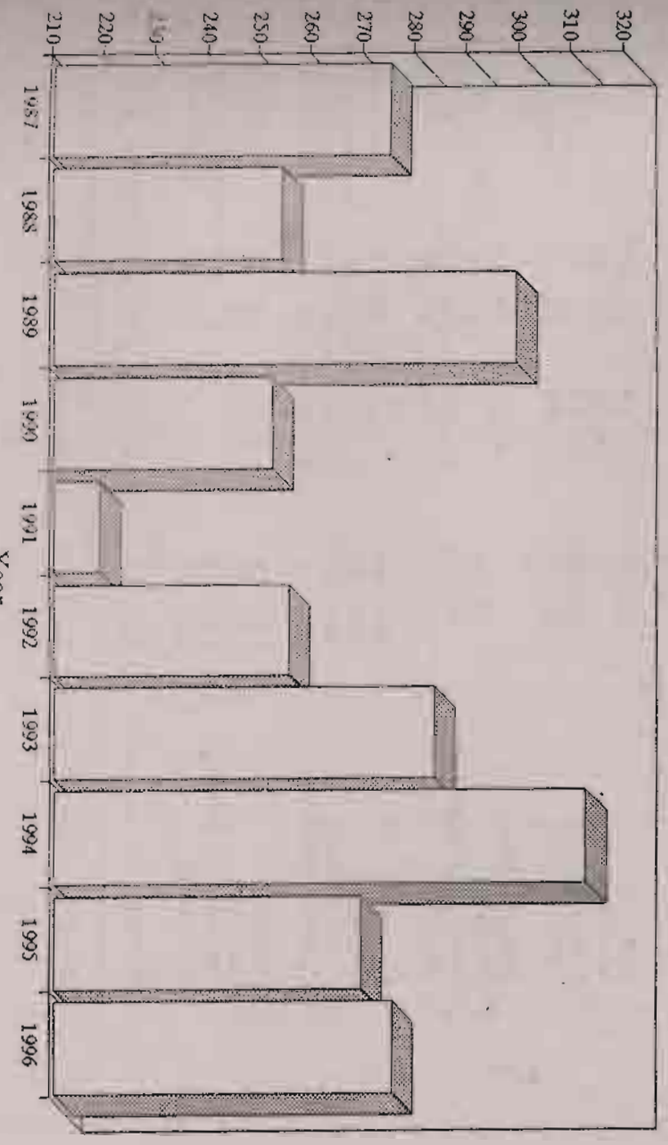


TABLE 7.1: LENGTH OF ROADS BY TYPE, BHUTAN, DECEMBER 1996

(length km)

Type of road	National highway	District road	Feeder road	Urban road	All roads
Black topped	1562.44	293.00	289.71	78.00	2223.15
Non-black topped	24.00	122.00	1006.50	..	1152.50
Total	1586.44	415.00	1296.21	78.00	3375.65

Source: Public Work Divison, Thimphu

TABLE 7.2: LENGTH OF ROADS BY TYPE AND DZONGKHAG, BHUTAN, 1996

(kilometres)

Dzongkhag	National highway	District road	Feeder road	Urban road	All roads
Bumthang	122.00	-	91.47	-	213.47
Chhukha	213.00	-	158.67	12.00	383.67
Dagana	-	87.00	13.00	-	100.00
Gasa	-	-	1.50	-	1.50
Haa	16.00	25.60	47.67	-	89.27
Lhuntse	-	43.00	10.00	-	53.00
Mongar	177.00	21.00	51.70	-	249.70
Paro	103.00	36.40	88.26	-	227.66
Pemagatshel	-	23.00	39.68	-	62.68
Punakha	9.00	-	100.72	-	109.72
Samdrupjongkhar	59.00	50.00	52.70	-	161.70
Samtse	-	84.00	39.80	-	123.80
Sarpang	120.44	-	129.10	-	249.54
Thimphu	111.00	-	152.65	66.00	329.65
Trashigang	141.00	5.00	96.65	-	242.65
Trashiyangtse	-	40.00	12.00	-	52.00
Trongsa	167.00	-	16.00	-	183.00
Tsirang	62.00	-	30.00	-	92.00
Wangduephodrang	142.00	-	108.24	-	250.24
Zhemgang	144.00	-	56.40	-	200.40
Bhutan	1,586.44	415.00	1,296.21	78.00	3,375.65

Source: Public Works Divison, Thimphu

TABLE 7.3: NUMBER AND LENGTH OF ROAD BRIDGES BY TYPE, BHUTAN, 1996

Type of bridges	Numbers	Length (metres)
Reinforced concrete	59	1318
Prestressed concrete	3	248
Bailey bridge	52	1769
Suspension	7	687
Hemilton and steel	7	214
Composite	25	476
Wooden	20	376
Submersible	7	194
All bridges	180	5281

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 - VII)
	I - IV	Vth	VI	VII	
Bjakar	1	7	3	4	15
Chhukha	3	5	1	3	12
Dagana	2	2	2	3	9
Gasa	0	0	2	2	4
Haa	3	6	1	3	13
Lhuntse	3	4	2	3	12
Monggar	9	5	2	5	21
Paro	3	8	3	2	16
Pemagatshel	2	7	2	3	14
Punakha	3	4	1	0	8
Samdrupjongkha	10	13	6	2	31
Samtse	9	15	2	1	27
Sarpang	9	8	5	0	22
Thimphu	0	1	3	3	7
Trashigang	7	12	2	3	24
Trashiyangtse	3	6	4	3	16
Trongsa	4	6	3	3	16
Tsirang	6	4	1	2	13
Wangduephodrang	2	10	5	3	20
Zhemgang	1	5	4	4	14
Bhutan	80	128	54	52	314

Source: Division of Roads, Thimphu

TABLE 7.5: NUMBER OF REGISTERED VEHICLES BY TYPE AND REGION, 1990 TO 1996

Region	Heavy	Light	2-whellers	Taxi	Others	All types
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	1,421	3,059	3,927	282	80	6,154
Thimphu	480	2,056	2,573	171	80	5,360
Gaylegphug	150	142	313	-	..	605
Phuentsholing	766	813	926	110	n.a	..
Samdrupjongkhar	25	48	115	1	..	189
1995 total	1,512	3,316	4,300	340	38	9,506
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
1996 total	1,884	4,856	6,349	432	48	13,569
Thimphu	604	2,691	3,229	287	48	6,859
Gaylegphug	275	364	730	..	..	1,369
Phuentsholing	907	1,720	2,274	145	..	5,046
Samdrupjongkhar	98	81	116	..	..	295

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. The 1996 figures for 2-Wheelers and light vehicles for Phuentsholing region includes the period from 1994 to 19/06/1997
(a) Includes figures from first few months of 1994

Source: Road Safety & Transport Authority, Thimphu

TABLE 7.6: NUMBER OF NEW MOTOR VEHICLE DRIVING LICENCES ISSUED (a) BY TYPE OF VEHICLE, 1986 TO 1996

(numbers)

Licence for	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Two Wheelers	179	324	163	465	103	523	159	328	371	225	538
Light	531	507	373	691	606	665	316	586	461	281	840
Medium	18	39	41	57	52	51	19	45	48	67	68
Heavy	131	187	65	63	50	77	21	74	45	19	63
Other(b)	44	34	82	132	161	76	n.a	n.a	66	27	91
All vehicles	903	1,091	724	1,408	972	1,392	515	1,033	991	619	1,600

Note: (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, bulldozers, power tillers, payloaders, excavators, well loaders, and cranes.

Source: Royal Bhutan Police, Thimphu

TABLE 7.7: DETAILS OF PUBLIC ROAD TRANSPORT SERVICES, 1990 TO 1996

Details	1990	1991	1992	1993	1994	1995	1996
Number of operators	15	15	15	15	14	15	18
Number of service routes (a)	68	66	67	72	65	67	65
Distance run ('000 kms)	3,484	4,668	4,484	4,581	4,180	3,107	4,350
Passengers carried ('000 passengers)	1,009	1,178	1,336	1,388	995	1,021	1,812
Direct	742	820	880	901	729	786	1,077
Local	267	358	456	488	265	235	735
Loads carried ('000 kgs)	755	1,154	1,155	1,275	4,314	119	4,626
Services suspended (route days)	815	1,196	1,467	2,278	1,427	1,038	1,230

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

Source: Surface Transport Division, Ministry of Communications, Thimphu

TABLE 7.8: NUMBER OF MOTOR VEHICLE ACCIDENTS BY TRAFFIC DIVISION, 1987 TO 1996

Traffic division	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Thimphu	144	142	154	105	107	127	176	207	133	156
Punakha Division No.II	35	24	14	20	26	11	22	20	26	18
Phuentsholing	23	14	38	40	19	30	13	16	46	48
Samtse	8	7	7	8	5	3	2	6	10	3
Gelephu	17	7	19	23	9	12	16	8	5	10
Tsirang	8	3	9	5	5	9	5	4	7	3
Trongsa	9	12	19	27	14	23	21	20	6	7
Samdrupjongkha	15	25	21	14	15	21	17	21	21	16
Trashigang	11	14	10	6	13	11	5	7	6	8
Monggar	5	6	8	4	6	8	6	3	9	6
Bhutan	275	254	299	252	219	255	283	312	269	275

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

Source: Royal Bhutan Police, Thimphu

TABLE 7.9: MOTOR VEHICLE ACCIDENTS BY CAUSE BY TRAFFIC DIVISION, BHUTAN, 1996

(numbers)

Traffic division	Mechanical fault	Drunk driving	Bad weather	Without licence	Other causes	All causes
Thimphu	8	14	1	10	43	76
Punakha	-	1	-	-	6	7
Phuentsholing	8	2	-	1	12	23
Samtse	-	-	-	-	1	1
Gelephu	2	2	-	1	1	6
Tsirang	-	1	-	-	-	1
Trongsa	1	-	-	1	1	3
Samdrupjongkha	3	-	-	-	3	6
Trashigang	-	-	-	1	-	1
Mongar	1	-	3	-	8	12
Bhutan	23	20	4	14	75	136

Source: Royal Bhutan Police, Thimphu

TABLE 7.10: MOTOR VEHICLE ACCIDENTS BY TRAFFIC DIVISION BY MONTH, BHUTAN, 1996

(numbers)

Traffic division	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Thimphu	11	12	14	8	9	16	10	15	20	16	16	9	156
Punakha	3	1	4	1	-	2	1	1	-	1	3	1	18
Phuentsholing	2	6	2	5	5	1	7	8	4	4	2	2	48
Samtse	-	-	1	-	-	-	-	-	1	-	1	-	3
Gelephu	1	-	1	-	2	1	1	2	2	-	-	-	10
Tsirang	1	-	-	-	-	-	-	-	-	1	1	-	3
Trongsa	-	-	1	-	-	2	-	-	3	-	-	1	7
Samdrupjongkha	3	1	1	1	1	-	1	1	2	2	1	3	16
Trashigang	-	2	2	1	1	1	1	-	-	-	1	-	8
Mongar	2	-	-	-	-	1	-	-	-	1	-	1	6
Bhutan	23	22	26	15	18	24	21	27	32	25	25	17	275

Source: Royal Bhutan Police, Thimphu

TABLE 7.11: NUMBERS OF PASSENGERS CARRIED AND REVENUE EARNED BY DRUK AIR FLIGHTS BY SECTOR, 1989 TO 1996

Sector	1989	1990	1991	1992	1993	1994	1995	1996
Paro to Calcutta	1,782	1,715	1,390	977	1,140	1,335	1,826	2,290
Calcutta to Paro	1,555	1,376	1,212	934	1,033	1,170	1,533	1,878
Paro to Bangkok	843	1,558	2,431	2,689	2,666	3,634	3,937	4,371
Bangkok to Paro	927	1,763	2,568	2,980	2,920	3,677	3,879	4,423
Paro to Dhaka	152	398	627	726	795	829	596	699
Dhaka to Paro	211	484	671	722	734	803	563	638
Paro to Delhi	2,593	3,189	2,710	2,843	2,852	2,779	3,042	3,614
Delhi to Paro	2,547	3,324	3,021	2,859	2,857	2,737	3,122	3,656
Paro to Kathmandu	513	1,064	1,846	2,181	2,271	2,151	1,998	2,649
Kathmandu to Paro	502	947	1,635	2,132	2,158	2,000	1,790	2,588
Total passengers (a)	11,625	15,818	18,111	19,043	19,426	21,115	22,286	26,806
Revenue (Nu.in millions) during fiscal year	58.07 1988/89	62.85 1989/90	70.97 1990/91	112.10 1991/92	241.47 1992/93(b)	188.34 1993/94	213.78 1994/95	252.94 1995/96

Note: (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 1996

Sector	1989	1990	1991	1992	1993	1994	1995	1996
Paro to Calcutta	131	62	53	57	72	105	111	120
Calcutta to Paro	129	63	53	56	71	104	108	114
Paro to Bangkok	40	56	98	101	113	157	158	169
Bangkok to Paro	40	56	98	101	113	153	156	167
Paro to Dhaka	48	55	91	62	53	52	52	52
Dhaka to Paro	48	55	91	66	53	59	52	51
Paro to Delhi	95	98	102	111	106	102	109	112
Delhi to Paro	95	99	102	111	106	102	112	111
Paro to Kathmandu	35	54	102	119	107	102	71	97
Kathmandu to Paro	36	55	102	118	104	102	64	99
All sectors	697	653	892	902	898	1,038	993	1,092

Source: Druk Air Corporation, Thimphu

TABLE 7.13: TELEPHONE CONNECTION CAPACITY BY EXCHANGE, 1989 TO 1996

(numbers)

Exchange (Switch type)	1989	1990	1991	1992	1993	1994	1995	1996	Existing Lines till 1996
Tsimakothi(SxS)	50	50	50	50	50	50	50	50	36
Gelephu(LS)	100	100	100	100	100	480	328	584	168
Haa(SxS)	50	50	50	50	50	50	50	50	50
Paro(SxS)	100	100	100	100	200	200	200	200	200
Phuentsholing(SxS)	400	400	900	900	900	900	900	900	819
Punakha(LS)	35	20	20	50	50	50	50	80	72
Samdrupjongkha(LS)	100	100	100	100	100	816	664	664	223
Samtse(SxS)	100	100	100	100	100	100	100	100	100
Sarpang(DRMASS)	50	50	50	50	50	128	109	109	68
Thimphu LS/INTS/MS)	1,000	3,000	3,000	3,000	3,000	3,000	3,896	3,896	3,349
Trashigang (TS/LS)	35	35	35	35	35	784	528	528	116
Trongsa (TS/LS)	35	35	35	35	35	616	336	336	92
Wangduephodrang(SxS)	50	50	50	50	100	100	100	100	74
Jakar(RLU)	-	-	-	-	-	216	132	200	152
Zhemgang(RLU)	-	-	-	-	-	216	200	200	68
Damphu(RLU)	-	-	-	-	-	656	632	376	48
Dagana(DRMASS)	-	-	-	-	-	64	62	64	51
Mongar(RLU)	-	-	-	-	-	420	420	420	92
Lhuntse(DRMASS)	-	-	-	-	-	64	46	64	64
Kanglung(DRMASS)	-	-	-	-	-	64	58	93	51
Trashiyangtse(DRMASS)	-	-	-	-	-	64	42	64	42
Pemagatshel(RLU)	-	-	-	-	-	116	116	116	56
Total capacity	2,105	4,090	4,590	4,620	4,770	9,154	9,019	9,194	5,991

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, 1996

Sector	Type of connection	Existing circuits
Thimphu - London (BT)	Satellite	8
Thimphu - Singapore (ST)	Satellite	8
Thimphu - Japan (KDD)	Satellite	6
Thimphu - India	Analogue Microwave	45
Thimphu - Phuentsholing	Analogue Microwave	30
Thimphu - Trongsa	Digital Microwave	60
Thimphu - Gelephu	Digital Microwave	60
Thimphu - Trashigang	Digital Microwave	60
Thimphu - Samdrupjongkha	Digital Microwave	30
Thimphu - Paro	DRCS	..
Thimphu - Paro Airport	DRCS	..
Thimphu - Tsimakothi	DRCS	..
Thimphu - Wangduephodrang	DRCS	..
Thimphu - Lobesa	DRCS	..
Thimphu - Punakha	DRCS	..
Trongsa - Trashigang	Digital Microwave	60
Trongsa - Gelephu	Digital Microwave	60
Trongsa - Samdrupjongkha	Digital Microwave	60
Gelephu - Trashigang	Digital Microwave	30
Trashigang - Samdrupjongkha	Digital Microwave	60
Paro - Haa	Physical Line	2
Samtse - Banarhat (India)	Physical Line	2
Phuentsholing - India (via Thimphu)	Analogue Micorwave	3
Phuentsholing - India (via Hasimara)	Analogue Micorwave	4
All sectors		588

Note: Circuits from Thimphu to Paro, Tsimalakha, Wangduephodrang, and Punakha jointly shares 15 circuits and these circuits are not reflected in the above figures. DRCS stands for Digital Radio Concentrator System.

Source: Division of Telecommunication, Thimphu

TABLE 7.15: NUMBER OF TRUNK LINES, CONNECTION CAPACITIES AND SETS IN USE, 1986 TO 1996

Details	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Trunk lines											
Satellite	n.a	n.a	n.a	n.a	6	3	6	3	19	23	22
Microwave	n.a	n.a	n.a	n.a	39	12	30	39	565	331	562
Analogue	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	101	82
Digital	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	105	480
Digital radio concentrator system	n.a	n.a	n.a	n.a	..	16	14	10	11	73	15
DRMASS	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	224	394
Physical lines											
Number of lines	n.a	n.a	n.a	n.a	15	12	12	12	4	4	4
Distance (km)	943	943	754	754	559	442	442	442	45	n.a	n.a
Connection capacity	1,945	1,945	1,990	2,105	4,090	4,590	4,620	4,770	9,154	9,019	9,194
Telephone sets in use	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	4,609	5,606	6,041

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 1996

(thousands)

Type of call	1988	1989	1990	1991	1992	1993	1994	1995	1996
Domestic calls	86	146	218	362	365	371	n.a	n.a	1,777
International calls	22	147	176	228	372	432	n.a	n.a	508
India	18	97	116	147	232	281	n.a	n.a	333
Other	4	51	60	82	141	151	n.a	n.a	174
All calls	108	293	394	590	737	802	n.a	n.a	2,285

Source: Division of Telecommunication, Thimphu

TABLE 7.17: TELECOMMUNICATION TRAFFIC IN MINUTES AND REVENUE EARNINGS, BHUTAN. 1993 TO 1996

Details	1993	1994	1995	1996
Type of call				
Domestic calls (minutes)	1,850,000	1,970,000	2,100,000	5,369,556
International calls (minutes)	392,653	400,000	427,800	461,076
India	300,000	430,000	444,180	1,288,620
Other countries	n.a	n.a	n.a	n.a
Total calls	2,542,653	2,800,000	2,971,980	7,119,252
Revenue earnings (millions Nu.)	56.19	60.00	96.00	123.17

Source: Division of Telecommunications, Thimphu

TABLE 7.18: NUMBER OF COMMUNICATION FACILITIES, 1980 TO 1996

Postal infrastructure	1980	1985	1990	1991	1992	1993	1994	1995	1996
General Post Offices	2	2	2	2	2	2	2	2	2
Post Offices	52	53	59	59	59	59	56	55	21
Branch Post Offices	27	29	25	25	22	22	23	21	64
Agency Post Offices	..	..	..	..	..	17	20	25	18
Telegraph or Fax Offices	8	9	8	8	8	8	17	17	17
Wireless Stations(a)	28	36	39	39	47	47	52	..	n.a
Hydromet Stations(b)	5	8	27	27	27	28	11	n.a	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: Bhutan Post, Thimphu

TABLE 7.19: VOLUME OF POSTAL MAIL TRAFFIC BY DESTINATION, 1980 TO 1996

('000 items)

Type of service	1980	1985	1990	1991	1992	1993	1994	1995	1996
Domestic	2,865	5,934	2,190	2,299	1,483	855	1,426	1,414	1,035
International	1,284	3,821	1,709	1,801	356	314	462	482	437
Dispatch	n.a	n.a	n.a	n.a	148	159	219	228	197
Receipt	n.a	n.a	n.a	n.a	207	155	243	255	240
Total mail items	4,149	9,755	3,899	4,099	1,839	1,169	1,888	1,896	1,471

Source: Bhutan Post, Thimphu

TABLE 7.20: VOLUME OF MAIL HANDLED BY TYPE OF ARTICLE AND DESTINATION, 1996

('000 numbers)

Type of mail	Total	Domestic	International			
			Total	Inward	Outward	
Letters						
Ordinary letter	1199.89	902.22	297.67	152.41	145.26	
Registered items	88.62	51.16	37.46	21.26	16.20	
Postcards	37.00	10.00	27.00	15.00	12.00	
Printed matter/packets	137.54	68.40	69.14	47.92	21.22	
Parcels	8.60	2.60	6.00	4.50	1.50	
Monetary items	25.60	18.20	7.40	0.20	7.20	
Express mail service (EMS)	4.60	2.10	2.50	1.80	0.70	
Messages						
Telegraphic message	..	n.a	..	n.a	n.a	
Facsimile message	3.82	1.00	2.82	1.30	1.52	
Wireless transmission	..	n.a	..	n.a	n.a	
All mail items	1505.67	1055.68	449.99	244.39	205.60	

Source: Bhutan Post, Thimphu

TABLE 7.21: NUMBER AND VALUE OF MONEY ORDER BY TYPE, 1990 TO 1996

Type	1990	1991	1992	1993	1994	1995	1996
Total money orders							
Number of orders ('000)	15.7	16.0	17.1	13.5	15.1	17.0	25.6
Amount of orders ('000 Nu.)	8,480.5	9,856.4	11,267.3	9;571.2	13,588.7	15,124.1	15,316.1
Domestic money order							
Number of orders ('000)	15.1	9.0	8.3	6.7	8.1	9.4	18.2
Amount of orders ('000 Nu.)	8,311.4	6,057.0	6,282.5	5,895.0	7,763.6	8,020.3	9,731.0
International money order							
Dispatched							
Number of orders ('000)	0.6	6.4	8.5	6.7	6.8	7.4	7.2
Amount of orders ('000 Nu.)	164.1	3,398.2	4,920.7	3,502.6	5,457.3	7,032.2	5,488.5
Receipts							
Number of orders ('000)	-	0.6	0.3	0.1	0.2	0.2	0.2
Amount of orders ('000 Nu.)	5.0	401.2	64.0	173.6	367.8	71.6	96.6

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, FY 1995/96

Generating stations (Dzongkhag)	Installed capacity (No. X MW)	Generating capacity (MW)	Peak generation (MW)	Energy generated (MU)
Hydro stations (a)	..	340.400	..	1,970.795
Chhukha	4 X 84.00	336.000	336.000	1,964.627
Chumey (Bumthang)	3 X 00.50	0.500	0.450	2.469
Gidakom (Thimphu)	5 X 00.25	0.500	0.000	0.000
Jushina (Thimphu)	4 X 00.09	0.090	0.000	0.000
Rangjung (Trashigang)	2 X 01.10	2.200	0.569	1.136
Chenari (Trashigang)	3 X 00.25	0.250	0.320	0.674
Khaling (Trashigang)	3 X 00.20	0.400	0.290	0.662
Khalangzi (Mongar)	3 X 00.13	0.260	0.296	1.017
Wangduephodrang	3 X 00.10	0.200	0.100	0.210
Micro hydels	..	1.000	..	8.558
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
Damphu (Tsirang)	..	0.200	..	0.846
Tingtibi (Zhemgang)	..	0.200	..	3.905
Dagana (Dagana)	..	0.200	..	0.698

continues...

TABLE 8.1(continuation): ELECTRICITY GENERATING STATIONS AND THEIR CAPACITIES, FY 1995/96 (b)

Generating stations (Dzongkhag)	Numer of machines	Generating capacity (MW)	Peak generation (MW)	Energy generated (MU)
Diesel generation stations	39	12.310	..	0.420
Thimphu	9	3.482	..	0.006
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	..	0.008
Sarpang	1	0.255	..	0.013
Kalikhola	1	0.052	..	0.029
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	14	6.520	..	0.364
Penden Cement Authority Ltd.	4	3.600	..	0.037
Bhutan Board Products Ltd.	2	0.458	..	0.300
Chhukha Hydro Power Corporation	5	1.949	..	0.008
Bhutan Chemical & Carbide Ltd.	2	0.225	..	0.004
Bhutan Ferro Alloys Ltd.	1	0.288	..	0.015

Note: The energy generated by micro hydels is the cumulated generation till date

Source: Division of Power, Thimphu

TABLE 8.2: TOTAL ELECTRICITY GENERATION AND SUPPLY, 1988/89 TO 1995/96

Details	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
Installed capacity (MW)	346.81	348.85	347.01	347.56	347.57	347.94	347.94	350.14
Chhukha hydro power	336.00	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	8.35
All diesel generators	4.85	5.13	5.45	5.50	5.51	5.79	5.79	5.79
Electricity generation (MU)	1,544.25	1,556.90	1,549.90	1,563.88	1,683.89	1,685.81	1,629.98	1,972.18
Chhukha hydro power	1,541.06	1,554.30	1,542.41	1,554.37	1,677.81	1,679.24	1,623.91	1,964.63
Other hydro power	2.95	2.58	7.45	8.20	5.05	5.49	5.89	7.50
All diesel generators	0.24	0.02	0.04	1.31	1.04	1.09	0.18	0.06
Exports (MU)	1,396.00	1,395.59	1,374.62	1,336.87	1,464.96	1,456.34	1,311.84	1,564.04
Imports (MU)	3.50	3.31	4.44	4.98	5.10	4.62	5.34	7.24
Total energy requirement (MU)	143.00	142.30	161.62	186.70	195.26	198.50	298.16	390.43
Total energy sales (MU)	123.30	127.57	144.67	159.71	173.82	176.51	275.95	342.79
Energy losses (MU)	19.95	14.77	16.95	26.99	21.43	21.99	22.21	47.64
Percentage losses (%)	13.93	10.38	10.49	14.45	10.98	11.08	7.45	12.20
Peak system demand (MW)	24.00	22.00	22.80	19.22	23.00	33.00	70.42	70.42
Length of HT lines (33/11 KV)								
Overhead lines (km)	554.00	624.58	751.04	765.14	764.78	820.14	841.22	872.26
Underground lines (km)	8.60	8.60	8.60	8.60	8.60	8.60	9.01	9.01
Length of LT lines								
Overhead lines (km)	519.00	560.66	730.31	732.44	733.87	736.89	736.89	809.70
Underground lines (km)	28.00	28.00	28.00	28.00	28.00	28.00	29.05	29.05

Note: Diesel generators excludes those owned by private organisations. 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, 1994 TO 1996

Stations	1994		1995		1996	
	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	..	31.9	..	31.9	..
Chhukha - Simtokha	54.900	..	54.9	..	54.9	..
Chhukha - Gedu	..	20.1	..	20.1	..	20.1
Gedu - Phuntsholing	..	17.700	..	17.700	..	17.700
Chhukha - Confluence	..	36.700	..	36.700	..	36.700
Confluence - Simtokha	..	18.300	..	18.300	..	18.300
Confluence - Haa	..	33.522	..	33.522	..	33.522
Confluence - Paro	..	24.022	..	24.022	..	24.022
Simtokha - Wangduephodrang	..	26.023	..	26.023	..	26.023
Phuntsholing - Gomtu	..	27.002	..	27.002	..	27.002
Phuntsholing - Singhigoan	..	8.380	..	8.380	..	8.380
Phuntsholing - Birpara	..	30.000	..	30.000	..	..
Total	71(d/c)::86.8(s/c)	241.700	71(d/c)::86.8(s/c)	241.749	71(d/c)::86.8(s/c)	211.749

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 1995/96

Details	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
Towns electrified (numbers)	20	28	30	36	37	37	38	39
Villages electrified (numbers)	171	221	254	270	277	282	297	331
Consumers ('000)	14.1	15.2	18.2	19.6	19.9	19.9	21.8	22.0
Sales of energy (million Nu.)	34.5	37.3	36.9	41.8	50.2	69.5	108.0	184.3
Per capita energy consumption (Units)	90.0	212.7	235.9	256.1	271.8	323.3	466.3	604.4

Source: Division of Power, Thimphu

TABLE 8.5: MONTHLY REVENUE FROM SALE OF ENERGY FROM CHHUKHA HYDROPOWER, 1992 TO 1996

(millions Nu.)

Month	1992			1993			1994			1995			1996		
	Export	Internal	Total	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	26.74	10.34	37.08
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	18.27	9.74	28.01
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	28.10	10.14	38.24
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	42.91	9.43	52.34
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	61.31	9.44	70.75
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	73.99	9.08	83.07
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	114.55	4.45	119.00
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	111.18	7.51	118.69
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	101.56	9.34	110.90
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	95.19	9.84	105.03
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	47.79	10.27	58.06
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	25.97	10.42	36.39
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	747.56	110.00	857.56

Source: Selected economic indicators, Royal Monetary Authority of Bhutan, Thimphu

TABLE 8.6: CONSUMPTION OF ELECTRICITY BY TYPE OF CONSUMER, 1990/91 TO 1995/96

Type of consumer	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
Total consumption (MU)	144.665	159.713	173.823	176.509	275.951	342.791
Domestic	18.327	18.293	21.500	17.037	16.790	25.723
Commercial & Government Offices	10.713	9.871	12.896	17.912	23.600	18.190
Industries	110.628	123.928	31.675	136.281	228.200	291.887
Bulk supply	4.914	7.397	107.309	4.861	7.021	6.517
Public lighting	0.083	0.224	0.443	0.418	0.340	0.474
Consumption as percentage						
Domestic	12.669	11.454	12.369	9.652	6.080	7.500
Commercial & Government Offices	7.405	6.180	7.419	10.148	8.552	5.306
Industries	76.472	77.594	18.223	77.209	82.696	85.150
Bulk supply	3.397	4.631	61.735	2.754	2.544	1.901
Public lighting	0.057	0.140	0.255	0.237	0.123	0.138

Source: Division of Power, Thimphu

CHAPTER 9: TOURISM

INTRODUCTION

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.

Tourist arrival by season, 1988 to 1996 (see table 9.3)

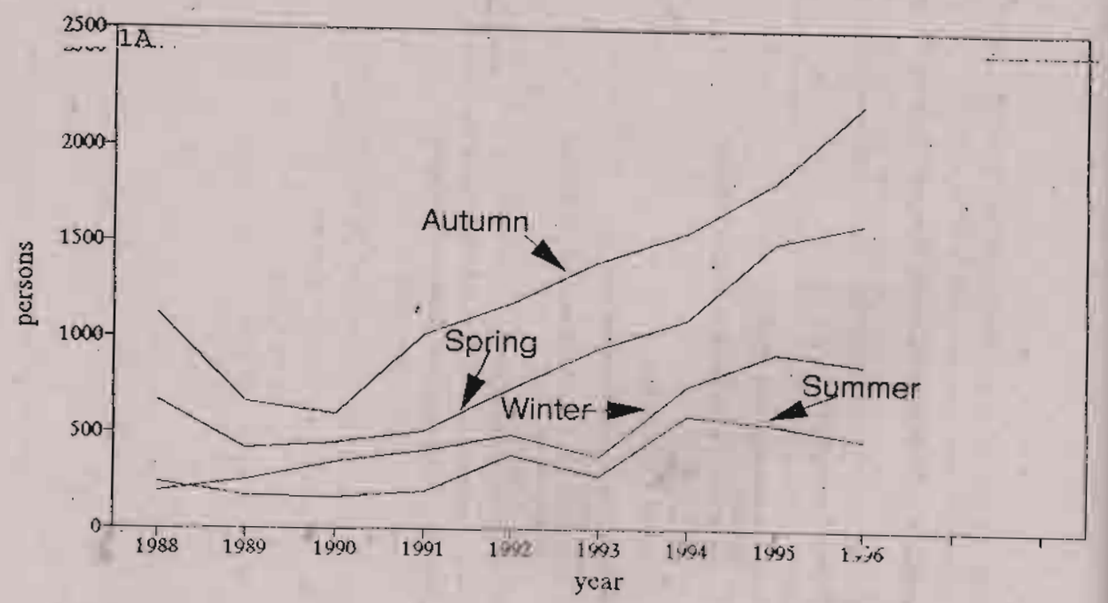


TABLE 9.1: NUMBER OF ANNUAL TOURIST ARRIVALS TO BHUTAN BY COUNTRY OF RESIDENCE, 1990 TO 1996

Country	1990	1991	1992	1993	1994	1995	1996
America	377	544	616	751	734	968	1,039
Canada	377	24	45	42	45	55	57
USA	n.a	509	571	709	689	865	963
Brazil	n.a	11	0	0	0	48	19
Asia/Pacific	459	755	728	791	1,193	1,529	1,639
India	0	4	0	4	0	n.a	1
Nepal	0	4	0	7	16	6	15
Other south Asia	0	25	0	55	n.a	70	112
Japan	445	631	646	643	1,029	1,192	1,211
Korea Republic	0	0	26	7	7	25	41
Thailand	0	0	9	7	44	57	181
Australia	14	91	35	63	91	142	71
New Zealand	0	0	12	5	6	37	7
Europe	614	807	1,229	1,323	1,884	2,227	2,391
Ireland	0	3	0	0	0	6	6
Sweden	0	11	18	15	26	45	7
United Kingdom	n.a	156	269	266	304	418	385
Italy	9	113	135	127	..	202	242
Spain	0	22	43	25	44	22	49
Austria	0	21	105	167	80	200	156
Belgium	0	19	66	23	85	79	77
France	27	109	115	129	219	338	331
Germany	161	269	281	370	566	500	722
Netherlands	0	18	64	58	165	100	131
Switzerland	417	57	73	69	116	218	161
Europeans unspecified	0	9	60	74	279	99	124
Others not specified	88	0	190	119	160	41	69
Total tourists	1,538	2,106	2,763	2,984	3,971	4,765	5,138

Source: Tourism Authority of Bhutan, Thimphu

TABLE 9.2: TOURIST ARRIVALS BY COUNTRY OF RESIDENCE AND TOURISM REVENUE RECEIPTS, 1988 TO 1996

Region	1988	1989	1990	1991	1992	1993	1994	1995	1996
Americas	598	479	377	544	616	751	734	1,003	1,039
Asia and Pacific	354	335	459	755	728	791	1,193	1,529	1,639
Europe	1,068	621	614	807	1,229	1,323	1,884	2,227	2,391
Others	179	45	88	-	190	119	160	6	69
All regions (persons)	1,247	1,480	1,538	2,106	2,763	2,984	3,971	4,765	5,138
Tourism revenue receipts Ngultrums (million)	27.00	25.10	48.20	52.31	77.49	100.62	124.52	n.a	231.41
Or US Dollars (million)	-	-	-	2.30	2.99	3.30	3.97	6.00	6.51

(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 1996

Season and month	1988	1989	1990	1991	1992	1993	1994	1995	1996
Winter	188	248	343	404	485	374	739	914	852
November	118	179	205	268	300	168	418	599	508
December	44	44	103	111	144	67	220	195	211
January	26	25	35	25	41	139	101	120	133
Spring	663	412	448	504	729	943	1,092	1,497	1,598
February	43	41	34	92	118	232	175	134	304
March	390	256	146	260	346	587	643	341	605
April	230	115	265	152	265	124	274	1,022	689
Summer	233	163	155	189	376	272	587	537	466
May	140	91	99	110	140	60	373	337	215
June	31	38	12	32	118	51	115	81	91
July	62	34	44	47	118	161	99	119	160
Autumn	1,115	657	595	1,009	1,173	1,395	1,553	1,817	2,222
August	147	133	94	181	117	494	301	183	306
September	298	154	262	402	355	426	465	466	788
October	670	370	249	426	701	475	787	1,168	1,128
Total tourists	2,199	1,480	1,538	2,106	2,763	2,984	3,971	4,765	5,138

Source: Tourism Authority of Bhutan, Thimphu

TABLE 9.4: NUMBER OF TOURIST ARRIVALS BY PURPOSE OF VISIT, 1989 TO 1996

Purpose	1989	1990	1991	1992	1993	1994	1995	1996
Tour, holidays and recreation	1,227	1,288	1,527	2,175	2,706	3,452	3,217	3,245
Trekking & mountaineering	253	250	579	588	278	519	1,548	1,893
Total tourists	1,480	1,538	2,106	2,763	2,984	3,971	4,765	5,138

Source: Tourism Authority of Bhutan.

TABLE 9.5: NUMBER OF TOURIST ARRIVALS BY MODE OF TRANSPORT, 1989 TO 1996

Mode of transport	1989	1990	1991	1992	1993	1994	1995	1996
Air	900	n.a	1,895	2,487	2,686	n.a	n.a	n.a
Other	580	n.a	211	276	298	n.a	n.a	n.a
Total tourists	1,480	1,538	2,106	2,763	2,984	3,971	4,765	5,138

Source: Tourism Authority of Bhutan, Thimphu

CHAPTER 10: FOREIGN TRADE AND BALANCE OF PAYMENTS

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.

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.

TABLE 10.1: BALANCE OF PAYMENTS ESTIMATES, FY 1988/89 TO 1995/96

(millions Nu.)

Item	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
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	1874.51	(1,613.94)	(1,525.45)	(2,148.53)	(3,470.86)	(2,914.20)	(3,053.00)	(3,802.34)
India	(1,204.70)	(1,318.81)	(1,254.92)	(1,814.14)	(2,086.26)	(2,065.90)	(2,228.00)	(2,790.52)
Other	(669.81)	(295.13)	(270.53)	(334.39)	(1,384.60)	(848.30)	(825.00)	(1,011.82)
Trade balance	(833.77)	(481.61)	(216.96)	(516.58)	(1,633.61)	(923.87)	(756.50)	(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)	(588.22)	(741.64)
Services & transfer receipts	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	215.83	282.26
Other	147.02	246.83	236.17	348.36	504.16	620.54	670.62	713.44
Services & transfer payments	(603.20)	(472.26)	(561.16)	(706.44)	(1,025.07)	(1,129.71)	(1,101.49)	(1,814.94)
India	(394.35)	(265.09)	(342.16)	(402.50)	(495.85)	(634.42)	(497.96)	(776.14)
Other	(208.85)	(207.17)	(219.00)	(303.94)	(529.22)	(495.29)	(603.53)	(1,038.80)
Current account balance	(1,071.47)	(475.41)	(313.27)	(639.54)	(1,953.15)	(1,208.11)	(1,071.54)	(1,272.45)
India	(391.32)	(366.34)	(238.83)	(516.39)	(858.56)	(689.41)	(450.01)	(205.45)
Other	(680.15)	(109.07)	(74.44)	(123.15)	(1,094.59)	(518.70)	(621.53)	(1,067.00)
Foreign aid	1,155.15	763.61	1,037.36	990.19	1,586.73	1,538.25	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	690.01	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 Investment	-	-	7.68	22.32	-	-	-	-
India	-	-	-	-	-	-	-	-
Other	-	-	7.68	22.32	-	-	-	-
Errors and omissions	(71.93)	(298.09)	(317.38)	80.23	280.66	(97.21)	(109.31)	(190.77)
India	(389.38)	(540.16)	(664.09)	(472.40)	(207.29)	(344.07)	(409.84)	(397.05)
Other	317.45	242.07	346.71	552.63	487.95	246.86	300.53	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

Note: Figures in the brackets refers to negative sign.

Source: Royal Monetary Authority, Thimphu

TABLE 10.2: 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 10.3: TEN MAJOR COMMODITIES OF EXPORT AND IMPORT TO AND FROM INDIA, CALENDAR YEAR FROM 1992 TO 1995

Commodity	1992			1993			1994			1995		
	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank
Exports												
Electric energy	355.14	24.4	1	537.3	30.1	1	519.23	26.7	1	721.09	23.4	1
Calcium carbide	350.61	24.1	2	355.8	19.9	2	413.8	21.3	2	497.90	16.2	2
Cement	132.26	9.1	3	..	..	..	268.21	13.8	3	..	..	..
Particle boards	121.42	8.3	4	165.86	9.3	4	81.07	4.2	5	329.46	10.7	4
Cardamom	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	36.56	2.5	7	..	..	..	..	..	..	..	..	..
Mixture of fruit and vegetable juices	34.91	2.4	8	..	..	..	..	..	..	..	..	..
Atta and maida	32.82	2.3	9	..	..	..	..	..	..	..	..	..
Sawn timber	28.73	2.0	10	..	..	..	..	..	..	..	..	..
Plywood	..	..	..	..	..	..	..	..	..	..	..	..
Cement, Portland	..	..	..	212.86	11.9	3	..	..	..	278.35	9.0	5
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

continues...

TABLE 10.3(continuation): TEN MAJOR COMMODITIES OF EXPORT AND IMPORT TO AND FROM INDIA, CALENDAR YEAR FROM 1992 TO 1995

Commodity	1992			1993			1994			1995		
	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu	Share (%)	Rank
Imports												
Rice	96.92	5.6	1	125.38	6.5	1	190.83	9.3	1	..	..	..
Diesel	89.88	5.1	2	90.68	4.7	2	100.85	4.9	2	136.14	5.2	2
Wheat	52.64	3.0	3	44.07	2.3	7	..	..	..	..	..	..
Petrol	48.01	2.8	4	50.89	2.6	4	51.38	2.5	4	64.04	2.4	4
Industrial plants machinery, spares	44.56	2.5	5	49.32	2.6	5	38.24	1.9	8	142.00	5.4	1
Tyres for buses and trucks	33.22	1.9	6	..	..	..	..	..	..	..	..	..
M.S. rod/TOR steel	32.58	1.9	7	..	..	..	..	..	..	..	..	..
Cotton fabrics	32.02	1.8	8	..	..	..	32.83	1.6	10	41.88	1.6	10
CG and GT 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	5
Truck chassis	..	..	..	..	..	..	..	..	..	..	..	..
Beer	..	..	..	..	..	..	36.36	1.8	9	47.41	1.8	7
Sugar	..	..	..	..	..	..	..	..	..	..	..	..
Motor cycles and scooters	..	..	..	..	..	..	..	..	..	..	..	..
Spirit for distillery	..	..	..	57.04	3.0	3	60.42	2.9	3	75.30	2.9	3
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	6
Trucks diesel	..	..	..	..	..	..	..	..	..	46.61	1.8	8
Wood charcoal	..	..	..	..	..	..	..	..	..	45.81	1.7	9

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

TABLE 10.4: TEN MAJOR COMMODITIES OF EXPORT AND IMPORT TO AND FROM THIRD COUNTRIES (a), CALENDAR YEAR FROM 1992 TO 1995

Commodity	1992			1993			1994			1995		
	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank
Exports												
Oranges	184.69	65.4	1	148.92	72.9	1	58.77	42.9	1	99.21	36.7	1
Apples	38.31	13.6	2	32.09	15.7	2	51.67	37.8	2	49.54	18.3	2
Cardamom	13.05	4.6	3	..	..	..	..	..	..	..	..	..
Dolomite powder chips and lumps	4.52	1.6	6	0.59	0.3	10	..	..	..	..	..	..
Portland cement	3.67	1.3	9	4.01	2.0	5	1.82	1.3	8	4.33	1.6	10
Boulders	..	..	..	..	..	..	5.80	4.2	4	..	..	
Coal	4.13	1.5	8	..	..	..	..	..	..	17.47	6.5	4
Fruit products	2.79	1.0	10	..	..	..	..	..	..	..	..	..
Limestone chips	..	..	..	..	..	..	2.07	1.5	7	6.52	2.4	6
Gingers	..	..	..	..	..	..	..	..	..	..	..	..
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 (Non-coniferious)	..	..	..	..	..	..	..	..	..	5.00	1.9	9

continues...

TABLE 10.4(continuation): TEN MAJOR COMMODITIES OF EXPORT AND IMPORT TO AND FROM THIRD COUNTRIES (a), CALENDAR YEAR FROM 1992 TO 1995

Commodity	1992			1993			1994			1995		
	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank
Imports												
Agriculture equipments	76.12	4.9	6	13.76	1.7	10	304.12	12.6	3	..	..	..
Passanger motor cars	69.50	4.4	7	56.01	6.9	3	125.25	15.2	2	88.16	9.5	3
Power project equipments	..	..	..	..	..	..	..	..	..	..	..	..
Cold rolled annealal sheet	..	..	..	..	..	..	..	..	..	..	..	..
Soyabean oil	..	..	..	..	..	..	..	..	..	..	..	..
Dry fish	..	..	..	..	..	..	..	..	..	..	..	..
Equipment for furniture manufacture project	..	..	..	..	..	..	..	..	..	..	..	..
Vegetable oil	..	..	..	..	..	..	..	..	..	..	..	..
Spare parts for motor vehicle	..	..	..	22.12	2.7	4	17.65	2.1	10	23.24	2.5	10
Hydro meteorological equipments	..	..	..	..	..	..	..	..	..	..	..	..
Aircraft	375.31	36.6	1	..	..	..	..	..	..	..	..	..
Equipments and accessories	103.85	9.8	2	..	..	..	..	..	..	..	..	..
Equipment for tele-communication	102.68	9.7	3	214.46	26.3	1	135.82	16.5	1	286.83	28.3	1
Spare parts for aircraft	89.69	8.7	4	..	..	..	..	..	..	..	..	..
MVA Elken fesi furnace equipment	83.91	8.3	5	178.26	21.9	2	..	..	..	..	..	..
Laboratory equipments	22.76	2.2	9	..	..	..	..	..	..	88.02	8.7	2
Laxfire extinguishers, etc	20.68	2.0	10	..	..	..	..	..	..	..	..	..
Fertilizers	..	..	..	54.57	6.7	4	..	..	..	..	..	..
Aircraft engine	..	..	..	33.92	4.1	5	..	..	..	..	..	..
Personal effects	..	..	..	23.06	2.8	6	..	..	..	..	..	..
Palm	..	..	..	16.54	2.0	8	..	..	..	..	..	..
Decorative paper	..	..	..	14.03	1.7	9	..	..	..	..	..	..

continues...

TABLE 10.4(continuation): TEN MAJOR COMMODITIES OF EXPORT AND IMPORT TO AND FROM THIRD COUNTRIES (a), CALENDAR YEAR FROM 1992 TO 1995

Commodity	1992			1993			1994			1995		
	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank
Imports												
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 computers	..	..	..	..	..	..	..	..	..	51.86	5.1	4
Photocopying apparatus	..	..	..	..	..	..	..	..	..	48.12	4.8	5
Computer CD Rom	..	..	..	..	..	..	..	..	..	40.04	4.0	6
Packing paper for bakery purpose	..	..	..	..	..	..	..	..	..	38.28	3.8	7
Spare parts for aircraft	..	..	..	..	..	..	..	..	..	35.95	3.6	8
Type writers, electric	..	..	..	..	..	..	..	..	..	32.59	3.2	9

end

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

TABLE 10.5: VALUE AND ITS PERCENTAGE SHARE OF EXPORTS TO SIX SELECTED COUNTRIES EACH YEAR, CALENDAR YEAR FROM 1992 TO 1996

Country	1992			1993			1994			1995		
	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank
India	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	270.68	15.57	2	191.68	9.63	2	127.64	6.13	2	201.12	6.01	2
Singapore	..	..	..	..	..	..	..	..	..	..	..	..
Netherland	0.98	0.06	4	1.26	0.06	4	..	..	..	..	..	..
Austria	..	..	..	..	..	..	..	..	..	2.75	0.08	6
Germany	1.20	0.07	3	0.37	0.02	6	..	..	..	4.09	0.12	5
Thailand	..	..	..	..	..	..	..	..	..	..	..	..
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	8.44	0.49	..	8.38	0.42	..	6.95	0.33	..	8.02	0.24	..
All countries	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 10.6: VALUE AND ITS PERCENTAGE SHARE OF IMPORTS TO TEN SELECTED COUNTRIES EACH YEAR, CALENDAR YEAR FROM 1992 TO 1996

Country	1992			1993			1994			1995		
	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank	Million Nu.	Share (%)	Rank
India	1,745.42	52.62	1	1,930.35	70.31	1	2,051.26	71.31	1	2,630.22	72.22	1
Japan	357.27	10.77	3	360.63	13.14	2	396.92	13.80	2	412.01	11.31	2
Germany	94.19	2.84	5	43.35	1.58	5	61.32	2.13	5	70.76	1.94	5
Canada	..	..	..	..	..	..	..	..	..	..	..	..
Denmark	56.41	1.70	6	21.90	0.80	7	84.73	2.95	3	111.87	3.07	4
Norway	260.53	7.85	4	183.96	6.70	3	13.02	0.45	10	..	..	..
Singapore	20.25	0.61	8	35.01	1.28	6	38.83	1.35	6	194.00	5.33	3
U.S.A	28.07	0.85	7	..	..	..	36.78	1.28	7	12.69	0.35	8
Hongkong	..	..	..	..	..	..	..	..	..	10.85	0.30	10
Korea, south	..	..	..	..	..	..	..	..	..	..	..	..
Australia	..	..	..	..	..	..	..	..	..	..	..	..
U.K	684.18	20.63	2	72.51	2.64	4	77.64	2.70	4	57.50	1.58	7
Malaysia	..	..	..	16.54	0.60	8	..	..	..	..	..	..
China	..	..	..	..	..	..	..	..	..	11.29	0.31	9
Netherland	17.59	0.53	9	15.84	0.58	9	18.74	0.65	9	..	..	..
Austria	6.23	0.19	10	13.81	0.50	10	23.61	0.82	8	..	..	..
Thailand	..	..	..	..	..	..	..	..	..	60.84	1.67	6
Other countries	46.93	1.41	..	51.42	1.87	..	73.50	2.56	..	69.88	1.92	..
All countries	3,317.07	100.00	..	2,745.32	100.00	..	2,876.35	100.00	..	3,641.92	100.00	..

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

TABLE 10.7: 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	1351.90
Royal Monetary Authority	81.05	14.85	25.77	10.86	30.07	33.45	33.38	25.10
Bank of Bhutan	695.83	403.59	220.18	86.94	49.74	91.80	37.57	1326.80
Convertible currency (million US $)	50.10	65.00	78.78	95.96	91.86	102.93	123.35	152.51
Royal Monetary Authority (a)	47.57	62.46	76.66	93.32	87.48	98.69	119.07	146.39
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	0.04
All reserves (million US $)	97.08	88.98	90.39	99.74	94.40	106.92	125.61	152.51

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 10.8: MONTHLY AVERAGE EXCHANGE RATES, NGULTRUMS PER US DOLLAR, 1985 TO 1996

Month	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
January	12.62	12.28	13.04	13.06	15.11	16.97	18.83	25.92	26.16	31.37	31.37	35.77
February	12.94	12.37	13.07	13.07	15.25	17.00	18.85	25.93	26.20	31.37	31.38	36.61
March	12.96	12.29	12.94	13.00	15.48	17.12	19.24	25.89	31.26	31.37	31.65	34.45
April	12.49	12.40	12.81	13.20	15.73	17.28	19.94	25.89	31.31	31.37	31.41	34.24
May	12.55	12.48	12.69	13.31	16.12	17.32	20.58	25.89	31.33	31.37	31.42	34.99
June	12.46	12.61	12.84	13.77	16.46	17.43	21.06	25.89	31.40	31.37	31.40	34.99
July	12.03	12.51	13.03	14.09	16.44	17.42	25.58	25.89	31.37	31.37	31.38	35.52
August	11.94	12.58	13.10	14.25	16.61	17.38	25.81	25.89	31.37	31.37	31.59	35.69
September	12.18	12.69	13.02	14.49	16.76	17.87	25.88	25.89	31.37	31.37	33.26	35.73
October	12.03	12.85	13.06	14.74	16.86	18.05	25.87	25.89	31.37	31.37	34.56	35.64
November	12.09	13.09	12.99	14.98	16.94	18.09	25.89	25.89	31.37	31.39	34.75	35.74
December	12.16	13.17	12.95	15.05	16.94	18.12	25.88	26.16	31.37	31.39	34.95	35.84
Calendar year average	12.37	12.61	12.96	13.92	16.23	17.50	22.74	25.92	30.49	31.37	32.43	32.45
Fiscal year average	11.89	12.24	12.79	12.97	15.15	16.97	18.74	25.86	27.77	31.37	31.41	34.29
	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96

Source: Royal Monetary Authority, Thimphu

CHAPTER 11: 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 Authority 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 11.1: MONETARY SURVEY (a), ROYAL MONETARY AUTHORITY AND BANK OF BHUTAN, 1987 TO 1996

(million Nu.)

Item	End of year									
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Total assets	868.1	1,133.8	1,449.6	1,630.6	2,563.8	3,031.5	3,839.2	4,369.8	5,397.8	7,129.4
Foreign assets (net)	1,077.0	1,384.4	1,446.2	1,487.5	2,480.0	1,882.5	2,811.2	3,194.9	4,428.5	6,580.1
Rupee	579.0	658.4	575.5	307.7	179.1	-313	-379.2	-507.3	-98	1,101.9
Convertible Foreign Currency	498.0	726.0	870.7	1,179.9	2,300.9	2,195.5	3,190.4	3,702.2	4,526.6	5,478.2
Domestic credit	-208.9	-250.5	3.4	143.1	83.8	1,149.0	1,028.0	1,174.9	969.2	549.3
Claims on Government (net)	-304.7	-398.8	-216.5	-125.9	-287.1	-46.9	-256.4	164.7	-321.1	-692.5
Claims on Government corporations	13.5	32.4	27.6	53.2	64.8	770.1	795.6	560.8	534.6	484.7
Claims on joint Corporations	..	..	..	..	..	..	..	238.9	229.2	187.7
Claims on private sector	82.3	115.9	192.2	215.9	306.1	425.8	488.8	485.0	521.5	564.4
Claims on NMFIs	..	..	..	..	..	..	..	55.0	5.0	5.0
Total liabilities	868.1	1,133.8	1,449.6	1,630.6	2,563.7	3,031.5	3,839.3	4,369.7	5,397.8	7,129.5
Liquidity-Broad money (M2)	552.5	723.7	976.6	1,078.8	1,397.9	1,587.0	1,953.3	2,395.0	3,257.8	3,563.8
Money supply-Narrow money (M1)	316.8	412.0	546.3	539.6	749.7	840.9	833.1	1,044.0	1,331.5	2,098.3
Currency outside banks	103.5	149.1	188.1	194.1	246.0	345.0	346.0	347.5	432.4	422.5
Demand deposits	213.3	263.0	358.2	345.4	503.7	495.9	487.1	696.5	889.9	1,651.6
Quasi-money	235.7	311.6	430.2	539.3	648.2	746.1	1,120.2	1,351.0	1,926.4	1,465.5
Money Market Instrument (RMA Bill)	..	..	..	..	..	..	..	600.0	550.0	1,000.0
Other items (net)	315.6	410.2	473.0	551.8	1,165.8	1,444.6	1,886.0	1,374.7	1,589.9	2,565.7

(a) Revised data, excluding rupees in circulation

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

TABLE 11.2: FINANCIAL DETAILS OF ROYAL INSURANCE CORPORATION OF BHUTAN, 1986 TO 1996

Item	End of year										
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Assets total	269.5	354.5	467.8	610.5	769.6	983.8	675.3	791.3	868.1	1,012.2	1169.3
Reserves	2.5	0.8	6.1	2.8	2.6	-16.2	1.9	18.2	9.6	24.5	61.7
Foreign Assets	..	..	..	..	..	..	..	..	0.4	0.6	1.4
Rupee	..	..	..	..	..	..	..	..	..	..	..
Others	..	..	..	..	..	..	..	..	0.4	0.6	1.4
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	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	728.4
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	321.8
Claims on NFIs	7.0	7.0	7.0	8.8	2.5	0.0	0.0	0.0	18.3	13.1	14.3
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	1,012.2	1169.3
General Insurance reserve funds	6.9	6.9	10.1	15.9	21.7	58.1	61.2	73.6	72.4	41.6	43.6
Life fund	9.0	9.2	12.2	15.1	19.0	21.0	23.8	70.0	23.8	0.0	0.0
Government employee provident fund	171.3	210.8	254.2	312.8	368.0	402.5	505.8	589.0	690.0	765.1	886.8
Group Insurance Fund	..	..	..	..	..	..	..	..	60.7	71.0	80.7
Credit from DMB	..	..	..	..	..	..	..	..	0.0	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	0.0
Capital accounts	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	43.8	45.1	63.0
Other items (net)	(21.8)	(29.7)	(30.5)	7.1	30.6	83.3	72.5	47.4	(23.4)	89.3	95.2

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

Source: Royal Monetary Authority of Bhutan, Thimphu

TABLE 11.3: FINANCIAL DETAILS OF UNIT TRUST OF BHUTAN, 1986 TO 1996

(millions Nu.)

Item	End of year										
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Assets total	100.3	150.2	215.3	297.2	378.9	549.1	729.0	632.0	683.8	599.3	810.7
Reserves	-	-	0.2	0.2	0.3	0.4	0.5	7.8	14.7	13.8	142.5
Invesments through RICB	91.4	145.4	209.9	247.6	318.3	438.9	0.0	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	601.4
Claims on joint sector	..	..	..	..	..	..	..	..	8.8	0.9	6.7
Claims on deposit money banks (Fixed deposits)	..	..	..	..	..	..	..	..	121.6	98.6	57.5
Claims on other NBFIs	..	..	..	..	..	..	..	..	..	0.0	2.5
Liabilities total	100.3	150.2	215.2	297.2	378.9	549.1	729.0	632.0	683.8	599.3	810.6
Deposits under unit shares	86.8	125.3	187.8	253.8	321.5	472.8	572.8	474.7	402.8	366.9	298.7
Deposits under fixed term units	..	..	..	..	..	..	..	..	67.9	94.6	235.8
Recurring deposits	..	..	..	..	..	..	..	..	19.3	0.0	0.0
Provident fund	..	..	..	..	..	..	..	..	0.0	6.3	9.3
Credit from deposit money banks	..	..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Credit from RMA	..	..	..	..	..	..	..	..	0.0	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	130.4
Other items(net)	8.1	13.1	20.7	32.7	43.6	73.5	153.7	114.8	138.4	45.5	136.4
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 11.4: MONEY AND BANKING DETAILS OF BHUTAN DEVELOPMENT FINANCE CORPORATION, 1992 TO 1996

(millions Nu.)

Item	1992	1993	1994	1995	1996
Assets total	124.8	175.3	297.3	349.9	425.8
Reserves	3.3	3.8	22.7	19.0	25.0
Foreign assets	0.0	0.0	0.0	0.0	0.0
Rupees	0.0	0.0	0.0	0.0	0.0
Others	0.0	0.0	0.0	0.0	0.0
Claims on Government	0.0	0.0	0.0	0.0	0.0
Claims on Government Corporations	0.0	0.0	4.9	4.8	2.0
Claims on joimt corporations	2.3	2.8	0.0	0.0	0.0
Claims on private sector	103.6	147.5	230.0	301.5	377.6
Claims on DMBs(a)	0.0	0.0	0.0	9.0	21.2
Claims on other NBFIs(b)	15.6	21.2	39.7	15.5	0.0
Liabilities total	129.6	175.3	300.5	349.9	425.8
Foreign liabilities	37.3	75.3	94.9	104.7	141.9
Credit from RMA	50.0	20.7	50.0	0.0	0.0
Credit from DMB	0.0	24.3	0.0	0.0	0.0
Credit from other NBFIs	0.0	0.0	0.0	0.0	0.0
Grants	7.9	14.3	0.0	0.0	0.0
Capital account	34.4	39.9	155.6	169.0	230.3
Other items net	-4.8	0.8	-3.26	76.3	53.5

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 11.5: MONEY AND BANKING OF ROYAL MONETARY AUTHORITY OF BHUTAN (RMA), 1986 TO 1996

(million Nu.)

Item	End of year										
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
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	5,602.5
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	5,284.8
Indian rupee	9.4	15.7	15.6	33.2	16.0	28.6	21.7	59.3	24.6	27.6	25.1
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	5,259.7
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	307.8
Claims on Government	0.0	0.0	0.0	60.4	235.5	141.2	171.0	73.7	0.0	50.0	5.0
Claims on NMFIs	..	..	..	..	..	..	..	..	55.0	5.0	4.9
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	5,602.6
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	2,328.5
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	422.5
Foreign Liabilities	..	..	..	..	..	..	..	..	616.8	161.1	250.0
Rupee	..	..	..	..	..	..	..	..	616.8	161.1	250.0
Others	..	..	..	..	..	..	..	..	0.0	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	333.7
RMA Bills Outstanding	..	..	..	..	..	..	..	..	600.0	550.0	1,000.0
Capital Account	..	..	..	..	..	..	..	..	40.2	88.1	78.9
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	1,611.5

Source: Royal Monetary Authority, Thimphu

TABLE 11.6: MONEY AND BANKING, BANK OF BHUTAN, 1986 TO 1996 .

(million Nu.)

Item	End of year										
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Assets total	768.1	1,054.9	1,129.2	1,416.9	1,741.8	1,975.2	2,238.9	2,726.4	2,984.1	3,921.7	4,962.5
Reserve with RMA	143.1	310.4	244.2	501.7	1,009.4	1,252.8	827.9	1,001.2	1,416.4	2,382.4	2,085.3
Foreign assets	433.8	637.0	733.8	692.9	460.8	348.8	212.5	434.3	278.5	252.5	1,545.4
Rupee	407.9	606.0	688.8	629.7	409.7	287.3	22.6	129.3	84.9	35.4	1,326.8
Other	25.9	30.9	45.0	63.2	51.1	61.5	190.0	305.0	193.6	217.4	218.5
Claims on Government	104.2	11.8	2.9	2.5	2.6	2.6	2.5	6.5	4.6	1.5	100.0
Claims on Government Corporations	19.7	13.5	35.4	27.6	53.2	64.8	770.1	795.6	560.8	534.6	483.7
Claims on joint Corporations	..	..	..	..	..	..	..	..	238.9	229.2	187.7
Claims on private sector	67.3	82.3	115.9	192.2	215.9	306.1	425.8	488.8	485.0	521.5	560.5
Liabilities total	768.1	1,054.9	1,129.2	1,416.9	1,741.8	1,975.2	2,238.9	2,726.4	2,984.1	3,921.7	4,962.5
Demand deposit (a)	186.3	213.3	263.0	358.2	345.4	503.7	495.9	487.1	696.5	889.9	1,651.6
Time deposit	212.6	223.4	289.1	415.1	515.2	622.2	691.1	1,054.9	1,266.8	1,822.1	1,370.5
Foreign currency deposits	9.1	12.3	22.5	15.1	24.0	26.0	55.0	65.2	84.2	104.3	95.0
Foreign liabilities	37.3	42.7	46.0	87.4	118.0	137.0	357.2	567.8	0.0	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	0.0
Other	..	..	0.0	0.0	0.0	0.1	0.0	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	458.8
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	371.1
Other items (net)	54.8	80.3	110.3	110.0	199.9	169.0	-94.4	-89.5	473.4	390.4	1,015.5

(a) savings deposits included in demand deposits

Source: Royal Monetary Authority, Thimphu

TABLE 11.7: INVESTMENTS OF FINANCIAL INSTITUTIONS BY INDUSTRY(a), AMOUNTS OUTSTANDING, 1987 TO JUNE 1996

Industry	End of year									
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Agriculture	21.4	21.3	26.5	35.9	55.4	86.4	92.2	80.9	106.1	6.1
Bank of Bhutan	n.a	3.8	4.9	5.4	4.0	6.1	6.0	5.0	0.0	0.0
Royal Insurance Corporation of Bhutan	n.a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bhutan Development Finance Corporation	n.a	17.5	21.6	30.5	51.4	80.2	86.1	75.8	106.1	6.1
Unit Trust of Bhutan	n.a	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0
Industry, Manufacturing	58.2	119.5	147.7	220.4	307.1	452.1	585.0	663.0	880.7	1,069.2
Bank of Bhutan	n.a	49.2	53.7	78.4	105.5	163.1	222.6	221.3	340.4	326.2
Royal Insurance Corporation of Bhutan	n.a	69.5	85.3	124.3	167.8	124.6	151.7	227.9	197.2	366.1
Bhutan Development Finance Corporation	n.a	0.8	8.7	17.7	33.8	57.1	91.4	20.0	134.1	152.4
Unit Trust of Bhutan	n.a	0.0	0.0	0.0	0.0	107.4	119.3	193.8	209.0	224.5
Building and construction	200.7	240.1	272.3	294.9	344.3	473.6	518.4	540.1	635.5	497.6
Bank of Bhutan	n.a	15.6	16.2	18.7	24.7	79.3	92.0	92.6	148.8	80.5
Royal Insurance Corporation of Bhutan	n.a	224.5	256.1	276.2	319.6	246.9	272.4	287.8	273.4	269.2
Bhutan Development Finance Corporation	n.a	0.0	0.0	0.0	0.0	0.8	0.8	2.6	60.4	0.0
Unit Trust of Bhutan	n.a	0.0	0.0	0.0	0.0	146.5	153.2	157.1	153.0	148.0
Trade and commerce	32.8	78.0	127.8	181.7	254.9	328.1	356.8	406.8	332.4	864.5
Bank of Bhutan	n.a	38.5	61.6	76.0	108.2	155.1	168.4	203.7	205.1	737.7
Royal Insurance Corporation of Bhutan	n.a	38.8	66.2	105.7	146.7	112.9	137.6	117.4	80.2	87.3
Bhutan Development Finance Corporation	n.a	0.7	0.0	0.0	0.0	2.1	4.3	41.3	0.0	0.1
Unit Trust of Bhutan	n.a	0.0	0.0	0.0	0.0	58.0	46.5	44.4	47.0	39.5
Transport	28.7	41.3	56.0	96.6	126.8	751.0	736.0	693.5	575.3	68.9
Bank of Bhutan	n.a	10.2	22.8	39.2	57.7	665.8	646.7	612.2	515.2	0.0
Royal Insurance Corporation of Bhutan	n.a	31.1	33.2	57.4	69.1	50.2	55.6	50.7	45.0	53.8
Bhutan Development Finance Corporation	n.a	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Unit Trust of Bhutan	n.a	0.0	0.0	0.0	0.0	35.1	33.7	30.2	15.1	15.2
Personal and other loans	32.5	93.0	167.2	166.8	249.7	281.9	252.5	316.1	222.8	324.8
Bank of Bhutan	n.a	73.7	102.6	93.0	117.7	184.0	144.8	183.7	94.3	183.4
Royal Insurance Corporation of Bhutan	n.a	14.1	15.2	13.5	22.5	18.5	15.6	22.3	50.8	66.4
Bhutan Development Finance Corporation	n.a	5.2	49.4	60.3	109.8	17.4	20.7	21.8	1.0	3.8
Unit Trust of Bhutan	n.a	0.0	0.0	0.0	0.0	61.9	71.4	88.3	76.8	71.2
Total	374.3	593.2	797.5	996.3	1,338.2	2,373.0	2,540.9	2,700.4	2,752.8	2,831.2

Note: (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 11.8: INTEREST RATES FOR DEPOSITS IN FINANCIAL INSTITUTIONS, 1987 TO 1996

(percent per annum)

Type of deposit	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
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	8.0	8.0	8.0	8.0	8.0
6 to 9 months	8.0	8.0	8.0	8.0	8.0	9.0	9.0	8.0	8.0	8.0
9 to 12 months	8.0	8.0	8.0	8.0	8.0	9.0	9.0	8.0	8.0	8.0
12 to 24 months	9.0	9.0	9.0	9.0	9.0	10.0	10.0	10.0	10.0	10.0
24 to 36 months	10.0	10.0	10.0	10.0	10.0	11.0	11.0	10.0	10.0	10.0
Over 36 months	11.0	11.0	11.0	11.0	11.0	13.0	13.0	11.0	11.0	11.0
UTB fixed term deposits										
3 to 12 months	n.a	n.a	n.a	n.a	n.a	n.a	n.a	8.5	8.5	8.5
12 to 36 months	n.a	n.a	n.a	n.a	n.a	n.a	n.a	10.5	10.5	10.5
Over 36 months	n.a	n.a	n.a	n.a	n.a	n.a	n.a	11.5	11.5	11.5
UTB Unit shares (a)	n.a	n.a	n.a	n.a	n.a	n.a	n.a	11.7	10.0	10.0

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

Source: Bank of Bhutan

TABLE 11.9: INTEREST RATES AND REPAYMENT PERIOD BY SECTOR AND TYPE OF LOAN, FINANCIAL INSTITUTIONS (a), 1996

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

TABLE 11.10: VOLUME AND VALUE OF STOCKS TRADING AT THE SECURITIES EXCHANGE OF BHUTAN, 1993/94

Period	Volume (numbers)	Value (million Nu.)
1993		
October	100	0.20
Novemver	250	0.50
December	3,000	5.40
1994		
March	5	0.01
April	2,000	3.40
May	100	0.01
June	4,000	6.80
July	122,500	1.23
August	3,200	0.51
September	100	0.05
Total turn over	135,255	18.10

Source: Royal Securities Exchange of Bhutan, Thimphu

TABLE 11.11: MONTHLY PRICE PER SHARE OF STOCKS FOR MAJOR COMPANIES, 1996

(Ngultrums per share)

Security	1996						
	Mar	Apr	May	Jun	Jul	Aug	Sep
Bhutan Chemicals & Carbide Ltd.	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Bhutan Board Products Ltd.	100	100	100	100	100	100	100
Bhutan Dairy Ltd.	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Royal Insurance Corporation of Bhutan	1,000	n.a	n.a	n.a	n.a	n.a	n.a
Bhutan Tourism Corporation Ltd.	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Bhutan National Bank	..	..	..	..	..	165	225
Penden Cement Authority	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Druk Stones and Minerals export Corporation Ltd.	..	..	..	..	..	100	100
Bhutan Ferro Alloys Ltd.	120	120	120	120	120	120	120

Source: Royal Securities Exchange of Bhutan, Thimphu

CHAPTER 12: 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 was 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.

Tax and Non-tax revenue receipt
1987/88 to 1995/96 (see table 12.3)

TABLE 12.1: CURRENT BUDGETARY EXPENDITURE OF THE GOVERNMENT BY MINISTRY/AGENCY, 1990/91 TO 1995/96

(millions Nu.)

Ministry/Non-ministerial Organisation	1990/91 (actual)	1991/92 (actual)	1992/93 (actual)	1993/94 (actual)	1994/95 (actual)	1995/96 (actual)
Ministries	709.64	801.06	839.60	864.13	1,017.64	1,228.11
Home Affairs	77.11	80.80	90.85	103.18	115.78	146.59
Finance	81.79	78.16	76.03	79.36	82.37	88.10
Communication & Tourism	99.43	141.60	143.82	142.47	165.29	183.74
Planning	5.16	9.44	7.08	8.09	13.23	9.55
Social Services	158.64	224.05	215.03	196.99	248.67	290.20
Agriculture	119.55	111.62	130.81	153.76	168.29	207.46
Foreign Affairs	51.33	72.70	74.54	84.34	85.08	113.73
Trade and Industries	116.62	82.70	101.44	77.93	138.94	188.75
Non Ministerial organisations	68.52	74.61	81.62	81.70	89.14	108.65
Special Commission	8.27	7.92	7.39	7.36	9.66	12.00
Central Monastic Secretariat	25.87	28.11	30.47	32.95	35.15	44.20
Royal Monetary Authority	-	-	-	-	-	-
Social and Cultural Division	-	-	-	-	-	-
His Majesty's Secretariat	4.72	4.77	5.66	3.96	4.47	4.84
Science and Technology	-	-	-	-	-	-
Royal Civil Service Commission	3.09	3.75	4.15	4.75	4.73	4.57
Royal Audit Authority	4.92	6.43	6.49	6.43	7.84	10.35
Royal Advisory Council	1.95	2.04	2.39	2.27	2.67	2.96
National Assembly	1.25	2.53	3.24	3.72	2.41	4.52
Urban Development Corporation	-	-	-	-	-	-
National Women's Association	2.16	2.18	1.98	-	-	-
Judiciary	11.15	12.49	13.10	13.88	16.54	19.14
Bhutan Olympic Committee	2.39	2.74	3.69	2.63	3.31	3.24
Druk Air Corporation	-	-	..	-	-	-
Tourism Corporation	-	-	..	-	-	-
Bhutan Govt. Transport Service	-	-	..	-	-	-
Dzongkhag Development Commission	2.75	1.67	3.08	3.75	2.37	2.84
National Enviroment Commission						
Dzongkhags	168.22	170.35	186.31	228.47	307.76	334.11
Other Dzongkhags	.168.22	170.35	186.31	200.79	274.80	299.80
Thimphu Dzongkhag	-	-	-	27.68	32.96	34.31
Common public expenditure	79.60	88.86	126.50	394.60	492.18	292.68
Total current expenditure	1,025.98	1,134.87	1,234.03	1,550.89	1,906.70	1,963.55

Note: Total current expenditure excludes Zonal Administration figures which existed earlier.

Source: National Budget and Aid Coordination Division, Thimphu

TABLE 12.2: BUDGETARY DEVELOPMENT EXPENDITURE OF THE GOVERNMENT BY MINISTRY, 1989/90 TO 1995/96

(millions Nu.)

Ministerial/non ministerial organizations	1989/90 (actual)	1990/91 (actual)	1991/92 (actual)	1992/93 (actual)	1993/94 (actual)	1994/95 (actual)	1995/96 (actual)
Ministries	657.29	593.21	787.96	1,083.36	1,151.02	1,533.98	1,956.95
Home Affairs	21.92	19.77	27.17	90.63	63.39	34.63	36.96
Finance	18.47	21.08	14.49	13.15	24.36	23.41	43.15
Communication & Tourism	250.31	123.39	172.53	564.01	253.11	540.31	349.82
Planning	11.21	4.93	2.49	6.67	3.34	3.20	3.33
Social Services	128.34	133.37	275.49	83.86	186.02	217.52	264.83
Agriculture	128.41	213.78	260.11	274.88	453.10	509.89	519.87
Foreign Affairs	0.98	1.68	1.80	0.86	0.95	4.31	2.37
Trade and Industries	97.66	75.19	33.87	49.30	166.75	200.72	736.62
Non ministerial organizations	20.60	12.73	7.50	9.14	39.52	44.18	90.38
Special Commission	5.29	3.30	3.73	3.19	4.33	5.16	11.09
Central Monastic Secretariat	8.98	5.16	2.88	3.31	5.90	5.05	4.25
Royal Monetary Authority	-	-	-	-	-	-	-
Social And Culture Division	-	-	-	-	-	-	-
Royal Secretariat (HM)	0.97	0.39	0.04	0.00	0.06	0.15	0.87
Science and Technology	-	-	-	-	-	-	-
Royal Civil Service Commission	1.80	0.81	0.11	0.73	10.38	0.91	29.93
Royal Audit Authority	2.19	0.33	0.03	0.04	0.33	2.71	0.49
Royal Advisory Council	0.02	0.03	0.07	-	-	0.16	0.27
National Assembly	0.02	0.04	0.04	0.04	0.63	1.36	0.23
Urban Dev. Corp.	-	-	-	-	-	-	-
Nat. Women's Association	0.21	0.76	0.13	0.19	-	-	-
Judiciary	0.78	1.72	0.24	1.11	0.66	1.49	2.22
Bhutan Olympic Committee	0.01	0.11	0.00	0.00	0.44	0.49	0.42
Dzongkhag Dev.Commission	0.32	0.07	0.21	0.53	0.68	0.19	1.68
SAARC Conference complex	-	-	-	-	-	-	-
Punakha Dz. Renovation Service	-	-	-	-	16.11	26.52	34.87
National Environment Commission	-	-	-	-	-	-	4.07
Dzongkhags	3.13	32.99	106.79	48.49	47.91	96.74	105.06
Other Dzongkhags	-	32.99	106.79	48.49	45.05	91.78	98.81
Thimphu Dzongkhags	3.13	-	-	..	2.86	4.96	6.25
Common public expenses	34.39	45.31	84.34	15.42	101.68	73.98	32.01
Total development expenses (c)	715.41	684.23	986.57	1,156.41	1,340.13	1,748.88	2,184.40

Note: Total development expense excludes Zonal Administrations figure which existed earlier.

Source: National Budget and Aid Coordination Division, Thimphu

TABLE 12.3 : BUDGETARY RECEIPTS OF THE GOVERNMENT BY SOURCE, 1987/88 TO 1995/96

(millions Nu.)

Source of revenue	1987/88 (actual)	1988/89 (actual)	1989/90 (actual)	1990/91 (actual)	1991/92 (actual)	1992/93 (actual)	1993/94 (actual)	1994/95 (actual)	1995/96 (actual)
Tax revenue	232.61	231.04	234.45	281.55	330.39	416.48	503.28	649.77	844.23
Direct tax	71.87	77.45	74.92	78.88	89.94	56.83	171.42	269.23	431.66
Tax on income & profits	66.59	71.86	70.24	70.57	82.32	51.02	165.35	263.46	426.08
Corporate taxes	48.10	55.85	54.13	52.58	63.98	12.17	114.53	203.17	357.03
Individual & trading units	18.49	16.01	16.12	17.99	18.34	38.85	50.81	60.29	69.04
Rural tax	5.28	5.59	4.68	8.31	7.61	5.81	6.07	5.77	5.59
Indirect tax	160.74	153.59	159.52	202.67	240.46	359.65	331.86	380.54	412.57
Tax on goods & services	148.27	141.29	149.41	188.34	219.19	273.84	295.14	332.31	374.44
Sales tax	38.89	34.26	33.31	43.21	52.40	96.23	88.75	117.14	140.29
Excise duty	97.82	92.77	105.97	134.16	152.17	154.67	185.20	194.04	211.59
Motor vehicle tax	11.57	14.27	10.14	10.95	14.62	22.94	21.19	21.13	22.56
Import duty	2.83	5.85	4.01	6.48	10.54	11.53	22.61	29.96	19.15
Business & Prof. licences	-	-	-	-	-	4.59	4.15	5.30	5.72
Royalties	-	-	-	-	-	60.02	115.43	120.40	127.65
Other taxes	9.65	6.44	6.10	7.86	10.73	9.67	14.10	11.79	9.62
Non tax revenue	609.13	615.99	722.07	712.20	655.29	976.98	1,064.91	1,032.12	1,086.91
Net transfer of profits from public enterprises	397.74	330.58	423.38	494.97	357.90	555.88	529.25	313.37	390.47
Royalties	45.12	71.02	28.41	27.77	31.53	-	114.85	119.81	126.76
Dividends	21.28	31.28	52.43	41.30	37.40	87.83	62.52	43.75	56.37
Administrative fees & charges	30.74	48.40	36.30	32.41	35.01	36.09	41.50	44.55	54.35
Sale of government properties	10.15	10.83	53.48	22.75	46.81	131.17	103.75	86.23	81.03
Receipts from govt. departments	96.14	120.19	122.78	90.27	140.77	162.44	209.86	279.85	375.93
Other non revenue receipts	6.01	2.35	4.59	2.08	2.55	3.57	3.18	144.57	2.01
Total revenue	841.74	847.03	956.51	993.75	985.68	1,393.46	1,568.18	1,681.89	1,931.14

Source: National Budget and Aid Coordination Division and DRC, Thimphu.

TABLE 12.4: SUMMARY OF BUDGETARY OPERATIONS, 1986/87 TO 1995/96 (a)

(million Nu.)

Item	1986/87 (actual)	1987/88 (actual)	1988/89 (actual)	1989/90 (actual)	1990/91 (actual)	1991/92 (actual)	1992/93 (actual)	1993/94 (actual)	1994/95 (actual)	1995/96 (actual)
Revenue	340.10	842.00	828.00	945.80	996.31	1,155.61	1,650.85	1,666.27	1,877.42	2,127.79
Tax revenue	173.80	236.00	232.00	231.80	281.41	328.31	447.13	503.28	649.77	844.23
Non-tax revenue	139.30	492.00	558.00	661.10	694.70	780.70	1,046.33	1,064.91	1,032.12	1,086.91
Other	27.00	114.00	38.00	52.90	20.20	46.60	157.39	98.08	195.53	196.64
Grants	782.30	929.90	791.00	523.00	752.71	785.88	1,230.12	1,456.22	1,773.16	2,363.61
India	486.70	708.90	564.00	290.20	452.58	232.17	363.31	607.46	727.98	1,168.86
Other	295.60	221.00	227.00	232.80	300.13	553.72	866.82	848.76	1,045.19	1,194.75
Expenditure	1,220.70	1,739.70	2,021.10	1,737.50	1,814.40	2,240.89	2,568.74	3,167.53	3,642.73	4,252.71
Current	522.60	774.60	952.80	1,068.50	1,082.28	1,152.43	1,240.69	1,550.89	1,906.70	1,968.20
Capital	698.10	965.10	1,068.30	669.00	688.70	986.61	1,156.58	1,340.13	1,748.88	2,184.40
Lending(net)	-	-	-	-	43.42	101.84	171.47	276.51	-12.86	100.12
Overall surplus/deficit	-98.30	-56.70	-607.70	-269.10	-47.20	-247.55	312.23	-45.05	7.86	. 238.68

(a) Years refer to period 1 April to 31 March. 1987/88 refers to fifteen month period 1 April 1987 to 30 June 1988 while 1988/89 onwards refer to 1 July to 30 June

Source: National Budget & Aid Cordination Division, Ministry of finance, Thimphu.

CHAPTER 13: 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 Hon'ble 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, fixing 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) will by estimate 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 13.1: OUTLAYS OF DEVELOPMENT PLANS, FIRST PLAN TO SEVENTH PLAN

(millions Nu.)

Sector	First Plan (actual)	Second Plan (actual)	Third Plan (actual)	Fourth Plan (actual)	Fifth Plan(a) (revised)	Sixth Plan (revised)	Seventh 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	-	-	-	-	-	-	-
Total outlay	14.4	15.6	42.5	54.7	-	-	-
	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 12.1 and 12.2 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 13.2: OUTLAYS OF DEVELOPMENT PLANS; PERCENTAGE BY CATEGORY, FIRST PLAN TO SEVENTH PLAN

(percent)

Sector	First Plan	Second Plan	Third Plan	Fourth Plan	Fifth Plan(a)	Sixth Plan	Seventh 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	7.9	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	1.5	0.6	0.5	0.6
Post & Telegraph	0.5	2.9	2.4	3.4	1.4	0.7	1.1
Telecommunications	-	-	3.1	1.1	0.7	1.4	7.0
Tourism	-	-	3.0	-	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 13.1.

Source: Ministry of Planning, Thimphu

TABLE 13.3: FINANCIAL OUTLAYS DURING SEVENTH PLAN BY SECTOR, 1992 TO 1997

(million Nu.)

Sector	Current	Capital	Total	% of total outlay
Agriculture Ministry	1,159.1	1,275.6	2,434.6	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	721.4	681.0	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	53.0	100.0	153.0	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	692.9	1,215.7	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	23.6
Secretariat	43.3	0.0	43.3	0.3
Education	1,065.0	673.0	1,738.0	11.1
Health	559.6	475.9	1,036.5	6.6
Works & Housing Division	209.4	500.0	709.4	4.6
Ministry of Home affairs	199.3	111.5	310.7	2.0
Secretariat	79.4	25.0	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	78.1	30.9	106.8	0.7
Secretariat	52.4	0.0	52.7	0.3
Central Statistical Organisation	2.0	27.6	29.6	0.2
National Environment 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	6.8
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 13.4: DZONGKHAG WISE SIXTH FIVE YEAR PLAN OUTLAY, 1987 TO 1992

(Nu. in million)

Dzongkhags	Current	Capital	Total
Bumthang	7.129	4.750	11.879
Chirang	12.592	1.270	13.862
Chhukha	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
Lhuntse	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
Pemagatshel	7.123	1.230	8.353
Samtse	16.370	1.733	18.103
Samdrup Jongkhar	14.869	1.945	16.814
Zhemgang	9.801	2.015	11.816
Trashigang	16.027	4.055	20.082
Thimphu	10.943	0.600	11.543
Trongsa	8.808	4.480	13.288
Wangdue Phodrang	8.253	2.350	10.603
Total	192.151	46.371	238.522

Source: Ministry of Planning, Thimphu

TABLE 13.5: DZONGKHAG WISE SEVENTH FIVE YEAR PLAN OUTLAY, 1992 TO 1997

(Nu. in million)

Dzongkhag	Current	Capital	Total
Bumthang	214.117	196.095	410.212
Chirang	133.228	414.285	547.513
Chhukha	229.979	2,174.821	2,404.800
Dagana	83.491	86.043	169.534
Gasa	0.000	0.000	0.000
Haa	59.974	99.253	159.227
Lhuentse	86.094	123.435	209.529
Mongar	244.134	2,009.736	2,253.870
Paro	258.431	301.648	560.079
Pemagatshel	81.546	233.729	315.275
Punakha	98.401	107.435	205.836
Samtse	205.204	204.710	409.914
Samdrup Jongkhar	218.169	1,954.123	2,172.292
Sarpang	266.112	341.965	608.077
Zhemgang	348.400	193.250	541.650
Trashigang	372.445	546.567	919.012
Trashiyangtse	76.133	98.845	174.978
Thimphu	771.568	779.479	1,551.047
Trongsa	153.051	199.546	352.597
Wangdue Phodrang	167.670	1,554.576	1,722.246
Total	4,068.147	11,619.541	15,687.688

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

Source: Ministry of Planning, Thimphu

CHAPTER 14: 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 14.1: GROSS DOMESTIC PRODUCT AT FACTOR COST IN CURRENT PRICES BY KIND OF ACTIVITY, 1988 TO 1996

(millions Nu.)

Activity	1988	1989	1990	1991	1992	1993	1994	1995	1996
Agriculture, livestock, forestry and fishing	1,746.3	1,924.3	2,094.9	2,305.1	2,460.5	2,801.9	3,427.1	3,897.6	4,538.0
Agriculture	829.8	937.7	1,057.6	1,180.8	1,363.0	1,526.6	1,814.6	2,043.2	2,253.7
Livestock	395.9	441.2	474.8	528.6	487.4	545.9	703.5	805.5	910.2
Forestry and logging	520.6	545.4	562.5	595.7	610.1	729.4	909.0	1,048.9	1,374.1
Fishing	-	-	-	-	-	-	-	-	-
Mining and quarrying	33.4	41.8	44.8	90.0	98.8	102.3	172.4	193.1	467.3
Manufacturing	226.5	302.5	396.7	499.5	647.4	752.3	875.2	1,088.8	1,393.4
Electricity and gas	388.0	391.0	384.7	384.4	445.3	560.9	574.2	1,058.7	1,101.6
Construction	309.0	365.4	398.7	359.7	595.1	616.8	787.2	930.7	1,040.0
Wholesale, retail trade, hotels and restaurants	258.5	282.3	321.6	382.9	479.7	551.2	647.2	730.7	903.5
Transport, storage and communications	180.6	235.6	346.7	398.5	471.2	587.4	638.0	687.6	855.8
Finance, insurance and real estate	263.9	306.9	378.0	409.4	438.8	457.7	468.2	503.0	441.9
Community, social services (government)	507.8	525.1	540.5	564.4	608.9	645.0	709.2	751.4	1,013.7
Less: Imputed bank service charges	-63.1	-67.0	-58.4	-51.8	-68.1	-68.0	-148.2	-231.0	-350.0
Gross domestic product	3,850.9	4,307.9	4,848.2	5,342.1	6,177.9	7,007.4	8,150.5	9,610.7	11,405.2
Annual growth rate (%)	9.1	11.9	12.5	10.2	15.6	13.4	16.3	17.9	18.7

Source: CSO, Ministry of Planning, Thimphu.

TABLE 14.2: GROSS DOMESTIC PRODUCT AT FACTOR COST IN 1980 PRICES BY KIND OF ACTIVITY, 1988 TO 1996

(millions Nu.)

Activity	1988	1989	1990	1991	1992	1993	1994	1995	1996
Agriculture, livestock, forestry and fishery	939.7	962.9	992.8	1,024.6	1,004.0	1,040.2	1,081.2	1,108.2	1,196.2
Agriculture	485.6	514.7	530.9	544.8	555.6	563.9	578.7	585.1	599.7
Livestock	191.5	201.7	212.2	221.3	201.6	226.1	227.6	234.4	256.0
Forestry and logging	262.6	246.5	249.7	258.5	246.8	250.2	274.9	288.7	340.5
Fishing	-	-	-	-	-	-	-	-	-
Mining and quarrying	19.0	21.7	19.3	27.4	23.5	26.2	32.7	34.8	46.2
Manufacturing	110.3	129.2	158.1	186.7	208.8	218.9	233.0	269.7	314.0
Electricity and gas	225.1	222.3	204.1	200.4	210.0	232.0	258.8	365.6	342.6
Construction	129.0	136.2	136.8	116.2	168.5	178.0	221.5	243.0	243.1
Wholesale and retail trade, hotels and restaurants	129.2	133.6	134.7	145.1	160.7	163.8	170.2	178.0	203.1
Transport, storage and communications	122.1	142.4	172.1	182.0	192.3	234.6	241.5	242.6	274.5
Finance, insurance and real estate	141.0	162.9	212.2	208.8	215.4	238.1	245.4	263.2	256.2
Community, social and personal services(government)	210.0	217.0	223.3	233.2	251.6	266.5	293.0	310.5	334.5
Less: Imputed bank service charges	-31.8	-41.1	-28.8	-21.0	-28.1	-45.0	-61.2	-95.4	-115.8
Gross domestic product	1,993.6	2,087.1	2,224.6	2,303.4	2,406.6	2,553.3	2,716.1	2,920.1	3,094.6
Annual growth rate (%)	1.2	4.7	6.6	3.5	4.5	6.1	6.4	7.5	6.1

Source: CSO, Ministry of Planning,Thimphu.

TABLE 14.3: COMPOUND GROWTH RATE OF GROSS DOMESTIC PRODUCT DURING FIFTH, SIXTH AND SEVENTH PLAN BY KIND OF ACTIVITY.

(percent)

Activity	Growth rate in current prices			Growth rate in 1980 prices		
	Vth Plan (1980-87)	VIth Plan (1987-91)	VIIth Plan (1992-97)	Vth Plan (1980-87)	VIth Plan (1987-91)	VIIth Plan (1992-97)
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 communicaations	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

Source: CSO, Ministry of Planning, Thimphu.

TABLE 14.4: PERCENTAGE COMPOSITION OF GROSS DOMESTIC PRODUCT BY VARIOUS ACTIVITIES, 1989 TO 1996

(percent)

Activity	1989	1991	1992	1993	1994	1995	1996
Agriculture sector	42.7	42.7	38.4	39.6	41.1	38.6	38.6
Agriculture proper	21.6	21.9	21.8	21.6	21.0	20.9	19.2
Livestock production	9.7	9.8	7.8	7.7	8.5	8.2	7.7
Forestry and logging	11.5	11.0	9.8	10.3	11.0	10.7	11.7
Fishing	-	-	-	-	-	-	-
Mining and quarrying	0.9	1.7	1.6	1.4	2.1	2.0	4.0
Manufacturing	8.1	8.3	10.4	10.6	10.5	11.1	11.9
Electricity and gas	7.9	7.1	7.1	7.9	6.9	10.4	9.4
Construction	8.1	8.3	9.5	8.7	8.5	9.9	9.9
Wholesale, retail trade, hotels & restaurants	6.6	7.1	7.7	7.8	7.8	7.4	7.7
Transport, storage and communications	7.1	7.4	7.5	8.3	7.7	7.0	7.3
Finance, insurance and real estate	7.7	7.6	7.0	6.5	5.8	8.1	1.5
Community, social and personal services	11.0	10.4	9.7	9.1	8.5	7.6	8.0
Gross domestic product	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: CSO, Ministry of Planning, Thimphu.

TABLE 14.5: GROSS DOMESTIC CAPITAL FORMATION BY MAJOR COMPONENTS, 1988 TO 1996

(million Nu.)

Components	1988	1989	1990	1991	1992	1993	1994	1995	1996
In current prices									
Construction	723.5	830.4	916.6	855.6	1214.0	1311.6	1556.2	1913.3	2,404.0
Machinery and equipment (a)	784.5	743.1	769.0	926.0	1348.7	2087.0	2314.8	2468.1	2,642.4
Gross fixed capital formation	1508.0	1573.5	1685.6	1781.6	2562.7	3398.6	3871,0	4399.4	5,046.4
Increase in stock (a)	10.4	-121.1	-33.9	-71.3	351.0	-102.0	229.3	155.7	157.3
Gross domestic capital formation	1518.4	1573.5	1685.6	1781.6	2913.7	3296.6	4100.3	4555.1	5,203.6
In 1980 prices									
Construction	296.8	298.0	306.6	278.7	360.2	392.7	461.8	465.4	579.3
Machinery and equipment	487.3	426.4	419.7	463.5	674.4	640.7	723.0	626.4	670.2
Gross fixed capital formation	784.1	724.4	726.3	742.2	1034.6	1033.4	1184.8	1091.8	1,249.5
Increase in stock (b)	4.8	-53.8	-9.2	-17.2	113.3	-30.2	74.0	50.2	43.9
Gross domestic capital formation	788.9	670.6	717.1	725.0	1147.9	1003.2	1258.8	1142.0	1,293.4

Note: (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 14.6: SHARE OF GROSS DOMESTIC CAPITAL FORMATION IN GDP AT MARKET PRICES, 1988 TO 1996

(million Nu.)

Components	1988	1989	1990	1991	1992	1993	1994	1995	1996
Gross domestic product at market prices	3933.7	4381.6	4961.0	5501.5	6353.9	7192.2	8501.1	9968.1	11,714.0
Gross domestic fixed capital formation	1508.0	1573.5	1685.6	1781.6	2562.7	3398.6	3871.2	4399.1	5,046.0
Gross domestic capital formation	1518.4	1452.4	1651.7	1710.3	2913.7	3296.6	4100.1	4555.1	5,204.0
				Share in Gross domestic product (percent)					
Gross domestic fixed capital formation	38.3	68.9	34.0	32.4	47.3	47.3	45.5	44.1	43.1
Gross domestic capital formation	38.6	33.1	33.3	31.1	45.9	45.8	48.2	45.7	44.4

Source: CSO, Ministry of Planning, Thimphu.

TABLE 14.7: GROSS AND NET CAPITAL FORMATION, 1988 TO 1996

(million Nu.)

Components	1988	1989	1990	1991	1992	1993	1994	1995	1996
In current prices									
Gross domestic capital formation	1518.4	1452.4	1651.6	1710.6	2913.7	3296.6	4100.1	4555.1	5,204.0
Consumption of fixed capital (depreciation)	362.3	399.0	451.0	503.6	590.7	670.0	846.0	1126.0	1,329.0
Net domestic capital formation	1156.1	1053.4	1200.6	1207.0	2323.0	2626.6	3254.1	3429.1	3,875.0
Im 1980 prices									
Gross domestic capital formation	788.9	670.6	727.1	724.7	1034.7	1033.4	1184.8	1091.8	1,310.0
Consumption of fixed capital (depreciation)	201.8	215.0	217.7	225.0	237.0	249.9	268.2	293.0	312.0
Net domestic capital formation	587.1	455.6	509.4	499.7	797.7	783.5	916.6	798.8	998.0

Source: CSO, Ministry of Planning, Thimphu

TABLE 14.8: GROSS AND NET DOMESTIC PRODUCT AND RELATED AGGREGATES, 1988 TO 1996

(million Nu.)

Aggregates	1988	1989	1990	1991	1992	1993	1994	1995	1996
In current prices									
Net domestic product at factor cost	3,489	3,909	4,397	4,839	5,587	6,337	7,305	8,485	10,077
Add: Consumption of fixed capital	362	399	451	504	591	670	846	1,126	1,329
Gross domestic product at factor cost	3,851	4,308	4,848	5,342	6,178	7,007	8,151	9,611	11,405
Add: Indirect taxes, less of subsidies (a)	83	74	134	159	176	185	351	358	308
Gross domestic product at market prices	6,934	4,382	4,983	5,502	6,355	7,192	8,501	9,968	11,714
Add: Net factor income from abroad	-344.3	-171.6	-326	-491	-734	-875	-914	-1198	-1396
Gross national product at market prices	3,589	4,210	4,657	5,011	5,621	6,317	7,587	8,770	10,318
In 1980 prices									
Net domestic product at factor cost	1,792	1,872	2,007	2,078	2,161	2,300	2,448	2,627	2,783
Add: Consumption of fixed capital	202	215	218	225	237	250	268	293	312
Gross domestic product at factor cost	1,994	2,087	2,225	2,303	2,398	2,549	2,716	2,920	3,095

Note: (a) Excludes excise refunds from Government of India

Source: CSO, Ministry of Planning, Thimphu.

TABLE 14.9: ESTIMATES OF FINAL CONSUMPTION EXPENDITURE, GROSS DOMESTIC SAVINGS AND SAVINGS IN CURRENT PRICES, 1989 TO 1996

Details	1989	1990	1991	1992	1993	1994	1995	1996
Revenue receipts	953.0	1,020.0	985.7	1,493.0	1,567.9	1,685.5	1,850.7	2,290.0
Consumption expenditure	3,374.0	3,532.7	4,244.1	4,996.2	4,800.3	5,679.1	6,301.1	7,669.0
Government	879.0	948.7	1,015.1	1,215.2	1,241.0	1,426.1	1,745.1	3,445.0
Private	2,495.0	2,584.0	3,229.0	3,781.0	3,559.3	4,253.0	4,556.0	4,224.0
Savings	1,000.4	1,360.7	1,070.6	960.8	1,876.1	2,312.4	2,885.1	3,086.7
Government	74.0	71.3	(29.4)	277.8	(333.3)	259.6	106.0	(1,155.0)
Private	926.4	1,289.4	1,100.0	683.0	2,209.4	2,052.8	2,779.1	4,241.7
Gross domestic savings	1,000.4	1,360.7	1,070.6	960.8	1,876.1	2,312.4	2,885.1	3,086.7
Gross domestic capital formation	1,452.4	1,651.7	1,710.6	2,913.8	3,296.6	4,100.4	4,555.1	5,204.0
Net capital inflow	452.0	291.0	640.0	1,953.0	1,420.5	1,788.0	1,670.0	2,117.3

Note: figures in the bracket refers to negative sign.

Source: CSO, Ministry of Planning, Thimphu.

CHAPTER 15: PRICES

INTRODUCTION

The only price statistics currently compiled in Bhutan relate to the Consumer Price Indexes, 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 indexes are measured relative to the base of June 1979 = 100.0 price change is estimated by measuring change in the Index numbers.

TABLE 15.1: CONSUMER PRICE INDICES FOR FOOD AND NON-FOOD COMPONENTS, BHUTAN, 1991 TO 1996

(December 1979 = 100)

Item	Weight (%)	1991		1992		1993		1994		1995		1996		Average growth (%)	
		Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun 80-96	Dec 79-96
Index															
Food	72.31	251.6	271.6	301.2	316.0	335.4	336.0	342.5	347.9	367.7	392.2	407.8	422.9	..	..
Non-food	27.69	331.6	336.2	360.1	387.2	426.6	443.3	484.8	519.1	532.2	556.6	566.3	607.8	..	..
Total	100.00	273.7	289.5	317.5	355.7	360.6	365.7	381.9	395.3	413.2	437.7	451.7	474.1	..	..
Percentage change on the previous year															
Food	72.31	11.5	15.1	19.7	16.3	11.4	6.3	2.1	3.5	7.3	12.7	10.9	7.8	9.1	8.8
Non-food	27.69	10.8	9.7	8.6	15.2	18.5	14.5	13.7	17.1	9.8	7.2	6.4	9.2	10.8	11.2
Total	100.00	11.3	13.3	16.0	16.0	13.6	8.9	5.9	8.1	8.2	10.7	9.3	8.3	9.7	9.6
Percentage change on the previous period														1979-96	
Food	72.31	6.6	8.0	10.9	4.9	6.1	0.2	1.9	1.7	5.7	6.7	4.0	3.7	4.3	..
Non-food	27.69	8.2	1.4	7.1	7.5	10.2	3.9	9.4	7.1	2.5	4.6	1.7	7.3	5.5	..
Total	100.00	7.1	5.8	9.7	5.7	7.4	1.4	4.4	3.5	4.5	5.9	3.2	5.0	4.7	..

Source: CSO, Ministry of Planning, Thimphu

TABLE 15.2: CONSUMER PRICE INDICES FOR MAJOR ITEMS, **BHUTAN**, 1991 TO 1996

(December 1979 = 100)

Item	Weight (%)	1991		1992		1993		1994		1995		1996	
		Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
Cereals	37.77	226.4	240.7	278.9	291.0	304.4	308.1	322.9	326.9	341.3	358.8	375.8	375.9
Pulses	0.67	296.3	322.0	313.7	307.0	328.5	255.8	355.7	410.7	441.1	511.5	525.6	595.4
Vetetables	2.43	278.2	331.0	291.0	290.7	358.1	392.4	344.7	403.9	454.2	477.6	487.5	456.2
Fruits	0.04	303.4	331.4	313.5	473.6	551.9	433.5	643.6	478.8	641.1	506.6	508.9	552.2
Edible oil and fats	2.87	311.4	333.5	337.4	323.4	314.1	316.7	310.6	309.8	329.0	332.2	330.7	321.3
Spices	5.10	302.7	374.5	456.2	550.0	520.8	579.5	518.6	476.5	536.4	596.8	579.5	630.4
Milk and its products	7.07	287.6	309.4	352.6	338.4	336.1	350.1	339.3	362.3	372.2	447.5	470.1	490.3
Other food and intoxicants	16.36	261.9	270.8	288.3	293.7	349.2	328.2	338.5	345.5	364.5	374.2	397.7	443.0
Fuel and lighting	3.65	216.7	216.7	216.7	216.7	222.2	222.2	225.6	225.6	235.1	235.1	235.1	257.0
Clothing and footwear	21.20	350.0	354.7	378.3	411.4	453.6	143.0	532.6	575.2	586.5	616.8	627.2	672.4
Stationary & personal effects	0.62	296.8	294.1	299.8	364.9	363.1	358.6	384.1	407.2	416.7	441.0	442.5	460.2
Miscellaneous goods & services	I.57	349.3	350.5	428.0	404.5	460.7	475.9	469.6	486.8	503.6	508.3	534.4	585.6
Furniture and utensils	0.65	365.8	407.0	462.9	530.8	666.5	619.2	511.4	521.5	604.4	621.9	628.5	657.7
Total	100.00	273.7	289.5	317.5	335.7	360.6	365.7	381.9	395.3	413.2	437.7	451.7	474.1

Source: CSO, Ministry of Planning, Thimphu

TABLE 15.3: CONSUMER PRICE INDICES FOR MAJOR ITEMS, BHUTAN, 1990 TO 1996

(percentage change on the previous period)

Item	Weight (%)	1990		1991		1992		1993		1994		1995		1996		Average growth(%) 1979-96
		Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	
Cereals	37.77	4.4	2.7	6.7	6.3	15.9	4.3	4.6	1.2	4.8	1.3	4.4	5.1	4.7	0.0	4.0
Pulses	0.67	1.7	8.3	2.7	8.7	-2.6	-2.1	7.0	2.2	5.9	15.5	7.4	16.0	2.8	13.3	5.4
Vetetables	2.43	-12.4	-5.9	24.0	19.0	-12.1	-0.1	23.2	9.6	-12.2	17.2	12.5	5.2	2.1	-6.4	4.6
Fruits	0.04	8.6	3.4	6.3	9.2	-5.4	51.1	16.5	-21.5	48.5	-25.6	33.9	-21.0	0.5	8.5	5.2
Edible oil and fats	2.87	17.7	19.2	6.2	7.1	1.2	-4.1	-2.9	0.8	-1.9	-0.2	6.2	1.0	-0.5	-2.8	3.5
Spices	5.10	-1.5	4.2	8.7	23.7	21.8	20.6	-5.3	2.2	-2.5	-8.1	12.6	11.3	-2.9	8.8	5.6
Milk and its products	7.07	3.9	2.1	3.1	7.6	5.2	3.9	-0.7	4.2	-3.1	6.8	2.7	20.2	5.1	4.3	4.8
Other food and intoxicants	16.36	3.3	9.0	5.1	4.2	5.7	1.9	18.9	-6.0	3.1	2.1	5.5	2.7	6.3	11.4	4.5
Fuel and lighting	3.65	29.7	1.0	0.0	0.0	0.0	0.0	2.5	0.0	1.5	0.0	4.2	0.0	0.0	9.3	2.8
Clothing and footwear	21.20	8.4	2.7	9.3	1.3	6.7	8.8	10.3	4.9	11.9	8.0	2.0	5.2	1.7	7.2	5.8
Stationary and personal effects	0.62	6.3	6.0	6.7	-0.9	1.9	21.6	-0.4	-1.2	7.1	6.0	2.3	5.8	0.3	4.0	4.6
Miscellaneous goods and services	1.57	4.0	-1.9	3.2	0.3	22.1	-5.5	13.9	3.3	-1.3	3.7	3.5	0.9	5.1	9.6	5.3
Furniture and utensils	0.65	-4.7	9.7	16.4	11.3	13.7	14.7	25.6	-7.1	-17.4	2.0	15.9	2.9	1.1	4.6	5.7
Total	100.00	5.3	3.9	7.1	5.8	9.7	5.7	7.4	1.4	4.4	3.5	4.5	5.9	3.2	5.0	4.7

Source: CSO, Ministry of Planning, Thimphu.

TABLE 15.4: CONSUMER PRICE INDICES FOR MAJOR ITEMS, BHUTAN, 1990 TO 1996

(percentage change over the previous year)

Item	Weight (%)	1990		1991		1992		1993		1994		1995		1996		Average growth(%)	
		Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun 80-96	Dec 79-96
Cereals	37.77	10.8	7.2	9.6	13.5	23.2	20.9	9.1	5.9	6.1	6.1	5.7	9.7	10.1	4.8	8.8	8.1
Pulses	0.67	6.0	10.2	11.2	11.6	5.9	-4.7	4.7	9.4	8.3	22.3	24.0	24.5	19.2	16.4	10.1	11.1
Vetetables	2.43	-14.6	-17.6	16.6	47.6	4.6	-12.2	23.1	35.0	-3.8	2.9	31.8	18.3	7.3	-4.5	10.9	9.3
Fruits	0.04	-0.4	12.2	9.9	16.1	3.3	42.9	76.1	-8.5	16.6	10.5	-0.4	5.8	-20.6	9.0	10.7	10.6
Edible oil and fats	2.87	21.5	40.3	26.5	13.7	8.3	-3.0	-6.9	-2.1	-1.1	-2.2	5.9	7.2	0.5	-3.3	7.3	7.1
Spices	5.10	5.4	2.6	13.3	34.6	50.7	46.8	14.2	3.3	-0.4	-10	3.4	25.3	8.0	5.6	11.2	11.4
Milk and its products	7.07	7.2	6.1	5.3	11.0	13.2	9.4	3.2	3.4	0.9	3.5	9.7	23.5	26.3	9.5	10.1	9.8
Other food and intoxicants	16.36	6.9	12.5	14.5	9.5	10.1	7.7	21.1	11.7	-3.1	5.3	7.7	8.3	9.1	18.4	8.6	9.2
Fuel and lighting	3.65	32.9	30.9	1.0	0.0	0.0	0.0	2.5	2.5	1.5	1.5	4.2	4.2	0.0	9.3	6.8	5.7
Clothing and footwear	21.20	15.6	11.3	212.2	10.8	8.1	16.0	19.9	15.7	17.4	20.8	10.1	7.2	6.9	9.0	11.1	11.9
Stationary and personal effects	0.62	8.7	12.6	13.1	5.7	1.0	23.9	21.1	-1.6	5.8	13.5	8.5	8.3	6.2	4.4	9.2	9.4
Miscellanecus goods and services	1.57	6.3	2.0	1.3	3.6	22.5	15.4	7.6	17.6	1.9	2.3	7.2	4.4	6.1	15.2	11.5	11.0
Furniture and utensils	0.65	8.0	4.5	27.2	29.5	26.6	30.4	44.0	16.7	-23	-16	18.2	19.3	4.0	5.8	12.0	11.7
Total	100.00	10.7	9.4	11.3	13.3	16.0	16.0	13.6	8.9	5.9	8.1	8.2	10.7	9.3	8.3	9.7	9.6

Source: CSO, Ministry of Planning, Thimphu.

TABLE 15.5: CONSUMER PRICE INDICES FOR FOOD ITEMS, BHUTAN, 1990 TO 1996

(December 1979=100)

Item	Weight (%)	1990		1991		1992		1993		1994		1995		1996	
		Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
Cereals	37.77	206.6	212.1	226.4	240.7	278.9	291.0	304.4	308.1	322.9	326.9	341.3	358.8	375.8	375.9
Pulses	0.67	266.4	288.4	296.3	322.0	313.7	307.0	328.5	335.8	355.7	410.7	441.1	511.5	525.6	595.4
Vetetables	2.43	238.5	224.3	278.2	311.0	291.0	290.7	358.1	392.4	344.7	403.9	454.2	477.6	487.5	456.2
Fruits	0.04	276.1	285.4	303.4	311.4	313.5	473.6	551.9	433.5	643.6	478.8	641.1	506.6	508.9	552.2
Edible oil and fats	2.87	246.2	293.4	311.4	333.5	337.4	323.4	314.1	316.7	310.6	309.8	329.0	332.2	330.7	321.3
Spices	5.10	267.2	278.4	302.7	374.5	456.2	550.0	520.8	532.1	518.6	476.5	536.4	596.9	579.5	630.4
Milk and its products	7.07	273.1	278.9	287.6	309.4	325.6	338.4	366.1	350.1	339.3	362.3	372.2	447.5	470.1	490.3
Sugar	1.03	249.8	249.6	251.7	253.9	272.8	272.6	279.0	313.3	396.5	367.3	387.6	387.9	399.1	396.0
Beverages	1.34	311.4	324.9	340.0	395.5	432.9	395.9	426.2	432.2	447.7	461.4	495.0	494.7	504.4	517.9
Meat and fish	9.10	244.1	278.6	297.2	301.8	317.8	325.5	416.3	364.1	369.8	376.9	402.2	416.3	451.4	505.2
Eggs	0.19	262.8	243.0	244.7	274.0	260.8	305.7	305.0	322.9	333.3	325.8	330.7	351.4	330.2	383.1
Intoxicants	3.38	166.8	170.8	172.8	179.6	188.8	201.6	206.4	223.6	236.0	249.2	252.8	256.4	260.4	260.0
Tobacco	1.32	174.4	170.1	176.9	200.5	207.3	219.8	233.0	254.0	227.6	241.5	243.6	254.7	277.8	449.8
Total	72.31	225.6	236.1	251.6	271.6	301.2	316.0	335.4	336.0	342.5	347.9	367.7	392.2	407.8	422.9

Source: CSO, Ministry of Planning, Thimphu.

TABLE 15.6: CONSUMER PRICE INDICES FOR FOOD ITEMS, BHUTAN, 1990 TO 1996

(percent change over the preceeding year)

Item	Weight (%)	1990		1991		1992		1993		1994		1995		1996		Average growth(%)	
		Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	June 80-96	December 79-96
Cereals	37.77	10.8	7.2	9.6	13.5	23.2	20.9	9.1	5.9	6.1	6.1	5.7	9.7	10.1	4.8	8.8	8.1
Pulses	0.67	6.0	10.2	12.2	11.6	5.9	-4.7	4.7	9.4	8.3	22.3	24.0	24.5	19.2	16.4	10.1	11.1
Vetetables	2.43	-14.6	-17.6	16.6	47.6	4.6	-12.2	23.1	35.0	-3.8	2.9	31.8	18.3	7.3	-4.5	10.9	9.3
Fruits	0.04	-4.0	12.2	9.9	16.1	3.3	42.9	76.1	-8.5	16.6	10.5	-0.4	5.8	-20.6	9.0	10.7	10.6
Edible oil and fats	2.87	21.5	40.3	6.5	13.7	8.3	-3.0	-6.9	-2.1	-1.1	-2.2	5.9	7.2	0.5	-3.3	7.3	7.1
Spices	5.10	5.4	2.6	13.3	34.6	50.7	46.8	14.2	-3.3	-0.4	-10	3.4	25.3	8.0	5.6	11.2	11.4
Milk and its products	7.07	7.2	6.1	5.3	11.0	13.2	9.4	3.2	3.4	0.9	3.5	9.7	23.5	26.3	9.5	10.1	9.8
Sugar	1.03	20.3	12.7	0.8	1.7	8.4	7.4	3.3	15.0	42.1	17.2	-2.2	5.6	3.0	2.1	6.2	8.4
Beverages	1.34	28.3	33.5	9.2	21.7	27.3	0.1	-1.5	9.2	5.1	6.8	10.6	7.2	1.9	4.7	10.2	10.2
Meat and fish	9.10	0.8	12.4	21.7	8.3	6.9	7.9	31.0	11.8	-11	3.5	8.7	10.5	12.2	21.4	9.8	10.0
Eggs	0.19	18.3	6.7	-6.9	12.8	6.6	11.6	17.0	5.7	9.3	0.9	-0.8	7.9	-0.2	9.0	6.8	8.2
Intoxicants	3.38	13.6	7.3	3.6	5.2	9.3	12.2	9.3	10.9	14.3	11.4	7.1	2.9	3.0	1.4	5.0	5.8
Tobacco	1.32	4.9	-2.1	1.4	17.9	17.2	9.6	12.4	15.5	-2.3	-4.9	7.0	5.4	14.1	76.6	8.2	9.2
Total	72.31	8.2	8.1	11.5	15.1	19.7	16.3	11.4	6.3	2.1	3.5	7.3	12.7	10.9	7.8	9.1	8.9

Source: CSO, Ministry of Planning, Thimphu.

TABLE 15.7: CONSUMER PRICE INDICES FOR FOOD ITEMS, BHUTAN, 1990 TO 1996

(percent change over the preceeding period)

Item	Weight (%)	1990		1991		1992		1993		1994		1995		1996		Average growth(%)
		Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	1979-96
Cereals	37.77	4.4	2.7	6.7	6.3	15.9	4.3	4.6	1.2	4.8	1.3	4.4	5.1	4.7	0.0	4.0
Pulses	0.67	1.7	8.3	2.7	8.7	-2.6	-2.1	7.0	2.2	5.9	15.5	7.4	16.0	2.8	13.3	5.4
Vetetables	2.43	-12.4	-5.9	24.0	19.0	-12.1	-0.1	23.2	9.6	-12.2	17.2	12.5	5.2	2.1	-6.4	4.6
Fruits	0.04	8.6	3.4	6.3	9.2	-5.4	51.1	16.5	-21.5	48.5	-25.6	33.9	-21.0	0.5	8.5	5.2
Edible oil and fats	2.87	17.7	19.2	6.2	7.1	1.2	-4.1	-2.9	0.8	-1.9	-0.2	6.2	1.0	-0.5	-2.8	3.5
Spices	5.10	-1.5	4.2	8.7	23.7	21.8	20.6	-5.3	2.2	-2.5	-8.1	12.6	11.3	-2.9	8.8	5.6
Milk and its products	7.07	3.9	2.1	3.1	7.6	5.2	3.9	-0.7	4.2	-3.1	6.8	2.7	20.2	5.1	4.3	4.8
Sugar	1.03	12.8	-0.1	0.9	0.9	7.5	-0.1	2.4	12.3	26.5	-7.4	5.5	0.1	2.9	-0.8	4.1
Beverages	1.34	27.9	4.4	4.6	16.3	9.5	-8.5	7.7	1.4	3.6	3.1	7.3	-0.1	2.0	2.7	5.0
Meat and fish	9.10	-1.5	14.1	6.7	1.6	5.3	2.4	27.9	-12.5	1.6	1.9	6.7	3.5	8.4	11.9	4.9
Eggs	0.19	15.4	-7.5	0.7	12.0	-4.8	17.2	-0.2	5.9	3.2	-2.2	1.5	6.2	-6.0	16.0	4.0
Intoxicants	3.38	4.8	2.4	1.2	3.9	5.1	6.8	2.4	8.3	5.5	5.6	1.4	1.4	1.6	-0.2	2.9
Tobacco	1.32	0.4	-2.5	4.0	13.4	3.4	6.1	6.0	9.0	-10.4	6.1	0.8	4.6	9.1	61.9	4.5
Total	72.31	3.3	4.6	6.6	8.0	10.9	4.9	6.1	0.2	1.9	1.6	5.7	6.7	4.0	3.7	4.3

Source: CSO, Ministry of Planning, Thimphu.

TABLE 15.8: QUARTERLY PRICE INDICES FOR FOOD ITEMS, THIMPHU TOWN, 1989 TO 1996

(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
1996				
March	459.5	1537.0	537.0	529.5
June	462.2	1803.6	538.6	541.4
September	501.7	1497.7	563.9	562.6
December	507.8	1859.1	586.4	588.2

Source: CSO, Ministry of Planning, Thimphu.

TABLE 15.9: QUARTERLY PRICE INDICES FOR FOOD ITEMS, THIMPHU TOWN 1989 TO 1996

(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
1996				
March	1.5	-8.5	3.7	0.4
June	0.6	17.3	0.3	2.3
September	8.5	-17.0	4.7	3.9
December	1.2	24.1	4.0	4.6

Source: CSO, Ministry of Planning, Thimphu.

CHAPTER 16. 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 this chapter should improve in our subsequent issues.

Number of sexual offences, 1986 to 1996 (see table 16.3)

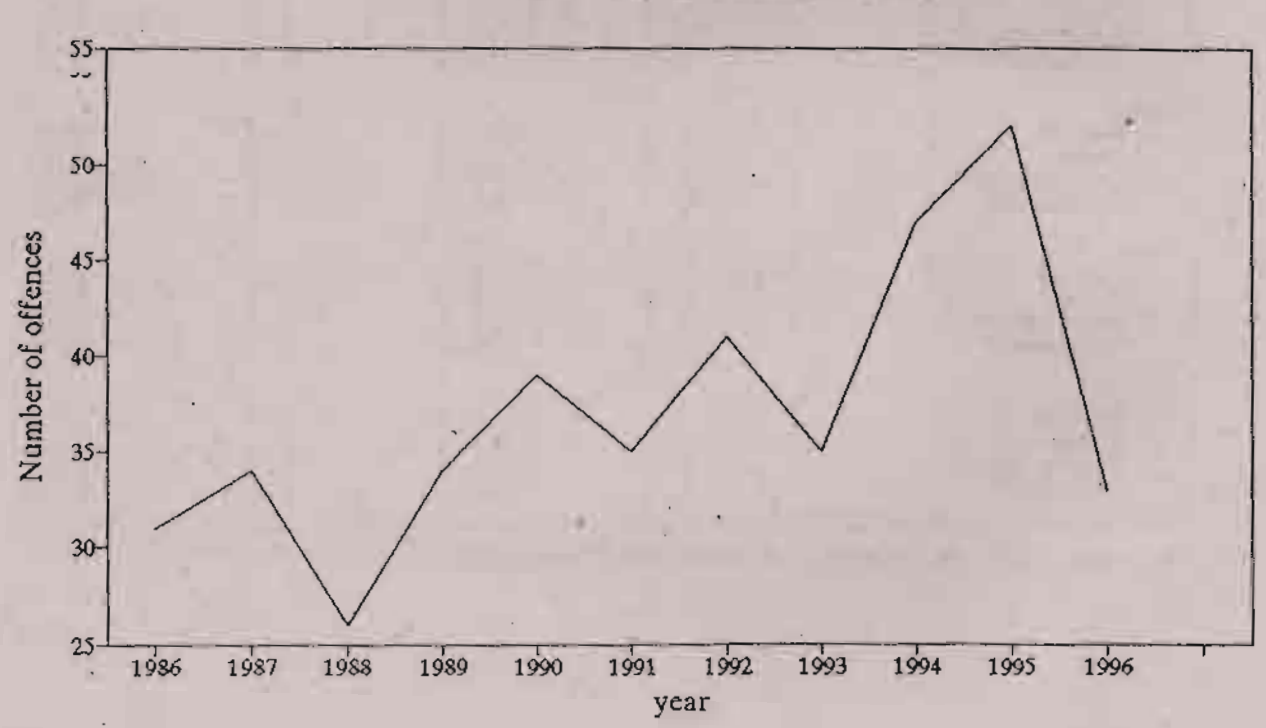


TABLE 16.1: CRIME REPORTS BY NATURE OF CRIME, BHUTAN, 1986 TO 1996
(numbers).

Nature of crime	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Crime against human body	492	654	627	726	711	461	533	556	556	542	552
Sexual offence	31	35	26	34	39	35	41	35	47	52	33
Crime against property	548	716	667	811	802	737	1,008	956	893	785	747
Motor vehicle accident	244	313	387	475	383	276	310	354	335	334	333
Forest offence	19	27	21	30	13	11	11	17	13	7	8
Antiques	2	1	4	2	26	49	113	128	104	90	193
Fire incidents	43	65	58	60	63	60	44	44	48	59	48
Others	108	123	175	177	190	141	128	122	118	154	132
All crimes	1,487	1,934	1,965	2,315	2,227	1,770	2,188	2,212	2,114	2,023	2,046

Source: Royal Bhutan Police, Thimphu

TABLE 16.2: DETAILS OF CRIME AGAINST HUMAN BODY, BHUTAN, 1986 TO 1996

(numbers)

Details	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Murder	8	7	12	14	20	12	27	19	20	16	12
Attempted murder	11	11	14	10	11	9	12	15	19	10	15
Dacoity with murder	-	-	-	-	4	1	2	-	3	1	-
Robbery with murder	-	-	-	-	-	1	1	1	-	-	-
Suspect homicide	-	-	-	1	-	-	-	-	-	-	-
Homicide murder	-	-	-	1	1	-	-	-	-	2	1
Suspect murder	-	1	1	-	2	-	1	-	-	2	-
Infanticide	-	-	-	1	1	-	-	-	-	-	-
Unnatural death	4	18	39	41	42	23	10	31	24	24	19
Accidental death	43	29	15	31	30	18	46	32	23	42	40
Natural death	-	-	-	-	-	1	-	-	-	3	2
Drowning	16	11	21	18	20	23	12	18	22	29	14
Suicide	23	33	27	29	34	28	19	24	29	26	35
Attempted suicide	2	9	8	19	6	5	12	8	13	7	6
Assault	356	481	470	540	494	312	355	385	373	367	387
Abduction	13	15	14	9	14	9	2	-	2	2	3
Kidnapping	7	2	-	1	14	6	5	3	2	1	2
Poisoning	8	5	2	4	3	1	14	4	4	1	2
Contempt of lawful authority	-	1	-	1	3	1	-	6	8	1	2
Wrongful confinement	-	2	-	-	-	-	1	1	-	-	1
Affray	-	1	-	3	3	3	3	-	7	3	3
Accidental injury	-	1	-	-	-	-	-	-	-	1	3
Querreling	-	1	-	-	-	-	1	-	-	-	-
Black magic	-	4	4	1	1	-	1	1	1	1	1
Defamation	-	-	-	-	1	2	4	1	-	1	3
Grevious hurt	-	-	-	-	2	-	-	-	-	2	1
Wronful restraint	-	-	-	-	-	-	-	2	-	-	-
All crimes against human body	491	632	627	724	706	455	528	551	550	542	552

Source: Royal Bhutan Police, Bhutan

TABLE 16.3: DETAILS OF SEXUAL OFFENCES, BHUTAN, 1986 TO 1996

Details	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Rape	14	6	8	7	4	19	11	9	14	10	12
Attempted rape	-	5	6	7	10	6	8	8	5	9	3
Adultry	11	19	10	8	10	6	7	8	5	8	4
Incest	-	-	-	3	2	-	-	1	1	-	2
Molestation	-	-	-	-	-	-	-	1	-	2	-
Elopment	6	3	-	9	11	4	12	6	15	15	11
Eve teasing	-	-	2	-	2	-	-	-	2	2	-
Unnatural offence	-	1	-	-	-	-	2	-	1	-	-
Prostitution	-	-	-	-	-	-	1	1	2	6	1
Robbery cum rape	-	-	-	-	-	-	-	1	-	-	-
Dacoity cum rape	-	-	-	-	-	-	-	-	2	-	-
All sexual offences	31	34	26	34	39	35	41	35	47	52	33

Source: Royal Bhutan Police, Thimphu

TABLE 16.4: DETAILS OF CRIME AGAINST PROPERTY, BHUTAN, 1986 TO 1996

(numbers)

Details	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Theft	442	539	441	501	501	354	534	427	383	383	356
Burglary	8	17	28	118	110	93	86	109	126	126	156
House breaking	8	11	30	13	18	11	6	7	4	4	3
Robbery	11	8	13	16	15	48	73	60	45	28	27
Dacoity	-	6	9	15	21	74	128	139	108	58	25
Pick pocketing	7	11	6	19	9	3	5	13	12	6	8
Cheating	28	27	36	33	31	26	38	22	29	18	19
Loss of property	12	16	32	16	25	26	33	52	40	36	31
Forgery	6	1	12	5	2	3	5	8	6	3	5
Criminal breach of trust	1	17	6	3	7	1	10	18	8	14	9
Embezzlement	4	4	2	4	2	4	-	4	2	5	5
Counterfeit of coin/notes	1	1	-	-	2	-	-	1	5	1	6
Misappropriation	5	5	-	2	-	-	3	1	1	6	6
Cattle lifting	2	12	14	24	16	50	25	28	41	29	24
Mischief	8	15	22	28	27	24	36	28	26	45	46
Extortion	2	4	-	2	2	1	3	4	7	7	3
Scooter theft	-	-	1	1	-	-	-	-	6	2	-
Theft of vehicle	-	-	-	-	6	4	2	12	8	-	-
Hijacking	-	-	-	-	-	7	11	9	12	4	2
Food adulteration	-	-	1	1	-	-	-	-	-	-	-
Attemted to robbery	-	-	1	-	-	2	1	3	5	2	2
Illegal tresspass	1	6	5	2	-	-	-	1	1	-	3
Attempted to theft	2	7	1	4	1	1	-	-	4	-	-
Monetary	-	8	-	-	3	1	4	-	-	-	-
Suspect theft	-	1	-	-	-	1	1	-	4	-	-
House tresspass	-	-	-	-	2	2	3	2	1	2	2
Trafficking in fair sex	-	-	-	2	-	-	-	-	-	-	-
Attempted to dacoity	-	-	2	-	1	-	1	4	3	-	-
Criminal tresspass	-	-	4	1	1	-	-	3	6	1	2
Smuggling	-	-	1	-	-	-	-	-	-	4	6
Conspiracy	-	-	-	1	-	1	-	-	-	1	-
Weight and measurers	-	-	-	-	-	-	-	1	-	-	1
All crimes against property	548	716	667	811	802	737	1,008	956	893	785	747

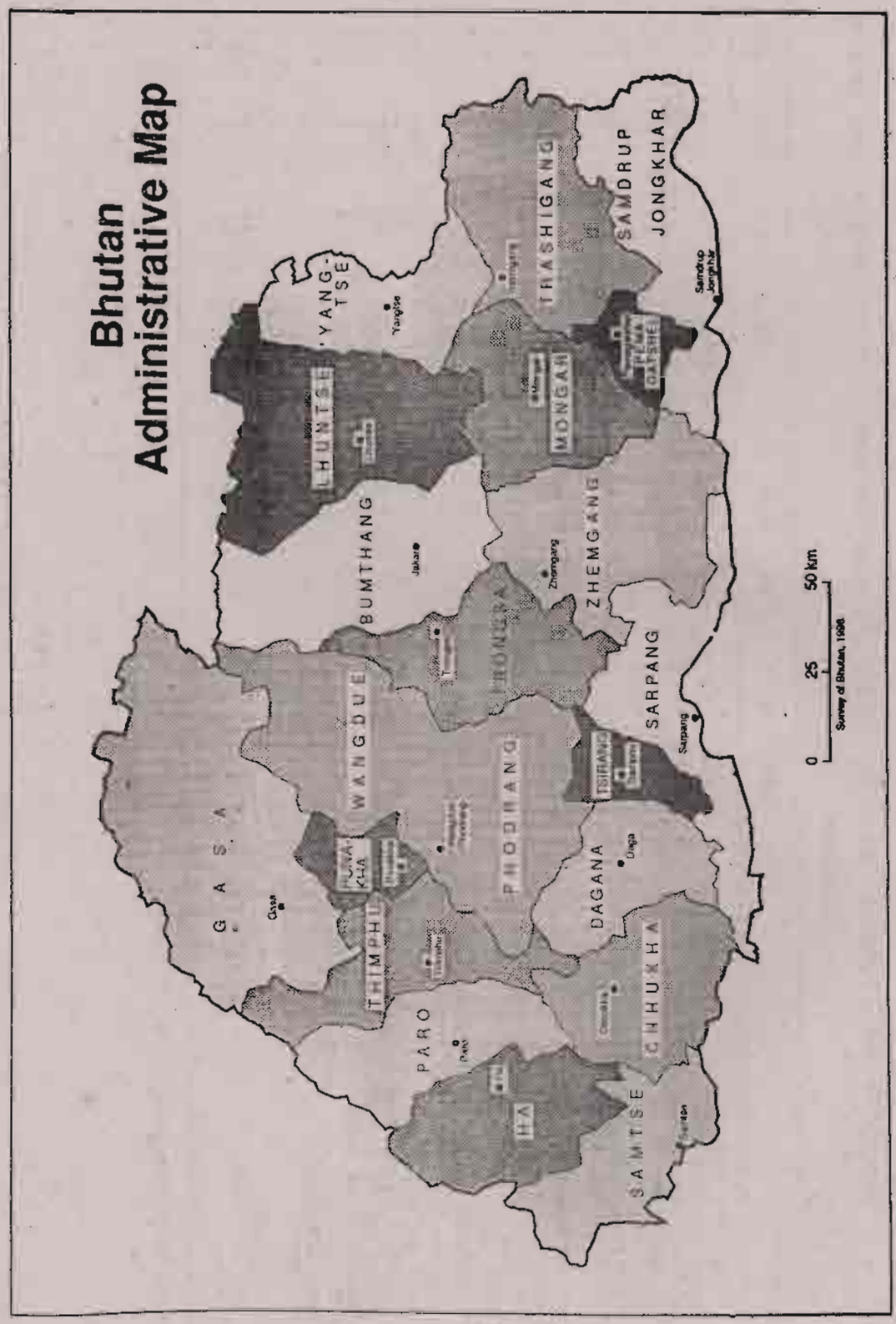
Source: Royal Bhutan Police, Thimphu

TABLE 16.5: DETAILS OF MOTOR VEHICLE, ANTIQUES, FOREST OFFENCES AND FIRE INCIDENTS, BHUTAN, 1986 TO 1996

(numbers)

Details	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Motor vehicle offences											
Cycle accidents	244	313	387	475	383	276	310	354	335	334	333
Traffic voilation	-	-	2	-	-	3	1	-	-	1	-
Hit and run	20	21	115	144	104	37	25	62	23	48	35
Motor vehicle accident	3	25	16	31	20	15	29	9	25	16	23
Motor vehicle accident (fatal)	221	267	254	299	258	220	255	283	283	261	260
Accident pay loader	-	-	-	1	-	-	-	-	4	8	15
Forest offences					1	1	-	-	-	-	-
Hunting	19	27	21	30	13	11	11	17	13	7	8
Poaching	-	3	-	2	1	2	1	2	1	-	-
Illegal fishing	11	9	8	8	5	5	1	9	4	2	3
Theft of forest product	8	12	8	19	4	1	1	2	5	1	4
Smuggling of forest product	-	3	3	1	3	3	8	4	3	4	1
Antiques	-	-	2	-	-	-	-	-	-	-	-
Theft of antique	2	1	4	2	26	49	113	128	104	90	193
Chhoeten vandalism	2	1	4	1	20	36	24	32	17	10	9
Smuggling of antique	-	-	-	-	4	9	87	92	83	77	179
Smuggling of musk	-	-	-	-	1	-	1	1	3	1	3
Musk antique	-	-	-	1	-	1	-	1	1	2	2
Musk trapping	-	-	-	-	-	1	-	-	-	-	-
Antique	-	-	-	-	1	1	-	-	-	-	-
Fire accident	-	-	-	-	-	1	1	2	-	-	-
Fire accident	43	65	58	60	63	60	44	44	48	59	48
Arson	43	65	58	60	52	52	37	33	40	52	44
	-	-	-	-	11	8	7	11	8	7	4

Source: Royal Bhutan Police, Thimphu



ANNEX I

ADMINISTRATIVE UNITS WITH THEIR STANDARD SPELLINGS.

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. Bjachho
7. Metab

(a) **Phuentsholing Dungkhag**
8. Bahgora
9. Dala
10. Logchina
11. Phuntsholing

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

IV. Paro Dzongkhag
Gewogs:
1. Dogar
2. Dopshari
3. Doeteng
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. Betem
10. Chaunautre
11. Gairigang
12. Lamidrangra

VII. Daga Dzongkhag
Gewogs:
1. Drugegang
2. Kahdzingkha
3. Khilpisa
4. Lajap
5. Tsangkha
6. Tseza

(a) **Dagapela Dungkhag**
7. Dorona
8. Emeri
9. Gozhing
10. Suntali
11. Trashiding

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

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

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

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