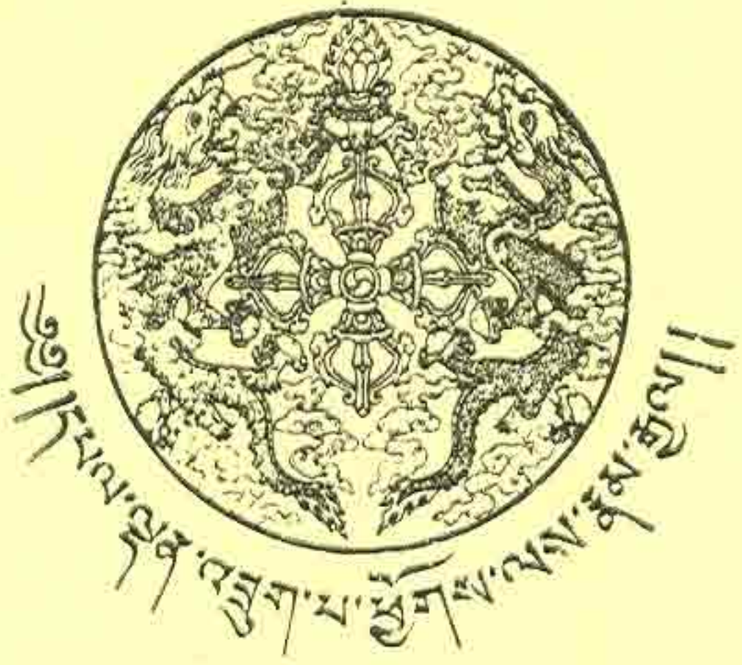
STATISTICAL YEARBOOK OF BHUTAN

1988



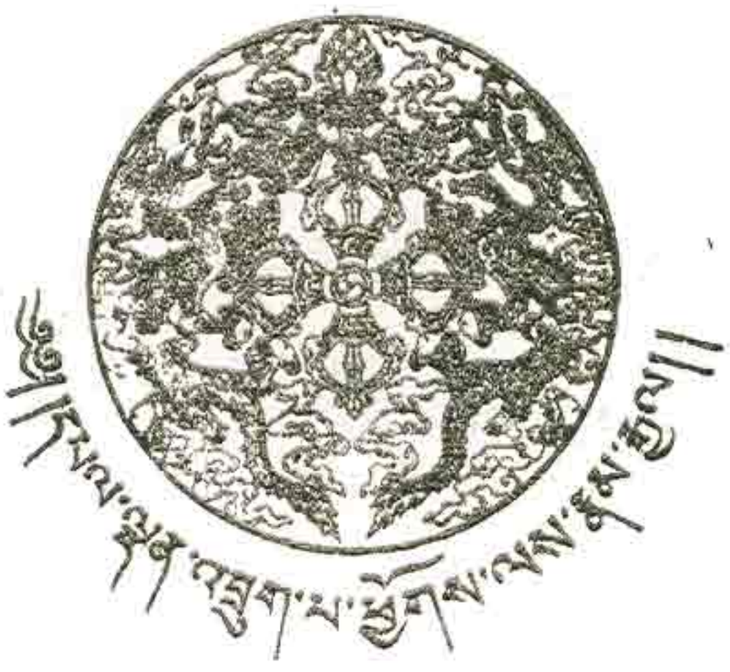
CENTRAL STATISTICAL OFFICE
PLANNING COMMISSION

ROYAL GOVERNMENT OF BHUTAN
THIMPHU. MAY 1989

Catalogue No. 101

STATISTICAL YEARBOOK OF BHUTAN

1988



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ANNEX I : ADMINISTRATIVE UNITS

MAP OF BHUTAN

GENERAL INFORMATION

EXPLANATION OF SYMBOLS

na	not available
..	not applicable
-	nil or rounded to zero
*	sampling error too high for accurate estimation
( )	brackets signify negative numbers

METRIC EQUIVALENTS

1 kilometre	=	0.62 miles
1 hectare	=	2.47 acres
1 square kilometre	=	0.386 square miles
1 litre	=	0.220 imperial gallons
1 kilogram	=	2.20 pounds
1 metric tonne	=	0.984 imperial tons

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 recent changes in the Dzongkhags following the creation of Punakha and Chhukha Dzongkhags and the abolition of Gasa Dzongkhag.

PREFACE

This publication is the seventh in the series of annual statistical publications issued by the Central Statistical Office (CSO).

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

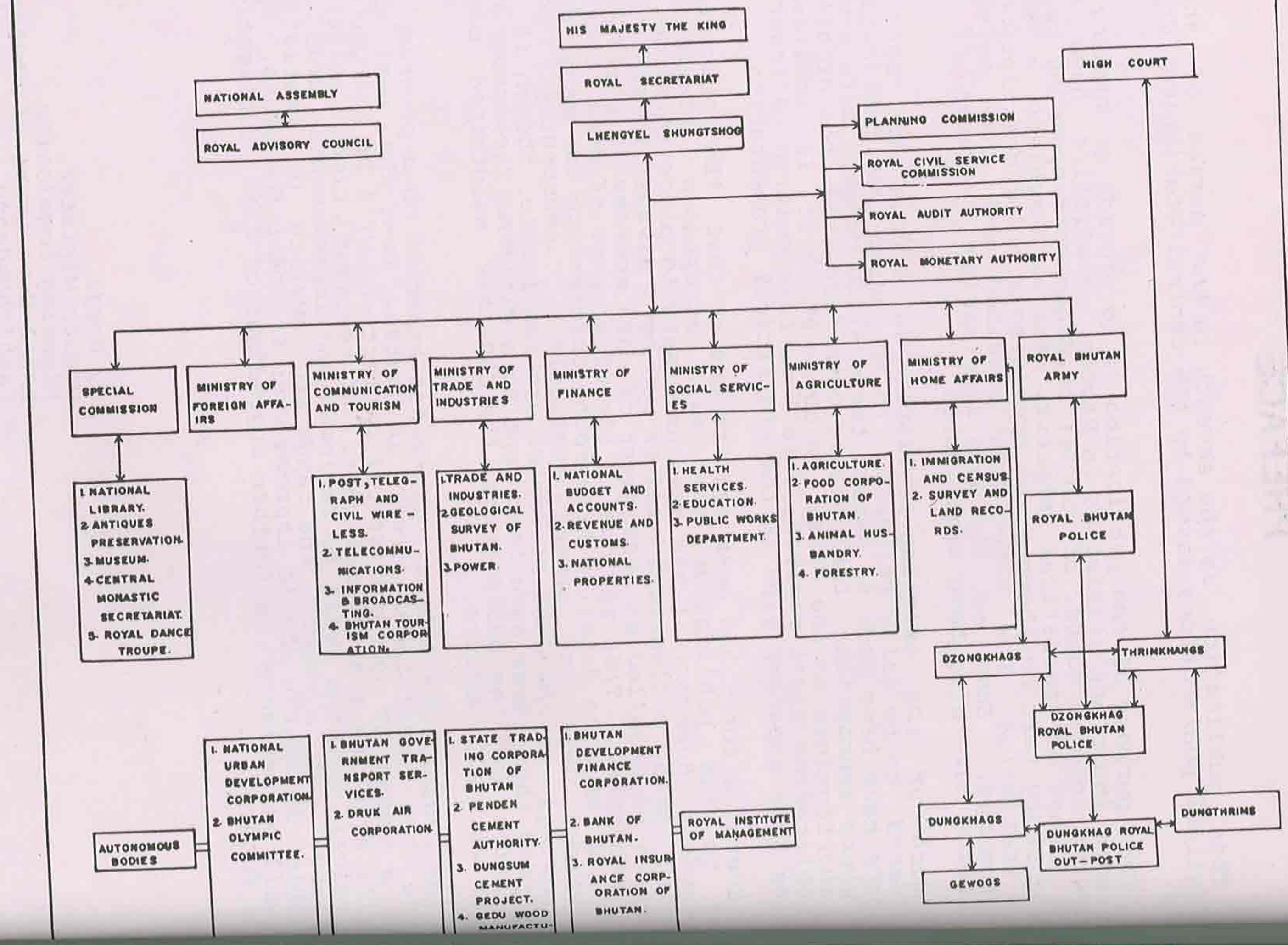
Much of the existing statistics in Bhutan are not yet considered to be fully reliable. In preparing the publication, attempts have been made to assess the quality of each data source and where appropriate, tables have been footnoted to highlight any shortcomings in the data. In cases where it is considered the publication might mislead, data have been omitted altogether leaving some apparent gaps in the statistical presentation.

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

The Central Statistical Office has embarked on a program to upgrade the statistical service in Bhutan. Over the next few years, a number of new statistical collections will be introduced to fill existing statistical gaps. At the same time, existing statistical systems will be reviewed and improvements made as necessary. As a result, the range and quality of statistics available in Bhutan should improve over the next few years, and this will be reflected in further upgradings of this publication in the future.

C. Dorji
Deputy Minister,
Planning Commission
Royal Government of Bhutan
Tashichhodzong
December 1988.

STRUCTURE OF GOVERNMENT



INTRODUCTION

GENERAL DESCRIPTION OF BHUTAN

Position and area - Bhutan comprises a land area of 46,500 square kilometres. 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 kilometres and the maximum longitudinal distance of 300 kilometres.

Bhutan is landlocked. It 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 north-west 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.

Landforms - Bhutan is almost entirely mountainous with flat land limited to 'the broader river valleys. The land rises from approximately 300 metres above sea level in the south to the towering Himalayan mountains in the north of over 7,000 metres high. The densely populated central valleys are separated from the south by a 2,000 metre 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 about 1,500 metres extending to the north by about 20 kilometres. Southern Bhutan consists of a heavy network of steep hills covered with large tracts of dense forest and jungles.

Central Bhutan consisting of the inner Himalayas rises gradually to about 3,000 metres. This region contains the broader river valleys - Paro, Thimphu, Punakha, Wangdiphodrang, Bumthang and Tashigang 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 principal crop and large tracts of forest 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 Kula Gangri and the Gangkar Punsum (both over 7,500 metres) and the Jomolhari (7316 metres) are the highest peaks in the Bhutan Himalaya. The slopes of the mountains are covered with birch, magnolia and rhododendron 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 a swiftly flowing rivers or streams which merge ultimately into four major river systems as they flow south - the Ammochu, the Wongchu, 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 months (June to September) and lowest in winter (December to March).

Climate - The country can be divided into three district climatic zones corresponding broadly to the three main geographical

divisions. The southern belt has a hot humid climate wi
temperatures remaining fairly even throughout the year betwe
15 C and 30 C with rainfall ranging between 2,500 mm to 5,000
in some areas.

The central inner Himalayas has a cool temperate climate wi
annual rainfall averaging about 1,000 mm with the western regi
receiving comparatively higher rainfall.

The higher and more northern region has a severe alpine clima
with annual rainfall around 400 mm. Much of the rainfall
concentrated in the summer months with the south west monso
accounting for 60-90 per cent of the total rainfall.

There is substantial variation within these broad ranges and
climate and rainfall characteristics change dramatically from
valley to an adjacent one with consequent sharp changes in
composition of agricultural production.

Widespread flood rainfall may occur during the summer monsoo
and the waters of the valley rivers may swell dramatically
spreading across the plains and flooding fields, bridges
houses.

GOVERNMENT

The Monarchy - On December 17 1907, Ugyen Wangchuck was crow
the first hereditary monarch of Bhutan by the civil and monas
representatives.

It was as a result of the influence of the strength and
sightedness of Ugyen Wangchuck that for the first time Bhutan
united under a central authority which provided the country w
stability and the opportunity for development. In 1926 Ug
Wangchuck was succeeded by his son Jigme Wangchuck, who ru
until his death in 1952.

The third Druk Gyalpo, Jigme Dorji Wangchuck began a campaig
modernisation and expansion of Bhutan's Government and soc
based on the accomplishments of his two predecessors in uni
the country under a strong central authority. Hence,
National Assembly consisting of representatives of the peo
the monastic order and civil administration was re-establi
in 1953.

The present Druk Gyalpo, His Majesty King Jigme Singye Wango
acceded to the throne in 1972 on the demise of his father.

His Majesty the King is the Head of State and also the Head
Government. He is assisted by the Cabinet which consists of
Majesty's Representatives in various Ministries, Ministers
some senior civil servants.

The National Assembly - The National Assembly has 150 member
which 100 members represent the people. These are elected
three year term by consensus in each of the Dzongkhags.
monastic representatives are elected by the regional monk bo
while forty representatives of the Government are nominated
the King. They include members of the Council of Ministers
the Royal Advisory Council, Secretaries of various Goverm
Departments and several Dzongkhag officers.

The National Assembly meets twice a year. The Assembly e
legislation and advises the Government on all matters of nati
importance. Decisions are passed by a simple majority. A se
ballot is taken on all matters of national importance.
Bhutanese over 25 years of age can be a candidate for member

The Royal Advisory Council - 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 10 members. There are two members elected by the National Assembly and two members appointed by the King. The Chairman is nominated by the King from among the members.

The Monk Body - The Monk Body which currently has a strength of about 5,000 is financed by an annual subsidy from the Government and is the sole arbiter on religious matters. The Je Khempo is the Head of the Body chosen from among high ranking gelongs (monks). He is assisted by four high ranking "Lopens" of the Central Monk Body which consists of 1,000 gelongs.

Local Government - Local administration has been strengthened to meet the requirements of decentralised administration and development. There are 18 Dzongkhags or Districts each under the charge of a Dzongda responsible for civil administration and development activities. Each Dzongda is assisted by a Dzongda Wongmo or a Dzongrab who are responsible for planning and development and civil administration. The larger Dzongkhags are sub-divided into sub-divisions (Dungkhags) headed by a Dungpa. Groups of villages have a headman - the Gup (in the north) or Mandal (in the south). In each Dzongkhag, the Dzongda is assisted in his development functions by the Dzongkhag Yargye Thschokchung (or District Development Committee) which consists of people's representatives and officials.

The Judiciary - Bhutan's legal code is based on that laid down by Ngawang Namgyal, the first Shabdung who arrived in Bhutan in 1616. Traditional Buddhist precepts are significantly maintained in the legal processes.

The High Court consists of six judges. Four of the judges are appointed by the King and two public representatives elected by the National Assembly subject to ratification by the King. There are courts in each Dzongkhag headed by a Thrimpon and assisted by Ramjams but minor disputes are settled by village gups.

TABLE 1.1 : POPULATION ESTIMATES BY AGE AND SEX, 1987

Age Group	Males	Females	Persons
0-4	124,400	110,300	234,700
5-9	79,500	78,500	158,000
10-14	70,800	74,400	145,200
15-19	67,800	68,200	136,000
20-24	60,400	58,600	119,000
25-29	51,200	50,700	101,900
30-34	43,800	42,800	86,600
35-39	37,400	35,800	73,200
40-44	32,000	29,600	61,600
45-49	28,500	26,200	54,700
50-54	24,900	22,800	47,700
55-59	20,700	18,800	39,500
60-64	16,300	15,000	31,300
65-69	11,800	11,100	22,900
70-74	8,000	8,000	16,000
75-79	4,600	4,700	9,300
80 and over	2,900	3,100	6,000
ALL AGES	685,000	658,600	1,343,600

Source:Ministry of Home Affairs-1980 Population Census projected forward using demographic methods.

TABLE 1.2 : POPULATION ESTIMATES BY DZONGKHAG, 1980

Dzongkhag	Population	Percentage
Chukhha	97,200	8.3
Ha	17,100	1.5
Paro	39,800	3.4
Samchi	138,900	11.9
Thimphu	64,600	5.5
Chirang	104,500	9.0
Daga	27,700	2.4
Punakha	34,500	3.0
Wangdiphodrang	47,700	4.1
Bumthang	23,600	2.0
Geylegphug	112,800	9.7
Shemgang	43,300	3.7
Tongsa	28,600	2.5
Lhuntshi	36,900	3.2
Mongar	71,300	6.1
Pemagatsel	35,100	3.0
Samdrupjongkhar	72,200	6.2
Tashigang	170,000	14.5
BHUTAN	1,165,000	100.0

Source : Ministry of Home Affairs- 1980 Population Census.

TABLE 1.3 : POPULATION PROJECTIONS, 1991-2006, WITH DIFFERENT FERTILITY AND MORTALITY PARAMETERS

	Projections (a)								
	A	B	C	D	E	F	G	H	I
	POPULATION ('000)								
1991	1,477	1,481	1,484	1,473	1,476	1,479	1,467	1,470	1,473
1996	1,661	1,676	1,689	1,642	1,657	1,670	1,619	1,663	1,645
2001	1,862	1,898	1,928	1,818	1,853	1,882	1,762	1,796	1,823
2006	2,090	2,159	2,216	2,006	2,072	2,125	1,900	1,963	2,012
	DEMOGRAPHIC ASSUMPTIONS								
Total fertility rate	5.8	5.8	5.8	5.0	5.0	5.0	4.0	4.0	4.0
Crude birth rate,2006	41.0	40.4	39.9	36.9	36.3	35.9	31.2	30.8	30.4
Crude death rate,2006	17.6	14.1	11.3	17.2	13.8	11.2	16.7	13.4	10.9
Life expectancy ,2006									
Males	45.8	51.8	56.5	45.8	51.8	56.5	45.8	51.8	56.5
Females	48.7	55.0	60.0	48.7	55.0	60.0	48.7	55.0	60.0
Average annual population growth 1986 to 2006 (%)	2.4	2.5	2.7	2.1	2.3	2.4	1.9	2.0	2.2

(a) Projections based on nine different fertility and mortality assumptions (Projections A to I).

Source : 1980 Population Census projected forward using demographic methods based on nine different fertility and mortality assumptions (Projections A to I).

TABLE 1.4 : SUMMARY OF POPULATION INDICATORS, 1987

Population Indicators	
Sex Ratio (Males/Females)	104.0
Age Composition (%)	
0-14	40.0
15-64	56.0
65 and over	4.0
Total	100.0
Dependency Ratio (a)	
Child dependency	71.6
Old age dependency	7.2
Total dependency	78.8
Index of aging (b)	10.1

(a) Dependency ratio measures the number of dependents as a percentage of the population aged 15 to 64. Child dependency refers to children aged 0-14, while old age dependency refers to persons aged 65 and over. (b) Index of aging refers to the number of persons aged 65 and over as a percentage of the number of persons aged 0 to 14.

Source : Derived measures based on population estimates in Table 1.1.

TABLE 1.5 : PERCENTAGE OF POPULATION BY MARITAL STATUS AND AGE, 1984.

Age Group	Never Married		Married		Divorced/Separated		Widowed		Total	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Fema
0-14	99.9	99.8	-	-	-	-	-	-	100.0	1
15-19	92.1	73.4	7.7	25.5	-	-	-	-	100.0	1
20-24	54.5	30.1	43.8	64.8	1.5	4.4	-	-	100.0	1
25-29	26.8	12.4	70.0	80.5	2.4	5.7	-	1.4	100.0	1
30-34	13.1	8.4	82.8	81.3	1.9	7.3	2.3	3.1	100.0	1
35-39	10.0	5.5	85.8	84.9	1.8	5.7	2.5	3.9	100.0	1
40-44	7.6	6.3	87.9	81.4	1.7	5.3	2.8	7.0	100.0	1
45-49	6.9	6.9	86.8	78.7	1.4	5.4	5.0	9.1	100.0	1
50 and over	6.5	4.2	75.4	58.8	2.3	4.8	15.7	32.2	100.0	1
ALL AGES	57.8	52.0	38.0	39.0	1.0	2.8	3.2	6.2	100.0	1

Note : Estimates less than 1 percent have been given as a "-".

Source : 1984 Demographic Sample Survey.

TABLE 1.6 : SUMMARY OF DEMOGRAPHIC INDICATORS, 1984

Measures of Fertility and Mortality	
FERTILITY	
Crude birth rate	39.1
General fertility rate	169.6
Total fertility rate	5.9
Gross reproduction rate	2.9
Net reproduction rate	1.9
Rate of natural increase (%)	2.0
MORTALITY	
Crude death rate	19.3
Infant mortality rate	142.0
Life expectancy at birth	
Males	45.8
Females	49.1

Note : For explanation of demographic indicators see Introduction to this Chapter.

Source : Analysis of 1984 Demographic Sample Survey.

CHAPTER 2

HEALTH

INTRODUCTION

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

There are also a number of special health programs in Bhutan administered by the Department of Health. These cover immunisation, 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 types of illnesses 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 patient records of health units, while information on mortality rates and causes of death is usually obtained from vitals registration systems (ie the system of 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 on mortality is available. While a registration system is in place for the reporting of births and deaths, it is recognised that there is some undercoverage and problems with the identification of cause of death. Overall levels 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 vitals registration system.

MAIN FEATURES

In 1987, there were 27 hospitals, 68 basic health units and 46 dispensaries scattered across Bhutan. A total of 138 doctors and 611 paramedical workers service the health needs of the population. This represents one doctor for every 9,740 population. There were 922 hospital beds available in 1987, representing one bed per 1,460 population.

Information on diseases of patients treated in basic health units and dispensaries, as summarized in Tables 2.3 and 2.4 provides a guide to the health problems of the people. The major diseases are respiratory problems (16.7 per cent of patients treated in 1987) and diarrhoea/dysentery (15.6 per cent). Worms, skin infection and malaria were also widespread. A comparison of 1986 and 1987 figures suggests that the incidence of some of the major diseases may be on the decline.

The immunization program has been given special priority in the administration of health services. In 1987, over 28,000 children were vaccinated for BCG, 21,000 against measles and

about 21,000 against both diphtheria and poliomyelitis. numbers were up significantly from the previous year.

Maternal and child health services are an important part the health services. In 1987, total attendance at mater health clinics was over 64,000.

Malaria is still an endemic disease in Southern Bhutan wi over 160,000 people living in malaria areas. Blood examinati carried out as part of the malaria eradication program produ over 13,000 positive readings during 1987. Leprosy is also problem in some areas and at the end of 1987, leprosy hospit had 1,183 patients including 88 new cases detected during year.

TABLE 2.1 : SUMMARY OF HEALTH FACILITIES AND PERSONNEL, 1985 TO 1987

	1985	1986	1987
Hospitals	27	27	27
Basic Health Units	65	67	68
Dispensaries	44	46	46
Indigenous Hospitals	1	1	1
Indigenous dispensaries	4	4	5
Hospital beds	857	915	922
Doctors	113	134	138
Paramedical Workers	n.a.	541	611
Population per doctor	11,300	9,800	9,740
Population per paramedical	n.a.	2,400	2,200
Population per bed	1,500	1,400	1,460
Per capita government health expenditure (Nu.)	n.a	46	n.a

Source : Department of Health.

TABLE 2.2 : HEALTH PERSONNEL BY CATEGORY AND SEX, 1986 AND 1987

Category	1986			1987		
	Males	Females	Persons	Males	Females	Persons
Specialist doctors	19	3	22	15	6	21
Doctors	107	5	112	110	7	117
Staff nurses	5	51	56	18	50	68
Junior nurses	-	80	80	1	24	25
Assistant nurses	-	116	116	2	184	186
Laboratory technicians	33	3	36	31	5	36
Physiotherapists	n.a	n.a	n.a	5	-	5
Dental technicians	4	-	4	8	1	9
Dental hygienists	4	-	4	5	-	5
O.T technicians	4	-	4	4	-	4
Pharmacy technicians	63	-	63	13	2	15
X'Ray technicians	8	-	8	12	-	12
Health assistants	84	1	85	90	1	91
Basic Health Workers	85	-	85	91	-	91
Compounders	n.a	n.a	n.a	45	-	45
Health supervisors	n.a	n.a	n.a	19	-	19
ALL HEALTH PERSONNEL	416	259	675	469	280	749

Source : Department of Health.

TABLE 2.5 : PATIENTS TREATED IN EACH HOSPITAL, 1985 TO 1987(a)

Hospital	1985	1986	1987
Government Hospitals			
Bumthang	19,072	9,552	10,429
Chirang	11,789	29,372	24,942
Geylegphug	50,380	70,428	66,401
Pemagatsel	9,931	8,850	8,666
Paro	16,738	17,175	19,441
Phuntsholing	21,396	18,539	24,369
Samdrupjongkhar	12,754	15,052	15,970
Samchi	6,009	27,486	24,777
Sarbhang	6,070	21,730	21,773
Sibsu	4,112	15,752	12,341
Thimphu	98,368	122,352	125,061
Tashigang	7,877	27,934	19,278
Tshimalakha	-	6,945	6,615
Tongsa	2,111	2,481	4,768
Leprosy Mission Hospitals			
Gidakom	1,896	7,227	9,068
Lhuntshi	3,602	3,690	4,704
Mongar	10,911	13,430	11,086
Riserboo	2,945	11,960	4,998
Yebilepcha(Shemgang)	4,172	4,529	3,780
Army Hospitals			
Lungtenphug	29,367	27,855	n.a
Wangdiphodrang	18,940	13,164	17,437
Yonphula	n.a	n.a	n.a
Project Hospitals			
Gomtu	8,849	35,613	33,643
Other Hospitals			
Deothang (Dantak)	n.a	n.a	n.a
Ha (IMTRAT)	n.a	n.a	n.a
IBF, Thimphu	n.a	n.a	n.a
Tongsa (Dantak)	n.a	n.a	n.a
Indigenous Hospital	26,943	25,077	22,841
ALL HOSPITALS (b)	374,232	536,193	492,388

(a)Comparisons over time may be affected by different coverage in each year. (b) Total patient numbers exclude hospitals for which data were not available.

Source : Department of Health.

TABLE 2.6: IMMUNIZATION ACTIVITIES, 1981 TO 1987

(children immunized)

Immuni-zation	1981	1982	1983	1984	1985	1986	1987
BCG	26,923	17,044	20,508	20,321	17,379	28,469	28,158
DPT1	9,380	7,689	11,782	13,188	14,078	21,556	25,456
DPT3	5,378	4,237	7,403	7,462	10,139	14,846	21,358
OPV1	11,666	7,587	10,899	13,226	13,331	20,927	25,355
OPV3	4,644	4,186	6,135	7,223	10,190	14,179	21,281
Measles	8,998	8,728	9,440	12,738	12,487	17,076	21,514
TT1	-	-	-	2,295	5,327	4,912	8,365
TT2	-	-	-	986	1,454	2,395	4,948

Source : Department of Health.

TABLE 2.7: MATERNAL AND CHILD HEALTH SERVICES, 1981 TO 1987

	1981	1982	1983	1984	1985	1986	1987
MATERNAL HEALTH SERVICES							
Attendance (a)							
Antenatal	3,807	4,360	5,106	7,841	13,548	18,532	26,662
Postnatal	4,806	4,903	9,834	13,141	18,080	22,803	37,476
Total attendance	8,613	9,263	14,940	20,982	31,628	41,335	64,138
Deliveries attended							
Home (b)	683	721	658	822	497	800	2,170
Hospital/Basic Health Units	213	310	489	1,460	1,817	3,007	2,491
Total deliveries	896	1,031	1,147	2,282	2,314	3,807	4,661
CHILD HEALTH SERVICES							
Attendance							
First visit	4,608	6,321	8,524	11,967	17,734	23,996	33,240
Repeat visit	36,688	36,543	36,084	65,526	93,275	90,754	163,161
Total attendance	41,296	42,864	44,608	77,493	111,009	114,750	196,401
Malnourished children (c)							
All malnourished	11,344	11,020	10,610	12,934	12,456	9,030	15,502
Third degree	1,092	1,087	1,116	1,114	1,250	953	2,020

(a)Refers to total attendance, not a count of individuals. (b) Home deliveries are those attended by health staff. Many women attending health units for antenatal care have deliveries at home without attendance by health staff and are not included in the delivery figures. (c) Children attending health units are classified according to three degrees of malnourishment. Third degree malnourishment refers to the most severe cases.

Source : Department of Health.

TABLE 2.8 : FAMILY PLANNING ACCEPTORS BY TYPE OF METHOD, 1982 TO 1987

Method of family planning	1982	1983	1984	1985	1986	1987	Percentage 1987
Vasectomy	210	851	637	447	414	552	6.2
Minilap	12	490	430	371	428	470	5.3
Intra uterine device(IUD)	180	387	337	584	896	665	7.5
Pills	1,242	1,599	1,440	4,314	6,355	6,036	67.8
Condoms	168	197	390	1,159	2,846	1,099	12.3
Injection DMPA	-	-	84	-	81	78	0.9
ALL METHODS	1,812	3,524	3,318	6,875	11,020	8,900	100.0

Source: Department of Health.

TABLE 2.9: LEPROSY CONTROL PROGRAMME, 1985 TO 1987

	1985	1986	1987
Patients at beginning of the year	2,478	2,233	1,674
New cases detected	113	71	88
Relapse cases	5	9	6
Deaths	47	33	33
Released from control(a)	215	546	534
Lost to control(b)	101	60	18
Patients at the end of the year	2,233	1,674	1,183

(a) Patients successfully treated. (b) Patients unsuccessfully treeated.

Source : Department of Health.

TABLE 2.10: MALARIA ERADICATION PROGRAMME, 1985 TO 1987

	1985	1986	1987
Population in malaria areas	148,000	158,000	161,000
Blood film examined	69,421	82,446	69,029
Blood slide positive	15,999	16,523	13,134

Source : Department of Health.

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 include religious instruction, training in traditional arts and crafts and agriculture.

The Department of Education maintains an extensive range of data on students, schools, and teaching personnel. Some summary data are presented in this Chapter.

MAIN FEATURES

In 1987 the total number of students enrolled in schools in Bhutan was 54,900. Of these, 39,600 were enrolled in primary schools, 11,000 in junior high schools and 4,300 in high schools. There were 19,700 females enrolled in schools (or about 36 per cent of total enrolment).

Student numbers have increased over the past few years from 36,700 in 1981 to 54,900 in 1987.

There were altogether 2,038 teachers in 1987, of which 1,398 were in primary schools, 411 in junior high schools and 229 in high schools.

TABLE 3.1 : SUMMARY OF SCHOOLS BY DZONGKHAG, 1987

Dzongkhag	No. of schools	No. of teachers	No. of students		
			Males	Females	Per
Chhukha	12	118	2,172	1,436	3
Ha	6	46	712	499	1
Paro	10	118	1,566	951	2
Samchi	22	298	5,129	2,974	8
Thimphu	13	273	3,757	3,198	6
Chirang	18	199	4,095	2,420	6
Daga	5	46	896	301	1
Punakha	6	54	786	416	1
Wangdiphodrang	8	73	782	504	1
Bumthang	4	43	654	386	1
Geylegphug	18	252	4,781	2,674	7
Shemgang	8	63	1,324	403	1
Tongsa	4	31	500	364	
Lhuntshi	5	37	621	237	
Mongar	7	70	1,209	437	1
Pemagatsel	4	36	793	189	
Samdrupjongkhar	11	116	2,455	1,048	3
Tashigang	17	165	3,017	1,241	4
BHUTAN	178	2,038	35,249	19,678	5

Source: Department of Education.

TABLE 3.2 : NUMBER OF SCHOOLS BY DZONGKHAG AND TYPE OF SCHOOL, 1987

Dzongkhag	Primary Schools	Junior high Schools	High schools	All Schools
Chhukha	11	1	-	12
Ha	5	1	-	6
Paro	8	1	1	10
Samchi	18	3	1	22
Thimphu	9	2	2	13
Chirang	15	3	-	18
Daga	4	1	-	5
Punakha	5	-	1	6
Wangdiphodrang	7	1	-	8
Bumthang	3	1	-	4
Geylegphug	15	2	1	18
Shemgang	7	-	1	8
Tongsa	3	1	-	4
Lhuntshi	4	1	-	5
Mongar	6	-	1	7
Pemagatsel	3	1	-	4
Samdrupjongkhar	11	-	-	11
Tashigang	14	2	1	17
BHUTAN	148	21	9	178

Source : Department of Education.

TABLE 3.3: NUMBER OF STUDENTS BY DZONGKHAG AND TYPE OF SCHOOL, 1987

Dzongkhag	Primary Schools	Junior High Schools	High Schools	All schools		
				Males	Females	Persons
Chhukha	3,410	198	-	2,172	1,436	3,608
Ha	751	460	-	712	499	1,211
Paro	1,904	358	255	1,566	951	2,517
Samchi	5,870	1,904	329	5,129	2,974	8,103
Thimphu	4,452	1,504	999	3,757	3,198	6,955
Chirang	4,832	1,683	-	4,095	2,420	6,515
Daga	1,001	196	-	896	301	1,197
Punakha	812	-	390	786	416	1,202
Wangdiphodrang	846	440	-	782	504	1,286
Bumthang	442	598	-	654	386	1,040
Geylegphug	5,128	1,411	916	4,781	2,674	7,455
Shemgang	1,128	-	599	1,324	403	1,727
Tongsa	413	451	-	500	364	864
Lhuntshi	548	310	-	621	237	858
Mongar	1,087	-	559	1,209	437	1,646
Pemagatsel	489	493	-	793	189	982
Samdrupjongkhar	3,503	-	-	2,455	1,048	3,503
Tashigang	3,012	999	247	3,017	1,241	4,258
BHUTAN	39,628	11,005	4,294	35,249	19,678	54,927

Source: Department of Education.

TABLE 3.4: NUMBER OF STUDENTS BY TYPE OF SCHOOL AND GRADE, 1987

Grade	Primary Schools			Junior High Schools			High Schools			All Schools		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
PP	8,071	4,866	12,937	1,319	958	2,277	217	148	365	9,607	5,972	15,579
I	6,649	3,654	10,303	1,428	934	2,362	233	196	429	8,310	4,784	13,094
II	3,662	1,905	5,567	819	628	1,447	210	141	351	4,691	2,674	7,365
III	2,889	1,483	4,372	710	440	1,150	181	164	345	3,780	2,087	5,867
IV	1,963	970	2,933	671	402	1,073	149	102	251	2,783	1,474	4,257
V	1,446	558	2,004	522	358	880	172	102	274	2,140	1,018	3,158
VI	1,060	452	1,512	522	306	828	174	114	288	1,756	872	2,628
VII	..	..	..	366	161	527	376	204	580	742	365	1,107
VIII	..	..	..	359	102	461	381	158	539	740	260	1,000
IX	..	..	..	..	..	..	428	100	528	428	100	528
X	..	..	..	..	..	..	272	72	344	272	72	344
Total	25,740	13,888	39,628	6,716	4,289	11,005	2,793	1,501	4,294	35,249	19,678	54,927

Source: Department of Education.

TABLE 3.5: NUMBER OF STUDENTS BY GRADE, 1981 TO 1987

Grade	1981	1982	1983	1984	1985	1986	1987
Primary grades							
Pre-primary	16,428	17,366	19,217	20,085	20,375	18,431	15,579
I	6,191	6,446	7,018	7,705	8,359	9,814	13,094
II	4,384	4,995	5,307	5,668	6,064	6,760	7,365
III	3,395	3,805	4,331	4,682	4,986	5,361	5,867
IV	2,332	2,745	3,147	3,426	3,690	3,957	4,257
V	1,751	2,047	2,352	2,709	2,967	3,029	3,158
VI	-	-	-	-	-	2,133	2,628
Total Primary	34,481	37,404	41,372	44,275	46,441	49,485	51,948
Junior High grades							
VI	732	950	1,059	1,249	1,149	-	-
VII	693	700	869	995	1,129	1,132	1,107
VIII	431	609	700	809	906	1,071	1,000
Total Junior High	1,856	2,259	2,628	3,053	3,184	2,203	2,107
High School grades							
IX	194	239	263	336	391	408	528
X	174	162	218	219	295	356	344
Total High School	368	401	481	555	686	764	872
Total students	36,705	40,064	44,481	47,883	50,311	52,452	54,927

Source: Department of Education.

TABLE 3.6 : NUMBER OF INSTITUTIONS, TEACHERS AND STUDENTS BY TYPE OF SCHOOL, 1987

	Primary School	Junior High School	High School	Total
No. of Schools	148	21	9	178
No. of Teachers	1,398	411	229	2,038
Students				
Males	25,740	6,716	2,793	35,249
Females	13,888	4,289	1,501	19,678
Persons	39,628	11,005	4,294	54,927
Student / Teacher ratio	28	27	19	27

Source : Department of Education.

TABLE 3.7: SUMMARY OF TEACHERS BY DZONGKHAG AND TYPE OF SCHOOL, 1987

Dzongkhag	Primary schools	Junior High Schools	High Schools	All Schools
Chhukha	107	11	-	118
Ha	31	15	-	46
Paro	88	15	15	118
Samchi	203	69	26	298
Thimphu	155	61	57	273
Chirang	133	66	-	199
Daga	35	11	-	46
Punakha	36	-	18	54
Wangdiphodrang	55	18	-	73
Bumthang	25	18	-	43
Geylegphug	166	44	42	252
Shemgang	39	-	24	63
Tongsa	14	17	-	31
Lhuntshi	22	15	-	37
Mongar	42	-	28	70
Pemagatsel	21	15	-	36
Samdrupjongkhar	116	-	-	116
Tashigang	110	36	19	165
BHUTAN	1,398	411	229	2,038

Source: Department of Education.

TABLE 3.8: NUMBER OF TEACHERS BY QUALIFICATION AND TYPE OF INSTITUTION, 1986

Qualification	Primary Schools	Junior High Schools	High Schools	All Schools
With teaching training				
Post Graduate (Arts)	3	10	10	23
Post Graduate (Science)	-	3	8	11
Post Graduate (Commmerce)	-	-	-	-
Graduate (Arts)	29	24	17	70
Graduate (Science)	17	21	13	51
Graduate (Commmerce)	1	1	-	2
Other (a)	428	67	18	513
Volunteer and deputationist	15	32	17	64
Without Teaching Training				
Post Graduate (Arts)	16	26	15	57
Post Graduate (Science)	7	5	7	19
Post Graduate (Commmerce)	1	-	1	2
Graduate (Arts)	105	48	15	168
Graduate (Science)	54	51	10	115
Graduate (Commmerce)	11	3	1	15
Other (a)	287	60	24	371
Temporary and National Services	112	2	-	114
Language Teachers	235	77	27	339
TOTAL	1,321	430	183	1,934

(a)Includes National Institute of Education,Teachers Training Centre, Matriculation, Non-matriculation and Physical teachers.

Source: Department of Education.

HUMAN RESOURCES

INTRODUCTION

The economy of Bhutan is characterized by the predominance of people engaged in self-employment, particularly those working 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 (eg. farmers operating their own land) as well as persons who work for wages (ie. 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, earnings 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 sources, whereby various aspects of labour statistics are obtained from administrative sources (eg civil service employee data obtained from civil service records).

In Bhutan, there are currently few statistics available on human resources and labour. The only data available are some broad level data on economic activity which was obtained from a household survey, and some data on civil service employment and wages obtained from administrative records. Plans are under way for an improvement in the statistics in the human resources area.

MAIN FEATURES

In 1984, over 93 per cent of the population aged 15 to 64 were engaged in some economic activity, including 90 per cent of the males and over 96 per cent of the females. For males, 78 per cent were engaged in agriculture and 12 per cent in other activities, while for females over 95 per cent were engaged in agriculture and only one per cent in other activities.

In August 1988, total civil service employment amounted to 13,363, including the newly established corporations. Of these, 3,134 (or 23 per cent) were non-nationals. There has been a substantial reduction in the number of civil service employees since January 1987 as a result of the government's policy for a small, compact, efficient government.

The total wages bill for the civil service in 1987/88 was Nu. 331.2 million.

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

Age group	Agriculture	Government service	Business	Others	No Occupation	Total
			MALES			
Less than 15	7.0	-	-	1.0	92.0	100.0
15 - 19	54.7	2.0	*	3.5	39.7	100.0
20 - 24	70.9	11.1	1.5	4.0	12.5	100.0
25 - 29	76.7	13.8	2.0	4.4	3.1	100.0
30 - 34	82.0	11.1	1.7	4.3	0.8	100.0
35 - 39	84.4	7.7	2.4	4.7	*	100.0
40 - 44	87.7	5.9	2.3	3.6	*	100.0
45 - 54	90.5	3.3	1.6	3.6	1.0	100.0
55 - 64	88.1	1.0	0.9	4.0	6.0	100.0
65 and over	71.1	1.5	*	0.9	26.0	100.0
ALL AGES	52.5	3.9	0.9	2.8	39.9	100.0
Age 15 - 64	78.4	6.5	1.4	4.0	9.6	100.0
			FEMALES			
Less than 15	9.2	-	-	0.2	90.7	100.0
15 - 19	87.8	*	*	0.4	11.0	100.0
20 - 24	95.7	1.0	1.1	*	2.1	100.0
25 - 29	98.0	*	*	*	0.7	100.0
30 - 34	98.4	*	*	*	*	100.0
35 - 39	99.1	*	*	*	*	100.0
40 - 44	99.2	*	*	*	-	100.0
45 - 54	98.4	*	*	*	1.2	100.0
55 - 64	91.1	*	*	*	8.5	100.0
65 and over	73.2	*	*	-	26.1	100.0
ALL AGES	61.5	0.3	0.3	0.2	37.8	100.0
Age 15-64	95.4	0.4	0.5	0.2	3.6	100.0
			PERSONS			
Less than 15	8.2	-	-	0.6	91.3	100.0
15 - 19	72.4	1.2	*	1.9	24.4	100.0
20 - 24	83.9	5.8	1.3	2.0	7.0	100.0
25 - 29	88.0	6.8	1.1	2.2	1.8	100.0
30 - 34	90.8	5.4	1.1	2.1	0.6	100.0
35 - 39	91.7	3.9	1.4	2.5	0.5	100.0
40 - 44	93.5	3.0	1.4	1.9	*	100.0
45 - 54	94.4	1.7	1.0	1.9	1.1	100.0
55 - 64	89.6	0.6	0.6	2.0	7.2	100.0
65 and over	72.1	1.0	*	0.5	26.0	100.0
ALL AGES	57.2	2.0	0.6	1.4	38.8	100.0
Age 15-64	87.2	3.4	0.9	2.0	6.5	100.0

Source : Demographic Sample Survey 1984.

TABLE 4.2: EMPLOYMENT IN CIVIL SERVICE BY MINISTRY AND DEPARTMENT(a), AUGUST 1988

Ministry/Department	Employment
Ministry of Home Affairs	459
Home Affairs	246
Survey and Land Records	90
Immigration and Census	
Total Ministry of Home Affairs	795
Ministry of Finance	47
Secretariat	13
HRH Office	32
Dechencholing Palace	11
Store Office	54
National Budget and Accounts	90
National Properties	336
Revenue and Customs	48
Royal Monetary Authority	9
Bhutan Development Finance Corporation	
Total Ministry of Finance	640
Ministry of Communications and Tourism	12
Secretariat	511
Posts, Telegraph and Civil Wireless	327
Telecommunications	237
Bhutan Tourism Corporation	143
Information and Broadcasting	170
Bhutan Government Transport Service	21
Civil Aviation	
Total Ministry of Communication and Tourism	1,421
Ministry of Social Services	28
Secretariat	1,346
Health Services	2,902
Education	722
Public Works Department	
Total Ministry of Social Services	4,998
Ministry of Agriculture	25
Secretariat	27
HRH Secretariat	566
Animal Husbandry	898
Forestry	213
Food Corporation of Bhutan	760
Agriculture	
Total Ministry of Agriculture	2,489
Ministry of Foreign Affairs	141

Table continued on next page. For footnotes see next page.

TABLE 4.2(cont.) : EMPLOYMENT IN CIVIL SERVICE BY MINISTRY AND DEPARTMENT(a), AUGUST 1988

Ministry/Department	Employment
Ministry of Trade and Industries	
Secretariat	12
Trade and Industries	23
Geological Survey of Bhutan	80
Trade and Commerce	27
Power	422
Total Ministry of Trade and Industries	564
Special Commission	
Special Commission Secretariat	40
National Library	44
National Museum	12
Antiques Preservation	74
Central Monastic Secretariat	21
Total Special Commission	191
Other Non-Ministerial Organisations	
His Majesty's Secretariat	80
Planning Commission	76
Royal Civil Service Commission	33
Royal Audit Authority	79
Royal Advisory Council	25
National Assembly	13
National Urban Development Corporation	177
National Women's Association of Bhutan	16
Judiciary	158
Bhutan Olympic Committee	6
Dzongkhag Development Advisory Committee	1
Royal Institute of Management	18
Total Other Non-Ministerial Organisations	682
Corporations	
Bank of Bhutan	308
Royal Insurance Corporation of Bhutan	185
State Trading Corporation of Bhutan	96
Druk Air	55
Penden Cement Authority	529
Gedu Wood Manufacturing Corporation	252
Bhutan Carbide & Chemical Limited	10
Dungsum Cement Project	1
Bhutan Board Products	6
Total Corporations	1,442
TOTAL CIVIL SERVICE EMPLOYMENT(b)	13,363

(a) Includes all permanent employees employed under Bhutan Civil Service Rules. Casual labour is excluded.

Source : Royal Civil Service Commission.

TABLE 4.3 : EMPLOYMENT IN CIVIL SERVICE BY MINISTRY BY NATIONAL/NON-NATIONAL, AUGUST 1988

Ministry	Nationals	Non-nationals	Total
MINISTRIES			
Home Affairs	731	64	795
Finance	582	58	640
Communication & Tourism	1,285	136	1,421
Social Services	3,243	1,755	4,998
Agriculture	2,306	183	2,489
Foreign Affairs	80	61	141
Trade and Industries	438	126	564
NON-MINISTERIAL ORGANISATIONS			
Special Commission	191	-	191
Others	556	126	682
Corporations	817	625	1,442
TOTAL CIVIL SERVICE EMPLOYMENT	10,229	3,134	13,363

Source : Royal Civil Service Commission.

TABLE 4.4 : WAGES AND SALARIES AND OTHER ALLOWANCES PAID BY GOVERNMENT ORGANISATIONS(a), 1981/82 TO 1987/88

(Nu. in millions)

Year	Central Government	Dzongkhags	Total Government
1981/82	61.6	2.7	64.3
1982/83	51.5	21.2	72.7
1983/84	57.8	23.9	81.7
1984/85	66.4	28.4	94.8
1985/86	95.0	39.0	134.0
1986/87	143.6	43.8	187.4
1987/88(b)	272.0	59.2	331.2

(a)Includes normal pay and allowances,other personal emoluments, medical benefits and special allowances.Wages paid by government business organisations are not included. Wages for most casual staff are excluded.Figures are budget appropriations.(b) 1987/88 refers to a 15 month period.

Source : Department of National Budget and Accounts.

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 some pigs for slaughter. At higher altitudes, herds of yak and sheep are kept on pasture.

The requirements for statistics on agriculture are extremely diverse. Existing agricultural data tend to be incomplete and fragmented. Until recently, the only data on crop area and production have been based on estimates made by Dzongkhag, gewog and village officials. Data on livestock numbers are available from collections undertaken each year, but little information is available on livestock production. Only limited data on output from forestry are available.

Efforts are under way to improve the statistical system for agriculture. During 1988, the CSO undertook a detailed sample survey to collect information on crop areas and livestock inventories in eight Dzongkhags. Some data from this survey (together with data from a pilot Agriculture Census undertaken in Wangdiphodrang in 1987) are presented in this chapter. A similar survey covering the remaining Dzongkhags will be carried out in 1989. Thereafter, it is planned to undertake surveys each year to provide the major crop and livestock statistics on a regular basis. The Department of Agriculture is also planning to introduce regular data collections, especially in respect of crop forecasting and estimation of major crop yields.

MAIN FEATURES

Bhutan covers a surface area of about 46,500 square kilometres. About 71 per cent of the country's total surface area consists of forest, 9 per cent is under cultivation and the rest is wilderness. The total land under cultivation amounts to 356,000 hectares.

The majority of agricultural holders have less than 5 hectares of land - in the nine Dzongkhags covered by the 1987 pilot Agriculture Census and the 1988 Agriculture Survey, an estimated 24 per cent of holders had less than one hectare, while a further 29 per cent had between one and two hectares. Only 11 per cent had five hectares or more.

The main cereal crops grown are paddy, maize, wheat, barley, buckwheat and millet. In total it is estimated that in 1984, the area under cereals was 124,100 hectares of which paddy accounted for 30,600 hectares and maize 58,500 hectares. Pulses and oilseeds (mustard) were expected to be grown over an area of approximately 10,800 hectares by 1987, while a total of 8,000 hectares were expected to be planted with oranges. Other cash crops include potatoes, apples, chillies, ginger and cardamom.

The most important livestock in Bhutan are cattle, sheep, poultry and pigs. In 1987, there were an estimated 357,000 cattle, 40,000 yaks, 36,000 sheep, 218,000 poultry and 70,000 pigs. In the nine Dzongkhags covered by the 1987 pilot Agriculture Census and the 1988 Agriculture survey, it was estimated that 88 per cent of holders had cattle, 51 per cent had pigs and 81 per cent had chickens. The majority of livestock holdings were small - almost 70 per cent of holders had between one and nine head of cattle, while less than 3 per cent had 20 or more cattle.

TABLE 5.1 : AREA ACCORDING TO LAND-USE AND VEGETATION TYPES, 1983

Land-use and vegetation types	Area ('000 hectares)	Percentage
NON-FORESTED		
Non-agricultural	400.6	10.0
Perpetual snow/glaciers	345.6	8.6
Barren exposed and rocky areas (above 3500 m)	30.7	0.7
Barren land, grassland and scrubs (below 3500 m)	52.3	1.3
Water spreads	829.2	20.6
Total non-agricultural		
Agricultural	64.9	1.6
Valley cultivation (slope less than 30 percent)	175.9	4.4
Terraced cultivation(slope more than 30 percent)	115.0	2.8
Old shifting cultivation (tsheri)	355.9	8.8
Total agricultural		
Total non-forested	1,185.1	29.4
FORESTED		
Tree cover	295.6	7.3
Fir	485.4	12.1
Mixed conifer	75.5	1.9
Blue pine	129.2	3.2
Chir pine	219.3	5.5
Hardwood mixed with conifers	872.6	21.7
Upland hardwood (temperate)	351.4	8.7
Lowland hardwood (tropical and sub-tropical)	141.6	3.5
Degraded forest	2.7	0.1
Plantations	2,573.4	64.0
Total tree cover		
Other	74.8	1.9
Alpine pasture/meadows	191.8	4.7
Alpine scrub (rhododendron,juniper scrubs)	266.6	6.6
Total other		
Total forested	2,839.9	70.6
	4,025.0	100.0
TOTAL SURVEYED AREA	625.0	..
AREA NOT YET SURVEYED		
TOTAL AREA	4,650.0	..

Note : Estimates based on remote sensing.

Source: Land use survey carried out by Department of Forestry,1983.

TABLE 5.2: AREA ACCORDING TO DIFFERENT LAND USE BY DZONGKHAG, 1983

('000 hectares)

Dzongkhag	Non-forested			Forested			Total Area Surveyed	Total Area	Percentage Forested
	Non-Agri-cultural	Agri-cultural	Total	Tree cover	Other	Total			
Ha	26.2	6.4	32.6	117.8	22.6	140.4	173.0	..	81.2
Paro	26.5	14.6	41.1	152.6	19.3	171.9	213.0	..	80.7
Samchi	8.4	48.4	56.8	133.6	4.6	138.2	195.0	..	70.9
Thimphu	31.0	13.9	44.9	215.8	15.3	231.2	276.0	..	83.7
Chirang	3.2	24.0	27.2	61.8	-	61.8	89.0	..	69.5
Daga	2.9	10.5	13.4	77.8	1.8	79.6	93.0	..	85.6
Gasa	313.3	2.3	315.6	103.6	82.8	186.4	502.0	..	37.1
Wangdiphodrang	118.0	19.6	137.6	257.2	30.2	287.4	425.0	..	67.6
Bumthang	135.4	7.0	142.4	123.7	33.9	157.6	300.0	..	52.5
Geylegphug	5.1	24.2	29.3	159.7	-	159.7	189.0	..	84.5
Shemgang	6.2	18.6	24.8	211.9	5.3	217.2	242.0	..	89.8
Tongsa	13.2	14.7	28.0	132.7	14.3	147.0	175.0	..	84.0
Lhuntshi	82.2	18.3	100.5	169.9	19.6	189.5	290.0	..	65.3
Mongar	6.0	20.5	26.5	165.5	-	165.5	192.0	..	86.2
Pemagatsel	0.2	15.2	15.4	33.6	-	33.6	49.0	..	68.5
Samdrupjongkhar	3.5	46.2	49.7	165.3	-	165.3	215.0	..	76.9
Tashigang	48.0	51.3	99.3	290.6	17.1	307.7	407.0	..	75.6
BHUTAN	829.2	355.9	1,185.1	2,573.4	266.6	2,839.9	4,025.0	4,650.0	70.6

Note : Estimates based on remote sensing.

Source: Land use survey carried out by Department of Forestry, 1983.

TABLE 5.3: LAND UNDER AGRICULTURAL USE BY DZONGKHAG, 1984

('000 hectares)

Dzongkhag	Wet Land	Dry Land	Tsheri Pangshing	Kitchen Garden	Orchard & Plantation	Total Area
Ha	0.1	1.5	0.3	-	0.3	2.2
Paro	2.1	2.5	0.2	-	0.2	5.0
Samchi	6.1	13.6	1.9	0.3	5.5	27.3
Thimphu	1.8	1.2	0.3	0.1	1.1	4.4
Chirang	3.0	7.8	0.1	0.1	3.8	14.8
Daga	0.7	2.6	0.2	-	0.1	3.6
Gasa	0.1	0.3	-	-	-	0.4
Punakha	1.5	0.2	-	-	0.1	1.8
Wangdiphodrang	1.8	0.9	0.1	-	0.1	2.9
Bumthang	-	2.6	0.6	-	0.1	3.4
Geylegphug	4.1	9.4	0.7	0.1	5.4	19.7
Shemgang	0.9	1.4	0.8	-	0.4	3.6
Tongsa	0.7	1.2	0.4	-	0.2	2.4
Lhuntshi	1.2	1.6	0.7	0.1.	-	3.5
Mongar	0.5	2.9	0.9	0.1	-	4.4
Pemagatsel	0.1	1.8	0.7	0.1	-	2.7
Samdrupjongkhar	1.8	4.2	2.8	0.2	0.5	9.5
Tashigang	3.2	10.1	1.2	0.2	0.1	14.9
BHUTAN	29.7	65.6	11.8	1.3	18.0	126.5

Note : These figures conflict with those given in Table 5.2. The figures in this table are based on estimates made by Dzongkhag, gewog and village officials, while the figures in Table 5.2 were based on remote sensing methods.

Source : Department of Agriculture.

TABLE 5.4 : MONTHLY TEMPERATURE AND RAINFALL IN SELECTED STATIONS OF DIFFERENT DZONGKHAGS, 1987

Station	January	February	March	April	May	June	July	August	September	October	November	December
Agriculture Office, Thimphu												
Temperature (Celsius)												
Average Maximum	15.0	16.0	17.0	21.0	24.4	25.0	25.1	24.1	24.5	21.9	19.8	18.0
Average Minimum	n.a	n.a	6.0	6.0	12.4	15.0	16.1	15.2	14.8	9.0	0.7	-2.8
Rainfall (mm)	-	-	13.6	46.4	49.8	117.7	194.3	115.2	101.2	95.0	-	2.6
Kalikhola, Geylegphug												
Temperature (Celsius)												
Average Maximum	19.0	25.0	26.0	30.0	n.a	31.0	29.7	32.0	32.8	31.8	26.8	n.a
Average Minimum	n.a	n.a	n.a	22.0	n.a	27.0	25.3	27.5	27.0	25.7	21.9	n.a
Rainfall (mm)	-	-	204.8	273.7	n.a	1,173.6	1,013.6	898.7	715.2	123.4	-	n.a
Ura, Bumthang												
Temperature (Celsius)												
Average Maximum	8.0	8.0	10.0	15.0	n.a	18.0	19.1	18.7	17.5	15.3	13.4	12.2
Average Minimum	n.a	-4.0	3.0	5.0	n.a	9.0	11.2	10.7	9.9	2.8	1.5	-3.0
Rainfall (mm)	-	-	-	26.5	n.a	150.6	104.2	104.2	142.0	-	-	-
Kanglung, Tashigang												
Temperature (Celsius)												
Average Maximum	12.0	16.0	18.0	n.a	n.a	25.0	24.6	n.a	23.8	21.8	18.8	17.3
Average Minimum	2.0	3.0	8.0	9.0	n.a	15.0	16.7	n.a	15.9	10.8	8.6	3.5
Rainfall (mm)	-	27.2	36.0	80.8	79.0	n.a	282.0	n.a	194.1	38.5	-	0.9

Source : Department of Agriculture.

TABLE 5.5 : CROP AREA AND PRODUCTION FOR EACH CROP, 1981 AND 1984

	Crop Area ('000 hectares)			Crop Producton ('000 tonnes)		
	1981	1984	Target 1987	1981	1984	Target 1987
Cereals						
Paddy	28.0	30.6	37.0	57.4	65.0	84.5
Wheat/Barley	12.0	14.4	16.6	13.3	16.0	22.5
Maize	56.8	58.5	52.5	80.7	87.3	85.1
Buck wheat/ millet	15.5	20.6	15.0	12.3	16.8	12.7
Total	112.3	124.1	121.1	163.7	185.1	204.8
Other Crops						
Pulses	4.0	3.0	5.3	2.4	2.6	3.8
Mustard	2.9	5.0	5.5	1.9	3.5	3.9
Potato	3.7	4.2	5.1	24.9	32.6	50.0
Chillies/vegetables	3.1	1.7	3.6	12.2	5.3	15.1
Oranges	6.2	7.8	8.0	25.6	38.7	53.1
Apples	1.5	1.6	1.9	3.3	3.5	8.8
Cardamom	5.9	8.8	6.6	2.8	3.0	4.1

Note : Figures are based on estimates made by Dzongkhag, gewog and village officials. Target 1987 refers to targets for the Fifth Plan.

Source : Surveys undertaken by Department of Agriculture in 1981 and 1984.

TABLE 5.6: IRRIGATION SCHEMES COMPLETED DURING YEAR 1987-88 (a) BY DZONGKHAG

	New construction			Renovation		
	No. of schemes	Length of channel (Km)	Command area (hectares)	No. of schemes	Length of channel (Km)	Command area (hectares)
Chhukha	1	0.5	42.5	-	-	-
Ha	1	2.1	60.7	1	1.0	11.9
Paro	1	4.3	56.7	2	10.4	170.4
Samchi	2	2.8	143.3	4	9.3	707.9
Thimphu	1	1.0	21.1	1	1.2	12.1
Chirang	1	2.0	60.7	12	21.5	228.4
Daga	1	4.5	141.7	2	5.9	78.7
Punakha	1	8.6	209.3	3	13.5	175.3
Wangdiphodrang	3	20.6	338.1	1	1.6	143.1
Bumthang	-	-	-	-	-	-
Geylegphug	1	37.7	1,457.5	3	7.3	161.9
Shemgang	1	3.6	72.9	-	-	-
Tongsa	1	7.6	263.2	1	4.1	16.2
Lhuntshi	-	-	-	3	15.9	397.9
Mongar	3	10.0	139.3	1	2.2	47.8
Pemagatsel	1	6.2	41.3	-	-	-
Samdrupjongkhar	6	16.8	728.7	3	3.4	155.9
Tashigang	2	7.1	512.1	3	7.0	253.0
BHUTAN	27	135.4	4,289.1	40	104.3	2,560.6

(a) Refers to the 15 month period 1 April 1987 to 30 June 1988.

Source : Department of Agriculture.

TABLE 5.7 : LIVESTOCK NUMBERS BY DZONGKHAG, 1987

(000)

Dzongkhag	Cattle	Yaks	Buffaloes	Sheep	Goats	Pigs	Horses	Poultry
Ha	8.0	4.0	-	0.1	-	1.9	1.1	4.5
Paro	24.5	2.7	-	0.3	-	11.3	1.5	11.4
Samchi	42.5	-	1.7	4.5	15.3	2.1	0.2	26.9
Thimphu	14.8	8.6	-	1.9	0.6	4.5	1.3	7.4
Chirang	27.1	-	1.4	3.3	9.0	2.7	1.2	23.0
Daga	11.4	-	0.2	0.6	3.6	2.5	0.6	12.7
Gasa	1.0	2.8	-	-	-	0.2	0.4	0.6
Punakha	9.5	-	-	-	-	3.7	0.8	5.4
Wangdiphodrang	18.2	11.2	-	2.1	-	4.1	2.5	6.1
Bumthang	9.4	3.6	-	7.1	-	-	1.3	2.7
Geylegphug	37.4	-	1.8	2.1	2.0	4.6	0.8	45.5
Shemgang	17.3	-	-	-	0.2	2.9	1.6	5.7
Tongsa	10.8	-	-	4.0	-	0.8	0.6	3.8
Lhuntshi	15.8	0.3	-	0.5	-	3.1	1.1	7.7
Mongar	31.1	-	-	0.1	-	6.6	1.6	15.3
Pemagatsel	7.1	-	-	-	-	2.1	1.1	4.2
Samdrupjongkhar	20.0	-	0.1	0.3	2.1	3.5	1.6	15.4
Tashigang	50.7	6.9	-	9.4	8.1	13.7	6.7	19.7
BHUTAN	357.0	40.1	5.2	36.4	40.9	70.3	26.0	218.0

Source : Department of Animal Husbandry.

TABLE 5.8 : HOLDERS BY SIZE OF HOLDING AND DZONGKHAG, WESTERN DZONGKHAGS, MAY 1988

Size of holding (hectares)	Chhukha	Ha	Paro	Samchi	Thimphu	Chirang	Daga	Punakha	Wangdi phodrang	TOTAL
				(No. of holders)						
0.01 - 0.49	170	120	170	390	490	140	*	250	600	2,390
0.50 - 0.99	230	190	400	860	540	750	240	420	780	4,410
1.00 - 1.49	580	170	440	1,020	320	1,040	240	480	540	4,830
1.50 - 1.99	350	*	360	920	160	750	220	280	270	3,370
2.00 - 2.99	550	110	440	1,790	150	1,420	360	230	210	5,260
3.00 - 4.99	600	*	360	1,590	110	1,180	480	*	60	4,500
5.00 and over	790	220	130	1,060	*	440	190	120	10	2,990
LAND HOLDERS	3,270	920	2,280	7,640	1,800	5,710	1,790	1,850	2,470	27,730
ALL HOLDERS	3,290	930	2,320	7,640	1,830	5,710	1,790	1,860	2,590	27,960
				(Per cent of all holders)						
0.01 - 0.49	5.4	13.3	7.4	5.2	26.6	2.4	*	13.3	23.2	8.5
0.50 - 0.99	6.9	20.1	17.1	11.3	29.4	13.1	13.2	22.7	30.1	15.8
1.00 - 1.49	17.5	18.3	18.8	13.3	17.5	18.2	13.7	25.9	20.8	17.3
1.50 - 1.99	10.6	*	15.4	12.1	8.9	13.1	12.3	15.0	10.4	12.1
2.00 - 2.99	16.9	12.3	18.8	23.4	7.9	24.8	20.3	12.6	8.1	18.8
3.00 - 4.99	18.1	*	15.5	20.8	6.0	20.6	26.8	*	2.3	16.1
5.00 and over	24.1	23.8	5.7	13.9	*	7.7	10.3	6.5	0.4	10.7
LAND HOLDERS	99.3	99.1	98.7	100.0	98.2	100.0	100.0	99.6	95.4	99.2
ALL HOLDERS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

NOTE: An asterisk ("*") indicates a sample estimate of less than 100 holders.

TABLE 5.9 : HOLDERS ACCORDING TO DIFFERENT CEREAL CROP AREAS, WESTERN DZONGKHAGS(a), 1987-88

Crop area (hectares)	Rice	Maize	Wheat	Buckwheat	Barley	Millet
			(No. of holders)			
0.01 - 0.09	560	750	1,590	2,700	1,000	3,970
0.10 - 0.19	1,310	1,130	2,030	2,940	970	3,610
0.20 - 0.49	5,960	4,500	4,290	4,090	1,330	5,360
0.50 - 0.99	5,670	4,360	1,690	570	210	1,060
1.00 - 1.49	2,630	3,060	380	200	*	400
1.50 - 1.99	1,130	1,660	*	*	*	130
2.00 - 2.49	450	1,110	*	*	*	*
2.50 and over	220	1,170	*	*	*	110
HOLDERS WITH CROP	17,920	17,740	10,160	10,520	3,520	14,720
HOLDERS WITHOUT CROP	7,450	7,630	15,210	14,850	21,850	10,650
			(Per cent of holders with crop)			
0.01 - 0.09	3.1	4.2	15.6	25.7	28.4	27.0
0.10 - 0.19	7.3	6.4	20.0	27.9	27.6	24.5
0.20 - 0.49	33.3	25.4	42.2	38.9	37.8	36.4
0.50 - 0.99	31.6	24.6	16.6	5.4	6.0	7.2
1.00 - 1.49	14.7	17.2	3.7	1.9	*	2.7
1.50 - 1.99	6.3	9.4	*	*	*	0.9
2.00 - 2.49	2.5	6.3	*	*	*	*
2.50 and over	1.2	6.6	*	*	*	0.7
HOLDERS WITH CROP	100.0	100.0	100.0	100.0	100.0	100.0

(a) Table covers nine Dzongkhags given in Table 5.8 (except Wangdiphodrang).

Source: Agronomic Survey undertaken by Central Statistical Office.

TABLE 5.10: HOLDERS GROWING KITCHEN GARDEN CROPS(a) BY DZONGKHAG, WESTERN DZONGKHAGS, 1987-88

(Per cent of holders)

Crop	Chhukha	Ha	Paro	Samchi	Thimphu	Chirang	Daga	Punakha	TOTAL (a)
Cereals									
Maize	*	*	15.1	*	12.6	*	*	5.4	3.0
Legumes									
Soya beans	3.0	*	7.3	16.9	9.8	11.4	10.1	5.9	10.7
Pulses	8.5	*	*	47.0	*	16.6	20.7	*	20.5
Other beans	34.7	16.1	34.5	60.7	31.7	29.9	38.5	53.2	42.2
Oil seeds									
Mustard	*	*	5.2	7.2	9.8	9.1	*	*	6.1
Other oil seeds	*	*	*	*	*	*	*	*	1.3
Roots and tubers									
Potatoes	7.9	66.7	9.5	17.3	36.6	31.5	19.6	15.6	21.8
Ginger	11.6	*	*	31.9	*	39.9	43.0	*	23.4
Radish	37.4	69.9	31.0	36.5	54.6	70.8	55.9	44.6	48.3
Turnips	28.3	80.6	32.3	3.8	45.4	9.1	27.9	48.4	21.6
Tapioca	15.8	*	*	44.5	*	28.4	11.7	*	22.7
Garlic	9.1	34.4	6.9	3.9	37.7	18.2	14.5	12.4	13.0
Onions	18.8	43.0	19.0	7.2	59.0	49.9	39.7	68.3	31.2
Sweet potatoes	6.4	*	*	28.4	*	33.8	14.5	7.5	18.8
Yams	25.5	*	*	65.8	*	61.3	24.0	*	38.9
Vegetables									
Chillies	73.3	18.3	75.9	84.7	76.0	90.5	85.5	76.3	80.1
Cabbages	8.2	*	32.3	5.1	15.3	11.9	*	*	9.9
Spinach	52.3	33.3	29.7	77.2	55.7	93.2	70.9	39.8	66.9
Tomatoes	29.2	*	35.3	38.0	30.1	70.9	40.8	29.6	41.7
Cauliflower	3.0	*	14.2	3.9	7.1	8.6	*	*	5.6
Peas	*	26.9	24.6	2.4	24.6	4.9	11.2	*	8.0
Carrots	4.3	*	5.2	2.0	9.8	2.5	*	*	3.2
Brinjal	26.4	*	24.6	41.9	20.2	45.7	37.4	26.9	35.0
Cucumber	61.4	14.0	51.7	81.0	62.8	91.9	84.4	67.2	73.7
Pumpkin	72.9	18.3	67.2	89.1	65.0	95.6	89.4	58.6	79.9
Gourd	34.0	*	44.4	41.5	50.8	30.6	15.6	29.0	35.1
Bitter gourd	19.8	*	*	52.4	9.8	66.5	28.5	12.4	37.1
Ladies finger	*	*	*	14.7	*	5.3	*	*	6.0
Other vegetables	16.1	*	*	34.7	*	26.3	6.7	5.9	19.6
Other crops									
Tobacco	6.7	*	*	12.0	*	14.2	14.5	*	8.7
Sugar cane	8.2	*	*	9.2	6.0	11.9	11.7	20.4	9.3
Other	*	*	*	8.2	*	2.6	*	*	3.1
HOLD. WITH KIT. GARDEN	91.8	91.4	93.1	97.4	89.1	98.8	95.5	95.7	97.5
LAND HOLDERS	99.3	99.1	98.7	100.0	98.2	100.0	100.0	99.6	99.6
ALL HOLDERS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
AREA KIT.GARDEN (hectares)	60	40	110	200	90	260	30	80	870

(a) Kitchen garden crops are those crops for which small areas are grown, usually in kitchen garde
but also elsewhere. Kitchen garden information was not obtained for Wangdiphodrang.

Source : Agronomic Survey undertaken by Central Statistical Office.

TABLE 5.11 : HOLDERS ACCORDING TO SIZE OF LIVESTOCK HOLDING, WESTERN DZONGKHAGS (a) MAY 1988

Number of Livestock	Cattle	Yaks	Buffaloes	Pigs	Goats	Sheep	Horses	Donkeys/ Mules	Chickens
				(No. of holders)					
No livestock	3,260	27,310	27,120	13,560	16,340	24,530	22,180	27,430	5,340
1 - 2	3,050	}	460	9,410	5,290	1,460	4,650	440	5,900
3 - 4	5,170	} 170	210	3,300	4,140	760	870	*	5,300
5 - 9	11,300	}	170	1,490	2,020	720	230	*	5,990
10 - 14	3,420	}	*	180	170	180	*	*	3,120
15 - 19	1,000	} 230	*	*	*	*	*	*	980
20 - 29	570	}	*	*	*	100	*	*	920
30 & over	190	250	*	*	*	130	*	*	390
TOTAL	27,960	27,960	27,960	27,960	27,960	27,960	27,960	27,960	27,960
				(Percentage of all holders)					
No livestock	11.7	97.7	97.0	48.5	58.4	87.7	79.3	98.1	19.1
1 - 2	10.9	}	1.6	33.7	18.9	5.2	16.6	1.6	21.1
3 - 4	18.5	} 0.6	0.8	11.8	14.8	2.7	3.1	*	19.0
5 - 9	40.4	}	0.6	5.3	7.2	2.6	0.8	*	21.4
10 - 14	12.2	}	*	0.6	0.6	0.6	*	*	11.2
15 - 19	3.6	} 0.8	*	*	*	*	*	*	3.5
20 - 29	2.0	}	*	*	*	0.4	*	*	3.3
30 & over	0.7	0.9	*	*	*	0.5	*	*	1.4
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Covers nine Dzongkhags given in Table 5.8.

Source: Agronomic Survey undertaken by Central Statistical Office.

TABLE 5.12: HOLDERS BY SIZE OF HOLDING AND FAMILY SIZE, WESTERN DZONGKHAGS (a), MAY 1988

Size of holding (hectares)	Family size										
	3 & less	4	5	6	7	8	9	10 - 11	12 - 14	15& over	Tota
	(No. of holders)										
Less than 0.50(b)	610	380	280	290	160	100	*	*	*	*	1,900
0.50 - 0.99	710	480	630	480	520	340	150	120	*	100	3,630
1.00 - 1.49	430	430	640	760	610	600	250	270	210	*	4,290
1.50 - 1.99	360	220	380	490	530	320	260	270	170	*	3,100
2.00 - 2.99	390	330	640	620	750	680	600	430	440	170	5,050
3.00 - 4.99	220	240	440	450	770	560	490	590	440	240	4,440
5.00 and over	190	140	180	340	400	270	280	590	330	270	2,980
ALL HOLDERS	2,910	2,220	3,190	3,430	3,740	2,870	2,050	2,310	1,690	950	25,370
	(Per cent of holders)										
Less than 0.50(b)	21.0	17.1	8.8	8.5	4.3	3.5	*	*	*	*	7.5
0.50 - 0.99	24.4	21.6	19.7	14.0	13.9	11.8	7.3	5.2	*	10.5	14.3
1.00 - 1.49	14.8	19.4	20.1	22.2	16.3	20.9	12.2	11.7	12.4	*	16.9
1.50 - 1.99	12.4	9.9	11.9	14.3	14.2	11.1	12.7	11.7	10.1	*	12.2
2.00 - 2.99	13.4	14.9	20.1	18.1	20.1	23.7	29.3	18.6	26.0	17.9	19.9
3.00 - 4.99	7.6	10.8	13.8	13.1	20.6	19.5	23.9	25.5	26.0	25.3	17.5
5.00 and over	6.5	6.3	5.6	9.9	10.7	9.4	13.7	25.5	19.5	28.4	11.7
ALL HOLDERS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Table covers nine Dzongkhags given in Table 5.8 (except Wangdiphodrang). (b) Includes landless holders.

Source: Agronomic Survey undertaken by Central Statistical Office.

TABLE 5.13: FOOD CORPORATION OF BHUTAN, IMPORTS AND DISTRIBUTION, 1981/82 TO 1987/88

(tonnes)

Commodity	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88
			IMPORTS				
Rice	2,345	5,843	6,033	5,388	7,211	11,282	16,750
Wheat	873	2,725	2,123	2,599	2,450	3,350	5,767
Sugar	1,276	1,381	1,800	1,824	2,749	3,574	4,039
Salt	3,475	2,755	2,326	3,598	5,689	3,516	5,035
Oil	-	-	240	306	557	874	1,280
			SALES				
Rice	2,127	5,561	4,537	4,863	6,956	11,761	16,700
Wheat	661	2,701	2,230	2,280	2,534	3,346	5,595
Sugar	1,085	1,289	1,575	1,996	2,579	3,731	4,078
Salt	429	278	179	617	3,603	3,513	5,050
Oil	-	-	214	213	472	516	1,082

Source: Food Corporation of Bhutan.

TABLE 5.14 :AGRICULTURAL PRODUCE HANDLED BY FOOD CORPORATION OF BHUTAN, 1982/83 TO 1987/88

Commodity	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88 (a)
			Quantity (tonnes)			
Potatoes	3,795.8	6,178.9	7,571.9	8,987.8	8,021.0	10,060.3
Apples	452.5	671.9	889.6	648.0	1,295.0	965.6
Oranges	549.4	588.6	690.0	769.5	946.3	2,455.6
			Value (Nu.millions)			
Potatoes	5.2	10.5	11.5	15.0	19.2	21.2
Apples	1.4	2.4	3.5	2.8	4.4	4.8
Oranges	1.6	1.3	1.8	2.2	2.9	7.1

(a) 1987/88 refers to the 15 month period April 1987 to June 1988. The remaining years refer to the twelve month period April to March.

Source: Food Corporation of Bhutan.

TABLE 5.15: PRODUCTION OF LOGWOOD, 1982/83 TO 1986/87 (a)

('000 cubic metres)

	1982/83	1983/84	1984/85	1985/86	1986/87
Commercial Logging - Bhutan Logging Corporation	34.0	59.7	100.8	59.1	118.1
Logging for house construction and public works	55.8	31.8	54.3	77.7	31.0
TOTAL	89.8	91.5	155.1	136.8	149.1

(a) Years refer to 1 April to 31 March. Figures exclude collection of firewood by individuals.

Source : Department of Forestry.

CHAPTER 6

INDUSTRIES

INTRODUCTION

The subject industries' covers the whole range of industrial activity 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 activity is limited to relatively small operations, mainly involved in the mining of limestone, coal, slate and dolomite.

The manufacturing industry is dominated by a small number of major operators such as the Penden Cement Plant and the Gedu Wood Manufacturing Corporation. The first chemical plant - Bhutan Carbide and Chemicals Ltd. - was inaugurated during 1988. In addition, there are a number of smaller manufacturing plants concentrated in the food processing and wood products sectors. 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 especially 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.

MAIN FEATURES

There were 349 manufacturing and mining firms licensed in 1986, of which 14 were public-owned and 335 were in private ownership. A total of 249 firms were in the food industry, the majority of which were very small operations. The other important industry was wood and paper products with 55 licensed firms, over half of which employed more than 10 persons.

In the manufacturing sector as a whole, 285 firms employed less than 10 employees, 21 had employment within the range 10-19, 16 employed between 20-49 employees, while 18 had more that 50 employees.

TABLE 6.1: NUMBER OF LICENSED MANUFACTURING FIRMS BY INDUSTRY AND EMPLOYMENT, 1986

Industry	Employment size					
	Less than 10	10-19	20-49	50-99	100 and over	Total
Food processing/milling	237	4	2	3	3	249
Textiles and Clothing	3	1	-	1	-	5
Wood and Paper Products	27	14	9	2	3	55
Chemical Products	8	1	1	1	1	12
Mineral Products	2	1	-	1	2	6
Other	8	-	4	-	1	13
TOTAL MANUFACTURING	285	21	16	8	10	340

Source: Department of Trade and Industries.

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

Industry	Public	Private	Total
Mining	4	5	9
Manufacturing			
Food processing/milling	4	245	249
Textiles and Clothing	-	5	5
Wood and Paper Products	2	53	55
Chemical Products	1	11	12
Mineral Products	2	4	6
Other	1	12	13
Total Manufacturing	10	330	340
TOTAL	14	335	349

Source: Department of Trade and Industries.

CHAPTER 7

TRANSPORT AND COMMUNICATION

INTRODUCTION

Traditionally the principal means of transport in Bhutan has been foot paths and mule tracks and these will continue to play an important role into the future. The development of the motor road network was initiated in 1961 with the commencement of work on the construction of the first road from Phuntsholing 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 most centres 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 - Calcutta sector. Services were extended to cover the Paro - Dhaka sector in 1986 and Paro - Delhi in 1988.

Postal and other communication facilities were limited prior to 1962. Since that time an extensive postal service has been developed so that the majority of the population now has 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 exists servicing many remote centres.

MAIN FEATURES

By June 1988, there were 2,273 kilometers of motorable roads in Bhutan, of which 1,725 kilometers were black topped. In May 1988, there were a total of 6,075 registered vehicles, of which 4,567 were light vehicles, 827 were heavy vehicles, and 439 were public trucks.

Bus transport combines both public and private enterprise. Government buses carried 1.2 million passengers in 1987/88. A total of 8,700 passengers were carried by Druk Air during 1987, an increase of nearly 12 per cent compared with 1986.

Post offices in Bhutan handled a total of 6.4 million items of mail during 1987.

TABLE 7.1 : ROAD NETWORK IN BHUTAN BY TYPE, JUNE 1988

Type of road	Distance (km) National Highways	District Roads	Feeder Roads	All Roads
Black topped	1,385	217	123	1,725
Non-black topped	70	248	230	548
TOTAL	1,455	465	353	2,273

Source: Public Works Department.

TABLE 7.2: ROAD NETWORK IN BHUTAN BY DZONGKHAG, JUNE 1988

Dzongkhag	Distance (km) National Highway	District Road	Feeder Road	All Roads
Chhukha	132	39	17	188
Ha	15	11	16	42
Paro	104	51	16	171
Samchi	-	82	13	95
Thimphu	102	-	19	121
Chirang	64	30	24	118
Daga	22	57	-	79
Punakha	-	12	56	68
Wangdiphodrang	106	-	41	147
Bumthang	122	-	24	146
Geylegphug	106	-	38	144
Shemgang	142	-	-	142
Tongsa	163	-	-	163
Lhuntshi	-	47	10	57
Mongar	177	20	18	215
Pemagatsel	-	23	16	39
Samdrupjongkhar	59	48	5	112
Tashigang	141	45	41	227
BHUTAN	1,455	465	353	2,273

Source : Public Works Department.

TABLE 7.3: NUMBER OF REGISTERED VEHICLES BY TYPE AND REGION(a), MAY 1988

Vehicle type	Western	Central	Southern	Eastern	Total
Light	2,547	407	1,283	330	4,567
Heavy	158	64	506	99	827
Public trucks	97	42	260	40	439
Taxi	115	19	31	4	169
Diplomatic	44	-	-	-	44
Royal	29	-	-	-	29
ALL VEHICLES	2,990	532	2,080	473	6,075

(a) Vehicles registered in the southern region are assigned the same number plates as those registered in the western region.

Source: Department of Revenue and Customs.

TABLE 7.4 : NUMBER OF NEW MOTOR VEHICLE DRIVING LICENCES ISSUED (a)BY TYPE OF VEHICLE, 1982 TO 1987

Type of vehicle	1982	1983	1984	1985	1986	1987
Scooter/Bike	61	82	141	105	179	324
Light Vehicle	205	177	307	322	531	507
Medium	30	32	24	30	18	39
Heavy	161	126	88	87	131	187
Other(b)	20	18	29	32	44	34
ALL VEHICLES	477	435	589	576	903	1,091

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

Source: Royal Bhutan Police.

TABLE 7.5 : BHUTAN GOVERNMENT TRANSPORT SERVICE, PASSENGERS CARRIED, 1982/83 TO 1987/88

Year	Passengers carried ('000)
1982/83	1,045
1983/84	1,149
1984/85	1,264
1985/86	1,239
1986/87	1,142
1987/88	1,228

Source: Bhutan Government Transport Service.

TABLE 7.6: NUMBER OF MOTOR VEHICLE ACCIDENTS BY TRAFFIC DIVISION, 1984 TO 1987

Traffic Division	1984	1985	1986	1987
Thimphu	36	69	118	146
Chimakothi	41	45	27	24
Phuntsholing	30	35	37	18
Samchi	-	5	2	5
Geylegphug	8	10	12	11
Chirang	3	1	1	8
Tongsa	6	5	6	6
Samdrupjongkhar	7	12	13	13
Tashigang	1	4	11	11
Mongar	3	1	3	4
TOTAL	135	187	230	246

Source : Royal Bhutan Police.

TABLE 7.7 : CIVIL AVIATION - DRUK AIR FLIGHT SERVICES, 1983 TO 1987

	1983	1984	1985	1986	1987
Distance flown ('000 km)	64	125	152	201	n.a
Passengers carried	2,854	4,480	5,928	7,776	8,700
Passenger-kilometers ('000 km)	1,612	2,531	3,349	4,381	n.a

Source : Druk Air Corporation.

TABLE 7.8 : TELEPHONE CONNECTION CAPACITY (a) BY EXCHANGE, 1987

Exchange	Connection Capacity
Thimphu	900
Phuntsholing	400
Wangdiphodrang	50
Paro	100
Ha	50
Punakha	25
Chimakothi	50
Tongsa	35
Geylegphug	100
Sarbhang	50
Samdrupjongkhar	100
Tashigang	35
Samchi	50
ALL EXCHANGES	1,945

(a)While figures refer to connection capacity, they should reasonably reflect the number of telephone sets in use.

Source: Department of Telecommunication.

TABLE 7.9 : NUMBER OF TRUNK LINES, 1987

Place	Distance (Kms)
Thimphu-Chimakothi	65
Thimphu-Phuntsholing (a)	130
Thimphu-Wangdiphodrang	45
Thimphu-Punakha	60
Thimphu-Paro	54
Wangdiphodrang-Punakha	15
Paro-Phuntsholing	124
Paro-Ha	18
Samdrupjongkhar-Tashigang	130
Geylegphug-Tongsa	200
Geylegphug-Sarbhang	23
Phuntsholing-Chimakothi	65
Samchi-Banarhat(India)	14

(a) Microwave.

Source: Department of Telecommunication.

TABLE 7.10 : NUMBER OF TELEPHONE TRUNK CALLS BY TYPE (a) ('000)

Type of call	Number of Calls
Domestic calls	84.9
International calls	
India	15.1
Other	3.1
Total	18.2
ALL CALLS	103.2

(a) Estimated annual number of calls based on calls sent during December 1986 to March 1987.

Source : Department of Telecommunication.

TABLE 7.11 : NUMBER OF POST OFFICES AND OTHER COMMUNICATION FACILITIES, 1980 AND 1987

	1980	1987
General Post Offices	2	2
Posts Offices	52	54
Branch Post Offices	27	29
Telegraph Offices	8	8
Wireless Stations (a)	28	37
Hydromet Stations	5	13

(a) Includes two stations installed at New Delhi and Dhaka Embassies.

Source: Department of Posts, Telegraph & Wireless.

TABLE 7.12 : NUMBER OF ITEMS OF MAIL SENT BY TYPE OF ITEM AND DESTINATION, 1987

('000)

Type of Mail	Letters			Aero-gramme	Postcards	Printed Matter	Parcels	Total
	Ordinary	Registered	Total					
Domestic	2,924	172	3,096	-	40	41	32	3,210
Neighbouring	2,599	154	2,753	-	47	23	4	2,826
Overseas	223	40	264	44	21	14	1	344
ALL MAIL	5,746	366	6,112	44	109	79	37	6,380

Source: Department of Posts, Telegraph and Civil Wireless.

TABLE 7.13 : NUMBER OF TELEGRAMS SENT BY TYPE, 1980 TO 1987

(000)

Type	1980	1981	1982	1983	1984	1985	1986	1987
Domestic	78.8	85.6	85.9	86.4	87.3	88.2	85.4	104.6
Overseas	35.2	42.6	42.2	43.1	44.1	45.3	43.0	56.6
Service messages	13.3	14.4	15.1	15.9	17.2	18.7	15.0	45.9
Transit	39.6	42.1	45.6	50.1	55.2	60.8	63.8	83.3
ALL TYPES	166.9	184.6	188.9	195.6	203.7	213.0	207.2	290.3

Source: Department of Posts, Telegraph and Civil Wireless.

TABLE 7.14 : NUMBER AND AMOUNTS OF MONEY ORDER BY TYPE, 1980 AND 1987

Type	1980	1987
Internal money order		
Number ('000)	54.0	n.a
Amount booked ('000 Nu.)	4,735.9	9,476.8
Amount paid ('000 Nu.)	3,933.5	8,497.9
Foreign money order (a)		
Number ('000)	37.8	n.a
Amount booked ('000 Nu.)	1,412.7	5,461.2
Amount paid ('000 Nu.)	117.3	169.2

(a)Amount booked refers to money transferred out of Bhutan. Amount paid refers to amount transferred into Bhutan.

Source : Department of Posts, Telegraph and Civil Wireless.

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 supplies of electricity which were supplemented by imports from India. With the commissioning of the first two units of the Chhukha Hydel Project during 1986, Bhutan substantially increased its electricity generation, and became a significant exporter of electricity to India. The final two units of the Chhukha project were commissioned during 1988.

MAIN FEATURES

Total installed capacity at June 1988 was 355.0 MW, including 336.0 MW from the Chhukha Hydel Project.

In the fifteen months ending June 1988, total electricity generation was 1,476.4 MU, of which 1,470.5 MU was from the Chhukha plant. A total of 1,386.7 MU (94 per cent) was exported to India. Total sales to consumers in Bhutan amounted to 71.4 MU representing consumption per head of population of only 53 units. Some 20 towns and 130 villages are now electrified.

TABLE 8.1 : ELECTRICITY GENERATING STATIONS AND THEIR CAPACITY, JUNE 1988

Generating Stations	Machine Sizes (MW)	Installed Capacity (MW)
Hydro Stations		
Chhukha Hydel Project	4 x 84	336.000
Thimphu	4 x 0.090	0.360
Gidakom	5 x 0.250	1.250
Wangdiphodrang	3 x 0.100	0.300
Tashigang	3 x 0.250	0.750
Mongar	3 x 0.130	0.390
Paro	4 x 0.100	0.400
Nagu	1 x 0.010	0.010
Lhuntshi	1 x 0.020	0.020
Khaling	3 x 0.200	0.600
Gyetsha	3 x 0.500	1.500
Micro hydels	12 nos.	0.380
TOTAL HYDRO CAPACITY		341.960
Diesel Generation Stations		
Phuntsholing	2 x 0.128	0.256
	2 x 0.248	0.496
Samchi	1 x 0.135	0.135
Paro	1 x 0.400	0.400
	1 x 0.088	0.088
Thimphu	1 x 0.500	0.500
	2 x 0.225	0.450
	2 x 0.150	0.300
	1 x 1.000	1.000
	1 x 1.000	1.000
Damphu	1 x 0.048	0.048
Tongsa	1 x 0.056	0.056
Shemgang	1 x 0.080	0.080
Daga	1 x 0.040	0.040
Chhukha Hydel Project	3 x 0.400	1.200
	2 x 0.248	0.496
Self-generating		6.500
TOTAL DIESEL CAPACITY		13.045
TOTAL CAPACITY		355.005

Source : Department of Power.

TABLE 8.2 : ELECTRICITY SUPPLY, 15 MONTHS ENDING JUNE 1988

	Hydro	Diesel	Total
Installed capacity (MW)			
Department of Power	5.960	4.849	10.809
Chhukha Hydel Project	336.000	1.696	337.696
Others(a)	-	6.500	6.500
Total installed capacity	341.960	13.045	355.005
Electricity generation (MU)			
Department of Power	5.4	0.3	5.7
Chhukha Hydel Project	1,470.5	-	1,470.5
Others	-	0.2	0.2
Total electricity generation	1,475.9	0.5	1,476.4
Auxiliary consumption (MU)	..	5.9	5.9
Imports (MU)	..	..	4.3
Exports (MU)	..	..	1,386.7
Net energy requirement (MU)	..	..	87.8
Net sales (MU)	..	..	71.4
Energy losses (MU)	..	..	16.5
Percentage losses (%)	..	..	18.7

(a) Includes self-generating industries and non-utilities.

Source: Department of Power.

TABLE 8.3 : ELECTRICITY TRANSMISSION AND DISTRIBUTION, JUNE 1988

Transmission lines (Km)	
220 KV	75.0
66 KV	216.9
33 KV	5.0
11 KV	460.1
6.6 KV	21.2
Low tension lines	408.3
Main substations (No.)	17
Aggregate capacity of transformers (KVA)	18,835.0
Distribution substations (No.)	160

Source: Department of Power.

TABLE 8.4: ELECTRICITY CONSUMPTION, 15 MONTHS ENDING JUNE 1988

Towns electrified (No.)	20
Villages electrified (No.)	130
Consumers (No.)	15,169
Sales (MU)	71.4
Per capita consumption (units)	53

Source: Department of Power.

TABLE 8.5: SALES OF ENERGY FROM CHHUKHA HYDROPOWER, 1986 TO 1988

(Nu. in millions)

Year and month	India	Bhutan	Total
1986			
September	5.1	0.1	5.2
October	4.9	0.1	5.0
November	13.2	0.2	13.3
December	18.8	0.2	19.0
Total 1986	42.0	0.6	42.5
1987			
January	18.1	0.2	18.3
February	13.9	0.2	14.1
March	12.2	0.2	12.4
April	15.6	0.3	16.0
May	20.6	0.3	20.8
June	20.3	0.4	20.7
July	25.5	0.4	25.8
August	31.5	0.3	31.8
September	28.4	0.3	28.7
October	32.0	0.4	32.4
November	31.1	0.4	31.5
December	26.6	0.5	27.1
Total 1987	275.9	3.8	279.7
1988			
January	18.9	0.5	19.4
February	15.1	0.4	15.5
March	15.7	0.5	16.2
April	18.2	0.4	18.6
May	33.7	0.4	34.1

Source: Department of Power.

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 is very high, though a strategy of 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.

MAIN FEATURES

The total number of tourist arrivals in 1987 was 2,524, the highest number recorded in any year since tourism commenced. The largest numbers of tourists came from Europe, United States, and Japan. The majority of tourists (82 per cent) came on a tour, while the arrivals in the months of April, September and October accounted for well over half of all arrivals.

TABLE 9.1 : TOURIST ARRIVALS BY COUNTRY OF RESIDENCE, 1987

Country	Number of tourists
United States of America	715
West Germany	381
Japan	379
United Kingdom	197
France	125
Italy	105
Austria	80
Belgium	73
Holland	65
Spain	55
Switzerland	50
Australia	40
Canada	31
Taiwan	31
Thailand	24
Sweden	20
Hongkong	12
Others	141
TOTAL	2,524

Source : Bhutan Tourism Corporation.

TABLE 9.2 : TOURIST ARRIVALS BY COUNTRY OF RESIDENCE AND TOURISM REVENUES, 1984 to 1987

Country	1984	1985	1986	1987
Europe				
West Germany	351	397	360	381
France	113	83	119	125
Italy	75	61	99	105
Other Europe	329	287	162	540
Total Europe	868	828	740	1,151
United States of America	514	550	776	715
Japan	396	411	448	379
Australia	66	46	60	40
Other	56	61	381	239
TOTAL TOURISTS (Nos.)	1,900	1,896	2,405	2,524
TOURISM REVENUE (Nu. million)	26.0	29.8	36.4	40.0

Source : Bhutan Tourism Corporation.

TABLE 9.3: TOURIST ARRIVALS BY PURPOSE, 1985 TO 1987

Purpose	1985	1986	1987
Tour	1,493	1,894	2,082
Trekking & mountaineering	403	511	442
TOTAL	1,896	2,405	2,524

Source : Bhutan Tourism Corporation.

TABLE 9.4: TOURIST ARRIVALS BY MONTH, 1984 TO 1987

Months	1984	1985	1986	1987
January	35	40	43	59
February	76	39	45	63
March	91	237	409	122
April	406	214	172	466
May	114	130	134	145
June	52	22	49	16
July	62	94	92	91
August	208	182	306	235
September	204	237	338	253
October	459	453	573	709
November	134	160	112	268
December	59	88	132	97
TOTAL	1,900	1,896	2,405	2,524

Source : Bhutan Tourism Corporation.

CHAPTER 10

BALANCE OF PAYMENTS

INTRODUCTION

Bhutan's economy is closely linked with India, though efforts towards diversification of products and markets are actively pursued.

While economic links with other countries are limited, significant amounts 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 and reliance is 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 situation 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 in a number of areas.

MAIN FEATURES

During the period from 1982/83 to 1986/87, the trade balance deficit rose from Nu. 487.1 million to Nu. 778.3 million. However, in 1987/88 the deficit declined to Nu. 641.0 million, a result of the exports of electricity from the Chhukha project to India. Imports grew sharply over the period 1982/83 to 1987/88 from Nu. 646.5 million to Nu. 1,430.0 million. Imports from countries other than India accounted for a significant part of this growth, rising from Nu. 100.0 million in 1982/83 to Nu. 400.0 million in 1987/88. The current account deficit has also risen over the period - from Nu. 754.7 million in 1982/83 to Nu. 929.3 million in 1987/88.

Foreign aid payments increased from Nu. 788.7 million in 1982/83 to Nu. 1,282.1 million in 1987/88. Aid from India accounted for Nu. 579.8 million of the 1987/88 figure. Total aid inflow has generally been larger than current account deficits and therefore Bhutan's total international reserves have been increasing over time. At the end of May 1988, Indian rupee reserves amounted to Rupees 637.2 million (an increase of Rupees 190.3 million since March of the previous year), while convertible currency reserves amounted to $US 38.9 million (an increase of $US 10.8 million since March of the previous year).

In 1986 the chief exports to India were cement (Nu. 79.6 million), electricity (Nu. 42.0 million) and a range of timber and food products (especially cardamom, fruit products, potatoes and oranges). At the same time, an estimated Nu. 54.8 million of diesel was imported from India, together with Nu. 48.1 million of rice, and a variety of transport and machinery equipment (tyres and tubes, truck chassis, machinery parts).

The value of the Ngultrum is pegged to the Indian rupee at one - to - one parity. In relation to the US dollar, there has been a continuous depreciation of the Ngultrum over the past few years, declining from a calendar year average of Nu. 8.66 to the dollar in 1981 to Nu. 13.77 to the dollar in June 1988.

TABLE 10.1: BALANCE OF PAYMENTS ESTIMATES, 1982/83 TO 1987/88(a)

(Nu. in millions)

Item	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88(b)
Exports,fob(c)	159.4	160.7	206.4	272.0	427.1	789.0
India	157.0	157.2	200.0	270.0	424.4	780.0
Other	2.4	3.5	6.4	2.0	2.7	9.0
Imports,cif(c)	(646.5)	(730.0)	(825.2)	(1,041.6)	(1,205.4)	(1,430.0)
India	(546.5)	(600.6)	(725.0)	(800.0)	(911.1)	(1,030.0)
Other	(100.0)	(129.4)	(100.2)	(241.6)	(294.3)	(400.0)
Trade balance	(487.1)	(569.3)	(618.9)	(769.6)	(778.3)	(641.0)
India	(389.5)	(443.4)	(525.0)	(530.0)	(486.7)	(250.0)
Other	(97.6)	(125.9)	(93.9)	(239.6)	(291.6)	(391.0)
Services and transfer receipts	131.3	156.4	204.3	234.9	271.9	313.0
India	89.8	106.2	133.1	158.5	173.4	200.8
Other	41.5	50.2	71.2	76.4	98.6	112.2
Services and transfer payments	(389.9)	(555.7)	(511.4)	(599.6)	(568.9)	(601.3)
India	(346.9)	(450.0)	(422.7)	(397.8)	(374.7)	(308.0)
Other	(52.0)	(105.7)	(88.7)	(201.8)	(194.2)	(293.3)
Current account balance	(754.7)	(968.6)	(926.0)	(1,134.3)	(1,075.3)	(929.3)
India	(646.6)	(787.2)	(814.6)	(769.3)	(688.1)	(357.2)
Other	(108.1)	(181.4)	(111.4)	(365.0)	(387.2)	(572.1)
Foreign aid	788.7	1,085.0	989.0	1,224.3	1,231.2	1,282.1
India	679.5	856.0	819.4	760.8	786.5	579.8
Other	109.2	229.0	169.6	463.5	444.7	702.3
Other loans	-	-	-	6.3	(6.3)	(63.1)
India	-	-	-	-	-	-
Other	-	-	-	6.3	(6.3)	(63.1)
Errors and omissions	25.9	(37.2)	70.4	(29.7)	35.7	58.8
India	18.0	(16.7)	64.0	(1.7)	(22.6)	(5.0)
Other	7.9	(20.5)	6.7	(28.0)	58.3	63.8
Overall balance	59.9	79.3	133.7	66.6	185.3	348.5
India	50.9	52.1	68.8	(10.2)	75.8	217.6
Other	9.0	27.2	64.9	76.9	109.4	130.8

(a) Years refer to 1 April to 31 March periods. Figures are revised from 1987 issue of Yearbook. (b)1987/88 figures are preliminary. (c) Exports and imports given in Table 10.1 for 1986/87 differ from those given for 1986 in later tables because of adjustments for fiscal year and, unrecorded exports and imports.

Source: Royal Monetary Authority of Bhutan.

TABLE 10.2 : VALUE AND QUANTITY OF EXPORTS TO INDIA OF MAJOR COMMODITIES (a), 1986

Commodity code	Commodity name	Units	Quantity ('000)	Value ('000 Nu.)	Value (per cent)
054.1	Potatoes	kgs.	12,421.2	23,592.7	6.2
057.1	Oranges, fresh(b)	pons	1,083.4	17,634.7	4.6
057.4	Apples, fresh	kgs.	1,578.0	5,087.0	1.3
058	Fruit, preserved	kgs.	1,894.5	21,499.9	5.7
075.24	Cardamom	kgs.	939.1	38,456.8	10.1
111	Soft drinks	litres	509.1	5,081.0	1.3
247.11	Sawlogs & veneerlogs, soft	c. feet	190.4	6,649.8	1.7
247.12	Sawn timber, soft	c. feet	245.9	10,905.8	2.9
247.21	Sawlogs & veneerlogs, hard	c. feet	768.2	17,303.0	4.6
247.22	Sawn timber, hard	c. feet	316.7	11,363.6	3.0
278.23	Dolomite, chips	c. feet	4,116.1	8,815.6	2.3
351	Electric energy	KWH	155,404.8	41,959.3	11.0
598.14	Rosin, spirits & oil	litres	1,732.4	18,609.6	4.9
634.4	Block boards	s. metres	159.1	21,187.1	5.6
661.2	Cement	kgs.	68,856.7	79,565.0	20.9
	TOTAL MAJOR COMMODITIES	..		327,710.9	86.2
	TOTAL ALL COMMODITIES	..		380,006.1	100.0

(a) Major commodities are those with value more than Nu. 5 million. (b) One pon is equivalent to 80 oranges.

Source : Central Statistical Office and Department of Trade and Industries.

TABLE 10.3 : VALUE AND QUANTITY OF IMPORTS FROM INDIA OF MAJOR COMMODITIES , 1986

Commodity code	Commodity name	Units	Quantity ('000)	Value ('000 Nu.)	Value (per cent)
042.2	Rice	kgs.	18,518.1	48,076.2	5.9
061.2	Sugar	kgs.	5,274.1	28,280.4	3.5
112.3	Beer	litres	1,559.3	12,830.8	1.6
334.11	Petrol	litres	3,073.8	20,894.4	2.6
334.3	Diesel	litres	17,201.5	54.782.0	6.7
351	Electric energy	KWH	39,366.1	34,692.3	4.3
541	Medicines	kgs.	365.9	14,232.0	1.7
625.10-625.90	Tyres	nos.	14.6	26,827.5	3.3
652	Cotton fabrics	s. metres	938.0	10,922.3	1.3
673.1	Wire rods of iron or steel	kgs.	1,495.8	10,981.4	1.3
673.2	Bars/rods of iron/steel drill	kgs.	2,137.2	14,759.8	1.8
674.9	Other plates/sheets iron/steel	nos.	197.1	15,490.9	1.9
694	Nails, screws, nuts etc	kgs.	968.3	13,850.2	1.7
723.9	Parts for tractors etc		..	14,045.0	1.7
751	Office machines		..	19,340.8	2.4
771	Electric power mach. & parts		..	10,297.5	1.3
784.1	Motor vehicle chassis		..	15,228.0	1.9
784.9	Other motor vehicle parts		..	18,418.0	2.3
872	Medical instruments, apparatus		.	10,432.8	1.3
	TOTAL MAJOR COMMODITIES	..		394,382.3	48.4
	TOTAL ALL COMMODITIES	..		814,022.3	100.0

Source : Central Statistical Office and Department of Trade and Indstries.

TABLE 10.4(cont.) : VALUE OF EXPORTS AND IMPORTS WITH INDIA BY COMMODITY DIVISION (a), 1986

('000 Nu.)

Commodity Division	Description	Exports	Imports
	5. CHEMICALS AND RELATED PRODUCTS		
51	Organic chemicals	2,334.6	7,720.3
52	Inorganic chemicals	52.9	2,381.4
53	Dyeing, tanning and colouring materials	-	3,787.1
54	Medicinal and pharmaceutical products	14.4	15,520.0
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations	3,222.9	12,568.9
56	Fertilizers, manufactured	-	3,630.0
57	Explosives	-	2,881.0
58	Artificial resins and plastic materials	65.0	779.3
59	Other chemical materials and products	21,115.1	1,332.4
	TOTAL CHEMICALS AND RELATED PRODUCTS	26,804.9	50,600.4
	6. MANUFACTURED GOODS CLASSIFIED BY MATERIAL		
61	Leather, leather manufactures	-	-
62	Rubber manufactures	554.8	30,117.3
63	Wood manufactures (excluding furniture)	29,143.4	4,695.9
64	Paper, paperboard, and articles of paper	9.9	12,072.4
65	Textile yarn, fabrics, made-up articles, and related products	259.0	38,660.5
66	Non-metallic mineral manufactures	80,797.4	18,695.8
67	Iron and steel	159.7	66,845.5
68	Non-ferrous metals	-	654.7
69	Other manufactures of metal	183.0	37,294.3
	TOTAL BASIC MANUFACTURES	111,107.2	209,036.4
	7. MACHINERY AND TRANSPORT EQUIPMENT		
71	Power generating machinery and equipment	-	3,419.0
72	Machinery specialized for particular industries	70.0	21,035.7
73	Metalworking machinery	-	2,208.8
74	General industrial machinery and equipment, and machine parts	9.0	1,643.8
75	Office machines/automatic data processing equip.	-	19,764.1
76	Telecommunications and sound recording and reproducing apparatus and equipment	-	3,002.3
77	Electrical machinery/apparatus/appliances & parts	36.7	49,768.5
78	Road vehicles	150.3	48,161.3
79	Other transport equipment	-	-
	TOTAL MACHINERY & TRANSPORT EQUIPMENT	266.0	149,003.6
	8. MISCELLANEOUS MANUFACTURED ARTICLES		
81	Sanitary, plumbing, heating and lighting fixtures and fittings	-	8,053.1
82	Furniture	56.7	3,835.0
83	Travel goods, handbags and similar containers	-	74.3
84	Articles of apparel and clothing accessories	1.9	102.8
85	Footwear	11.8	9,888.8
87	Professional/scientific/ controlling instruments and apparatus	-	11,576.9
88	Photo. apparatus, equipment and supplies and optical goods; watches and clocks	-	5,300.8
89	Other miscellaneous manufactured articles	6.6	9,001.8
	TOTAL MISCELLANEOUS MANUFACTURED ARTICLES	76.9	47,833.5
	TOTAL TRADE	380,006.1	814,022.3

(a) Commodity division refers to the first two digits of the Standard International Trade Classification (SITC).

Source: Central Statistical Office and Department of Trade and Industries.

TABLE 10.5: GROSS INTERNATIONAL RESERVES, 1981/82 TO 1987/88(a)

Item	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88 (a)
			RUPEE REERVES (million rupees)				
Rupee reserves	209.5	260.4	312.5	381.3	371.1	446.9	637.2
Royal Monetary Authority	-	-	6.2	12.0	8.1	10.7	14.2
Bank of Bhutan	209.5	260.4	306.3	369.3	362.9	436.2	623.0
			CONVERTIBLE CURRENCY RESERVES (million US dollars)				
Convertible currency reserves	8.1	8.5	10.4	14.2	20.6	28.1	38.9
Royal Monetary Authority (c)	-	-	4.4	7.9	19.8	26.9	36.9
Royal Government (b)	3.3	2.8	-	-	-	-	-
Bank of Bhutan	4.1	4.5	4.7	6.3	0.8	1.1	1.9
Royal Insurance Corporation of Bhutan(d)	0.6	1.2	1.3	-	-	-	-
			TOTAL RESERVES (million US dollars)				
Total reserves	30.5	34.6	39.6	44.9	50.8	62.6	86.2

(a) As of end-March up to 1986/87. 1987/88 figure refers to position at May 1988. (b) Includes reserve tranche position in the International Monetary Fund from 1981/82. (c) The large change in 1985/86 is mainly a result of the takeover of the Bank of Bhutan's convertible foreign exchange by the Royal Monetary Authority of Bhutan. (d) Small reserves from 1984/85.

Source: Royal Monetary Authority of Bhutan.

TABLE 10.6: EXCHANGE RATES, NGULTRUM/$ US, 1981 TO 1988

(period average)

	1981	1982	1983	1984	1985	1986	1987	1988
January	7.94	9.12	9.79	10.72	12.62	12.28	13.04	13.06
February	8.18	9.19	9.90	10.76	12.94	12.37	13.07	13.07
March	8.21	9.28	9.97	10.75	12.96	12.29	12.94	13.00
April	8.25	9.36	9.98	10.83	12.49	12.40	12.81	13.20
May	8.39	9.28	9.99	11.03	12.55	12.48	12.69	13.31
June	8.59	9.43	10.05	11.05	12.46	12.61	12.84	13.77
July	8.87	9.54	10.09	11.34	12.03	12.51	13.03	
August	8.99	9.55	10.17	11.57	11.94	12.58	13.10	
September	9.09	9.62	10.19	11.82	12.18	12.69	13.02	
October	9.16	9.67	10.22	12.08	12.03	12.85	13.06	
November	9.11	9.76	10.35	12.08	12.09	13.09	13.00	
December	9.12	9.68	10.48	12.31	12.16	13.17	12.95	
Calendar year average	8.66	9.46	10.10	11.36	12.37	12.61	12.96	
Fiscal year average(a)	7.89 (1980/81)	8.93 (1981/82)	9.63 (1982/83)	10.31 (1983/84)	11.89 (1984/85)	12.24 (1985/86)	12.79 (1986/87)	12.97 (1987/88)

(a) Fiscal year refers to period 1 April to 31 March.

Source: Royal Monetary Authority of Bhutan.

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 1960's 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 Banking organisation; 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 Unit 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 relationships 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 institutions.

MAIN FEATURES

During 1987, there was an increase in the broad money supply (M2) of Nu. 53.7 million or 11 per cent from the previous year. This was largely accounted for by an increase in net foreign assets of Nu. 376.9 million, which was not offset by a decline in domestic credit of Nu. 262.8 million.

From December 1983 to December 1987, there was an increase in net foreign assets of the Royal Monetary Authority and the Bank of Bhutan of Nu. 731.3 million. Domestic credit decreased by Nu. 319.3 million over the same period, mainly as a consequence of large increases in deposits of government with the Bank of Bhutan.

Investment in the two non-bank financial institutions has grown rapidly over the past few years. Between December 1983 and December 1987, total investment in the Royal Insurance Corporation of Bhutan increased from Nu. 137.5 million to Nu. 353.8 million while investment in the Unit Trust of Bhutan increased from Nu. 25.2 million to Nu. 150.1 million.

Loan amounts outstanding by the financial sector (including both banking and non-banking institutions) totalled Nu. 374.3 million in 1987. The use of those advances has changed over time with the building and construction industry in 1987 receiving 54 per cent of all advances compared with only 27 per cent in 1983. Agriculture received 6 per cent of advances in 1987,

industry received 16 per cent and trade and commerce received 9 per cent.

Interest rates on deposits with the Bank of Bhutan range from 5 per cent to 11 per cent. The Bank's interest rates on advances vary from 10 per cent to 15 per cent.

TABLE 11.1: MONETARY SURVEY (a) - ROYAL MONETARY AUTHORITY AND BANK OF BHUTAN, 1983 TO 1987

(Nu. in millions)

Item	End of year				
	1983	1984	1985	1986	1987
Foreign assets (net)	345.7	490.2	595.4	700.1	1,077.0
Rupee	260.5	317.6	359.0	380.0	579.0
Other	85.2	172.6	236.5	320.1	498.0
Domestic credit	110.4	45.1	101.7	53.9	-208.9
Claims on Government (net)	10.0	-54.0	19.7	-33.1	-304.7
Claims on Government corporations	57.3	41.3	26.6	19.7	13.5
Claims on private sector	43.1	57.8	55.4	67.3	82.3
Total liquidity-Broad money (M2)	324.6	367.0	464.0	498.8	552.5
Money supply-Narrow money (M1)	177.2	209.8	261.7	277.1	316.8
Currency outside banks	22.1	46.2	70.4	90.7	103.5
Demand deposits	155.1	163.6	191.3	186.3	213.3
Quasi-money	147.4	157.2	202.3	221.8	235.7
Other items (net)	131.5	168.3	233.1	255.2	315.6

(a) Revised data, excluding rupees in circulation.

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

TABLE 11.2 : ROYAL INSURANCE CORPORATION OF BHUTAN- FINANCIAL STATISTICS,1983 TO 1987

(Nu. in millions)

End of Year	ASSETS							
			Investments(a)					
	Total assets	Reserves	Total Invest-ments	Claims on Govt. Enterp-rises	Claims on Private Sector	Claims on Deposit Money Banks	Claims on Non-mon. Financ. Institts.	Real Estate
1983	140.1	2.6	137.5	25.1	41.3	52.4	6.1	12.6
1984	170.1	7.0	163.1	29.0	61.0	51.2	6.8	15.0
1985	219.1	3.4	215.7	17.9	102.2	71.8	6.8	17.1
1986	269.5	2.5	267.1	18.1	150.3	71.0	7.0	20.7
1987	354.5	0.8	353.8	14.9	233.2	75.2	7.0	23.4

End of Year	LIABILITIES						
	Total	Insu-rance Reserve Funds	Life Fund	GEPF Fund(b)	UTB Fund(c)	Capital Accounts	Other Items (Net)
1983	140.1	5.8	4.8	102.5	21.3	12.0	-6.2
1984	170.1	9.8	5.6	119.8	36.8	12.0	-13.9
1985	219.1	7.6	7.4	149.2	66.0	12.0	-23.1
1986	269.5	6.9	9.0	171.3	92.1	12.0	-21.8
1987	354.5	6.9	9.2	210.8	145.4	12.0	-29.7

(a) Including Unit Trust of Bhutan funds. (b) Government Employees Provident Fund.
(c) Unit Trust of Bhutan.

Source : Royal Insurance Corporation of Bhutan.

TABLE 11.3 : UNIT TRUST OF BHUTAN- FINANCIAL STATISTICS,1980 TO 1987

(Nu.in millions)

End of Year	Assets					Liabilities				
			Investments							
	Total	Reserves	Total	RICB(a)	Direct	Total	Deposits	Call loans	Capital Accounts	Other Items (Net)
1980	4.0	0.5	3.5	-	3.5	4.0	1.6	-	2.5	-0.1
1981	10.5	0.1	10.4	-	10.4	10.5	7.6	-	2.6	0.3
1982	16.3	1.2	15.0	-	15.0	16.3	12.8	-	3.1	0.3
1983	25.2	-	25.2	21.3	3.9	25.2	20.1	-	3.8	1.3
1984	40.9	0.1	40.8	36.8	4.0	40.9	33.8	-	4.4	2.7
1985	70.0	0.3	69.7	65.4	4.3	70.0	57.6	-	4.2	8.2
1986	100.3	-	100.3	91.4	8.9	100.3	86.8	-	5.4	8.1
1987	150.2	0.1	150.1	145.4	4.7	150.2	125.3	6.5	5.3	13.1

(a) Royal Insurance Corporation of Bhutan.

Source: Unit Trust of Bhutan.

TABLE 11.4: FINANCIAL SECTOR(a) - LOAN AMOUNTS OUTSTANDING BY INDUSTRY, 1983 TO 1987

(Nu. in millions)

Industry	End of year				
	1983	1984	1985	1986	1987
Agriculture	10.4	14.9	15.2	18.5	21.4
Industry	52.0	57.7	67.2	72.3	58.2
Building and construction	51.1	59.4	89.4	135.1	200.7
Trade and commerce	23.7	31.8	18.0	19.8	32.8
Transport	32.4	31.4	30.9	26.4	28.7
Other(b)	19.9	29.7	30.2	37.9	32.5
TOTAL	189.5	224.9	250.9	310.0	374.3

(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 other.

Source: Royal Monetary Authority of Bhutan.

TABLE 11.5 : BANK OF BHUTAN INTEREST RATES - DEPOSITS, 1982 TO 1988

(per cent per annum)

Type of deposit	Effective dates				
	October 1982	May 1983	June 1985	June 1987	January 1988
Savings	5.0	5.0	5.0	5.0	5.0
Fixed					
3-6 months	5.5	5.5	6.5	6.5	6.5
6-9 months	6.0	6.0	8.0	8.0	8.0
9 months-1 year	7.0	7.0	8.0	8.0	8.0
1-2 years	8.5	8.5	8.5	9.0	9.0
2-3 years	9.0	9.0	9.0	10.0	10.0
3-5 years	9.5	10.0	10.0	11.0	11.0
5 years and over	10.0	11.0	11.0	11.0	11.0

Source: Bank of Bhutan.

TABLE 11.6: COMMERCIAL BANK INTEREST RATES- LOANS(a)

(per cent per annum)

Type of loan	Interest rate(%)
Commercial	
Export trade	12.0
General trade	15.0
Transport	
Buses,lorries and trucks,and cars	15.0
Agriculture (including livestock)	
Up to Nu. 20,000	10.0
Up to Nu. 100,000	12.0
Above Nu. 100,000	13.0
Industrial	
Up to Nu. 1,000,000	10.0
Up to Nu. 5,000,000	13.0
Above Nu. 5,000,000	14.0
Working Capital	15.0
Tourism	13.0
Housing (commercial and residential)	14.0
Miscellaneous (including personal loans)	15.0

(a) Rates applicable since 1 July 1988. Rates apply to all financial institutions.

Source: Bank of Bhutan.

CHAPTER 12

PUBLIC FINANCE

INTRODUCTION

The system of modern public finance practices 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 finances became a necessity.

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

The first budget on modern lines was presented by the Ministry of Finance in 1971. It was called the `Civil' budget as it covered only the needs of the Ministries of Finance, Home Affairs and Foreign Affairs. The requirements of development oriented Ministries like Communications and Tourism, Trade, Industry, Forests 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 budgets into `Civil' and `Development' was replaced by the concepts 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.

MAIN FEATURES

Government domestic revenue rose by 121 per cent between 1986/87 and 1987/88 totalling Nu. 753.1 million in 1987/88. Current expenditure in 1987/88 totalled Nu. 897.6 million (an increase of 76 per cent over 1986/87), while development expenditure totalled Nu. 1,471.5 million (an increase of 84 per cent over the same period).

The Budget deficit in 1986/87 was Nu. 186.2 million, following a deficit of Nu. 258.5 million recorded in the previous year. Domestic revenue amounted to 26 per cent of total expenditure in 1986/87, with grants from India accounting for 37 per cent.

TABLE 12.1: CURRENT BUDGETARY EXPENDITURE OF THE GOVERNMENT BY MINISTRY, 1981/82 TO 1987/88(a)

(Nu. in millions)

Ministry / Non-ministerial Organisation	1981/82 (revised)	1982/83 (actual)	1983/84 (actual)	1984/85 (actual)	1985/86 (actual)	1986/87 (actual)	1987/88 (approp.) (a)
MINISTRIES							
Home Affairs	12.6	15.5	16.7	18.6	24.1	27.3	37.8
Finance	19.4	21.8	26.0	41.2	82.3	165.4	260.9
Communication & Tourism	9.5	13.8	12.5	13.7	18.1	19.2	44.4
Social Services	51.8	52.8	51.4	79.7	137.6	96.5	202.2
Agriculture	26.4	24.7	30.1	30.9	50.7	47.1	109.5
Foreign Affairs	7.9	11.7	11.5	13.4	21.9	24.6	38.3
Trade and Industries	7.0	10.6	10.8	11.4	13.0	13.5	32.4
NON-MINISTERIAL ORGANISATIONS							
Special Commission	1.2	1.4	1.0	1.0	9.8	4.1	8.4
Central Monastic Secretariat	-	-	-	0.1	0.6	11.2	19.0
Royal Monetary Authority	-	-	0.7	-	-	-	-
Social & Cultural Div.	0.3	0.3	0.3	0.8	0.4	0.3	-
His Majesty's Secretariat	1.1	1.7	1.8	2.0	4.7	3.9	3.6
Planning Commission	1.0	1.0	0.6	1.6	2.6	2.6	4.3
Science and Technology	-	-	0.1	0.3	0.3	0.3	1.0
Royal Civil Service Commission	0.5	0.7	2.1	4.8	1.1	1.0	1.5
Royal Audit Authority	1.0	1.2	1.4	1.9	2.2	2.7	3.8
Royal Advisory Council	1.0	0.9	0.9	1.0	1.8	1.6	2.0
National Assembly	0.6	0.8	0.8	1.1	1.6	1.9	2.8
Nat. Urban Development Corp.	1.2	2.6	2.9	12.0	1.0	8.4	12.5
National Women's Association	-	-	-	-	0.3	0.4	0.9
Judiciary	1.7	3.0	3.2	3.7	5.1	5.1	7.2
Bhutan Olympic Committee	-	-	-	0.2	0.3	1.4	1.9
Druk Air Corporation	0.2	2.7	3.1	4.7	-	-	-
Tourism Corporation	7.4	2.4	0.6	1.5	-	-	-
Bhutan Govt. Transport Service	11.4	0.5	-	0.1	-	-	-
SAARC Summit Meeting	-	-	-	-	-	-	2.6
DZONGKHAGS	6.6	42.9	44.8	58.3	61.7	72.0	100.6
TOTAL CURRENT EXPENDITURE	169.7	213.1	223.2	304.0	441.5	510.5	897.6

(a) 1981/82 to 1986/87 refer to the twelve month period 1 April to 31 March. 1987/88 refers to the period 1 April 1987 to 30 June 1988.

Source: Department of National Budget and Accounts.

TABLE 12.2 : BUDGETARY DEVELOPMENT EXPENDITURE OF THE GOVERNMENT BY MINISTRY, 1981/82 TO 1987/88(a)

(Nu. in millions)

Ministerial / Non-ministerial Organisation	1981/82 (revised)	1982/83 (actual)	1983/84 (actual)	1984/85 (actual)	1985/86 (actual)	1986/87 (actual)	1987/88 (approp.) (a)
MINISTRIES							
Home Affairs	5.5	6.1	6.7	10.1	9.3	9.7	6.2
Finance	25.0	23.3	22.6	41.6	21.4	28.3	25.8
Communication & Tourism	10.2	5.2	25.7	9.1	12.1	27.6	78.8
Social Services	86.3	115.0	184.1	155.3	143.9	128.6	279.3
Agriculture	94.7	67.3	104.1	94.7	100.1	106.3	136.4
Foreign Affairs	0.1	-	3.2	3.9	5.3	5.6	1.6
Trade and Industries	21.7	13.1	24.1	34.6	370.6	376.1	763.3
NON-MINISTERIAL ORGANISATIONS							
Special Commission	-	2.4	1.4	0.7	0.9	2.5	3.3
Central Monastic Secretariat	-	-	-	2.5	0.2	0.9	5.4
Royal Monetary Authority	-	-	0.9	-	-	-	-
Social & Cultural Div.	0.3	0.6	1.7	2.8	-	-	-
His Majesty's Secretariat	-	-	0.1	0.1	-	0.3	0.1
Planning Commission	0.3	0.3	12.6	8.0	5.0	2.6	6.7
Science and Technology	-	-	0.1	0.1	1.2	0.9	1.2
Royal Civil Service Commission	1.2	3.9	3.5	3.4	9.8	21.1	0.5
Royal Audit Authority	-	-	0.3	0.1	0.2	0.7	0.1
Royal Advisory Council	-	-	-	-	0.3	0.2	0.1
National Assembly	-	0.1	0.1	-	0.2	0.2	0.1
Nat. Urban Development Corp.	3.1	3.5	4.5	24.0	33.5	52.4	84.2
National Women's Association	-	-	-	-	3.8	0.9	0.7
Judiciary	0.1	0.4	0.3	0.4	0.9	0.4	0.7
Bhutan Olympic Committee	-	-	-	1.5	1.6	-	0.1
Druk Air Corporation	4.0	0 3	24.3	5.4	-	-	-
Tourism Corporation	8.9	2.0	4.8	1.0	-	-	-
Bhutan Govt. Transport Service	4.4	-	-	-	-	-	-
SAARC Summit Meeting	-	-	-	-	-	-	36.2
DZONGKHAGS	1.4	31.1	50.9	55.3	56.1	33.0	40.7
TOTAL DEVELOPMENT EXPENDITURE	267.1	274.7	476.0	454.4	776.2	798.1	1,471.5

(a) 1981/82 to 1986/87 refer to the twelve month period 1 April to 31 March. 1987/88 refers to the period 1 April 1987 to 30 June 1988.

Source: Department of National Budget and Accounts.

TABLE 12.3 : BUDGETARY RECEIPTS OF THE GOVERNMENT BY SOURCE, 1981/82 TO 1987/88(a)

(Nu. in millions)

Source of Revenue	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88 (a)
TAX REVENUE(b)							
Direct tax	11.0	20.7	43.3	39.4	44.1	62.9	77.1
Tax on income & profits	8.8	19.4	40.0	35.8	40.9	59.5	69.9
Company corporate & enterprise	3.7	13.4	28.9	24.1	24.0	40.6	48.1
Individuals & trading units	4.5	5.5	10.2	9.0	14.8	17.6	23.7
Agriculture Income Tax	0.6	0.4	0.9	2.7	2.1	1.3	1.7
Rural tax	2.2	1.3	3.3	3.6	3.2	3.4	3.6
Indirect tax	54.0	55.0	70.4	94.4	91.8	109.3	158.8
Taxes on goods & services	51.8	53.0	67.0	92.7	89.4	106.0	155.2
Sales tax	6.9	7.8	11.6	13.5	12.9	15.8	39.2
Selective excise on goods	39.1	40.6	47.5	71.0	67.2	79.5	97.5
Selective tax on services	1.3	0.9	1.0	1.2	1.4	1.7	2.1
Tax on use of goods/property	4.5	3.6	6.9	7.0	8.0	9.0	16.4
Taxes on international trade	0.2	0.2	0.7	1.1	1.9	2.8	2.8
Other tax	2.0	1.8	2.7	0.6	0.5	0.5	0.8
Revenue stamps	0.2	0.1	0.2	0.2	0.3	0.4	0.5
Municipal Tax	1.8	1.7	2.5	0.3	0.2	0.1	0.2
TOTAL TAX REVENUE	65.1	75.7	113.7	133.7	135.9	173.8	232.3
NON-TAX REVENUE(b)							
Operating surpluses of departmental enterprises	2.6	2.0	0.1	1.0	-	-	-
Net profit transferred from non-fin. & public enterp.	12.7	28.3	39.1	75.1	50.7	83.5	397.7
Royalties and dividends	5.3	17.7	14.8	25.9	34.0	45.3	66.4
Administrative fees, charges and non- industrial sales	3.2	4.2	9.2	14.2	12.5	12.1	27.5
TOTAL NON-TAX REVENUE	23.7	52.2	63.2	116.2	97.3	139.3	491.6
CAPITAL REVENUE							
Sales fixed capital assets, stock, land and other intangible assets	0.7	0.5	2.2	3.7	3.7	6.5	10.1
Unclassified revenue	22.7	-	-	5.4	9.2	9.1	2.0
TOTAL CAPITAL REVENUE	23.4	0.5	2.2	9.1	12.9	15.5	12.1
RECEIPTS FROM DEPARTMENTAL ENTERPRISES							
Druk Air	-	-	1.5	6.9	1.7	-	-
Posts and Telegraphs	1.7	1.0	2.9	3.2	4.2	5.5	6.0
Telephones	1.5	2.2	3.8	0.8	0.7	1.2	1.5
Wireless	0.2	0.4	0.8	0.2	-	-	-
TOTAL RECEIPTS DEPT. ENTERP.	3.4	3.6	9.0	11.1	6.6	6.7	7.5
OTHER NON-REVENUE RECEIPTS							
Treaty of 1949	-	-	-	-	0.5	0.5	0.5
Audit recovery	-	0.2	-	0.2	0.9	1.8	2.2
Recovery of loan & advance	0.3	0.7	2.3	0.5	0.8	0.3	0.4
Surrender of revolving fund	-	-	1.4	0.7	0.2	-	0.1
Surrender of unspent balance of budget	0.2	0.9	1.1	0.3	0.8	1.1	0.7
Recovery of cost of vehicles	3.4	3.9	3.3	4.4	1.9	0.7	0.9
Recovery against cost of material	-	-	-	-	-	0.4	-
Receipts on outstanding dues	-	-	-	-	-	-	0.7
Receipts on foreign exchanges	-	-	-	-	-	-	0.1
Receipts on security deposits	-	-	-	-	-	-	0.5
TOTAL OTHER NON-REV. REC.	3.9	5.7	8.0	6.1	5.1	4.8	6.0
ALL REVENUE RECEIPTS	119.6	137.7	196.0	276.2	257.5	340.1	753.1

(a) Figures refer to actual receipts. 1981/82 to 1986/87 refer to the twelve month period 1 April to 31 March. 1987/88 refers to the period 1 April 1987 to 30 June 1988. (b) A small discrepancy exists in totals for tax and non-tax revenues in 1986/87 because of misclassification.

Source : Department of Revenue and Customs.

TABLE 12.4: SUMMARY OF BUDGETARY OPERATIONS, 1981/82 TO 1986/87(a)

(Nu. in millions)

Item	1981/82 (revised)	1982/83 (actual)	1983/84 (actual)	1984/85 (actual)	1985/86 (actual)	1986/87 (actual)
Revenue						
Tax revenue	65.1	75.7	113.7	133.7	135.9	173.8
Non-tax revenue	23.7	52.2	63.2	116.2	97.3	139.3
Other	30.8	9.8	19.1	26.3	24.3	27.0
Total revenue	119.6	137.7	196.0	276.2	257.5	340.1
Grants						
India	195.3	259.7	256.2	355.6	334.1	486.7
Other	104.9	100.6	222.1	156.5	367.6	295.6
Total grants	300.2	360.3	478.3	512.1	701.7	782.3
Total revenue and grants	419.8	498.0	674.3	788.3	959.2	1,122.4
Expenditure						
Current	169.7	213.1	223.2	304.0	441.5	510.5
Development	267.1	274.7	476.0	454.4	776.2	798.1
Total expenditure	436.8	487.8	699.2	758.4	1,217.7	1,308.6
OVERALL SURPLUS/DEFICIT	(17.0)	10.2	(24.9)	29.9	(258.5)	(186.2)

(a) Years refer to period 1 April to 31 March.

Source : Ministry of Finance.

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 the preparation of the Third Plan in 1971, the Planning Commission was established headed by His Majesty, the King. In the absence of basic economic information and skilled manpower, the formulation of the Third Plan, like earlier ones was relatively simple. Major developments in regard to the consolidation of the planning process took place in the Fourth Plan period, when the Dzongkhags were involved in the development process.

Until 1981-82, the responsibility for making Plan allocations, raising internal resources, and negotiating foreign assistance etc. lay with the Planning Commission. In 1981-82, 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 allocation 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 Fifth Five Year Plan was successfully completed in 1986-
87. The Sixth Five Year Plan will give emphasis to 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 SIXTH PLAN

(Nu. in millions)

Sector	First Plan (actual)	Second Plan (actual)	Third Plan (actual)	Fourth Plan (actual)	Fifth Plan(a) (revised)	Sixth Plan (revised)
Agriculture	1.9	21.6	58.3	259.0	419.4	822.1
Food Corporation of Bhutan	-	-	-	-	135.5	106.5
Animal Husbandry	1.5	5.8	24.2	61.5	162.4	331.0
Forestry	3.2	6.9	28.4	110.3	229.9	418.2
Power	1.5	9.1	30.1	50.5	340.5	1,247.9
Trade and Industries	1.1	1.0	25.2	175.0	323.3	1,276.1
Geological Survey	-	-	-	-	-	35.3
Public Works Department	62.9	70.5	84.6	128.3	787.5	887.2
Road Transport/Aviation	7.5	12.0	9.5	-	26.3	48.8
Post & Telegraph	0.5	5.9	11.4	16.9	65.8	68.1
Telecommunications	-	-	14.8	37.3	33.7	133.8
Tourism	-	-	14.1	12.5	29.1	-
Druk Air	-	-	-	-	-	391.0
Education	9.4	35.7	90.0	134.6	519.1	778.8
Health	3.1	16.7	38.1	54.6	237.5	399.1
Information and Broadcasting	0.1	1.4	4.0	11.0	36.1	95.9
Urban Development	-	-	-	-	187.3	248.7
General Government	-	-	-	-	1,114.9	1,973.8
Dzongkhags	-	-	-	-	-	238.5
Other	14.4	15.6	42.5	54.7	-	-
TOTAL OUTLAYS	107.2	202.2	475.2	1,106.2	4,648.3	9,500.9

(a) Figures exclude Chhukha Hydel Project (Fifth Plan outlay Nu. 2,430 million). Small differences exist between outlays shown in this table and budgetary expenditures shown in Tables 12.1 and 12.2 because some expenditures will not be reflected in Development Plans.

Source: Planning Commission.

TABLE 13.2: OUTLAYS OF DEVELOPMENT PLANS, PERCENTAGE BY CATEGORY, FIRST PLAN TO SIXTH PLAN

(per cent)

	First Plan	Second Plan	Third Plan	Fourth Plan	Fifth Plan(a)	Sixth Plan
Agriculture	1.8	10.7	12.3	23.4	9.0	8.7
Food Corporation of Bhutan	-	-	-	-	2.9	1.1
Animal Husbandry	1.4	2.9	5.1	5.6	3.5	3.5
Forestry	3.0	3.4	6.0	10.0	4.9	4.4
Power	1.4	4.5	6.3	4.6	7.3	13.1
Trade and Industries	1.0	0.5	5.3	15.8	7.0	13.4
Geological Survey	-	-	-	-	-	0.4
Public Works Department	58.7	34.9	17.8	11.6	16.9	9.3
Road Transport/Aviation	7.0	5.9	2.0		0.6	0.5
Post & Telegraph	0.5	2.9	2.4	1.5	1.4	0.7
Telecommunications	-	-	3.1	3.4	0.7	1.4
Tourism	-	-	3.0	1.1	0.6	-
Druk Air	-	-	-	-	-	4.1
Education	8.8	17.7	18.9	12.2	11.2	8.2
Health	2.9	8.3	8.0	4.9	5.1	4.2
Information and Broadcasting	0.1	0.7	0.8	1.0	0.8	1.0
Urban Development	-	-	-	-	4.0	2.6
General Government	-	-	-	-	24.0	20.8
Dzongkhags	-	-	-	-	-	2.5
Other	13.4	7.7	8.9	4.9	-	-
TOTAL OUTLAYS	100.0	100.0	100.0	100.0	100.0	100.0

(a) See footnotes to Table 13.1.

Source : Planning Commission.

TABLE 13.3 : PROPOSED OUTLAYS BY SECTOR, SIXTH PLAN (1987 - 1992)

(Nu. in millions)

Sector	Current	Capital	Total	% of Total Outlay
Agriculture	282.6	539.5	822.1	8.7
Food Corporation of Bhutan	72.7	33.8	106.5	1.1
Animal Husbandry	183.0	148.0	331.0	3.5
Forestry	139.3	278.9	418.2	4.4
Power	33.3	1,214.6	1,247.9	13.1
Trade and Industries	35.3	1,240.8	1,276.1	13.4
Geological Survey	17.4	17.9	35.3	0.4
Public Works Department	119.6	767.6	887.2	9.3
Civil Aviation	8.6	40.2	48.8	0.5
Post and Telegraph	65.1	3.0	68.1	0.7
Telecommunications	28.8	105.0	133.8	1.4
Druk Air	14.0	377.0	391.0	4.1
Education	532.5	246.3	778.8	8.2
Health	336.2	62.9	399.1	4.2
Information and Broadcasting	35.7	60.2	95.9	1.0
Urban Development	58.7	190.0	248.7	2.6
General Government	1,694.0	279.8	1,973.8	20.8
Dzongkhags	192.2	46.4	238.5	2.5
ALL SECTORS	3,849.0	5,551.9	9,500.9	100.0

Source: Planning Commission.

TABLE 14.1: GROSS DOMESTIC PRODUCT AT CURRENT PRICES BY KIND OF ACTIVITY, 1981 TO 1986

(Nu. in millions)

Activity	1981	1982	1983	1984	1985	1986
Agriculture and livestock	555.4	647.5	769.6	884.3	989.4	1,109.7
Forestry and logging	68.6	116.8	127.9	131.9	170.7	264.1
Mining	4.0	6.2	4.7	6.7	10.9	14.8
Manufacturing	48.1	52.2	69.2	79.1	94.9	96.0
Electricity	1.1	3.0	3.1	3.2	3.6	96.0
Construction	168.8	229.3	261.4	268.5	242.3	234.4
Wholesale and retail trade, hotels and restaurants	151.2	174.7	200.7	230.7	259.1	290.1
Transport	32.2	36.8	44.1	50.3	60.0	68.8
Finance, insurance and real estate	136.7	145.3	156.7	175.5	191.2	192.6
Government services	151.4	177.4	196.9	221.1	322.8	355.1
Less:Imputed bank service charges	(26.9)	(29.9)	(30.2)	(38.5)	(44.6)	(43.3)
TOTAL GROSS DOMESTIC PRODUCT	1,290.6	1,559.3	1,804.1	2,012.8	2,300.3	2,678.3
Annual growth rate (%) (current prices)	..	20.8	15.7	11.6	14.3	16.4

Source : Estimates compiled by Central Statistical Office.

TABLE 14.2: GROSS DOMESTIC PRODUCT AT 1983 PRICES BY KIND OF ACTIVITY, 1981 TO 1986

(Nu. in millions)

Activity	1981	1982	1983	1984	1985	1986
Agriculture and livestock	670.0	709.5	769.6	808.2	850.2	892.6
Forestry and logging	80.7	127.3	127.9	121.1	141.1	192.2
Mining	4.2	6.5	4.7	6.3	7.7	10.4
Manufacturing	60.5	59.6	69.2	72.5	81.0	76.3
Electricity	2.5	2.7	3.1	3.1	3.7	91.0
Construction	204.3	252.3	261.4	244.0	200.2	176.2
Wholesale and retail trade, hotels and restaurants	177.9	189.6	200.7	212.7	219.6	226.7
Transport	37.9	39.9	44.1	46.3	51.4	54.8
Finance, insurance and real estate	147.1	151.3	156.7	170.0	175.4	174.5
Government services	183.2	195.1	196.9	201.0	219.1	225.7
Less: Imputed bank service charges	(32.9)	(32.9)	(30.2)	(35.0)	(38.4)	(33.8)
TOTAL GROSS DOMESTIC PRODUCT	1,535.4	1,700.9	1,804.1	1,850.2	1,911.0	2,086.6
Annual growth rate (%) (1983 prices)	..	10.8	6.1	2.6	3.3	9.2

Source : Estimates compiled by Central Statistical Office.

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, ie. 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 economic activities that have 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 final 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 years under review. For measuring the performance of the economy in regard to the production of economic goods and services in real terms over a period constant price estimates of GDP have to be taken into account. Current price estimates of GDP give a view of the levels of production performances of the economy for all the years under review at changing current prices.

In 1985, estimates of GDP by major kind of activity (ie. major industrial sector) at current and constant (1983) prices were produced for Bhutan for the period 1981-84. While the estimates suffered from deficiencies caused by the paucity of data, the series was recently extended for a further two years on the basis of the same methodology, in order to maintain comparability with the earlier data. Work on the revision of the GDP estimates based on wider coverage and more systematic methodology, and preparation of the Consolidated Accounts of the Nation has been initiated in the CSO.

MAIN FEATURES

In real terms (measured at constant 1983 prices), the economy witnessed a rate of growth of 9.2 per cent in 1986, following growth of 2.6 per cent and 3.3 per cent recorded in 1984 and 1985 respectively.

The high rate of growth in 1986 was due in large part to the substantial increases in electricity generation following the commissioning of the Chhukha Hydel Project. Other sectors to grow significantly during 1986 were Forestry and Logging (36 per cent) and Mining (35 per cent). Against this, declines were recorded for Construction (due to the completion of construction work on the Chhukha project) and Manufacturing.

TABLE 14.3 : GROSS DOMESTIC PRODUCT PROJECTIONS(a) TO 1991/92

(at 1986-87 prices)

Activity	Nu. in millions			Annual growth rate (%)	
	1981/82	1986/87	1991/92 (project)	1981/82 to 1986/87	1986/87 to 1991/92
Agriculture and livestock	830.0	1,109.7	1,416.2	6.0	5.0
Forestry and logging	110.9	264.1	466.0	19.0	12.0
Mining	6.0	14.8	37.0	20.0	20.0
Manufacturing	75.1	96.0	148.0	5.0	9.0
Electricity	2.6	96.0	431.0	105.0	35.0
Construction	270.8	234.4	314.0	(3.0)	6.0
Wholesale and retail trade, hotels and restaurants	226.7	290.1	370.2	5.0	5.0
Transport	46.6	68.8	101.1	8.0	8.0
Finance, insurance and real estate	161.4	192.6	229.0	3.5	3.5
Government services	287.2	355.1	432.0	4.0	4.0
Less:Imputed bank service charges	(42.3)	(43.3)	(50.0)	-	-
GROSS DOMESTIC PRODUCT	1,975.0	2,678.3	3,894.5	6.3	7.8

(a)Gross domestic product for 1986/87 is assumed to be the same as the figure for the calendar year 1986 given in Table 14.1.

Source: Estimates compiled by Central Statistical Office.

CHAPTER 15

PRICES

INTRODUCTION

The only price statistics currently compiled in Bhuta relate to the Consumer Price Indexes, often referred to as th CPI. The CPI has been produced by the CSO twice a year sinc December 1979. In addition, a food price index for Thimphu ha been produced each quarter since September 1987.

The purpose of the CPI is to provide a general indicator o 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 standards 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' includes food items (eg. 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.

MAIN FEATURES

In June 1988, the rate of inflation in Bhutan as measured by the change in the Consumer Price Index over the previous twelve months was estimated to be 10.6 per cent. This means that prices for consumer items in Bhutan as a whole rose by an average of 10.6 per cent over this twelve month period. This compares with rates of 7.9 and 4.8 per cent recorded in December 1987 and June 1987 respectively.

Prices for food rose by an average of 11.7 per cent in the year to June 88, while prices for non-food items rose by 8.3 per cent over the same period.

TABLE 15.1: CONSUMER PRICE INDEXES - FOOD AND NON-FOOD COMPONENTS, BHUTAN, JUNE 1981 TO JUNE 1988

DECEMBER 1979=100

ITEM	WEIGHT (2)	1981		1982		1983		1984		1985		1986		1987		1988	AVE. GROWTH (2)	
		JUNE	DEC	JUNE	DEC	JUNE	DEC	JUNE	DEC	JUNE	DEC	JUNE	DEC	JUNE	DEC	JUNE	JUNE 80-88	DEC 79-87
INDEX																		
Food	72.3	112.0	115.7	129.1	122.8	139.4	149.6	148.0	156.9	155.6	160.8	165.0	169.2	171.7	183.8	191.7		
Non-food	27.7	119.0	117.7	130.4	125.6	176.7	147.2	187.3	171.4	171.1	178.1	204.2	215.2	217.5	229.3	235.5		
Total	100.0	113.9	116.3	129.5	123.5	149.7	148.9	158.8	160.9	159.9	165.6	175.9	182.0	184.4	196.4	203.8		
PERCENTAGE CHANGE ON THE PREVIOUS YEAR																		
Food	72.3	11.0	14.5	15.3	6.1	7.9	21.9	6.1	4.9	5.2	2.5	6.1	5.3	4.0	8.6	11.7	8.4	7.9
Non-food	27.7	8.4	-0.9	9.6	6.7	35.5	17.2	6.0	16.5	-8.6	3.9	19.3	20.8	6.5	6.5	8.3	10.0	10.9
Total	100.0	10.2	9.7	13.7	6.2	15.6	20.6	6.1	8.0	0.7	2.9	10.0	9.9	4.8	7.9	10.6	8.9	8.8
PERCENTAGE CHANGE ON THE PREVIOUS PERIOD																	DEC '79 TO JUNE '88	
Food	72.3	10.8	3.3	11.6	-4.9	13.6	7.3	-1.1	6.0	-0.8	3.3	2.6	2.5	1.4	7.0	4.3	3.9	
Non-food	27.7	0.2	-1.1	10.8	-3.7	40.7	-16.7	27.2	-8.5	-0.2	4.1	14.7	5.4	1.1	5.4	2.7	5.2	
Total	100.0	7.5	2.1	11.4	-4.6	21.2	-0.5	6.7	1.3	-0.6	3.5	6.2	3.5	1.3	6.5	3.8	4.3	

Source: Collection undertaken by Central Statistical Office.

TABLE 15.2: CONSUMER PRICE INDEXES - MAJOR COMPONENTS, BHUTAN, JUNE 1981 TO JUNE 1988

(PERCENTAGE CHANGE ON THE PREVIOUS PERIOD)

ITEM	WEIGHT (%)	1981		1982		1983		1984		1985		1986		1987		1988	AVERAGE GROWTH RATE
		JUNE	DEC	JUNE	DEC	JUNE	DEC	JUNE	DEC	JUNE	DEC	JUNE	DEC	JUNE	DEC	JUNE	
Cereals	37.77	8.9	-1.0	21.2	-1.6	17.1	10.1	-7.5	8.4	-7.5	4.2	2.9	0.1	0.9	2.9	4.6	3.3
Pulses	0.67	-19.5	11.2	8.6	-8.8	-4.0	5.6	9.6	-0.7	14.2	2.8	4.0	1.0	2.8	5.0	6.4	4.3
Vegetables	2.43	-18.1	7.2	30.1	-9.0	11.6	-2.2	16.8	8.8	3.1	8.5	0.8	5.7	-0.1	10.0	-3.5	4.3
Fruits	0.04	7.3	18.4	-3.5	1.3	29.1	-23.4	33.1	-17.5	22.8	35.1	25.3	-37.2	20.5	11.8	10.3	6.2
Edible oil & fats	2.87	8.6	13.0	0.8	-6.9	12.7	0.9	-0.4	5.8	-5.2	0.8	8.4	3.4	9.5	29.1	-3.4	4.6
Spices	5.10	14.0	1.5	6.9	-10.7	11.5	1.7	13.9	-4.0	18.6	3.9	0.6	15.2	0.2	18.2	4.9	5.4
Milk & its products	7.07	25.0	18.9	-13.5	-3.9	32.8	4.2	4.1	-0.4	8.3	-1.1	0.7	6.5	0.5	7.4	12.9	5.0
Other food & intoxicants	16.36	14.9	3.8	6.5	-9.7	-0.3	6.1	6.7	6.7	5.6	2.8	3.1	1.8	2.3	7.7	2.3	4.0
Fuel & lighting	3.65	-42.6	17.7	-10.7	2.1	-9.3	18.8	-6.2	19.3	-7.5	8.3	11.3	6.2	-0.9	7.0	1.1	2.3
Clothing & footwear	21.20	7.1	-4.2	14.8	-5.7	55.1	-21.8	34.5	-12.8	0.8	3.1	17.3	5.0	1.2	4.9	2.8	5.5
Stationery goods etc.	0.62	5.7	3.1	19.9	-0.4	-7.1	8.3	5.3	7.3	4.5	3.5	3.4	1.5	0.2	18.1	3.6	4.8
Misc. goods & services	1.57	39.8	-2.6	8.1	7.3	-5.0	2.7	6.0	9.0	-2.4	8.1	0.0	9.0	2.1	6.6	2.6	6.3
Furniture & utensils	0.65	-0.7	23.0	-4.3	-2.5	16.2	3.6	6.6	8.2	-0.9	9.3	-2.8	7.2	3.2	3.2	4.3	5.3
Total	100.00	7.5	2.1	11.4	-4.6	21.2	-0.5	6.7	1.3	-0.6	3.5	6.2	3.5	1.3	6.5	3.8	4.3

Source: Collection undertaken by Central Statistical Office.

TABLE 15.3: THIMPHU FOOD PRICE INDEX, SEPTEMBER QUARTER 1987 TO SEPTEMBER QUARTER 1988

December 1979 = 100

Period	Cereals and Pulses	Vegetables and Fruit	Other food	Total food
		Indexes		
Quarter ending:				
September 1987	152.1	214.9	197.3	172.2
December 1987	157.7	234.2	214.2	182.8
March 1988	156.7	196.1	207.8	178.4
June 1988	163.5	236.7	210.6	184.8
September 1988	170.5	192.7	220.1	190.9
		Percentage changes		
Quarter ending:				
September 1987	..	..	..	..
December 1987	3.7	9.0	8.6	6.2
March 1988	-0.6	-16.3	-3.0	-2.4
June 1988	4.3	20.7	1.3	3.6
September 1988	4.3	-18.6	4.5	3.3

Source: Collection undertaken by Central Statistical Office.

ANNEX 1

ADMINISTRATIVE UNITS

1. Chhukha Dzongkhag
   Gewog :
   1. Bongo 2. Chapchha 3. Dungna
   4. Getana 5. Geyli 6. Jagchhu
   7. Metab

   (a) Phuntsholing Dungkhag
   Gewog :
   1. Balujora 2. Gengudala 3. Logchina
   4. Phuntsholing

2. Ha Dzongkhag
   Gewog :
   1. Bee 2. Isu 3. Katsho
   4. Samar 5. Sangbay

3. Paro Dzongkhag
   Gewog :
   1. Dogar 2. Dopshari 3. Doteng
   4. Humrel 5. Lamgong 6. Lungni
   7. Naja 8. Shaba 9. Tsento
   10. Wangchang

4. Samchi Dzongkhag
   Gewog :
   1. Pagli 2. Samchi 3. Tading

   (a) Chengmari Dungkhag
   Gewog :
   1. Chargharey 2. Chengmari 3. Gumauney
   4. Nainital

   (b) Dorokha Dungkhag
   Gewog :
   1. Denchhukha 2. Dorokha 3. Dungteo
   4. Mayona

   (c) Sibsu Dungkhag
   Gewog :
   1. Bangra 2. Biru 3. Lahirini
   4. Sibsu 5. Tendu

5. Thimphu Dzongkhag
   Gewog :
   1. Babesa 2. Chang 3. Dagala
   4. Geyni 5. Kawang 6. Mewang
   7. Teobesa

   (a) Lingshi Dungkhag
   Gewog :
   1. Lingshi 2. Naro 3. Soy

6. Chirang Dzongkhag
   Gewog :
   1. Chirang Dangra 2. Dunglagang 3. Goseling
   4. Kikhorthang 5. Patali 6.Phungtenchhu
   7. Samjong 8. Tshokana

   (a) Dagapela Dungkhag
   Gewog :
   1. Dorona 2. Emiray 3. Goshi
   4. Suntalay 5. Tashiding

   (b) Lamidangra Dungkhag
   Gewog :
   1. Beteni 2. Chaunauti 3. Gairi Goan
   4. Lamidangra

7. Daga Dzongkhag
   Gewog :
   1. Drujegang 2. Kalizingkha 3. Khibesa
   4. Lajab 5. Tsangkha 6. Tsezang

8. Punakha Dzongkhag
   Gewog :
   1. Chhubu 2. Geonshari 3. Guma
   4. Jimi 5. Kabisa 6. Lingbukha
   7. Shengana 8. Talo 9. Teowang
   10. Zoma

   (a) Gasa Dungkhag
   Gewog :
   1. Khamed 2. Khateo 3. Laya
   4. Lunana

ADMINISTRATIVE UNITS (continued)

9. Wangdiphodrang Dzongkhag

Gewog :	1. Athang	2. Daga	3. Dangchhu
	4. Ganteo	5. Gase Tsogog	6. Gase Tsowog
	7. Jena	8. Kashi	9. Nahi
	10. Nisho	11. Phangyul	12. Phobji
	13. Rubisa	14. Sephu	15. Thetso

10. Bumthang Dzongkhag

Gewog :	1. Chhokhor	2. Chhumi	3. Tang
	4. Ura		

11. Geylegphug Dzongkhag

Gewog :	1. Bhur	2. Danabari	3. Geylegphug
	4. Lalai	5. Sershong	6. Surey
	7. Taklai		

(a) Kalikhola Dungkhag

Gewog :	1. Deorali	2. Kalikhola	3. Nichula

(b) Sarbhang Dungkhag

Gewog :	1. Doban	2. Hilay	3. Leopani
	4. Sarbhangtar	5. Singye	

12. Shemgang Dzongkhag

Gewog :	1. Bardo	2. Nangkor	3. Shingkhar
	4. Tong		

(a) Panbang Dungkhag

Gewog :	1. Drokar	2. Ngala	3. Phangkhar

13. Tongsa Dzongkhag

Gewog :	1. Dragteng	2. Korphu	3. Namther
	4. Nubi	5. Tangsibi	

14. Lhuntshi Dzongkhag

Gewog :	1. Gangzur	2. Jaray	3. Khoma
	4. Kurteo	5. Menbi	6. Menji
	7. Metsho	8. Tsenkhar	

15. Mongar Dzongkhag

Gewog :	1. Chaskhar	2. Dametsi	3. Gongdu
	4. Kengkhar	5. Mongar	6. Ngatsang
	7. Saleng	8. Selambi	9. Tangrong
	10. Tsakaling	11. Tsamang	

16. Pemagatsel Dzongkhag

Gewog :	1.Chongshi Borang	2. Dungmed	3. Khangma
	4. Khar	5. Shumar	6. Yurung
	7. Zobel		

17. Samdrupjongkhar Dzongkhag

Gewog : 1. Orong

(a) Dechhenling Dungkhag

Gewog :	1. Dechhenling	2. Norbugang	

(b) Bangtar Dungkhag

Gewog :	1. Bakuli	2. Dalim	3. Martsala
	4. Samrang		

(c) Daifam Dungkhag

Gewog :	1. Hastinapur	2. Louri	3. Serthig

ADMINISTRATIVE UNITS (continued)

18. Tashigang Dzongkhag

Gewog :	1. Kanglung	2. Phongme	3. Radi	
	4. Samkhar	5. Shongphu	6. Tongma Shangtseng	
	7. Uzarong	8. Yangner		

(a) Sakteng Dungkhag

Gewog :	1. Bartsam	2. Bidung	3. Merasakteng
	4. Yalang		

(b) Tashi Yangtse Dungkhag

Gewog :	1. Jangphu	2. Tashi Yangtse

(c) Thrimshing Dungkhag

Gewog :	1. Gomdar	2. Kangpara	3. Thrimshing

(d) Wamrong Dungkhag

Gewog :	1. Khaling	2. Lumang	3. Nanong

TOTAL NUMBER OF GEWOGS - 191

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TABLE 2.3 : PATIENTS TREATED BY BASIC HEALTH UNITS AND DISPENSARIES BY DISEASE, SEX AND AGE, 1987

Disease	Age 0-14			Age 15 and over			All Persons	Percentage
	Males	Females	Persons	Males	Females	Persons		
Diarrhoea/Dysentery	20,523	18,519	39,042	14,796	11,849	26,645	65,687	15.6
Respiratory tract infection	15,673	15,310	30,983	20,984	18,460	39,444	70,427	16.7
Worms	12,851	12,896	25,747	10,986	9,708	20,694	46,441	11.0
Skin infection	14,698	14,249	28,947	14,535	10,458	24,993	53,940	12.8
Malaria/P.U.O	7,826	7,239	15,065	10,008	8,352	18,360	33,425	7.9
Conjunctivitis	4,908	4,824	9,732	4,500	3,312	7,812	17,544	4.2
Otitis media	3,737	3,671	7,408	1,765	1,587	3,352	10,760	2.6
Nutritional deficiency	5,892	6,859	12,751	8,852	11,111	19,963	32,714	7.8
Peptic ulcer syndrome	996	1,404	2,400	6,265	6,268	12,533	14,933	3.6
Disease of teeth and gum	1,165	1,272	2,437	3,190	3,116	6,306	8,743	2.1
Urinary tract infection and nephritis	562	718	1,280	1,511	1,888	3,399	4,679	1.1
Injuries	4,334	4,117	8,451	7,468	3,950	11,418	19,869	4.7
Sexually transmitted diseases	40	88	128	868	714	1,582	1,710	0.4
Other childhood diseases	1,581	1,578	3,159	214	110	324	3,483	0.8
Diseases of female genital tract	-	191	191	-	1,308	1,308	1,499	0.4
Complication of pregnancy and child birth peuperum	-	28	28	-	674	674	702	0.2
Others	5,599	5,869	11,468	12,004	10,610	22,614	34,082	8.1
All DISEASES	100,385	98,832	199,217	117,946	103,475	221,421	420,638	100.0

Source : Department of Health.

TABLE 2.4: PATIENTS TREATED IN BASIC HEALTH UNITS AND DISPENSARIES BY DISEASE, 1985 TO 1987 (a)

Disease	Number			Percentage		
	1985	1986	1987	1985	1986	1987
Diarrhoea/Dysentery	52,668	61,876	65,687	18.2	17.5	15.6
Respiratory tract infection	48,118	58,572	70,427	16.6	16.5	16.7
Worms	33,651	41,415	46,441	11.6	11.7	11.0
Skin infection	34,145	39,834	53,940	11.8	11.2	12.8
Malaria/P.U.O	30,204	30,035	33,425	10.4	8.5	7.9
Conjunctivitis	12,516	17,169	17,544	4.3	4.8	4.2
Otitis media	7,793	7,348	10,760	2.7	2.1	2.6
Nutritional deficiency	20,774	23,962	32,714	7.2	6.8	7.8
Peptic ulcer syndrome	10,852	14,419	14,933	3.7	4.1	3.6
Disease of teeth and gum	5,330	6,944	8,743	1.8	2.0	2.1
Urinary tract infection and nephritis	5,061	6,302	4,679	1.7	1.8	1.1
Injuries	2,699	19,260	19,869	0.9	5.4	4.7
Sexually transmitted diseases	2,059	2,665	1,710	0.7	0.8	0.4
Other childhood diseases	1,263	3,791	3,483	0.4	1.1	0.8
Disease of female genital tract	958	1,189	1,499	0.3	0.3	0.4
Complication of pregnancy and childbirth peuperum	n.a	551	702	n.a	0.2	0.2
Others	21,532	18,977	34,082	7.4	5.4	8.1
ALL DISEASES	289,623	354,309	420,638	100.0	100.0	100.0

(a) Data for later years may be based on more complete coverage and this may affect comparisons over time.

Source : Department of Health.