

CHAPTER 1. COUNTRY, PEOPLE AND INSTITUTIONS

Physical Characteristics

The Kingdom of Bhutan covers an approximate area of 46,500 square kilometers: roughly 150 km north to south and 300 km east to west. The kingdom is bordered by the Tibetan region of China and the Indian states of Sikkim, West Bengal, Assam and Arunachal Pradesh (see Map 1 location map of Bhutan).

The terrain is among the most rugged and mountainous in the world, as most of the country includes part of the Himalayan ranges. The land rises from an elevation of about 100 metres above sea level in the south to more than 7,550 metres above the sea level in the north. The variations in climate are correspondingly extreme. Southern Bhutan is generally hot and humid, while the high Himalayan mountains in northern borders of Bhutan are under perpetual snow. Climate can vary considerably between valleys and within valleys depending on the altitude. Rainfall, in particular, can differ within relatively short distances due to rain shadow effects. Annual rainfall is concentrated in the monsoon season - mid-June to September (see Map ..Rainfall map of Bhutan). Rough estimates of rainfall are:

southern border areas	3000 - 5000 mm p.a.
southern foothills	1200 - 2000 mm p.a.
inner central valleys	500 - 1000 mm p.a.
above 4000 m elevation	less than 500 mm p.a.

Natural Resources

Flora

The flora of Bhutan are exceptionally diverse as a result of a great range of altitudinal zones and varied climatic conditions, and 72% of the country is covered by forests of fir, mixed coniferous, temperate and broadleaf species. In addition, there are many species which are unique to Bhutan. Moreover, much of Bhutan's flora have remained undisturbed so that Bhutan probably has the richest flora in the Himalayan region. The flora wealth of Bhutan is highly appreciated by both Bhutanese and the outside world. The government is determined to conserve this wealth and has set a national policy to maintain at least 60% of land under forest cover for all times to come.

Fauna

A number of rare animals can still be found since Bhutan's flora have remained undisturbed. The exact number of species is unknown, but over 165 have been reported. Rare animals including the golden langur, takin and blue sheep are found distributed quite widely. Tigers, leopards, snow leopards, red panda, gaur, serow, Himalayan black bears, brown bears, wild pigs, musk deer and other types of deer are commonly found in many parts of Bhutan. The Phobjikha valley in Wangdue dzongkhag and Bomdiling in Tashiyangtse are two of the three wintering grounds for the rare Black-necked crane. 26% of the country has been declared as nature parks and reserves, (see Map .Protected system map.) which form havens for a number of the world's rare and endangered species.

Agriculture

While 72% of the country is covered by forest, the area suitable for agricultural production is limited, mainly by the very steep terrain and by altitude. The river valleys and the flatland in the southern foothills account for most of the fertile cultivable land whereas the northern alpine belt below the snowline is suitable only for pasture. The most recent estimates suggest that 7.8% of total land is used for agricultural production, including dryland and irrigated crop production and orchards. Most rural households also own livestock, which are grazed in the forest areas and pastures.

Water

With the high precipitation and an altitudinal variation of up to 7,550 metres, water resources are abundant in Bhutan. While the altitudinal difference provides many possibilities for hydro-power generation, the main rivers are generally deeply incised and irrigated agriculture is limited to areas served by gravity from small perennial streams. The four major rivers are Ammochu, Wangchu, Punatsangchu and Manas, all of which flow in a north-south direction and discharge into the Brahmaputra in the plains of India. The Power Master Plan estimates that these rivers could provide 20,000 MW of electricity. As local requirements are still quite modest, the major share of the energy produced will be exported representing a large part of Bhutan's total export revenue.

Minerals

The exact magnitude of Bhutan's mineral resources is unknown, as only 30% of the country has been mapped geologically. Mineral prospecting has been undertaken mainly in the southern foothills and inner Himalayas as prospecting in the other areas is constrained by lack of transport infrastructure. Geological mapping has indicated the occurrence of coal, limestone, dolomite, talc, marble, gypsum, slate, zinc, lead, copper, tungsten and quartzite deposits (see Map 25.1 Geological map of Bhutan). Mining is strictly regulated for environmental reasons, but limited coal, limestone, dolomite, gypsum and quartzite are mined for domestic use and export.

People

History

Stone implements indicate that the country was inhabited as early as 2000-1500 B.C. Although Bhutan's history since the 7th century is becoming increasingly known, its more ancient history remains to be brought to light. The country consisted of small but independent principalities until Shabdrung Ngawang Namgyal (1594 - 1652) unified the country into one nation in the early 17th century. He established a theocracy in 1652 and gave Bhutan an administrative system, and a code of law. The theocracy established by Shabdrung ended in 1907 when Ugyen Wangchuck (1862 - 1926) was elected as the first king of Bhutan by popular consensus. Since the establishment of the monarchy in 1907, there have been four hereditary kings:

- | | |
|-------------------------|-------------|
| 1. King Ugyen Wangchuck | 1907 - 1926 |
| 2. King Jigme Wangchuck | 1926 - 1952 |

- | | |
|--------------------------------|-------------|
| 3. King Jigme Dorji Wangchuck | 1952 - 1972 |
| 4. King Jigme Singye Wangchuck | 1972 - |

Throughout its history, Bhutan has remained independent, being one of the few countries in Asia never to have been colonized. Bhutan was fairly isolated from the outside world until the 1960s when the third King Jigme Dorji Wangchuck (1952 - 1972) opened links with other countries and initiated the development of a modern economy. His Majesty the late King also introduced many social, legal and constitutional reforms, which have far-reaching effects.

Religion

Buddhism was introduced in Bhutan in the 7th century by Guru Padma Sambhava. In the centuries that followed, Bhutan was home to many sages and saints including the great saints-scholars like Longchen Ramjam, also known as Kuenkhen Longchen Ramjam, (1308-1363). Various schools of Buddhism in Bhutan assimilated other earlier practices and beliefs. The aspirations towards enlightenment and the belief in the innate goodness of human beings are widely shared among Buddhists and majority of the Bhutanese are Buddhists. Hinduism is another religion, practised particularly in Southern Bhutan. The Hindu religion as practised by Southern Bhutanese has many common saints and divinities with Vajrayana, the school of Buddhism prevalent in Bhutan.

Buddhism has a significant influence on the values of the Bhutanese and has shaped the institutions, organizations, arts, drama, architecture, literature and social structure. Bhutan's culture, as in other societies, is continually adapting itself in the face of development.

The importance of religious institutions continues in present day Bhutan, as signified by the strength of the monk body who number about 5000 in Dratshangs or Rabdeys supported by the state. This figure takes into account only those monks who are part of the formal monastic structure supported by the state and excludes those who are not part of the state sponsored Dratshangs. The Rabdeys are based mainly in dzongs. Each Rabdey is headed by a Lam Neten who is appointed by His Holiness the Je Khenpo (Head Abbot), the elected Head of the Central Monk Body. The present Je Khempo is the 70th incumbent. His Holiness the Je Khenpo is the chairman of the nine-member Dratshang Lhentshog. Monks continue to play an important role in the daily lives of the people in performing religious ceremonies, and in promoting and preserving traditional scholarship. They are also actively involved in the process of development while constantly renewing their relevance to society in times of change.

Population

The population of Bhutan is estimated at 600,000. As in most developing countries, the proportion of the population under 15 is as high as 43%. As this age group enters the reproductive period, the population growth rate is likely to rise above the current 3.1%, unless family planning is more widely practised. With this in view, various family planning options with the latest techniques are made freely available, accompanied by a family planning information campaign.

Settlements

Bhutan is one of the least populated countries in South Asia. Most of the population is concentrated in the valleys, while large areas at higher altitudes in the north of the country are virtually empty except for nomadic herders.

Most Bhutanese still live in villages in an extended family system or maintain strong links with their rural families. The average size of the household or family is estimated to be 6.5. The number of houses per village varies from 2 to 100 with an average of 43. Thimphu in Western Bhutan is the capital with an estimated population of 30,000 - 40,000 people. The other main urban settlements are Gayleghug, Phuntsholing and Samdrup Jongkhar, all of them in the south. Towns are developing in all the 20 dzongkhag (districts) headquarters.

Employment and Incomes

Although significant economic progress has taken place since the 1960s, the majority of the population remains dependent on agriculture for incomes and employment. The national per capita income stands at US\$ 470 (1995). As most rural settlements are far from markets, there has been little potential for the sale of surplus production of crops and livestock, although this is beginning to change with the opening of roads in the once inaccessible areas. The type of crops produced varies considerably, depending on climate and access to markets. Staple crops include rice, maize, potatoes, buckwheat, barley and wheat. Livestock, an extremely important part of the farming system, are kept for draught power, milk and meat. Production of horticultural crops is increasing as their export potential has been realised. By 1994, Bhutan achieved 77% self sufficiency in cereals and 38% in edible oils. While self-sufficient in maize, barley, millet and buckwheat, Bhutan is only 64% self-sufficient in rice and 65% in wheat.

85% of the population derive a living from agriculture and other traditional activities in the rural sector. Employment in the modern sectors of the economy is limited, apart from public services of various kinds, and small-scale trade in the urban areas. Industrial development is as yet limited and does not provide significant employment. The Government has been responsible for the establishment of several productive enterprises, but the private sector is being encouraged to take over these activities. Unlike many other developing countries, unemployment is not yet a major problem.

Transport and Communications

Bhutan's total road network measures about 3,200 km and the main routes consist of an east-west highway and four north-south highways. The road network connects all dzongkhags and 16 dungkhags. Major towns and villages are also connected by motor roads. However, some areas can only be reached by mule tracks, foot trails, and cantilever and suspension bridges. Although horses are the main beast of burden, yaks and oxen are used for transportation in some parts of Bhutan. The only airport, at Paro, is in regular use. The national airline, Druk Air provides services to Dhaka, Kathmandu, Delhi, Calcutta and Bangkok.

Telecommunication services consisting of telephone, telegraph, telex, facsimile and email, including the international telephone links (see Map 16.1 Telecommunication

services), are available to the dzongkhag headquarters throughout the country except a few dzongkhags in western Bhutan. However, civil wireless facilities are available in all the dzongkhags.

Institutional and Legal Framework

Monarchy

His Majesty King Jigme Singye Wangchuck (born 11 Nov. 1955), fourth in Wangchuck Dynasty, is the head of the Government and of the State. His Majesty formally ascended the Golden Throne on 2 June 1974. Since then, under his leadership, great improvements have been achieved in the living standards and quality of life of the people.

Until the beginning of the twentieth century, Bhutan was ruled by the dual system of administration known as "chhosi" which was initiated by Shabdrung Ngawang Namgyal in 1651. Shabdrung Ngawang Namgyal created the office of the Druk Desid to look after the temporal administration of the country and the Je Khenpo to look after religious matters. Although the successors of Shabdrung lacked his stature and vision, this remarkable system provided a very workable form of government for over two centuries. However, by the second half of the 19th century, frequent disputes over the issue of succession to the office of the Shabdrung brought internal strife and instability in the country. The desire of the clergy, officials and the people for political stability and internal peace, therefore, led to the establishment of hereditary monarchy.

The year 1907 marked the beginning of a new era in the history of Bhutan. On December 17 of that year, the clergy, the State Councillors, the Chillahs of all the districts, and the representatives of the people met at Punakha and unanimously elected the Trongsa Penlop Ugyen Wangchuck as the first hereditary King of Bhutan. After becoming Trongsa Penlop in 1883, Ugyen Wangchuck displayed extraordinary qualities as a leader and statesman. He was a deeply devout and religious man and imbued with a genuine desire to improve the conditions of his people. By uniting the country and establishing a central authority, he brought peace and stability to the country and laid the foundation for the emergence of modern Bhutan.

Organizations of Government

The National Assembly, the Royal Advisory Council, the Judiciary, the Council of Ministers and the Central Secretariat are the organizations that play a crucial role in the governance of the Kingdom of Bhutan (see figure 1.1). However, at the district, block and village levels there are established mechanisms that ensure people's participation in the decision making process. On the personal initiative of the present King, the decentralization of administration was implemented in 1981 through the establishment of the Dzongkhag Yargye Tshogchungs (DYTs or District Development Committees) followed by further decentralization to the Gewog (block) level in 1991 with the introduction of the Gewog Yargye Tshogchungs (GYTs or Block Development Committees) has enhanced the capacity of traditional local institutions. Under the present King's leadership and guidance, the strengthening of these local institutions and devolution of power from the centre have led to people's active participation, and the

crucial role of decision-making has been given to the people themselves at the Dzongkhag and Gewog level.

The Tshogdu (National Assembly) has 150 members of which 105 are chimmis (representative of the people) elected for a term of three years. The monk bodies elect 10 monastic representatives, while the remaining 35 members are representatives of the Government and nominated by the King. The Tshogdu sits twice a year, in addition to emergency sessions. The Royal Advisory Council consisting of 9 Councillors was established in 1965 to advise the King and the Ministers. Six Councillors are elected from the representatives of the people; two from the representatives of Monk Bodies (for one year term) and one nominated by the King acts as Chairman of the Council.

The central government consist of eight Ministries and their respective Divisions, 5 Commissions, the Royal Bhutan Army, Royal Bhutan Police, Royal Body Guards and several autonomous bodies. The Ministries include Foreign Affairs, Planning, Communications, Trade and Industry, Finance, Health and Education, Agriculture and Home Affairs (see Figure 1.1). The five Commissions are the Planning Commission, the Royal Civil Service Commission, the Special Commission for Cultural Affairs, Dzongkha Development Commission and National Environment Commission.

Bhutan has resident diplomatic representations in India, Bangladesh, Kuwait, New York and Geneva. The Bhutanese Ambassadors in these places are accredited to several other countries. Apart from representatives of international agencies, only India and Bangladesh have resident diplomatic representatives in Thimphu.

The country is divided into 20 Dzongkhags (see Political Map). Larger Dzongkhags are sub-divided into Dungkhags(sub-districts). The Dzongkhags and, where they exist, Dungkhags, are further sub-divided into 196 gewogs (blocks). Dzongkhags are governed by Dzongdags who also function as the chairman of the DYTS, and Dungkhags by Dungpas. The Gewogs are administered by Gups who are elected by the community and who also function as the chairmen of the GYTs. The Gups assist the Dzongdags and Dungpas in collection of taxes, mobilization of work force for community services and public construction, settlement of disputes and many other local activities including implementation of development programmes.

Bhutan's legal system is based on codes laid down by Shabdrung, the spiritual ruler of the 17th century. The present laws as they exist in Thrimshung Chenmo (Supreme Laws) were enacted by the Tshogdu (National Assembly) in 1957 under the aegis of His Late Majesty Jigme Dorji Wangchuck (1928-1972), the third King. Disputes are usually settled by Gups. Disputes which fail to be resolved out of the court by the Gups go to the District Courts. Each Dzongkhag has a court headed by a Thrimpon. A Dzongkhag court has both original and appellate jurisdictions. The next level of jurisdiction is the High Court in Thimphu.

Constraints to Development

Right from the inception of its first development plan in 1961, the RGoB has recognised that Bhutan's economic future is linked to its neighbours and to the world economy.

Having abandoned a strategy of self-imposed isolation, Bhutan has looked to increased economic interaction with other countries as an avenue for development. The development of Bhutanese economy is, however, constrained by several factors:

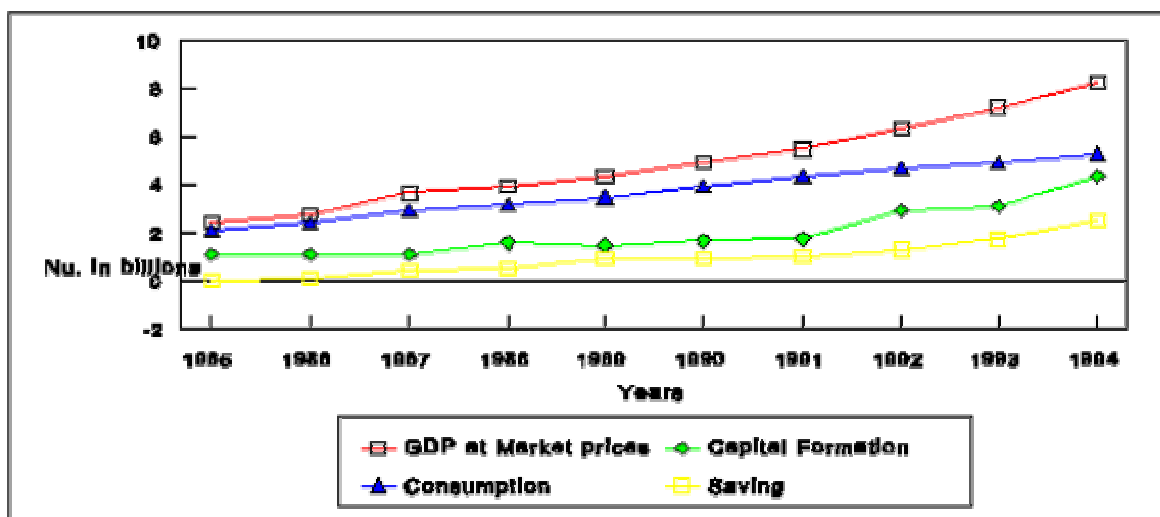
- Bhutan, as a landlocked country, is geographically isolated from other countries in the region and is as far as 800 Kms from the nearest sea port in Calcutta, India. This isolation substantially increases the costs of transport of goods into and from Bhutan.
- Because of the extremely mountainous terrain, the area of land suitable for agricultural production is very limited. This restricts the potential for increasing output from the agricultural sector and increases the risks of environmental degradation.
- The population is distributed in remote scattered settlements, to take advantage of the limited land suitable for agricultural production.
- The above factors have made the provision of roads and communication networks difficult, and the delivery of health and education services costly.
- Unlike most developing countries, Bhutan has a relatively small population and the supply of manpower is a major constraint. The fairly recent introduction of modern education has not been able to make good the shortage of manpower with the necessary skills for a developing economy;
- As most of the population have been subsistence farmers until recently, the level of monetization has remained low. This has restricted the Government's ability to raise domestic revenues, and Bhutan has relied on external assistance for the funding of development programmes.

Since the 1960s, Bhutan has made considerable progress in overcoming many of these constraints, particularly in terms of infrastructure. In the 8FYP, it will continue its efforts to off-set the limitations imposed by these constraints.

CHAPTER 2. REVIEW OF ECONOMIC PERFORMANCE (1985-1995)

Overview

By the end of 1985, Bhutan had completed 24 years of planned development. Nonetheless the Bhutanese economy was still dominated by agriculture and vast majority of Bhutanese depended on agriculture for their livelihood. In 1985, agriculture contributed 54.9% of GDP as shown in Table 2.1 Construction sector with 11.1% was the next major contributor to GDP. Other sectors that contributed a significant share to GDP were government services and trade and allied activities, each contributing more than 8% of GDP. Financial services contributed 7.2% to GDP. Transport, communication and manufacturing sectors which were still in their nascent stages contributed only 5.2% and 4.9% respectively. Prior to 1986/87, before the commissioning of Chhukha Power project, Power sector's contribution to GDP was negligible.



During the decade, the Bhutanese economy experienced growth rate of 6.8% p.a, doubling the real GDP to Nu. 2946 m from Nu. 1,519.8. This was largely due to the commissioning of Chhukha Power Project in 1987/88 and its forward linkages to other sectors, particularly manufacturing. During the period, the composition of GDP had also changed substantially with Agriculture sector's share declining from 55% to 38%. The contribution of modern sectors like manufacturing, electricity, transport & communication increased significantly (see Table 2.1).

The total real investment (Gross Domestic Capital Formation) increased on an average by about 8.6% with investment on machinery and equipment remaining on the higher side. The large investment made by the Government during the early 1990s was due to the construction of sewerage system, renovation of Punakha dzong, Telecommunications boosted the growth. As development programmes accelerated and the associated increase in the flow of funds from external donors, the Government investment formed 52% of the total in 1994. On the other hand, with the Government's

policy to encourage private sector and privatization, the volume of private investment is also steadily increasing.

The savings have shown an encouraging trend as it rose from Nu. (-)4.9 m in 1985 to Nu. 2523.8 m by 1994. This growth is attributable mainly to the private sectors' saving. The government saving on the other hand, has remained mostly negative, as a proportion of GDP it was negligible.

The consumption expenditure as percent of GDP had gradually declined from 86% in 1985 to 63% in 1994 with private consumption declining from 68% to 39%. Private consumption was concentrated more on basic necessities, with only a small segment of the population indulging in luxury items. On the other hand, government consumption expenditure remained around 25% of GDP. This is commendable, especially in view of the increased recurrent expenditure government had to incur on social sectors during the period.

The Consumer Price Index during the decade increased on an average by 9.5 %.

While exports have continued to pick up in absolute terms both with India and Third countries, the indication is high growth of imports has continued and will continue to grow. Thus, the trade balance was always negative. Nonetheless, due to generous foreign grants and aids, Bhutan enjoyed a surplus overall Balance of Payments entailing the built up in reserve which was over 12 months of import cover by the end of the decade .

Aggregate growth in the various sectors

Agriculture and allied activities

The agriculture sector showed a modest growth of 3% p.a.. While the share of agriculture proper increased due to higher productivity, the share of forest and livestock sector declined in the 1990s. This was due to the restriction on mass scale logging activities and the number of cattle reared to prevent unsustainable use of forest resources by the people to prevent environment from hazards like deforestation, soil erosion, etc.

Mining

Due to lack of adequate geological information, lack of expertise and government's policy of sustainable use of resources and environmental conservation, mining and quarrying sector's contribution to GDP was negligible.

Manufacturing

The commissioning of Chhukha Power Project enabled the Royal Government and the private sector to develop medium to large power-intensive industries. Consequently, the manufacturing sector received a boost to its growth after 1987/88. The sector witnessed a growth rate of 13.5% p.a. which is attributable largely to the increased output from Penden Cement Authority Limited (PCAL), Bhutan Chemicals and Carbide Limited (BCCL), Bhutan Board Products Limited (BBPL) and recently from Bhutan

Ferro Alloys Limited (BFAL). The share of the manufacturing sector to GDP in 1980 prices increased by more than three times during the period from Nu. 75.4 m in 1985 to 268.3 m in 1995.

Electricity

Contribution of electricity, which was Nu. 6.0 m in 1985, increased to Nu. 244.9 m in 1995. Its contribution to GDP peaked in 1988 with Nu. 225.1 m. Thereafter, there was no substantial increase in its contribution until 1993, when Power tariff was raised from Nu.0.27 per unit to Nu.0.37 per unit. The tariff was further raised from Nu. 0.37 to Nu. 0.50 in 1995. This sector grew at the rate of 48.2% p.a. during the decade under review.

Construction

The share of construction sector to GDP was high during the period 1983-84 as numerous major construction works were undertaken such as Chhukha Power Project. After the completion of Chhukha Power Project, no major projects were undertaken and its contribution to GDP declined and remained low until the early 1990s. The contribution of this sector increased since 1992 with the starting of major projects such as Kurichu power, Basochu power, expansion of Penden cement plant, Punakha dzong renovation, Telecommunications, Flood protection works at Punakha, Thimphu and Phuntsholing Sewerage project, etc. The share of this sector is expected to increase in the remaining years of 7FYP and the 8 FYP with the start of the major projects such as Dungsum cement plant, Tala hydro power project, etc. Despite its fluctuating trend, the Construction sector grew at an average of 6.5% p.a.

Trade and Commerce

Although the share of Trade and its allied activities to GDP increased over the years, this sector experienced one of the slowest growth rates between 1985 and 1995, growing at an average rate of 3% p.a. This low growth was due to slow growth of service industries. Further, for avoiding unwanted side-effects of the excess influx of the tourist in the country, the government adopted a policy of high value low volume tourism, restricting the number of tourist by charging a high tariff. However, with government's continued emphasis on the involvement of private sector in all spheres of socio-economic development, it is anticipated that trade and commerce will experience a higher growth in the 8 FYP.

Transport and Communications

Transport, storage and communication sector experienced one of the most rapid growth rates during the decade, 1985-95. The achievement of this sector was the outcome of the Government's act of privatizing the bus services in the 1980s for efficient management and better return on capital employed. With the purchase of an additional aircraft and with setting up of satellite communication system, the overall contribution of transport and communication sector further increased with a growth of 11.8 during the period.

Services

The share of government and financial services experienced a growth rate of more than 9% p.a. during the period as a result of growing population and the Government's

commitment to provide free education and other social services. The increase in the share of Government services was also due to the grant of the Special Government Allowance (SGA) to the civil servants in 1994. The share of financial services, on the other hand, increased because of better performance of the financial institutions like the RMA and Bank of Bhutan. The increased contribution of the financial institutions to GDP was also credited to the creation of two other financial institutions during the period; BDFC, in 1988 and the separation of UTB from RICB, as an independent financial institution in 1992.

Table 2.1 Sector-wise shares of GDP in 1985 & 1995 (in 1980 prices)

SECTORS	1985	1995	Average growth (%)
Total	100.0	100.0	

Table 2.1 Gross Domestic Product at factor cost by kind of activity in 1980 Prices

Sectors	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995 (Pro)	Compound growth (%) 85-95
1. Agriculture	834	881	926	940	963	993	1025	1006	1045	1066	1119	2.9
1.1 Agriculture Proper	412	436	458	486	515	531	545	556	564	575	601	3.9

1.2 Livestock	169	177	185	192	202	212	229	202	227	232	246	3.8
1.3 Forestry and logging	254	267	283	263	247	250	250	249	254	259	271	1
2. Mining and quarrying	13	22	22	19	22	19	27	24	26	30	38	11.6
3. Manufacturing	75	71	105	110	129	158	187	209	217	224	268	13.5
4. Electricity & gas	6	60	229	225	222	204	200	210	232	230	245	48.2
5. Construction	169	142	152	129	136	137	116	157	182	280	317	6.5
6. Wholesale & retail trade, restaurant and hotels	132	143	142	129	134	135	145	161	164	170	178	3
7. Transport, storage and communication	79	84	91	122	142	172	182	192	223	231	242	11.8
8. Finance, insurance and real estate	110	126	136	141	163	212	209	215	238	245	281	9.8
9. Community, social & personal services (Government)	126	169	200	210	217	223	233	252	267	296	322	9.8
Less : Imputed bank service charges	-25	-24	-30	-32	-41	-29	-21	-28	-45	-55	-63	
Gross Domestic Product	1520	1675	1973	1994	2087	2225	2303	2397	2549	2716	2946	6.8

Growth rate of GDP over preceding year (%)	3.7	10.	17.	1.2	4.7	6.6	3.5	4.1	6.3	6.5	8.5
		2	8								

Human Development

Economic growth however is not the goal of development; human development is. Income expansion and increased commodity production are only means that have the potential for enhancing human capabilities. They are useful only to the extent that they can contribute to “Gross National Happiness”. What matters is how secure people feel, the peace and comfort they enjoy, the richness of human lives. Recognizing that there is no automatic link between economic growth and human development, planning in Bhutan has put in place several policies that have enabled the translation of economic growth into human development.

Growth-mediated Security

Bhutan has given the top-most priority to investment in people. Every effort has been made to channel economic growth for ensuring universal access to basic health, education and essential social services. Today, every family in Bhutan has shelter and access to land holdings; every child is entitled to free education; and every individual is offered free medical treatment. An effective health care system is in place that provides access to 90% of the population. An extensive outreach system has been designed that ensures that help is made available as soon as possible even in remote villages. 58% of the rural population has access to piped drinking water; and 70% of rural households have access to latrines.

During the First Plan, 59% of the expenditures were incurred on public works for the creation of infrastructural facilities. There has been a steady decline in the allocations for public works since then, and during the Seventh Plan, only 8% of the development outlay was earmarked for the purpose. Allocations to social sector like health, education, water and sanitation went up from 12% during the First Plan to 27% during the Second Plan. They varied between 16-17% during the subsequent plans. During the Seventh Plan, the allocation increased to 22.6%.

Judicious Financing of Development

In keeping with Buddhist values, need rather than greed has been the guiding principle in revenue mobilization. Bhutan has used a mix of local revenue mobilization, foreign aid and international loans to finance its development.

Options for domestic tax resource mobilization have been limited in Bhutan. Until 1987 Bhutan relied primarily on foreign aid for its development. The domestic resource mobilization prospects changed in 1987 with the commissioning of the Chhukha hydropower project. In 1993, about 90% of the electricity generated by Chhukha was exported to India; and RGOB’s revenues doubled between 1985/86 and 1987/88. By 1994, Chhukha accounted for 11% of total resources generated by the government.

In the early 1980s, Bhutan's external debt was negligible. But because of loans for developing the power sector, the total outstanding debt had risen to US \$133 million by 1994. Debt service payments have risen to 20% of exports of goods and services. Government revenues account for about 20% of the GDP. With little scope to increase domestic taxes, recurrent budget requirements, especially for the social sectors, are under considerable strain.

The reliance on foreign grants may seem large, but it is spent on development projects effectively and judiciously. Donors recognize and respect the constraints under which Bhutan has to operate, especially in terms of conserving natural resources, not only for Bhutan's sake but for the security of the global environment. There is also additional potential for revenue mobilization from the further expansion of hydropower projects which the Government has not yet tapped.

Preventing rather than Correcting Market Failures

The country has always attempted to prevent market failures from occurring so that the question of correcting them does not arise. For example, recognizing the global responsibility placed upon Bhutan as one of the world's ten ecological "hotspots", every effort has been made to prevent excessive logging. The Government has set the minimum forest coverage at 60% of Bhutan's area, and monitors deforestation and reforestation activities very closely.

Despite the potential that exists, the country has not made tourism a major source of revenue. The Royal Government is fully aware not only of the negative impact that a large number of visitors is likely to have on the domestic environment; it is even more concerned about the negative externalities of tourism. Similarly, the efforts to build and develop growth centres in rural areas is a conscious strategy intended to prevent unnecessary migration to the cities with all its accompanying problems of congestion, pollution, homelessness, etc.

Impact on Human Development

CHAPTER 3. LONG-TERM DEVELOPMENT OUTLOOK

Approach to development

The Royal Government's past development efforts, and those of the people themselves, have consistently been directed to improving living standards, including spiritual well-being, preservation of cultural values and the physical environment. Since Bhutan opened its doors to the outside world in the 1960s, the Royal Government has welcomed external assistance on a selective basis to support its successive development plans, while seeking to ensure that such aid promotes self-reliance on a sustainable basis, rather than dependence. As with all countries, the preservation of national security is seen as a prerequisite for a meaningful development.

These broad goals are reflected in the 8FYP objectives, and development programmes outlined in this document, but the time-scale for realizing the benefits of such socio-economic development extends far beyond the life span of a single five year plan. For the 8FYP, therefore, an attempt is made for the first time to include a longer 20 year perspective and a macro-economic outlook for the five years of the Plan itself.

A Perspective to 2017

It is important that there should be a longer-term assessment of the macro-economic variables that are expected to influence the realization of the country's vision of the future. However, a period ending fifteen years beyond the 8FYP is too far away to take more than a tentative look at the economic growth prospects. Hence only the GDP and the population parameters are considered. The following provides a summary with these variables in view, starting with Table 3.1, a forecast of the national income and population from the beginning of 9FYP to 11FYP.

The population growth is projected to decline from 2.59% in 2001/02 to 1.63% in 2011/12 and to 1.31% in 2016/17. On the basis of these figures, the population is expected to reach 931,711 in 2016/17 from 600,000 in 1996 (see Chapter 14). During this period, the proportion of the population below the age of 15 years (42% in 1996) is likely to increase and stay close to 50%, which will induce a correspondingly higher expenditure on health and education.

The estimate of national income by 2016/17 is based on the accumulated performance of the economy from the current plan until the end of the 11FYP. The assumed performance during each five-year period of the overall growth rate and of the contributing sectors is examined below.

The growth in GDP for the 7 FYP is estimated to be around 5.9%. The sectors which make significant contributions in terms of growth are: mining and quarrying (14.1 %), manufacturing (9.1 %), electricity (3.9%), construction (20.3%), transport and communications (5.9%), finance, insurance and real estate (7.7%), and community and social services (6.7%).

GDP for the 8 FYP is projected to grow at an average of about 6.7% per annum. The sectors which are expected to make a significant contribution to growth are: mining and quarrying (19.4%) manufacturing (12%), electricity (7%), construction (7%), transport and communications (10%), finance, insurance and real estate (10%) and community and social services (6%).

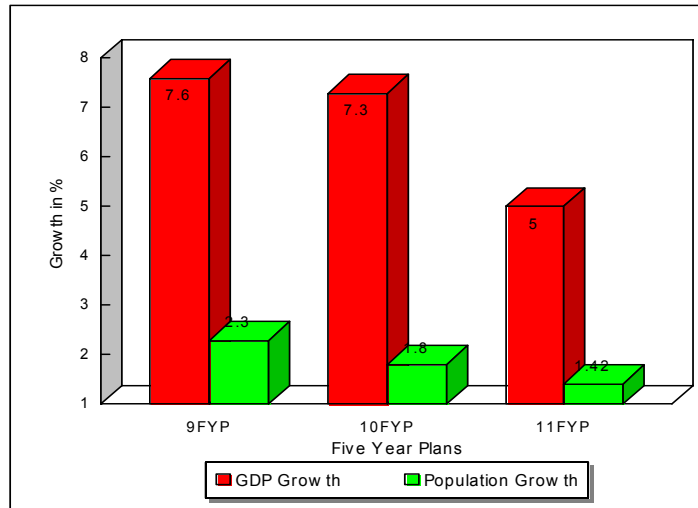
The preparation of detailed forecasts for the 9, 10 and 11 FYPs, is more difficult because of the unpredictable behaviour of the financial variables over the longer period. The method used here to forecast GDP is based on the assumption that the economy will have an underlying average growth rate of about 5% per annum until year 2005/06, and about 4.5% thereafter. This underlying growth rate is then boosted upwards by larger projects coming on stream, especially in the power sector. The underlying growth rate assumes a steadily growing private, financial and horticultural sector, the latter growing in accordance with its master plan projections.

Table 3.1 Forecast of national income and population, 2002-2017

	9 F YP					9 FYP comp ound grow th	10 FYP					11 FYP comp ound grow th	11 FYP					11 FYP com pou nd gro wth
	2002 /03	2003 /04	2004 /05	2005 /06	2006 /07		2007 /08	2008 /09	2009 /010	2010 /011	2011 /012		2012 /013	2013 /014	2014 /201 5	2015 /016	2016/ 017	
GDP in 1980 prices	4465 .5	4688 .8	4923 .2	5169 .4	5402 .0		5645 .1	5899 .1	6164 .6	6442 .0	6731 .9		7034 .8	7351 .4	7682 .2	8027 .9	8389. 1	
Tala					703. 8		703. 8	703. 8	703. 8	703. 8	703. 8		703. 8	703. 8	703. 8	703. 8	703.8	
Wangdue Hydro							524. 4	524. 4	524. 4	524. 4	524. 4		524. 4	524. 4	524. 4	524. 4	524.4	
Hydro-power project (2000 MW)										690. 0			1380 .0	1380 .0	1380 .0	1380 .0	1380. 0	
Total GDP	4466	4689	4923	5169	6106		6873	7127	7393	7670	8650		9643	9960	1029 0	1063 6	1099 7	
Growth over the previous year	5.0	5.0	5.0	5.0	18.1	7.5	12.6	3.7	3.7	3.8	12.8	7.2	11.5	3.3	3.3	3.4	3.4	4.9

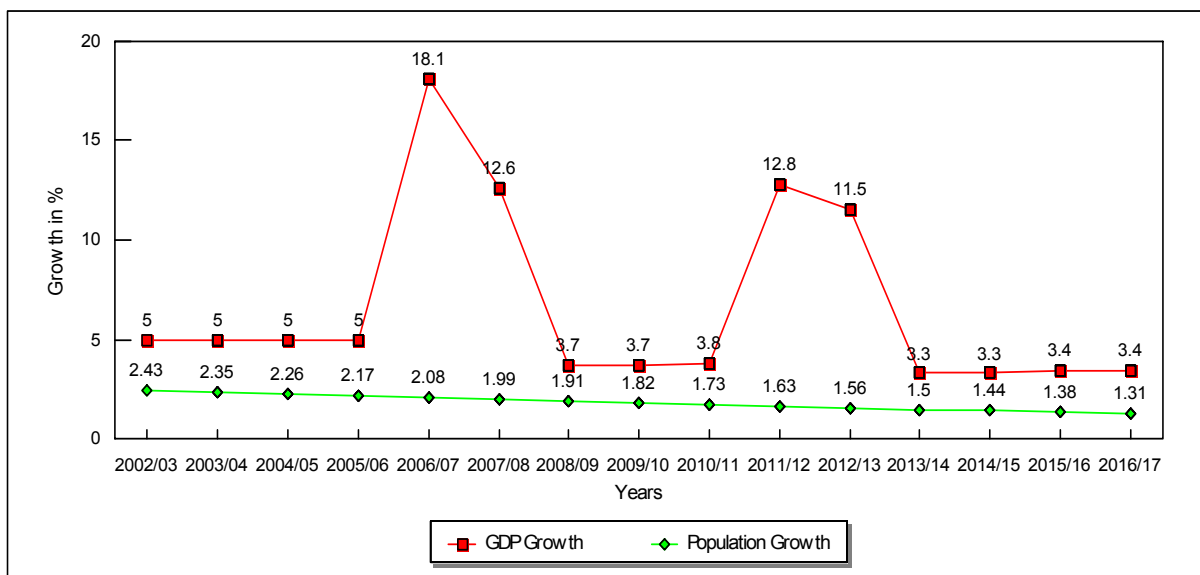
Population	0.72 5	0.74 2	0.75 9	0.77 5	0.79 2		0.80 8	0.82 3	0.83 8	0.85 3	0.86 7		0.88 1	0.89 4	0.90 7	0.92 0	0.932	
Population Growth Rate(%)	2.43	2.35	2.26	2.17	2.08	2.70	1.99	1.91	1.82	1.73	1.63	1.80	1.56	1.50	1.44	1.38	1.31	1.5
Per capita real GDP (Nu.)	6159	6319	6486	6670	7709	4.5	8507	8660	8822	8992	9977	5.2	1094 6	1114 0	1134 6	1156 1	1180 0	3.4

In 2006/07 (9 FYP) underlying 5% p.a. growth rate is boosted by about 13% from the additional power generation and distribution from Tala. During the 9 FYP, therefore, an average annual growth rate of about 7.5% is projected. In 10 FYP (2007/08-2011/13) and 11FYP (2012/13-2016/17), the underlying growth rate of 4.4% is expected to be boosted further by two major hydropower projects with over 2000 MW.



The annual average growth rates for the 10 and 11 FYP's are 7.2% and 4.9% respectively. The

growth rate during 11 FYP shows a decline from the previous growth rates estimated for the 9 FYP and 10 FYP. However, the annual average rate of 4.9% can be further boosted upwards if new projects, unforeseen at the present time, come on stream (see figure 3.1). In addition, the economy at that level of income will have a higher multiplier effect on the



economy, which has not been taken into consideration in estimating the GDP projections. Moreover, in absolute terms, a growth of 4.9% on a bigger economy is in itself a substantial achievement.

It must be stressed that the high growth rates projected in 9 FYP and 10 FYP depend heavily on the implementation and completion of the big power sector projects. The assumed decline in the population growth rate from 2.59% in 2001/02 to 1.31% in 2016/17 from its current rate of 3.1%, to produce a population of 931,711 in 20016/17, will in turn depend primarily upon the successful implementation of family planning programmes.

The per capita income, in real terms (at 1980 prices) is envisaged to reach Nu. 11,800 by 2016/17. This means that the per capita income of Nu. 5181 (at 1980 prices) at the end of 7 FYP, is expected to more than double by the end of the 11 FYP.

CHAPTER 4. EIGHTH PLAN OBJECTIVES, STRATEGIES AND OUTLOOK

Objectives and Strategies

Self-reliance

The central theme of the 8 FYP development programmes will be mustering of efforts towards achieving self-reliance as expressed by His Majesty the King:

"National self-reliance in the Bhutanese context means ultimately to be able to stand on one's own feet, have the power of decision in one's own hands, and not be dependent on others."

The achievement of the goal of national self-reliance will largely depend on continued progress being made in human resource development and the application of technology appropriate to Bhutan's development needs. The expansion and improvement of education and technical training, and of HRD in all economic sectors, are therefore reflected throughout the 8 FYP, and geared to both public and private sector needs. While vocational training, particularly in technical fields claims high priority, improved management will also be addressed. Both as an essential tool for self-reliance and as an end in itself, the focus on HRD includes education and health as key elements. The 8 FYP, therefore, includes further investment in preventive medicines and improved health services, with continued efforts to maximize cost-effectiveness.

Investment in essential social services is balanced by investment in the economic sectors to increase GDP, personal incomes and government revenue. Economic sector growth will come through increased production and productivity, creation of employment opportunities, expansion of trade in terms of scale and diversified markets, and through hydropower development, for which there is immense potential. Investment in essential infrastructure, particularly the development and improvement of surface transport and telecommunications, will also receive high priority. In all these aspects of development, care will be taken to avoid over-exploiting the country's natural resources. Self-reliance will also be promoted through continued encouragement of local community participation, and of selective privatization and decentralization.

Sustainability

Sustainability is one of the main criteria in the 8 FYP for the selection of social and economic programmes and projects. It requires that all development is consistent with environmental conservation and cultural values, and that it enhances the capacity of the country to increasingly provide, from its own resources, the financial and other services required to support self-sufficiency. At least for the next ten years or so, social and economic development is likely to require continued external assistance, but towards the end of that period with sound policies and management, Bhutan will become increasingly self-sufficient in terms of skilled manpower and both capital and recurrent resources.

During the 8 FYP itself, the enhancement of national revenue to support development goals from both tax and non-tax sources will be an important objective. The tax base, 7% of GDP, is relatively low as compared to other developing countries. With regard to non-tax revenues, effective and prompt revision of electricity tariff rates, higher surpluses from public

enterprises and gradual introduction of user charges are expected to yield a significant increase in revenues. These necessary reforms will be implemented with due consideration for equity, and without reducing the incentive to work or produce the goods and services that the country needs. For budgeting purposes a more conservative base-line scenario has been prepared. In the event that revenues exceed this base-line scenario, additional funds will be available for activities not currently budgetted for, or they will be used to reduce the budget deficit.

Preservation and promotion of cultural and traditional values

The preservation and promotion of Bhutan's unique cultural and traditional values will continue to be pursued in the 8 FYP. These elements, highly valued in themselves by all the people, are also essential embodiments of the nation's identity. For a small country with neither military might nor economic strength to safeguard its security, this distinct identity is seen as an important means to safeguard and strengthen the country's status as a sovereign and independent nation. A number of programmes are therefore included in the 8 FYP to foster Bhutan's rich spiritual and cultural heritage, which has given it strength and resilience over many centuries, and to ensure that it is not eroded in the process of modern development.

National security

Security for the country, its people and its governing body, to lead a life and a path of development of their own choice without unnecessary external interference, is an over-riding objective which will be strengthened as the economy grows. Bhutan's national security is also envisaged to benefit from continued membership of the United Nations and regional bodies, and from continued collaboration with its friendly neighbours and with donors. These valued relationships will continue to be fostered during the 8 FYP.

Balanced development

His Majesty the King has consistently stressed the need to secure balanced development throughout the Kingdom. Balanced development involves, as far as possible, providing equal access to basic services and facilities of comparable quality to all Bhutanese wherever they reside in the kingdom. In the case of industrial and related income-generating activities, however, the location of enterprises will take account of geographical and other factors which influence comparative advantage. In the long term, it is to be expected that several of the existing larger growth centres will gradually develop, where sufficient land for urban and industrial development is available, while smaller growth centres will develop in the Dzongkhags as communications improve and electrification expands.

Improving the quality of life

Measures to improve the quality of life in Bhutan will be directed not only to raising the income-earning capacity of the majority of the population, but also to improving access to basic services such as education, health and facilities such as clean drinking water, sanitation and communications. During the 8 FYP, efforts directed towards this goal will also address issues that will further consolidate and improve equitable income distribution. For the rural sector, integrated rural development will be pursued wherever practicable.

Institutional strengthening and human resource development

The strengthening of government institutions concerned with all stages of development from planning to implementation will be addressed during 8 FYP. In both public and private sectors, there is a need to improve management as well as to supply the skilled manpower, currently in short supply, and to ensure its effectiveness and efficient utilization. The latter also applies to

technical assistance which, unless used selectively, and matched by an appropriate HRD programme, may retard efforts towards increasing self-reliance.

The national HRD programme, for which further donor assistance is a very high priority, is a reflection of the needs of government agencies and of individual programmes and projects derived through the development of manpower planning during 7 FYP. During 8 FYP, further efforts will be made to improve the present arrangements and procedures for manpower planning in the public sector, as well as paying more attention to the needs of the private sector. In addition to the specific needs identified for training in the national HRD programme by sub-sector and field of training, arrangements in 8FYP for the public sector include training in agriculture, as well as trade and industry, construction and services, and for participatory involvement in health and education.

Decentralization and community participation

Community participation has long been customary in a range of local activities from house-building to the construction and maintenance of religious and cultural buildings. In recent years, communities have become further involved in development work such as constructing feeder and farm roads, schools and health clinics, and without their support the costs of these services would be beyond government's limited budgetary resources. While it is the Government's objective to mobilize continued community participation for these essential services, and since 5 FYP to further decentralise the functions on a selective basis, a corresponding effort has been made to enable local communities to determine the priorities for developments which affect them, whether these are part of national programmes or of a limited local nature, and to have more control over their implementation.

The necessary institutional mechanisms for public participation such as DYT and GYT and the rules of procedure - Chathrims for DYT and GYT are already in place and the task now is to strengthen these institutions to make public participation more effective and satisfactory to those involved. Since 5 FYP, considerable progress has been made in decentralization to Dzongkag level, and during 8 FYP further efforts will be made to strengthen planning and implementation capacity at Gewog level (see Chapter 8). In-country training programmes will play an important part in this.

Privatisation and private sector development

The privatisation efforts made during 7 FYP will be continued during 8FYP (see Chapter 11). The privatization of some services such as agricultural input supply and produce marketing, or the provision of a rural water supply, provides opportunities for local participants or beneficiaries to undertake these services on a cooperative basis. In other cases, privatisation provides new opportunities for individual entrepreneurs to undertake commercial activities initiated in the first place by the Government, or to develop new businesses in areas such as surface transport, in which private sector investment is encouraged by government investment in improving the infrastructure.

The Government's general role in 8 FYP vis-a-vis private sector development will continue to be that of promoting an 'enabling environment', but in some respects more direct support will be needed. From experience during the 7 FYP, for example with the hotel industry, it is clear that the government will need to provide increased training for entrepreneurs, as well as for personnel in the financial institutions, and to offer guidance on business management, if the viability of private sector enterprises as well as the loan recoveries of the lending institutions is to be improved.

Macroeconomic Outlook for 8 FYP

National Income, Savings and Prices

The GDP for the 8 FYP is forecasted based on the past performance, future capacity utilization and investment, market expansion and new policy considerations.. Overall, GDP growth at market prices is expected to average 6.7% (see Table 4.2). The specific assumptions for each sector are as follows:

Agriculture

Reviewing past trends, a growth rate of 2.5% per annum is projected for the sector. The positive factors which contribute to this growth rate are productivity gains and horticultural development. In livestock a decreasing trend in numbers is more than compensated for by increased productivity in terms of output and weights of animals. An increase of 3% per annum is projected. For forestry and logging, a growth rate of 2% per annum is projected using past trends and continuing emphasis on environmental sustainability.

Mining and Quarrying

After analyzing past trends, and considering additional requirements of limestone (due to expansion of PCAL (Penden Cement Authority Limited)) and commissioning of Dungsum Cement Project(DCP), a growth rate of almost 20% is estimated.

Manufacturing

Since 1980, the manufacturing sector was growing at an average by about 15% per annum, although the base was small. However, during the 7 FYP manufacturing growth slowed down to 9.1%. Growth is projected at 12% per annum in 8 FYP after taking into consideration the expansion of PCAL and production from DCP.

Transport & Communications

Based on past trends and new expansion in communications, this sector is expected to grow by about 10% per annum.

Table 4.1 GDP estimates for the 7 FYP and projection for the 8 FYP by sectors at factor cost in 1980 prices (Fiscal Year)

Sectors	7 FYP Compound Growth (%)	8 Five Year Plan					8FYP Compound Growth (%)
		1997/98	1998/99	1999/2000	2000/01	2001/02	
1. Agriculture sector							
1.1 Agriculture proper	2.4	634.8	650.7	667.0	683.7	700.7	2.5
1.2 Livestock production	3.5	263.3	271.2	279.4	287.8	296.4	3.0
1.3 Forestry and logging	2.2	284.8	290.5	296.3	302.2	308.2	2.0
2. Mining and quarrying	14.1	51.8	54.4	71.5	100.4	119.9	19.4
3. Manufacturing	9.1	327.8	350.7	410.2	514.7	540.5	12.0
4. Electricity	3.9	273.4	277.5	305.5	316.4	348.0	7.0
5. Construction	20.3	368.3	394.1	421.6	451.2	482.7	7.0
6. Trade and commerce	3.7	190.6	198.2	206.1	214.4	223.0	4.0
7. Transport and communication	5.9	273.6	301.0	331.0	364.2	400.6	10.0

8. Finance, insurance & real estate	7.7	338.3	372.1	409.3	450.3	495.3	10.0
9. Government services	6.7	355.4	376.7	399.3	423.2	448.6	6.0
Less :Imputed bank service charges		-75.81	-83.39	-91.73	-100.91	-111.00	
Gross domestic product	5.8	3286.2	3453.6	3705.5	4007.4	4252.9	6.5
GDP growth preceding year		5.7	5.1	7.3	8.1	6.1	

Electricity

Based on expected new micro and mini-hydels, an underlying growth of 1.5% per annum is assumed. This would be boosted up by the anticipated tariff revision early in the 8FYP. Further, with the expected additional power generation in 2000/01 (Basochu) and 2001/02 (Kurichu), the overall growth rate of the sector could increase to 7% per annum.

Construction

From 1993 to 1995, this sector's contribution to GDP was substantial with a growth rate of 24% per annum. This was mainly due to the sewerage project and private construction activities. Based on past trends and future investment on power sector projects and DCP, a growth rate of about 7% per annum is assumed.

Service sectors

Trade and commerce is projected to grow by about 4% p.a during the 8FYP. This is accounted for by general business activity and tourism. Based on past trends, implementation of reforms in the financial sector and rise in the value of real estate, the finance, insurance & real estate sector is projected to grow by about 10% p.a. Based on past trends, the Government services sector is expected to grow by about 6% per annum.

The saving ratio measured as a percentage of gross domestic savings to GDP has been steadily increasing from 15% in 1992/93 to 31.5% in 1994/95. This trend is expected to continue in the 8 FYP stabilizing at about 33%. Private sector savings, mainly corporate savings, also show a marked increase and as a percentage of GDP, it currently stands at around 32%.

Table 4.2 Estimates of GDP and other aggregates for the 7 FYP and projection for the 8 FYP

Sectors	7 FYP	Projection for the 8 FYP (1997-2002)					
	ESTED. COMP OUND GROW TH (%)	1997/9 8	1998/1 999	1999/2 000	2000/2 001	2001/2 002	Comp ound Growth (%)
GDP in 1980 prices (Million Nu.)	5.9	3,286	3,462	3,714	4,016	4,262	6.7
GDP growth preceeding year (%)		5.7	5.3	7.3	8.1	6.1	
GDP in current market	14.3	12,389	14,054.	16,229.	18,835.	21,437	14.7
Population growth rate	2.78	3.04	2.86	2.76	2.67	2.59	2.80
Population in million		0.62	0.64	0.65	0.67	0.69	
Percapita GDP in	11.0	19,982	21,959	24,968.	28,112.	31,068	12.1
Percapita GDP in Nu.	2.8	5,300.	5,409.0	5,713	5,994.0	6,177.0	3.90
Nu. per US\$ (Exchange	8.2	37.4	39.2	41.0	43.1	45.0	4.7
Percapita GDP (US\$)	2.6	534	560	609	652	690	6.60
Per capita GDP (PPP	2.6	3,204.	3,360.0	3,654.0	3,912.0	4,140.0	6.70
CPI Index 1 /	8.4	503.4	542.7	583.9	627.1	672.3	7.5
CPI % Change (June to		8.0	7.8	7.6	7.4	7.2	

1 / The CPI Index used here is different from the CPI Index of the CSO's Bulletin. The CPI Index used here is the average of three periods. e.g., the 1993/94 index is estimated by taking the geometric average.

Population size is estimated by population growth rates applied to the initial size at the start of the 8 FYP. The growth rate is expected to decline gradually from 3.04% in 1997/98 to 2.59% in 2001/02.

Inflation is targetted to decline to 7.2% by the end of 8 FYP. The rate is expected to track Indian inflation closely and growth in money supply is expected to be within tolerable limits. The growth in money supply is to be contained within 30%.

Balance of Payments

In order to forecast the Balance of Payments for the 8 FYP, the following assumptions were used (see Table 4.2)

Exports of Merchandise

Exports to India and Third countries are projected to increase by 15 and 10 percent per annum, from 1996/97 to 2001/2002, respectively. The assumptions are based on past trends and future prospects. The increases resulting from the latter are due to enhanced production and exports of power, cement, ferro alloys, calcium carbide and horticultural products.

Imports of Merchandise

Imports from India and Third countries are expected to increase by 15 and 10% per annum respectively during the same period. Based on past trends, it is estimated that there would a small increase in per capita income and growth in aid-imports.

Services and Private Transfers - Receipts

The income from services and transfers is assumed to increase by 3% per annum with India and 12 percent per annum with Third countries. The main income earning sources with India are excise refund and travel. The growth from Third countries is largely accounted for interest received from foreign reserves and Trust Fund investments from overseas, tourism, travel and inflows of Non-Governmental Organisations.

Services and Private Transfers - Payments

The payments due for services and transfers are assumed to increase by 10% per annum to India and 12% per annum to Third countries. The payments to India are largely accounted for interest payments on loans, remittances by Indian workers, medical expenses, travel etc. The payments to Third countries are accounted for interest payment on loans, aid-imports, technical assistance remittances, official travel, diplomatic expenses etc.

Official Transfers

It is assumed that official unrequited transfers, in the form of grants, are expected to increase by 10 percent per annum from both India and Third countries. These grants are received for budgetary support, financing capital projects and technical assistance.

Capital Flows

The capital flows are mainly divided into official and private flows. The official flows are expressed in terms of net flows i.e. inflows of loans minus repayment of principal.

The Current Account balance, excluding official transfers, will continue to be in deficit during the 8 FYP. However, this deficit as a percentage of GDP, shows a declining trend during the Plan period from about 20.7% in 1997/98 to about 19.3% in 2001/02. When forecast of official transfers are added, the Current Account position is in surplus throughout the Plan period. The overall balance, after taking both current and capital accounts transactions into consideration, shows a healthy surplus during the plan period. Gross foreign reserves increase at an average rate of 11.9% p.a. during the 8 FYP. This is lower than the average growth rate of about 15%

accumulated during the 7 FYP. Import cover, measured as a ratio of gross reserves to imports, remains at a satisfactory level, averaging about 13.6 months.

Table 4.3 Balance of payments estimates for the 7 FYP and projection for the 8 FYP
(Nu. in million)

Item	7FYP Estimate	8 FYP projection					8FYP Total
		1997 /98	1998 /99	1999 /00	2000 /01	2001 /02	
Exports, fob(c)	11639	3358	3853	4420	5072	5821	22524
India	10599	3176	3652	4200	4830	5554	21411
Other	1041	182	201	221	243	267	1113
Imports, cif(c)	-18,773.	-5,26	-5,99	-6,83	-7,80	-8,89	-34,800.6
India	-14,055.	-4,18	-4,80	-5,53	-6,36	-7,31	-28,199.6
Other	-4,717.4	-1,08	-1,18	-1,30	-1,43	-1,58	-6,600.98
Trade balance	-7,134.0	-1,90	-2,14	-2,41	-2,72	-3,07	-12,276.4
India	-3,457.2	-1,00	-1,15	-1,33	-1,53	-1,76	-6,788.66
Other	-3,676.7	-898.	-988.	-1,08	-1,19	-1,31	-5,487.73
Services and transfer	4412	1160	1280	1412	1560	1726	7138
India	1036	224	231	238	245	252	1191
Other	3376	936	1049	1174	1315	1473	5947
Services and transfer payments	-6,729.0	-1,81	-2,01	-2,24	-2,49	-2,77	-11,352.1
India	8	6.05	9.04	4.91	6.23	5.90	0
Other	-2,983.1	-746.	-821.	-903.	-993.	-1,09	-4,558.21
Other	-3,745.9	-1.06	-1.19	-1.34	-1.50	-1.68	-6,793.93
Current account	-9,450.7	-2,56	-2,88	-3,25	-3,66	-4,12	-16,490.5
India	-5,404.4	-1,52	-1,74	-1,99	-2,28	-2,60	-10,156.3
Other	-4,046.2	-1,03	-1,13	-1,25	-1,38	-1,52	-6,334.21
Official transfers	10753	2955	3251	3576	3934	4327	18043
India	4666	1282	1411	1552	1707	1878	7829
Other	6087	1673	1840	2024	2227	2450	10214
Current account	1302	394	365	324	270	200	1553
India	-738.40	-246.	-337.	-445.	-573.	-724.	-2,327.26

Other	2041	641	702	770	843	924	3880
Capital accounts	1111	345	439	543	612	687	2626
Official loans (Net)	1269	429	483	543	612	687	2755
India	1171	464	511	563	736	808	3081
Other	100	-34.7	-27.8	-19.4	-123.	-120.	-326.20
Commercial loans	-157.80	-84.6	-44.2	0	0	0	-128.80
Foreign Direct	0						0
Capital flow	0						0
Errors and omissions	383						0
Overall balance	2797	739	804	867	882	887	4179
Gross Reserves	3979.9	6085	6888	7756	8638	9524	7778.09
Months Import Cover	13	14	14	14	13	13	13
Cur A/C (% GDP		-20.6	-20.5	-20.1	-19.5	-19.3	
Cur A/C (% GDP Incl Grants) Grantsd. Off.		3	3	2	1	1	

Public Finance

The Government's policy will be to enhance revenues and manage expenditures prudently and effectively. Its overall revenues from tax and non-tax sources are forecast to increase by about 8% p.a. during the 8 FYP. The total revenue generated from tax and non-tax sources is forecast to reach Nu. 13000 m during the plan period.

The increase in total expenditures during the plan period will be kept in line with revenue generating potential and aid flows. Overall during the Eighth Plan a fiscal deficit of 1% of GDP is forecast.

Table 4.4 Summary of Public Finance estimates for the 7 FYP and projection for the 8FYP
(Nu. in million)

	Estimates for the last two years and the total for the 7 FYP (1992-97)			Projection for the 8 FYP (1997-2002)					
	95/96	96/97	Plan Total	97/98	98/99	99/00	00/01	01/02	Plan Total
REVENUE AND	355	357	1394	332	346	361	377	393	181
Tax revenue	682	718	2912	130	137	145	154	162	730
Non-tax revenue	122	126	5543	103	108	113	119	125	569
Budgetary Grants	146	141	4298	800	800	800	800	800	400
Donor Recurrent	190	181	701	188	203	219	237	256	110
EXPENDITURE	371	393	1473	322	341	363	395	470	189
RECURRENT	199	219	8590	245	264	287	305	375	147
Personal	668	841	3126	100	102	104	104	155	567
Interest Payments	206	188	874	136	163	194	187	171	850
Other expenses	112	116	4590	130	146	163	182	203	825
NET CAPITAL EXPENDITURE & NET LENDING	172	326	6288	776	770	768	899	944	4158
Capital Expenditure	161	150	4821	408	441	476	514	555	239
Lending/repayment	104	232	1325	368	329	292	385	389	176
OVERALL FISCAL POSITION	-16	-36	-128	94	50	-26	-18	-76	-833
	1	1	3				4	5	
Memorandum items									
Deficit (-)/Surplus (+)	-1.7	-3.3		2.2	0.4	-0.2	-1.0	-3.6	

Money, Credit and Prices

The Monetary Survey consolidates the balance sheets of the monetary authority and the financial system. It comprises three main items, namely, net foreign assets, net domestic assets and money supply (see Table 4.4).

The Money Supply is forecast to grow by an average rate of about 23% p.a. during the 8 FYP. The ratio of GDP to Money supply, also shows a marked increase from 27.8% in 1996 to about 39.6% in 2001. Saving deposits is assumed to increase by about 22 percent per annum. Longer term deposits or Quasi money, as a percentage of total money supply shows averages around 55.4 percent. This is slightly higher than the average of 54 percent recorded during the 7 FYP. This ratio, together with the ratio of GDP/Money supply are key indicators which are widely used to measure a country's efforts to promote the process of 'Financial Deepening'. The latter is considered to be one of the important conditions required to stimulate private sector investment.

On the lending side, a large proportion of it is accounted for the accumulation of Net Foreign Assets, resulting from Bhutan's healthy gross reserves position. On Net Domestic Assets, it is also envisaged that joint enterprises and the private sector will continue to borrow prudently and judiciously to expand their activities. The changes in Other Items (net) is mainly accounted for by depreciation of the Ngultrum.

Table 4.5 Money and Credit - Estimates for the 7 FYP and Projection for the 8FYP
(Nu. in million)

	7 FYP					8 FYP				
	199 2	199 3	199 4	199 5	199 6	199 7	199 8	199 9	200 0	200 1
1. Net foreign assets	199 3	217 5	282 4	323 5	373 0	424 5	480 5	541 0	602 7	664 8
2. Net domestic assets	400	106 0	901	104 3	111 7	133 8	167 2	218 1	298 3	415 6
Other items (Net)	-10 27	-16 47	-17 95	-17 70	-18 38	-19 42	-20 35	-21 29	-22 36	-23 36
TOTAL ASSETS	136 6	158 8	193 0	250 7	300 9	364 1	444 2	546 3	677 4	846 8
3. Money Supply	136 6	158 8	193 0	250 7	300 9	364 1	444 2	546 3	677 4	846 8
3.1 Narrow money (Currencies & Demand deposits)	728	734	771	110 0	129 9	157 3	195 4	242 7	303 8	396 1
3.2 Quasi-money (Saving & deposits)	639	855	115 9	140 7	171 0	206 8	248 7	303 6	373 6	450 7

TOTAL LIABILITIES	136	158	193	250	300	364	444	546	677	846
	6	8	0	7	9	1	2	3	4	8

Memorandum item

Money supply growth		16	22	30	20	21	22	23	24	25
Money supply/GDP	21	22	23	26	28	29	32	34	36	40
Quasi-money/Money supply	47	54	60	56	57	57	56	56	55	53

CHAPTER 5. FISCAL AND MONETARY POLICIES

Overview

It is widely acknowledged that sound and sustainable management of an economy relies significantly on its demand management policies which essentially consist of fiscal and monetary policies.

In broad terms, fiscal policy encompasses the Government's revenue enhancement policy, efficient and effective expenditure policy both in terms of quantity and composition, policies that minimise transfers to inefficient public enterprises and non-priority agencies, and sound financing policies that would support a sustainable level of deficits. The fiscal deficit as a percentage of the GDP is a parameter that will be closely monitored to ensure that it remains within sustainable levels.

To complement sound fiscal management policies, the RGOB will also continue to put in place efficient and appropriate monetary policies during the 8 FYP. The Royal Monetary Authority (RMA) will play a key role in ensuring that monetary policies which are related to determining the allowable quantum of monetary growth, the level of foreign reserves, the level of credit and interest rates are in accordance with the sound management and long-term development of the economy.

Fiscal policies

Revenue policies

The latest statistics for 1994/95 show that the total revenue as a percentage of GDP stands at 22%. The current apparent bias in favour of non-tax revenues will be corrected at the beginning of the 8 FYP when a reclassification of revenues will yield a more realistic picture in which tax revenues constitute the majority of Government domestic revenues. During the 8 FYP, efforts will be made to enhance overall revenues, with special emphasis on raising the tax revenues from both direct and indirect sources. The following measures and strategies will be adopted:

- General tax administration will be strengthened to increase compliance and provide greater efficiency in collection.
- Broaden the tax base to ensure wider coverage.
- Rationalise the import duty structure by replacing the current system of quantitative restrictions by a comprehensive but simplified tariff system. This will ensure transparency and liberalise international trading activities.
- Introduce an income tax assessment system which will not only enhance revenues but also provide a more equitable payment of taxes.
- Review and strengthen the existing tax structure with a view to improve it.

- Introduce tax incentives to improve productivity and earning potential.
- Review the current non-tax revenues such as user charges, licensing fees etc.
- Promote institutional strengthening, through capacity building and provision of appropriate training programmes in the Division of Revenue and Customs.

In general, all revenue enhancing measures will be based on equity and fairness as well as efficiency. The combination of the above mentioned revenue measures is expected to yield an overall revenue package for the 8 FYP of about Nu 13000 m based on a low revenue scenario (see Chapter 4 & 13). This gives an annual average increase in revenue of about 7.8% during the 8 FYP. When added to the foreign grants in the form of budgetary support of Nu. 800 m per annum, the total revenue for the 8 FYP is estimated to be Nu. 18103 m.

Expenditure policies

As mentioned earlier, the Government will exercise a prudent public expenditure policy. The main measures to be pursued during the 8 FYP are as follows:

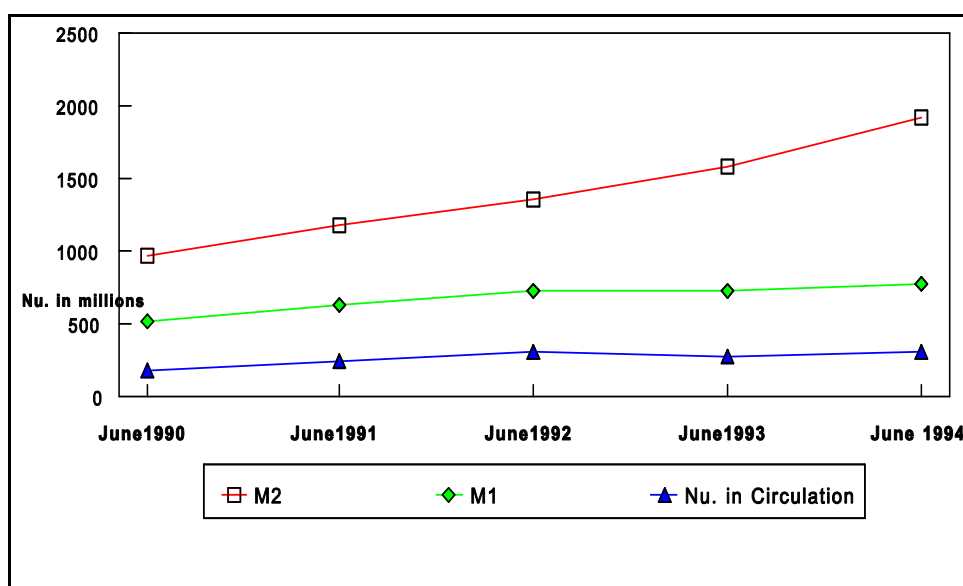
- Maintain a reasonable balance between domestic revenue and recurrent expenditure.
- Improve sustainability of public services and gradually reduce dependence on budgetary support.
- In accordance with the above, wherever possible, the Government will privatise its activities and introduce user charges.
- Salary increases for public employees will attempt to restore their remuneration to 1988 levels in real terms, subject to budgetary constraints.
- Debt service payments both external and internal will be made on time and without any accumulation of arrears.
- An adequate provision for supplies and materials will be made.
- Transfers to public enterprises will be minimised and subventions to other agencies will be strictly monitored.
- Adequate provisions will be made for operations and maintenance thus ensuring that completed capital projects are well maintained.
- Capital projects will be selected on the basis of their impact on the national development goals set out in the plan, on sound socio-economic criteria and sustainability.

The total recurrent expenditure, including the counterpart financing of the development expenditure (10%) and an allowable deficit of 1% per annum, is estimated to be around Nu. 14777m.

Deficit Financing

The overriding feature of RGOB's approach to public finances will be to limit the budget deficit to prudent and sustainable levels. This will guarantee macroeconomic stability and longer term development prospects. In order to maintain macro economic stability, the Government will resort to borrowing, if necessary, from the financial institutions and the general public through the issuance of government bonds. Direct borrowing from the RMA will be discontinued. During the Plan period, the average deficit to GDP ratio will not be allowed to exceed 1%.

The Government will continue to seek external assistance from its development partners. It's first priority would be to obtain the maximum amount of this external assistance in the form of grants. It will seek concessional terms for the remainder. The percentage of the total external assistance, in the form of grants and concessional loans, to overall expenditure is expected to average around 55 percent.



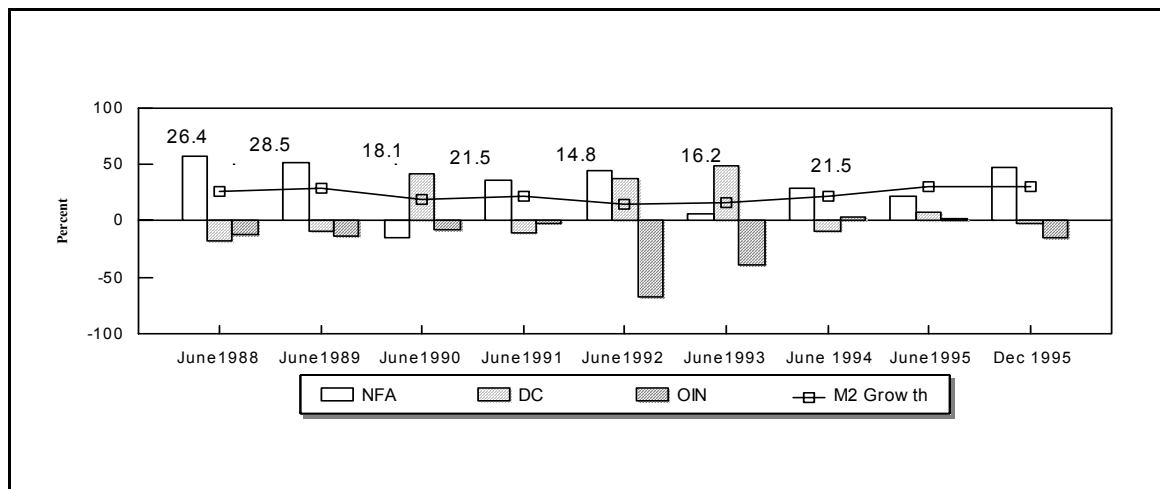
Monetary policies during 8 FYP

The responsibility of conducting the most appropriate monetary policies lies with the RMA. Its objectives of maintaining price stability will be carried out by maintaining an established exchange rate link with the Indian Rupee and by effectively controlling the money supply. It will stringently observe the real sector and monetary sector, and if it discovers a significant discrepancy between the two to cause macroeconomic instability, then it will take necessary and timely action to absorb any unwanted excess liquidity from the system.

In addition, its other roles of reserves management, bank supervision and banking and financial sector reforms will be carried out with improved efficiency and effectiveness.

In the present context, the money supply is anticipated to grow by about 25% over the next few years, which is higher than the projected growth of nominal GDP. In the past, the monetization of the economy absorbed much of the impact of any increase. However, in the future, the accelerated growth in money supply (M2), measured in terms of currencies, demand and savings deposits, will translate into major macroeconomic imbalances (see figure 5.1). The responsibility for ensuring a stable growth of money supply in relation to GDP growth during the next Five Year Plan lies with the RMA. The RMA has already laid the groundwork for proper monetary management in the 7FYP by introducing monetary policy instruments such as the RMA Discount Bills and Treasury Bonds, strengthening prudential norms and supervision, and increasing competition in the financial system.

Excess liquidity



One of the biggest challenges which the RMA will face during the 8FYP will be to manage the large liquidity overhang in the financial sector. During the 7FYP period, broad money supply grew on average by about 25-30% per annum mainly because of the build-up of net foreign assets. Unless the RMA adopts appropriate policies, this liquidity overhang could result in macroeconomic instability which will be manifested in a high rate of inflation and a decline in the balance of payments. The following steps will be considered for the sterilization of excess liquidity:

- Introduction of government securities as a means to finance the Government away from the RMA. This will prevent further build up in the liquidity overhang and contribute to its sterilization, as well as developing the financial market.
- Consideration of deregulating the Foreign Exchange Regulation. The RMA is working towards removing the exchange restriction on current international transactions with third countries, which will ameliorate the monetary effects of the build-up in reserves. Furthermore, the RMA will continue to use the hard currency reserves to finance Indian rupee deficits.
- Actively use the RMA Discount Bills to sterilize liquidity and implement monetary programme.

Credit policy

Interest rate policy

Maintaining a real rate of interest is an essential policy for ensuring the viability of financial intermediation and the soundness of the financial institutions. The present system of administratively determining interest rates does not reflect the actual cost of financial intermediation and results in the misallocation of resources. It has also been partly responsible for the growth of excess liquidity in the financial system. Therefore, to deepen financial markets

and foster more efficient allocation of resources, as well as assist in the absorption of excess reserves, the deregulation of interest rates is one of the principal objectives of monetary policy in the 8FYP. The step would enhance mobilisation of savings by the financial sector and improve the allocation of these resources for investments.

The RMA has taken steps to develop a system of open market operations based on RMA and Government securities. The interest rates which attach to the RMA Discount Bills and Government Bonds will serve as the “benchmarks” for short and long term interest rates, respectively.

Prudent norms and supervision

In order to improve mobilisation of resources and quality of credit allocation, or in broader terms, financial intermediation of the financial institutions, the RMA has also initiated the process of strengthening prudent norms and supervision. The implementation of the provisions of the Financial Institutions Act (1992) will be completed in the 8FYP. In addition to strengthening the portfolio of financial institutions, the RMA will seek to increase autonomy and competition in the financial system by limiting its intervention and by creating a more even playing field among the four financial institutions namely Bank of Bhutan, Royal Insurance of Bhutan, Unit Trust of Bhutan and the Bhutan Development Finance Corporation.

Enhancing competition in the banking system

The past decade has witnessed substantial financial deepening and rapid expansion of the Bhutanese financial system. The growing monetization of the economy has created a need for greater competition and increased efficiency in financial intermediation. At present, the banking transactions involve a considerable loss of time and productivity. As a result, a significant amount of currency lies outside the financial system. Therefore, a second commercial bank is inevitable to foster greater competition and efficiency in financial intermediation. The most viable alternative found was to convert the Unit Trust of Bhutan into a commercial bank. Conversion process is underway and it is expected to be completed before the commencement of the 8FYP.

A favourable financial system will help to achieve one of the central objectives of the Plan - increase the private sector's contribution to growth and development, combined with withdrawal of the Government from most of the commercial activities.

Exchange system

Since its introduction in 1974, the Ngultrum has been pegged at par to the Indian rupee, which circulates freely within Bhutan. Cross rates vis-a-vis other currencies are based on the rates prevailing for the Indian rupee. The existing system will continue as trade with India still accounts for over 80 percent of total external trade.

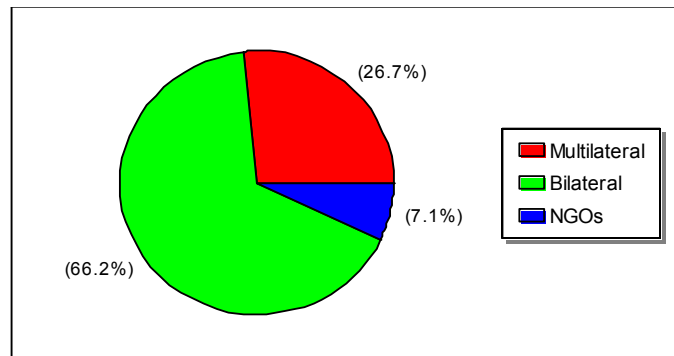
Although large capital transactions with India must be approved by the Ministry of Finance, there are no restrictions on payments for current transactions between Bhutan and India.

In support of other monetary and fiscal policies, the RMA in the 8FYP, will gradually relax the controls on hard currency transactions in view of the high level of hard currency reserves and good balance of payments prospects. The deregulation will help in diversification of foreign trade, thereby reducing the pressure on Indian rupee reserves and also ameliorate the monetary effects of the build- up in hard currency reserves.

CHAPTER 6. EXTERNAL ASSISTANCE

Overview

During the last thirty-six years, impressive achievements have been made in the living standards of the Bhutanese people. Such noteworthy developments have been possible largely through the support of Bhutan's development partners. Over the years, there has been a marked increase in development support to Bhutan in terms of both magnitude and sources of aid (see Figure 6.1 and Table 6.1). Though the composition of aid has been changing, the aid received has been on favorable terms with an increasing degree of concessionality.



In the early 1980s, aid amounted to around 50% of GDP but with the rapid economic development that has taken place over the years, the aid/GDP ratio fell to below 20% in 1989-92. However, during the first three years of 7 FYP, the aid/GDP ratio registered a rise as a result of a few large infrastructure projects, namely, Domestic Telecommunication Network, Support to Urban Infrastructure Programme, Kurichu Hydropower Project and Paro Airport Development. Further, capital requirements are expected to accelerate in the forthcoming years as significant investment flows are anticipated in support of large power and cement projects.

Historically, India has been Bhutan's main development partner. The first two Five-Year plans were wholly implemented with financial and technical assistance from the Government of India. From the third plan onwards, aid from the Government of India has been increasingly augmented by assistance from other bilateral and multi-lateral sources. At present, Bhutan receives external assistance from as many as 15 multilateral organizations, 19 individual donor countries (bilateral assistance), 4 Financial Institutions (ADB, World Bank, IFAD and KFAED) and some non-governmental organizations (NGOs).

Assistance during 7 FYP

In the first three years of 7 FYP, Official Development Assistance flows to Bhutan amounted to US \$262.3 m. Of this, multilateral donors' contribution amounted to US \$70 m. Bilateral donors' contribution amounted to US \$173.7 m, and the contribution of NGOs was US \$18.6 m. A breakdown of external assistance from 1992 to 1994 is shown in the Table 6.1 below.

CHAPTER 7. HUMAN RESOURCES MANAGEMENT AND DEVELOPMENT

Overview

CHAPTER 8. DECENTRALIZATION AND PEOPLE'S PARTICIPATION

Background

The launching of the first plan in 1961 saw a modern administration system come into existence with the establishment of the Development Wing, otherwise Secretariat, and the creation of 10 sectoral departments. The post of dzongdags, responsible for administration, revenue collection and protocol functions, was formalized. For the next twenty years, responsibility for implementing the expanding development activities set out in the five year plans lay solely with the central administration. By the end of the 4 FYP, however, the need was felt to devolve the increasing task of development to the dzongkhag administration to increase local participation. This realization led the Royal Government to adopt the policy of decentralization as a major objective in the subsequent development plans, recognizing the benefits of enabling the people to be active participants in the planning, implementing and managing of local development programmes which have direct bearing on their lives.

With the commencement of the 5FYP in 1981, the dzongkhag administrations were made entirely responsible for their development programmes, besides maintaining law and order. Following the decentralization of responsibility from central agencies to the dzongkhags, the Government created the Dzongkhag Yargye Tshogchung (District Development Committee) in each dzongkhag, with elected members who are actively involved in the preparation and implementation of their own development plans.

In 1990, His Majesty the King commanded that the 7FYP programmes should be specifically gewog-based, and that future plans feature distinct sectoral strategies at gewog level. Further, in 1991, the institution of old Gewog Zomdue (meeting of households), headed by the Gup, was revitalised and formally established as the Gewog Yargye Tshogchung (Block Development Committee) in each of the 196 gewogs with 2,589 elected members across the country.

Rationale for Decentralization

Since the end of 4FYP, the policy of decentralization, people's participation and self-reliance have been central to Bhutan's development philosophy. Underlying Bhutan's decentralization initiative is the belief that the effective involvement of communities in joint decision making, planning, implementation and management of activities which directly affect their daily lives is inherently more efficient administratively, socially and economically, than the activities being directed by central government agencies which may be remote from the aspirations and problems of the communities. It is also seen as a means of supporting and ensuring a balanced and more equitable development. While the past experience of decentralization of functions has largely reflected a devolution of central government responsibilities to local government institutions at dzongkhag level, recent policy directions in favour of privatization have been to reduce the role of the government in development, and, instead, to involve private enterprises, particularly in the commercial ventures to effect further decentralization.

The topography of the country has also lent weight to the need for decentralization. While physically integrated by an expanding road network and helped by an improving

telecommunication system, it still takes days to reach many parts of the country from Thimphu. And in winter and monsoon periods, many areas remain inaccessible for weeks.

Functions Decentralised

The functions to be decentralised to dzongkhags were set out by the Planning Commission in 1979. The central directorates and ministries remained accountable for the fulfillment of national goals in their respective spheres. The activities transferred to the Dzongkhag Administrations included :

Agriculture

All field and regional agricultural and irrigation services apart from research centres, training institutes and some projects which cut across more than one dzongkhag.

Livestock Services

All field and regional animal husbandry activities and services other than training institutes and research centres.

Forestry Services

Community and social forestry management.

Health

All services excluding referral hospitals and training institutions.

Education

All schools excluding college and training institutions.

Trade, Industry and Commerce

All local small scale industries, trade and commerce activities. In Power sector, maintenance and management of local electricity supply and mini-micro hydels.

Road and Transportation

Implementation and maintenance of feeder and farm roads and transport services.

Community Services

Implementation and maintenance of drinking water and maintenance of suspended/suspension and traditional bridges, footpaths and mule tracks in rural areas.

Other Services

General administrative responsibilities such as collection of revenue, census and immigration, civil administration, socio-cultural activities.

It was recognized that decentralization would require a major training and capacity building programme, but the pace of the exercise left little time for this. Before decentralization began in 1981, the total dzongkhag staff strength was 361 (1981) and by 1996 there were 5,908 as per the RCSC record. There were no technical personnel in 1981, however by 1996 there were 3,216 out of the 5,908 district level staff. Training of the sectoral staff transferred, and of additional personnel, to strengthen the Dzongkhag Administrations, has, therefore, been a major programme during the fifteen years that have followed.

While the inventory of functions decentralized in early 80's is still valid today, the volume of activity undertaken in furtherance of many of them has greatly increased since it was drawn up. Some programmes implemented with the active participation of local communities are the construction and maintenance of community schools, feeder roads, mule tracks, water supply schemes, health service units and irrigation channels. In fact today, the only activities that are not fully decentralized are those which require coordination across dzongkhag boundaries, or which involve specialised services or economies of scale. Dzongkhag staffing levels have also increased since 1981, the total, including teachers, rising to 5,908 in 1996, or approximately 50% of the total civil service. An important recent addition was the appointment of a graduate planning officer in each dzongkhag administration.

Dzongkhag Administration

The dzongkhags continue to discharge the civil function on behalf of the Ministry of Home Affairs. This responsibility embraces the maintenance of law and order, land records, census and revenue collection. From the 5 FYP onwards, Dzongkhag staff have become increasingly involved together with the DYT's in the planning and implementation of the successive five year development plans. Their responsibilities include:

- Preparation of the annual plans and programmes and related budgets of the dzongkhags and the execution of the same;
- Preparation of the Dzongkhag Five Year Plans and implementation of all approved projects and programmes; and
- Monitoring and review of programmes in the Dzongkhags.

With the issuance of the Guidelines for Decentralisation in 1993, coordination of the development functions was formally assigned to the Ministry of Planning, and in 1995 the Dzongkhag Planning Officers were made responsible both administratively and functionally to the Ministry of Planning.

Prior to the 5 FYP, Planning process was centralized and it was a top down exercise. However, with the initiation of the decentralization process from the 6 FYP onwards, there was a marked change, which set the pattern for preparation of the 8 FYP. The planning process involves the setting of the national objectives and guidelines for plan preparation by the Ministry of Planning in consultation with the sectoral ministries and dzongkhags with the final endorsement coming from the Planning Commission. The national objectives and guidelines are finally prepared and circulated, incorporating all the views and recommendations from the dzongkhags and central government agencies by the Ministry of Planning. With the distribution of the Guidelines, the ministries and the dzongkhags initiate their respective plans and programmes which begins virtually at the village level. Based on the local needs and experience, the various levels of government then become involved in the planning process starting from the Village Zomdu and then, in ascending order, the Gewog (GYT), Dzongkhag (DYT), sectoral Policy and Planning Divisions (PPDs), the Technical Committee and the Planning Commission. The proposals are reviewed in numerous consultations between the concerned sectors, the relevant agencies like the Ministry of Finance, Ministry of Planning and the Royal Civil Service Commission before it is finally put up for approval to the Planning Commission and to the Government.

Increased Involvement at Gewog Level

The Gewog is the level where nearly all government's development efforts ultimately converge with those of local people themselves. The decision to establish a GYT in each gewog is a recognition of this fact and of its essential role in taking the decentralization process still closer to the people. Its membership consists of the Gup as Chairman, together with Mang Aps/Tsogpas and Chipons. The Head teachers of local community/primary school functions as Secretary and other technical representatives at the Gewog level attend as an observer in accordance with the Gewog Yagye chathrim. The functions laid down in chathrim include:

- identifying, reviewing and prioritizing development activities,
- identifying constraints in implementation, and
- ensuring participation of the people through Zhapto-Lemi in timely and regular maintenance of local services and community institutions.

Despite the prevailing shortage of labour, His Majesty the King commanded abolition of Goongda Woola during 7 FYP as being inconsistent with the national ethic, emphasizing instead on the role of Zhapto Lemi, a voluntary and free labour contribution by the people for implementing development programmes in their own villages and gewogs which benefit them directly. The responsibility for mobilizing and deploying Zhapto-lemi would be fully vested in the DYT's and GYT's under a revised chathrim.

Issues to Be Addressed During 8 FYP

Enabling people to involve themselves in programmes which affect their daily lives is an end in itself. In most respects, however, decentralization itself is a means rather than an end, and government efforts to increase its effectiveness and efficiency to contribute to development objectives will continue to receive high priority. In this regard a number of issues will be

addressed on priority basis during 8 FYP relating to human resource and institutional development..

Human Resource Development and Capacity Building

Trained staff, particularly at professional and higher technical levels, is still inadequate in many sectors in all dzongkhags. As such, further in-country and over seas training will be given high priority. Steps will also be taken to ensure that an appropriate number of returning trainees from various HRD programmes are posted to the dzongkhags, rather than being retained in the headquarters.

Improvements in management are needed and will be pursued in decentralized institutions, as well as in central government agencies, with emphasis on in-service training by the Royal Institute of Management (RIM). The question of establishing a cadre and career structure for dzongkhag administrators, while often recommended, still has to be addressed. While upgrading the capabilities of Dzongkhag Planning Officers, whose enhanced abilities will also benefit the DYT's and GYT's, consideration will also be given to the creation of a professional cadre for planners incorporating economists and statisticians, which would, amongst other things, help to ensure the optimal allocation of economic planners among central agencies, sectoral ministries and the dzongkhags.

In view of the importance of the Gup as chairman of the GYT and also a member of the DYT, consideration will be given to election for office for a longer period than three years as at present, to further training in the exercise of his or her development functions, and to the provision of simple office accommodation, where this is not available.

Institutional Strengthening and Procedures

One aspect of decentralized systems is the existence of organized cooperatives based mainly on commercial undertakings and activities. Such organisations are encouraged to improve the efficiency and cut down on production cost, so that the low income farmers could increase their marginal profit. The water users' associations in the irrigation schemes and milk producers and potato growers cooperatives are some that have come up over the years. These have helped the farmers to manage their irrigation schemes effectively and marketing their produce by organising transport on a cooperative basis. With such developments, the question of whether establishing a legal framework and an institutional structure to register and guide such enterprises is necessary and pertinent needs to be addressed during 8FYP.

Greater attention will be paid to strengthening the linkage between sectoral ministries and other agencies in Thimphu and Dzongkhag professional staff to ensure optimal use of resources and, specifically to ensure that specialized services are readily available when called upon to support decentralised activities. Matters not covered in the Decentralization Guidelines issued by the Planning Commission in 1993 will be examined and their merits considered for incorporation and implementation.

The establishment in recent years of aid-funded projects, such as afforestation and watershed management, which frequently cut across dzongkhag boundaries has given rise to separate management structures. Attention will therefore be given to ways of ensuring adequate integration within dzongkhag development plans and programmes to facilitate sustainability when external funding ceases.

In order to further enhance dzongkhag level capacity for planning, implementation and monitoring, additional efforts will be made to improve the information data base. This will include strengthening the linkage between the CSO and the Dzongkhag Planning Officer, and until such time as a qualified statistician is provided to each dzongkhag, the provision of basic statistical training to all staff involved with the collection, compilation, storage and retrieval of essential data is deemed important. This will be assisted by the computerisation of data and records and automation of dzongkhag offices together with improved telecommunication links with key central agencies.

Throughout the decentralisation experience, budgetary limitations have been a widely-felt constraint. While the establishment of an improved financial management and accounting system with appropriate links between central and dzongkhag accounts, needs to be addressed, there is also the need to provide adequate financing of programmes at the dzongkhag level.

On the eve of 8 FYP, the main institutional mechanisms and some infrastructure are in place to provide a sound foundation for the growth of decentralisation. There is increasing consciousness of the decentralisation process as a national priority both in the public sector and among the rural leaders. It is now a question of building effectively and efficiently on these achievements. One of the expected benefits of decentralization is a reduction in bureaucracy. To fulfil this expectation, further efforts will need to be made to streamline procedures, and to identify and reduce unnecessary bureaucracy. Apart from management training, one of the important ways of promoting this will be to encourage civil servants, to participate more fully in the effort to improve management at all levels.

CHAPTER 9. ENVIRONMENT AND DEVELOPMENT

Bhutan's Natural Heritage

Located in the Eastern Himalayas, Bhutan is one of the ecological wonders of the world. The country straddles two biogeographical realms: the Palearctic realm of the temperate Euro-Asia and the Indo-Malayan realm of the Indian sub-continent. The result is a country rich in biodiversity, with its natural forest cover largely intact. The biomes in Bhutan stretch from sub-tropical in the south (100m ASL) through temperate in the central interior, to an alpine zone in the north (7550m ASL). Animals such as the tiger, elephant, one-horned rhinoceros, Asiatic water buffalo, pygmy hog and the rare golden langur exist in the lush tropical forests of the South. The snow leopard, blue sheep and takin are found in the cool forests and alpine meadows of the North. There are over 165 species of animals (mammals), and more than 770 species of birds have been identified.

Within Bhutan's borders, one can find over 60 percent of the endemic species of the Eastern Himalayan region. In addition, Bhutan's rich flora include over 50 species of Rhododendrons, and over 300 species of medicinal plants, mostly alpine, that are used in traditional herbal medicine. As a result, Bhutan has been declared as one of ten global "hot-spots" for the conservation of biological diversity. Many ecologists believe that Bhutan represents the last best chance for conservation in the Eastern Himalayas, a region considered to be of critical importance to the global efforts to conserve biological diversity.

Conservation Ethic

The preservation of the country's rich biological diversity can be attributed to two factors, the enlightened leadership and the strong conservation ethic of the Bhutanese people. Conservation is a central tenet of Buddhism. Buddhism believes in preserving nature and giving back to the earth what one has taken, and also in the sanctity of life. The importance of protecting nature in all its manifestations has permeated Bhutanese consciousness and has become integral to the Bhutanese way of life. Therefore, preservation of the environment, as well as of sacred and cultural heritage sites are an important and an integral part of the Bhutanese value system.

His Majesty the King Jigme Singye Wangchuck has stated that :

"Throughout the centuries, the Bhutanese have treasured their natural environment and have looked upon it as the source of all life. This traditional reverence for nature has delivered us into the twentieth century with our environment still richly intact. We wish to continue living in harmony with nature and to pass on this rich heritage to our future generations."

Ever since embarking on its first socio-economic development planning, RGoB's policy has been to ensure that the process of development in all its aspects should be consistent with maintaining the environmental and cultural integrity of the country. This guiding principle is the essential basis for Bhutan's sustainable development strategy, which was elaborated further in the 1990 Paro Resolution on Environment and Sustainable Development.

An important consequence of the enlightened leadership over the years is that over 72% of the country is still under forest cover, and in response to more recent measures, 26% of the total land area is now under protected area management (see Map...). In 1995, the 73rd session of the National Assembly ruled that the country must maintain not less than 60% of the country under forest cover for all times to come.

Environmental Challenges Ahead for Bhutan

Bhutan visualizes many challenges in the next century. The country is small, the terrain extremely rugged, the economy is rural based and there is very limited agricultural land with overall scarcity of trained manpower and other resources required for development. At the same time, the process of modernization is creating new demands upon the country's natural resources.

As yet, Bhutan has little to sell to the outside world to pay for its numerous needs. Foremost among these needs is the cost of financing development. The RGoB is committed to providing increased access to essential services such as health, education, transport and so on. The cost of providing such services is very high in Bhutan as many of the people live in scattered and remote settlements that are isolated from each other and from administrative centres.

The policies that preserve Bhutan's rich natural beauty and biodiversity, restrict the commercial exploitation of the raw materials upon which most national development schemes are based in other countries. In addition to tight restrictions on commercial logging aimed at preserving the forest cover, soil and water resources, exploitation of the country's mineral resources is severely regulated. The Mining Act of 1995, requires stringent environmental impact assessments to be conducted for all mining projects.

While 85% of the population earn their living from the land, only about 7.8% of the land is under cultivation and of this a high proportion is on slopes that are too steep for cultivation without severe risk of erosion. Of the total area under cultivation, nearly 30% is under Tseri or other forms of shifting cultivation which, on environmental grounds, is to be phased out. As there is no evidence of an equivalent area suitable for permanent cultivation, the phasing out of shifting cultivation is a major challenge which is going to be addressed throughout the 8FYP.

Livestock, owned by 90% of rural families are an important source of meat, milk, draught power and manure. At present, pastureland composes around 3.8% of the land area which is supplemented by forest forage and fodder as feed for the cattle. In the absence of adequate reliable data, there is some doubt about trends in livestock numbers, but during 8FYP the threat of potential damage to forest cover and to pastures through over-grazing will need to be kept under review.

During 8FYP and beyond, the pressure on land and other renewable natural resources (See Chapter 15) will inevitably grow as a result of increasing human population. In the face of limited agricultural land, and the need to extend and improve social and other services, the recent increase in the human population growth rate, now estimated at 3.1%, is a tremendous challenge. The increase is primarily due to the dramatic success of the programmes of health sector (see chapter 28). This increase in population will present another set of equally daunting challenges in

the urban areas. Though only 15% of the population currently resides in urbanized areas, that proportion is expected to increase dramatically as a result of the combination of the "pull" of urban communities in terms of the employment and social opportunities they offer, and the "push" of the rural areas arising from limited non-farm employment, and social prospects.

Based on the plausible assumption that half of the national population increase will occur in urban areas, Bhutan's current urban population of slightly over 100,000 will approach 400,000 by the year 2020. The next twenty-five years will thus see an unprecedented stress on the country's urban and peri-urban environments. Such surges are common in the first phases of development and Bhutan does not have to look far for examples of the problems that ensue. In Bhutan's case, however, the adverse potential is exacerbated by the fragility of most of the land upon which that growth is destined to occur. Given the country's predominantly mountainous terrain, urban growth is constrained by a shortage of suitable, level ground. Bhutan's current urban centres have sprung up where they could, mostly in major river valleys. The narrowness of most of these valleys has severe environmental implications for most urban sector activities such as housing construction, road building, and the provision of sanitation services.

To date, Bhutan's urban settlements have sprung up with only minimal urban planning. Town planners were simply not prepared for the dramatic increases in urban populations that have come to pass in the past two decades. Now that they have been firmly established, Bhutan's urban areas will continue to grow and be augmented by additional centres that result from new industrial enterprises. Within the next ten to twenty years, a dozen or more nascent population centres can be expected to be affected with the same ailments that have come to plague Thimphu and Phuntsholing. The pressure on natural resources and pollution from urbanization will be tremendous if facilities like solid and liquid waste treatment and management are not provided. Standards have to be set for emissions of pollutants in soil, water, and air to safeguard urban population against health hazards.

To avoid slums and shanty towns from developing, there is an urgent need to provide urban housing for the low and middle income groups. There will also be a great pressure on the government to provide educational, health, and recreational facilities, all of which will have considerable impact on the environment through pollution and pressure on natural resources. There is, therefore, a compelling need for integrated rural/urban planning, which must be addressed in 8FYP and beyond. Not only are the problems of the one interconnected with those of the other, their mutual solution depends, in large part, on the successful resolution of shared concerns. This is especially true in the light of the fact that the government's agenda for sustainable development have both industrial and agricultural components which are interwoven.

In spite of these many challenges, and limited economic opportunities, the RGOB has made it a policy to avoid over-exploitation of its forests and minerals. The RGoB has instead chosen to forego immediate economic gains and has placed a higher priority on the conservation of natural resources.

National Institutions in the field of Environmental Conservation

Nature Conservation Section

The primary responsibility for nature conservation activities falls on the Nature Conservation Section (NCS) of the Forestry Services Division. The NCS maintains the protected areas and ensures that forests are protected. The main objective of the NCS is to conserve Bhutan's rich biodiversity in line with the RGoB's policy of sustainable development and environmental protection. The NCS is divided into three units, the Biological, the Geographical Information Systems/database management unit and the Management/Planning unit.

The biological unit conducts biodiversity surveys in protected areas. To date, surveys have been completed for two national parks, the Royal Manas and the Jigme Dorji National Park, and work has currently been started in the third park, the Black Mountain National Park. Critical surveys of the Phibsoo, the Kholong Chu and the Trumshingla National Parks have also been initiated.

The Nature Conservation Section faces human resources, and financial constraints in carrying out its mandates. In addition to the large costs of maintaining protected areas and preparing management plans, there is also the need to provide protection to the endangered species from the onslaught of poachers. Of late, many anti-poaching squads have been launched.

Until the late 1980's, the RGoB felt that as conservation activities were being carried out by the relevant Ministries such as the Forestry Services Division, there was no need for the establishment of a separate national coordinating agency. Since then, the Government has recognized that environmental related issues are cross-sectoral in nature and the need for a national agency was recognized.

The National Environment Commission (NEC)

The National Environmental Committee was therefore set up in 1989 and later upgraded as the National Environment Commission. The composition of the NEC and its functions are outlined in Chapter 31.

To implement its mandate effectively, the NEC works in close collaboration with the line ministries and the dzongkhag administrations. The National Environment Commission Secretariat is headed by a Deputy Minister. This Secretariat plays a key role in promoting sound environmental policies and investments and carries out the mandates given to it by the National Environment Commission. This Secretariat, however, is at an early stage of development and requires significant institutional strengthening in order to carry out its mandate effectively. As outlined in the 1990 Paro Resolution, one of the ultimate objectives for the NEC is to draft a National Environmental Strategy (NES), a dynamic, long-term strategy for bringing about sustainable development through improved environmental planning, policy-making, and management. Since the state of Bhutan's future natural environment will be closely linked to the way its natural resource base is exploited, it is imperative that the National Environmental Strategy emphasizes not only the optimal utilization of the country's natural resources, but also the possibility of alternative utilization, especially in the industrial sector. Such an approach is dictated by Bhutan's inherent smallness and its mountainous environment, both of which place severe limitations on its absorptive capacity. It is therefore critical that a concerted emphasis be placed on integrating planning activities in those sectors involved primarily in the development

of Bhutan's natural resources. If done effectively, the result will be a blueprint that facilitates the adoption and evolution of sustainable natural resource management systems in line with the sustainable development approach adopted by Bhutan.

Bhutan Trust Fund for Environmental Conservation

Bhutan has received generous support from donors in the conservation and sustainable development fields. However, the country has suffered from the lack of continuity in project funding that results from fluctuating budgets, which often lead to projects ending before their benefits have been fully realized. When adequately completed, however, income-generating projects can derive support from the revenues created. However, this is not the case with environmental conservation projects. With a few exceptions, a national park will not be paying its way in the short term, and may not do so in financial terms even in the long-run. The economic benefits of exploiting the forests of Manas National Park, probably one of the most important reserves in South Asia, would in the short term generate greater revenues than setting it aside as a national park. In setting aside 26 percent of its land area to conserve the rich natural heritage of the Eastern Himalayas, Bhutan hopes that its partners in development will defray some of the costs of maintaining these protected areas.

To this end, the RGOB has established the Bhutan Trust Fund for Environmental Conservation, which can well prove to be an excellent role model of how the world community can effectively assist countries in making major commitments to the global environmental efforts. This Trust Fund was established in March 1991 as an innovative financing mechanism which will help Bhutan continue conservation activities and ensure that the country can uphold its commitment to the environment in spite of the pressures to reduce conservation activities and focus on economic development. As of beginning 1996, six donors contributed US\$ 17.4 million to the Trust Fund (see Table 9.1).

At the 5th Round Table Meeting in Geneva, the World Wildlife Fund drew attention to the limitations of project-by-project funding and urged support over the long term for initiatives such as the Bhutan Trust Fund for Environmental Conservation. It is also Bhutan's hope that endeavors such as its Trust Fund will be supported, as funding for such projects will ensure that the weight of global conservation does not fall on small countries like Bhutan who have much more immediate needs at hand.

CHAPTER 10. WOMEN IN DEVELOPMENT

Overview

Bhutanese women constitute 48% of the country's total population and play a major role in the development of the country. They are actively involved in all areas of economic, political and social life as farmers, entrepreneurs, decision makers, doctors, engineers and home-makers. Bhutanese women do not suffer from gender discrimination as they have equal status with men and enjoy the same level of freedom under the laws of the country. In fact, the predominant inheritance laws are particularly favourable to women, and most households are headed by women. Their participation in the decision making fora such as Zomdus (community meetings) at the grassroots level is as high as 70%. Participation of women in the other decision making fora like the district and block level development committees is also being actively promoted and is increasing. Positions in the higher levels of Government and decision making, in which women are not yet adequately represented, are open to both genders, and placement of women in the higher strata of government will continue to be encouraged. In general, the level of women's involvement in the decision making processes is increasing as may be illustrated by the representation in the National Assembly and this presents a very conducive environment for enhanced integration of women in the socio-economic development of the country.

Employment

Agricultural Sector

Currently, about 62% of women are involved in agriculture and their contribution to the production cycle is substantial. The division of labour by gender is not rigidly fixed although ploughing is generally regarded as man's work while house-keeping is considered the woman's domain. Promotion of an efficient and productive agricultural sector can play an important role in improving the economic status of women and thus of the household as a whole. Although, at present, there are only a few female agricultural extension workers, the scenario will soon change greatly with the National Resource Training Institute (NRTI) providing training to both the sexes. About 11 percent of the institute's enrolment today is made of female students covering all the extension services of the RNR sectors.

Public Sector

In the 1960s, there were hardly any women employed in the public sector, but the participation rate of women is now around 16% and it is rising rapidly. There is no discrimination in terms of opportunities, salaries, benefits or career development prospects. Although the sector employs 13,566 people, the number of women holding senior management positions is comparatively small, largely due to the low recruitment in the earlier years. This is due to availability of fewer educated women in the earlier years as a result of physical constraints which made educational institutions, mostly available only outside the country, almost inaccessible to Bhutanese students especially girls. However, the number of women at the middle and lower levels of the civil service, is increasing significantly. One of the main factors contributing to this has been the enhanced accessibility of education institutions and the increasing enrolment rates for girls,

which has given rise to a higher percentage of women possessing adequate education to enter the public sector.

Private sector

In terms of distribution by economic activity, the percentage of women in the private sector has been very small in the past. However, at present, there is a visible upward trend in the number of up-coming women entrepreneurs in many spheres of production and service activities.

The initiative to increase and enhance women's representation in business has been boosted by the activities of agencies such as the National Women's Association of Bhutan (NWAB) and the Bhutan Development Finance Corporation (BDFC). NWAB plays a major role in providing vocational training, basic skills and literacy, and nutritional and health training to encourage and promote women's role in the development activities. The BDFC with its urban as well as rural credit programmes for industrial development, commercial farming and other rural activities, has a total clientele of 10,000 out of which 32% are women.

An increasing number of women both in the rural and urban areas are gainfully employing themselves in order to improve the economic well-being of their families. However, the involvement of women in the private sector is greatly hindered due to lack of entrepreneurial skills. Most entrepreneurs, both men and women, do not have the necessary experience in business management as industrial and commercial development are very recent phenomena. On the whole, women's participation in the private sector still needs to be given more impetus, and this is being provided by government programmes designed to promote entrepreneurial skills both for men and women.

Access to services

Education

Education in Bhutan is free and without any discrimination. In spite of limited resources, the strong drive by the government to encourage enrolment of children in schools increased primary coverage to 72% in 1995. A review of the enrolment pattern for the technical and vocational institutions also shows interesting and encouraging results. The increased percentage of enrolment of girls in technical and vocational institutions is a direct reflection of the RGoB's recognition of the importance of promoting the involvement of women in all aspects of the country's development. This also reflects the increasing interest amongst girls themselves in technical and vocational education. Their selection of an increasingly wide choice of subjects will consequently increase their participation in the overall development of the country.

The enrolment of girls at 43% is one of the highest in the SAARC region as well as in the developing countries. Nonetheless, RGOB is making further efforts to increase enrolment especially at secondary and college levels. While girls' enrolment in community and primary schools is as high as 43%, it is only 20% at the college level. Parental concerns regarding the well-being of girls still make it necessary for the government to locate schools closer to communities and also to provide boarding facilities.

The national literacy rate is currently 54%. To further meet basic educational needs in writing, reading and numeracy in order to enhance effective communication and understanding of health, sanitation, hygiene and other development related issues, the RGOB has established 33 adult and non-formal education centres throughout the country. It has been observed that nearly 70% of the beneficiaries in these centres are women.

Health

Maternal and child health have always been accorded high priority by the government and with the assistance from the international organizations, there has been a rapid expansion of health infrastructure, installation of modern equipment and training of personnel for mother and child health services. These efforts have contributed towards the impressive achievements made in the quality of life enjoyed by the women in Bhutan today. Health programmes made particularly significant impact between the years 1984 and 1994, resulting in the reduction of many health hazards for mother and child (see for detail in Chapter 28, Table 28.1).

Further steps will need to be taken to enhance health service facilities and also improve women's awareness of issues related to basic health, nutrition and family planning. In this context the involvement of women voluntary health workers in providing health services is a priority area of intervention. At present, available statistics show that although in a few dzongkhags women health workers exceed 60% of the total, overall they only constitute around 22%.

Institutions for strengthening the mainstreaming of women in development

National Women's Association of Bhutan (NWAB)

The NWAB was established in 1981 under a resolution passed in the 53rd session of the National Assembly. The NWAB was established to enhance the role of women at all levels of the development process. The association, with nationwide chapters, has successfully addressed various needs of rural women through a variety of programmes like education, family health care, skills training, employment and rural credit facilities. The NWAB became a semi-governmental organization in 1985 and a Non-Governmental Organization in 1992.

Since its inception, NWAB has carried out several programmes in close collaboration with government agencies. It has provided training programmes to enhance income generating skills in such areas as weaving, knitting and tailoring, as well as in establishing business activities and in improving women's access to credit. The association's chapters, especially in the eastern districts, have been successful in initiating group saving schemes which have served to mobilize resources for small-scale income earning activities. The NWAB members in cooperation with the district health authorities have also actively participated in disseminating information related to general health, hygiene and small family size norms to rural women. They have also been involved in the installation of safe piped drinking water, fuel efficient and smokeless stoves, in rural areas.

During the 8 FYP, the NWAB will continue to play an important role in enhancing the participation of women in the national development efforts.

Bhutan Development Finance Corporation (BDFC)

The BDFC is the most important of the financial institutions in meeting the credit needs of the rural community. With its network of branch offices in all the 20 districts, the BDFC provides credit services to both women and men. While past loans to women accounted for 27% of the total BDFC loans, women comprised 32% of the total clients in 1994. The recovery rate for loans made to women was about 49% as compared with about 40% for men.

In order to enhance credit accessibility and delivery, the BDFC decentralized its credit system with the establishment of Block Loan Committees. To further enhance the delivery system, the BDFC introduced schemes such as Saving Mobilization and Group Guarantee Lending during the 7 FYP. These measures brought about wider participation by the rural population, especially the women.

Objectives and Strategies for the 8 FYP

While there will be no parallel projects formulated specifically for women, measures related to the promotion of women in development will be incorporated in all sectoral projects and programmes. Appropriate policies and development planning will enhance the contribution of women by reflecting their special needs, role and potential.

CHAPTER 11. PRIVATIZATION AND PRIVATE SECTOR DEVELOPMENT

The General Approach

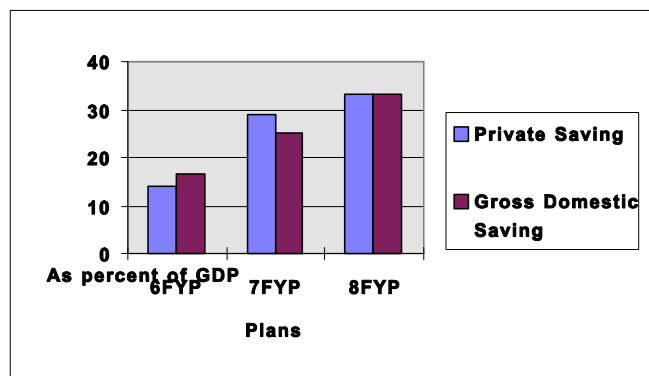
During the last decade, increasing attention has been focused, in Bhutan as well as worldwide, on the role of the private sector in economic development. Two aspects of private sector development will be addressed in the 8FYP. The first focuses on privatization of public sector activities - divestiture programmes, in part or in whole. The different modalities of privatization will include outright sale, partial minority ownership, management contracting, lease management and commercialization. In principle, the private sector will be encouraged to assume activities that have hitherto been carried out by the public sector if this will result in increased efficiency and higher profitability. However, where it is in the public interest, essential services will continue to be in the public sector, operating, wherever appropriate and possible, along commercial lines.

The second category of private sector development to be pursued involves enhancing the current level of activities and promoting new activities, hitherto undeveloped. For this the government will continue to promote an 'enabling environment', appropriate to Bhutan, that will help to stimulate private sector growth. Recognizing the role of the private sector, the government adopted appropriate strategies and policies during the 6 FYP, and subsequently enhanced the process of privatization in the 7 FYP with the divestment of shares and measures to create an 'enabling environment'. For the private sector to continually grow and take a greater share in the country's economic activities, further steps will be taken during the 8 FYP. In addition to the development of the private sector itself, the divestiture programme will also further government's objective to improve public finances through improved efficiency in privatized enterprises, thus providing greater tax revenue, and also by reducing the tax burden which occurs through transfers and subsidies to loss-making public enterprises.

Review of Past Performance

Savings Behaviour

Two important parameters that contribute towards growth and development are savings and investment. During the 7 FYP, gross domestic savings grew by an average of 24% p.a. Private savings performed even better with an average growth rate of 25.2% per annum, of which corporate savings accounts for the larger share of the increase. At present, gross savings to GDP stand at 20%. However, private sector investment as a percentage of GDP has remained low due to insufficient activities for private sector involvement at acceptable levels of profitability. This has consequently given rise to a situation of excess liquidity (see Figure 11.1).



Net Borrowing by Sectors

Statistical evidence from the banking sector shows that between 1992 and 1995, the overall net credit to the private sector(excluding personal loans) increased at 6.5% p.a. Analysis of the five important sectors show that borrowing by the agricultural sector was at a steady rate of 6.4% p.a., while for the manufacturing sector it had been fluctuating with an estimated average of 24% p.a. The building and construction sector's borrowing saw a moderate increase of about 3.8% p.a. The trade and commerce sector borrowing fluctuated at a rate averaging around 8.3% p.a. and the Transport sector saw a declining rate of about 6.3%.

Privatization Programmes

Privatization of public sector enterprises was given increased priority during the 7FYP, with the government continuing to transfer all commercial enterprises to the private sector, wherever possible, while limiting its role to providing essential regulation, entrepreneurial, managerial and skills training, and technical backstopping. During the 7 FYP, several public enterprises were divested. Of the 14 major industries, ten have majority private ownership at present as opposed to only two in 1990, but outright sale of some enterprises was not possible due to the lack of competitive offers. Buyers were not attracted to industries where (a) the scale of operations was seen to be beyond their managerial capacity, or (b) not seen as viable under prevailing circumstances. In some cases the government felt that privatization might lead to undue concentration of ownership in a few hands and therefore did not proceed with the sale of such enterprises.

In the Agricultural sector, the Fruit Processing Unit in Paro could not be privatized through outright sale as no buyer was found.

In the Mining/Manufacturing sector, the Calcium Carbide Plant was fully privatized together with the gypsum, slate and coal mines. The Sha Slate Mines in Wangdiphodrang and Salt Iodisation Plant in Phuntsholing were also privatized. Privatization of Bhutan Polythene Corporation was not achieved due to lack of private sector interest.

The activities and facilities related to Tourism, Hotels and Transport services were successfully privatized. The Tourism Authority of Bhutan will remain within the public sector to monitor and, where necessary, regulate private sector activities in tourism.

Three government workshops in Thimphu, Phuntsholing and Samdrup Jongkhar were also auctioned to the private sector for a period of seven years each for a fixed royalty.

Private Sector Development

Despite a number of constraints, the private sector has continued to register modest growth and play its role in the economic development of the country. The factors that have restrained the potential growth of the sector have been identified as;

- (a) The relatively small size of the local market,

- (b) Lack of entrepreneurial expertise and experience,
- (c) Limited access to credit facilities,
- (d) High interest charges and
- (e) Shortages of domestic skilled and unskilled labour.

Towards the promotion of small entrepreneurs in carrying out commercial and industrial activities, a total sum of Nu.71.839 million was disbursed by the Bank of Bhutan to a total of 2631 beneficiaries between 1992 and 1994.

To develop the indigenous entrepreneurial capacity, a series of Comprehensive Entrepreneurship Development courses were held. By mid 1994 a total of 99 businessmen/women were trained under the scheme which started in 1990. A total of 81 entrepreneurs participated in the three workshops for the development of cottage industries which were held in Khaling, Bumthang and Panbang. Several business opportunity workshops were also conducted in various dzongkhags which attracted more than 20 participants.

Major reforms are underway in the Financial and Banking sector, which are detailed in Chapter 13.

Objectives and Strategies for 8 FYP

Objectives

Public Sector Enterprises

A number of public enterprises which are unlikely to be privatized are the Chukha Hydel Power Corporation which is simply too large for private sector participation, the Bank of Bhutan, which is a joint operation with the State Bank of India, and the Druk Air Corporation which is unlikely to be attractive to the private sector until its financial position improves. But in the case of others, the Government will continue divesting its share to the private sector.

A list of major public enterprises including divested corporations and their current status is presented in Table 11.1. A forecast of further divestment of enterprises during the 8 FYP is also shown in Table 11.1. Based on accounts submitted for years 1992, 1993 and 1994, a forecast of sales and profits for the last two years (1995 and 1996) of the 7 FYP is presented in Table 11.2. Based on these estimates for 7 FYP and taking into consideration other factors such as capacity utilization rates and investment programmes, an attempt is made to prepare sales forecast and a minimum rate of return on capital employed for 8 FYP, for each of the Public Enterprises. These are also presented in Table 11.2. It is assumed that all the enterprises should obtain a rate of return on capital employed above 10 percent as the latter currently represents an average risk-free return i.e. yield on bonds and bills.

The government will continue to finance and implement large projects such as Dungsum Cement Project, and other major hydro-electric projects which are beyond the present capacity of the private sector. For small to medium-scale projects, the strategy will be for the government to act as a catalyst by providing the private sector with improved access to credit and markets, physical infrastructure, training and technical backstopping. During the 8FYP, strong emphasis will be placed on profitability as the major criterion of performance of all the public sector enterprises. However, until such time the private sector capacity is developed further, there may be circumstances where potentially significant enterprises, particularly in trade and industry, will be pioneered by Government, provided there are sound prospects for privatization within a short time.

Privatization of Functions and Activities of Government Agencies

Ministry of Agriculture

The RGOB intends to privatize the various farms which are currently under the Ministry of Agriculture as far as it is feasible. After privatizing NASEP(Druk Seed Corporation), the Agricultural Machinery Centre (AMC) in Paro will also be privatised. The Forestry Services Division will also contract out logging activities and other functions of the division where appropriate to reduce overhead costs and encourage the growth of the private sector.

Ministry of Trade and Industries

In the Power Division, construction of mini and micro hydel power plants, and transmission and distribution will be contracted out to the private sector. Efforts will also be made to privatise the State Trading Corporation of Bhutan (STCB). Privatization of the agro-industries in Wangchutaba and the Wood Craft Centre in Langjuphaka will also be actively pursued.

Ministry of Communications

Road construction and maintenance, for which private contractors have increasingly been utilized, will be further encouraged. The Ministry of Communications will formulate detailed regulations for privatized road construction and maintenance activities. While postal services have been privatized to a great extent in the dzongkhags through the agency system, efforts will be made to further privatize services right down to the gewog (block) level. The privatisation process will go through an intermediate stage in which the services will initially be corporatised.

Ministry of Health and Education

To further enhance quality and reduce government overhead costs, the existing policy of encouraging private schools and health clinics will be given renewed emphasis. The private sector will be encouraged and assistance provided to establish schools beyond the primary level as and when proficiency is established. The Printing Unit, which is currently under the Education Division will also be sold to the private sector.

Other Ministries

The National Property Division and Foreign Drinks Store under the Ministry of Finance will be considered for privatization. These are activities that should normally be guided along competitive and profitable lines and therefore suited to be under private sector management.

The Ministries of Planning, Finance, Trade and Industry, the Royal Civil Service Commission, as well as the sectoral ministries, have a role in the promotion of the government privatization programme.

Policies and Strategies for Private Sector Development

Access to Credit

Entrepreneurs have faced difficulties in obtaining sufficient credit to expand businesses or establish new enterprises. With the financial restructuring programme which is expected to take place during 8 FYP, a number of constraints currently faced by entrepreneurs will be removed. Interest charges, though remaining high at the earlier period of the plan will be gradually decreased (For details see Chapter 13). The interest rate will be maintained at a level which will be attractive to both savers and borrowers; savers will receive a positive real rate of return while borrowers will find the rate attractive to borrow and make profitable investments.

Foreign investment

Development of the private sector is partly constrained by the shortage of domestic capital as well as by indigenous entrepreneurial capacity and technological know-how. The government will, therefore, continue with its current policy of foreign equity participation of up to a maximum of 20% in joint venture projects. The selection of foreign participation will be made on a case-by-case basis.

Labour requirements

Bhutan is still experiencing a serious shortage of skilled and semi-skilled labour, which is expected to continue during the 8 FYP. The gap between demand and supply will therefore continue to be reduced as far as possible by the employment of expatriate labour. In order to bridge the gap satisfactorily, the RGOB will review its procedures for the employment of expatriate labour and revise them where necessary. The RGOB will also pursue the promotion of mechanization to off-set the lack of required domestic manpower.

Other policies and strategies

In general, the policies and strategies adopted in the 6FYP and 7FYP will be continued with greater emphasis placed on implementation in order to further private sector participation. A brief summary of some of the strategies to be followed is outlined below:

- increasing assistance to entrepreneurs in identifying market prospects for manufacturing activities;
- developing a fair and equitable tax structure providing appropriate incentives to individuals and enterprises in the private sector;
- improving power supply through increased efficiency and reduction in energy losses due to transmission.
- enhancing domestic saving through increased competition between the financial institutions which would be encouraged by the phasing out of administered interest rates. Financial institutions will be encouraged to support productive investments in cottage, small and medium scale manufacturing and construction sectors;
- adoption of special share allotment schemes to encourage participation from small investors, under which a certain percentage of shares will be offered to individuals and small investors. This will be further supported by special incentives such as introduction of discounts, borrowing at low interest rates for share purchases, and payment by instalments;
- promotion of further divestiture of public sector enterprises wherever appropriate and feasible, after carrying out relevant studies.

- high priority will continue be given to Human Resource Development for the private sector, to include domestic entrepreneurship, management and associated skills, and training in technical fields required by private sector enterprises.

Table 11.1 Profile of major enterprises and divestiture programme for the 8FYP

	Year of Estb.	Current Status	Pvt. Holding end of 6th Plan	Pvt. holding by the end of 7th FYP	Targeted Pvt. holding by the end of 8th FYP
Bhutan Carbide & Chemicals LTd.	1984	Operational	75%	100%	100%
Bhutan Board Products Limited	1983	Operational	61%	76.1%	85%
Penden Cement Authority Limited	1974	Operational	25%	31.26%	49%
Distillery (Army Welfare Project.)	1976	Operational	0%	0%	
Bhutan Fruit Products Ltd.	1973	Operational	100%	100%	100%
Bhutan Logging Corporation	1984	Operational	0%	0%	
Gedu Wood Manufacturing Corporation	1982	Under Liquidation			
Lhaki Cement Private Limited.	1989	Operational	100%	100%	100%
Bhutan Tourism Corporation Limited.	1974	Operational	89%	93.33%	95%
Shumar Gypsum	1980	Liquidated			
Druk Satair Corporation Limited.	1993	Operational		100%	100%
Bhutan Polythene Company	1986	Operational	51.1%	60.06%	70%
Handicrafts Development Corporation.	1974	Operational	0%	0%	
Namgail Cement Company Limited	1988	Operational	100%	100%	100%
Bhutan Marbles & Minerals Limited.	1989	Operational	100%	100%	100%
Wood Craft Centre	1990	Operational	0%	0%	
Bhutan Agro Industries Ltd.	1993	Operational	0%	0%	
Penden Dukpa Coal Co.	1988	Liquidated 1993			
Eastern Bhutan Coal Company.	1993	Operational		100%	100%
Bhutan Ferro Alloys	1990	Operational		20%	20%

Penden Dukpa Coal Co.

Eastern Bhutan Coal Company.

-

15.80

17.38

19.12

10.00

20.00

4.68

30.00

Bhutan Ferro Alloys

10.00

CHAPTER 12. MANAGEMENT OF PUBLIC FINANCE

Overview

The Royal Government of Bhutan will continue to emphasis on the prudent and efficient management of its finances. Revenues will be enhanced through increased efforts in compliance and collection of taxes, and introduction of equitable and fair user charges for non-tax revenues. It will also focus on new areas of taxation, set up an appropriate legal framework, and review the current tax structure and administrative system.

The growth in expenditure will be kept below the nominal growth of GDP and in line with revenue increases. Additional spending will only be allowed if additional collection of revenues can be made. The overall fiscal deficit as a percentage of GDP will be kept to 1 percent. The expenditure will be strictly monitored so as to bring about efficiency and effectiveness from the recurrent budget, and a higher rate of implementation and capital formation from the capital budget. The financing of the deficit from domestic borrowing will be minimised to avoid inflationary pressures and crowding out effects on the private sector.

Revenue prospects for 8 FYP

The Revenue and Customs Division of the Ministry of Finance has produced two scenarios of revenue projections. In the first scenario, termed the **base line scenario**, revenues are projected to increase at a rate of 7.8 percent in nominal terms during the plan period. This is based on the assumptions of sound economic performance, increase in profits, revision of power and other tariffs and improved administrative efficiency in terms of wider coverage and efficient collection of taxes. In the second scenario, termed the **optimistic scenario**, the revenues are projected to increase by 12.8 percent per annum during the 8 FYP. This is based on the assumptions mentioned under the base line scenario as well as the implementation of tax reforms and the introduction of new tax measures. However for the 8 FYP revenue projections the baseline scenario has been used, (see table 12.1).

The projections of the main items of tax and non-tax revenues are discussed individually in the following section. The items which make significant contributions to tax revenues are corporate income, royalties, Bhutan sales tax and excise duty. On the non-tax revenue side, major contributions are made by dividends from corporations, revenues from government agencies and to a lesser extent, capital revenues.

Individual Revenue projections

Bhutan Sales Tax and Excise Duty

Bhutan sales tax is projected to grow by about 5 percent per annum as a result of increases in prices and consumption demand. Though introduction of sales taxes to new sectors is under consideration, these have not been used in the projections. Excise duty, which is currently applicable to alcohol and beverages, is also projected to grow by 5 percent per annum.

Revenues from Government Agencies

The main contributions to this category are expected to come from profits made by Telecommunications and higher tariffs on domestic power. The revenues are projected to grow by about 6 percent per annum.

Corporate Income Tax, Net Transfers from Public Enterprises, Dividends

A reclassification of revenues within these three categories will be effected in 1997/98. Taken together, these three sources of revenue are projected to grow by 24% in the first year of the 8FYP, reflecting the expected increase in the Chhukha power tariff. Thereafter growth is projected at 5% p.a..

Table 12.1 Base Line National revenue estimate for 7FYP and forecast for 8FYP

Source	7 Five Year Plan					TOTAL 7 FYP	8 Five Year Plan					TOTAL 8 FYP
	1992/93 (Actual)	1993/94 (Actual)	1994/95 (Actual)	1995/96 (Est.)	1996/97 (Est.)		1997/98	1998/98	1999/2000	2000/2001	2001/2002	
1. TAX REVENUE	457	503	650	682	718	2,912	1,302	1,378	1,457	1,540	1,627	7,304
1.1 Corporate income tax	112	115	203	234	245	810	632	664	697	732	769	3,494
1.2 Business income tax	28	33	36	37	39	174	46	48	50	53	55	252
1.3 Salary tax	5	6	7	7	7	32	8	8	8	9	9	41
1.4 Health contribution	4	6	7	7	7	31	8	8	9	9	10	44
1.5 Royalties							144	151	159	167	175	795
1.6 Rural tax	6	6	6	6	6	30	7	7	7	8	8	37
1.7 Bhutan sales tax	96	89	118	120	126	548	133	139	146	153	161	733
1.8 Export tax on cash crops	2	8	11	11	12	44	13	14	15	15	16	73
1.9 Excise duty	155	185	194	194	204	932	210	221	232	243	256	1,162
1.10 Motor vehicle tax	23	21	21	24	25	115	24	26	27	28	30	135
1.11 Business and professional	5	4	5	6	6	26	6	6	7	7	7	34
1.12 Import duty	11	23	30	24	25	113	38	40	42	45	47	212
1.13 Gongda Woola	1	1	5	4	8	20						
1.14 Other tax revenue	9	6	7	8	8	37	8	8	8	9	9	42
1.15 Proposed new taxes							25	37	50	62	75	249
2 NON-TAX REVENUE	1,029	1,098	1,327	1,223	1,261	5,543	1,031	1,082	1,137	1,193	1,253	5,696
2.1 Net transfer of profits from public entps.	556	529	455	605	638	2,783	140	147	154	162	170	774
2.2 Royalties	60	115	120	109	114	518						
2.3 Dividends	87	63	44	47	49	290	387	407	427	448	471	2,140
2.4 Administrative fees & charges	35	46	47	43	46	217	54	57	60	63	66	299
2.5 Capital Revenues	130	104	87	68	71	462	101	106	111	117	122	556
2.6 Revenue from Govt. deptts./agencies	161	210	280	296	310	1,258	346	363	381	400	420	1,910
2.7 Other non-tax revenue	0	31	294	55	33	15	3	3	4	4	4	18
TOTAL REVENUE RECEIPTS	1,486	1,601	1,978	1,905	1,979	8,949	2,332	2,460	2,594	2,734	2,880	13,000
Tax revenue as percent to GDP	7.18	7.00	7.82	7.19	6.63		10.52	9.81	9.02	8.20	7.62	
Non-tax revenue as percent to GDP	16.20	15.30	16.00	12.90	12.60		8.33	7.70	7.04	6.35	5.87	

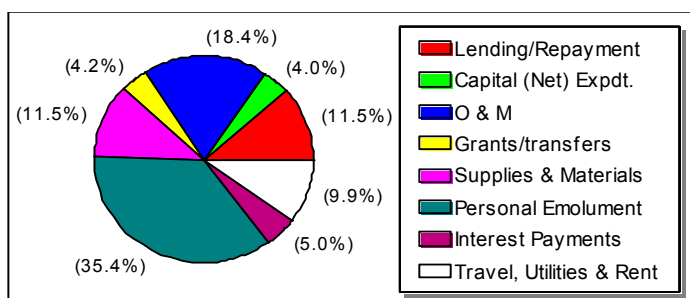
Capital Revenues

Though it is difficult to project capital revenues due to the wide variability from year to year, it is anticipated that the revenues generated under this category will be significant. It covers sale of government shares of the corporations and sale of government property.

Royalties

In contrast to the 7 FYP, royalties have been included under the category of tax revenues.

Royalties include mining and minerals extraction rents, tax on wood products but do not include Royal Bhutan lottery. The royalty on the latter is still classified under transfer of profits.



Foreign Grants

It is assumed that the Government of India will continue to provide budgetary support in grant form amounting to Nu. 800 m p.a. during the 8 FYP.

Expenditure programme for 8 FYP

Expenditure ceilings

Taking the above factors and the related assumptions into consideration, the total revenue during the 8 FYP, is projected to be about Nu. 13000 m. For the purpose of allocating and targeting expenditures, this figure will be used as the most realistic revenue forecast. With the continued growth of education and health coverage, and with new capital projects coming on stream, recurrent expenditures will need to grow in real terms by 3-4% a year.

The total government expenditure mainly consists of three items namely, recurrent, development or capital expenditures and loan repayments.

Recurrent Expenditures

Recurrent expenditure is further broken down in to 6 sub-classifications - personnel emoluments, interest payments, utilities and rent, supplies and materials, grants and transfers, and operations and maintenance.

Personal emoluments

The average salary of civil servants would be increased to a level equivalent in real terms to that of 1988 by 2001/02, which would be done in tranches subject to availability of resources. Civil service numbers are currently 13,566 (1996) inclusive of teachers and health workers. There will be some retrenchments of under-performing staff during the next few years to maintain a slim, efficient and high quality civil service. In addition, real expenditures on Personnel Emoluments will need to rise, since the average government salary in 1995/96 was, despite a wage increase, was still about 40 % below the real level of 1988/89. This will facilitate induction of competent personnel in the civil service.

Interest payments

Payments are based on debt service data provided by the debt management unit in the Ministry of Finance. Interest payments are expected to be stable in nominal terms.

Travel, Utilities and Rent, and Supplies and Materials

The increase in these expenses will rise by at most 11.8% a year in real terms..

Grants/subventions and Other Expenses

The RGoB will continue to pursue the policy of not offering subsidies or transfers to loss-making organisations. However, it will continue providing grants or subventions to non-profit making institutions. Overall expenses in this category will be closely monitored to ensure efficient use.

Operations and maintenance expenditure

Although past trends show an annual average in real terms of over 10%, the projected growth rate is kept to below 11.7% a year from 1996/97 to 2001/02, with increases above this to be allocated if and when revenue availability above the base-line projection allows.

Capital expenditure

At present, based on the budget estimates of 1995/96, about 50.4% of the capital expenditures is financed by external donors. It is anticipated that Bhutan's development partners will continue to provide assistance to the capital budget in similar manner. For the 8 FYP, capital expenditure is projected to reach Nu 13429 billion. The total of these outlays is less than the total projected commitments for 8 FYP projects, as many will have outlays which extend into the 9 FYP. Donors are expected to finance over 80% of the total capital expenditure. The balance as counterpart financing will be the responsibility of RGoB, which is expressed as net capital expenditure.

Lending/Repayments

This consists of two major items, namely loans to enterprises and repayment of external principal and repayment of domestic debt. It is anticipated that the loans to enterprises will continue to increase at about 1% per annum from about Nu. 90m in 1996/97. External principal repayments are based on the schedule provided by the National Budget and Accounts Division, Ministry of Finance.

Deficit Level and Financing

Given the above revenue and expenditure projections the overall fiscal position during the 8 FYP shows a deficit of 1 percent of GDP. This, of course, assumes that the projections regarding revenue growth, foreign grant flows and expenditure ceilings can be realised.

Donor Financing

The scenario provided here indicates the following aggregate contributions for the 8 FYP by donors:

- Government of India - Budgetary Support Grant Nu. 4000 m
- Government of India- Project-Tied Grant Nu. 3500 m

-	External Multi & Bilat. Donors for Capital Budget	Nu. 11034 m
-	External Donor support for recurrent cost	Nu. 1103 m
	Total	Nu. 19637 m

Table 12.2 Government Expenditure Estimates for the 7 FYP and Projection for the 8 FYP

	7 FYP Estimates						8 FYP Projection					
	1992/93	1993/94	1994/95	1995/96	1996/97	Total	1997/98	1998/99	1999/00	2000/01	2001/02	Total
1. DOMESTIC REVENUE RECEIPT	1485	1602	1978	1903	1980	8948	2332	2460	2594	2734	2880	13000
2. GOI PROGRAMME GRANT	325	300	300	300	300	1525	800	800	800	800	800	4000
3. GOI PROJECT GRANTS	38	307	153	1162	1113	2773						
4. DONOR RECURRENT FINANCING	98	118	114	190	181	701	188	203	219	237	256	1103
TOTAL (1+2+3+4)	1946	2327	2545	3555	3574	13947	3320	3463	3613	3771	3936	18103
A. TOTAL EXPENDITURE (A.1+B+C)	2006	2416	2664	3716	3935	14737	3226	3413	3639	3956	4702	18935
A.1 RECURRENT EXPENDITURE	1240	1490	1667	1995	2198	8590	2450	2643	2871	3056	3757	14777
1. Personal Emoluments	498	510	609	668	841	3126	1007	1020	1046	1046	1550	5670
2. Interest Payments	63	218	199	206	188	874	136	163	194	187	171	850
3. Travel, utilities and rent	146	152	186	233	241	958	269	301	336	376	420	1701
4. Supplies and materials	210	215	224	293	315	1257	352	393	440	491	549	2225
5. Grants/transfers and other expenses	154	192	168	208	200	922	223	249	278	311	348	1410
6. Operation & maintenance	169	202	280	387	414	1452	462	516	577	645	720	2921
B. Capital (Net) Expenditure	278	599	823	1617	1504	4821	408	441	476	514	555	2395
B.1 Capital Expenditure	1157	1390	1592	3262	3447	10848	2289	2472	2670	2884	3114	13429
B.2 External Funding	879	791	769	1645	1943	6027	1881	2031	2194	2369	2559	11034
C. LENDING/REPAYMENT (NET)	488	327	174	104	232	1325	368	329	292	385	389	1763
C.1 Loans to enterprises	127	188	6	-183	-32	106	91	92	93	94	95	464
C.2 Repayment of debt principle	361	139	168	287	264	1219	277	237	199	292	295	1299
D. OVERALL FISCAL POSITION	-60	-89	-119	-161	-361	-790	94	50	-25	-185	-766	-831
Deficit (-)/Surplus (+) as % of GDP	-1.0	-1.2	-1.4	-1.7	-3.3	-1.9	0.8	0.4	-0.2	-1.0	-3.6	-1.0

Table 12.3 Eighth Five Year Plan Budget Outlay

Nu. in million

ORGANIZATIONS	RECCURE NT	CAPITAL	TOTAL	%
1. His Maiestv's Secretariat	35.17	0.00	35.17	0.1%
2. National Assemblv of Bhutan	31.28	7.80	39.08	0.1%
3. Roal Advisorv Council	21.39	2.43	23.82	0.1%
4. Council for Ecclesiastical Affairs	259.98	10.00	269.98	0.7%
5. Special Commission for Cultural	81.63	213.76	295.39	0.7%
6. Judiciarv	123.16	200.00	323.16	0.8%
7. Roal Audit Authority	61.78	117.16	178.94	0.5%
8. Roal Civil Service Commission	40.79	2298.70	2339.49	5.9%
9. Bhutan Olymnic Committee	26.49	43.10	69.59	0.2%
10 Dzongkha Development Commiission	13.96	4.48	18.44	0.0%
11 National Environment Commission	5.25	120.17	125.42	0.3%
12 Police, Jail and Fire Services	688.29	63.48	751.77	1.9%
13 <u>Ministry of Home Affairs</u>	<u>208.09</u>	<u>355.16</u>	<u>563.25</u>	<u>1.4%</u>
a. Secretariat	63.17	324.16	387.33	1.0%
b. Registration Division	36.32		36.32	0.1%
c. Survev and Land Record Division	108.60	31.00	139.60	0.4%
14 <u>Ministry of Finance</u>	<u>5498.69</u>	<u>49.98</u>	<u>5548.67</u>	<u>14.0%</u>
a. Secretariat & Divisions	693.10	49.98	743.08	1.9%
b. Debt Servicing	2149.53		2149.53	5.4%
c. Common Public Services	406.06		406.06	1.0%
d. Reserve for Pav Revision	2250.00		2250.00	5.7%
15 <u>Ministry of Foreign Affairs</u>	<u>734.01</u>	<u>185.82</u>	<u>919.83</u>	<u>2.3%</u>
16 Ministrv of Health and Education	3662.79	3316.02	6978.81	17.7%
a. Secretariat	49.70		49.70	0.1%
b. Education services	2089.00	1936.00	4025.00	10.2%
c. Health services	1524.09	1380.02	2904.11	7.3%
17 Roal Instt. of Management	50.41	248.54	298.95	0.8%
18 Ministrv of Agriculture	1453.98	3292.03	4746.01	12.0%
a. Secretariat	163.39	176.09	339.47	0.9%
b. Research, Extension & Irrigation	263.66	727.75	991.42	2.5%
c. Crop & Livestock services	226.16	667.54	893.70	2.3%
d. Forest services	275.70	865.95	1141.65	2.9%
e. Area Development Proiects	525.07	854.70	1379.78	3.5%
19 Ministrv of Trade and Industrv	1077.40	5624.39	6701.79	17.0%
a. Secretariat	30.65	10.79	41.44	0.1%
b. Tourism Authority of Bhutan	12.29	26.25	38.54	0.1%
c. Trade Division	67.66	3.56	71.22	0.2%
d. Geoglogv & Mines services	70.37	60.64	131.01	0.3%
e. Power services	896.43	5315.59	6212.02	15.7%
f. Industries Division		207.57	207.57	
20 Ministrv of Communication	1451.09	7182.37	8633.46	21.8%
a. Secretariat	55.34	10.00	65.34	0.2%
b. Postal services	203.89	35.00	238.89	0.6%
c. Telecommunication services	273.14	1560.00	1833.14	4.6%
d. Roads services	650.46	4011.09	4661.55	11.8%
e. Works & Housing services	228.38	1357.81	1586.19	4.0%
f. Civil Aviation	24.29	48.95	73.24	0.2%
g. Surface Transport	15.59	47.58	63.17	0.2%
h. Thimphu Citv Corporation		111.95	111.95	0.3%
21 Ministrv of Planning	55.47	111.49	166.96	0.4%
22 Dzongkhag Administrations (Civil)	495.84	0.00	495.84	1.3%
GRAND TOTAL	16076.94	23446.88	39523.82	100.00
				%

CHAPTER 13. FINANCIAL SECTOR DEVELOPMENT

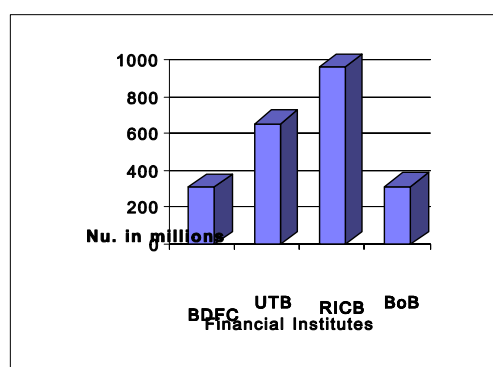
Institutional Development

In the 1960's the Bank Of Bhutan(BOB) was the only financial institution that was operational in the country. It played an important role in meeting the limited needs of the economy. However, these needs have changed and grown, and in order to meet the new challenges, a number of other financial institutions have been established. Today, in addition to the Royal Monetary Authority (RMA), there are four major financial institutions in the country and their activities are being currently reviewed so as to further improve and strengthen the financial sector.

Royal Monetary Authority (RMA)

The RMA was established in 1982, in accordance with the Royal Monetary Authority of Bhutan Act of 1982. Amendments were made subsequently in 1992, through the Financial Institutions Act. Today, it fulfils the role of a Reserve/Central Bank and carries out the conventional functions that are normally associated with central banks.

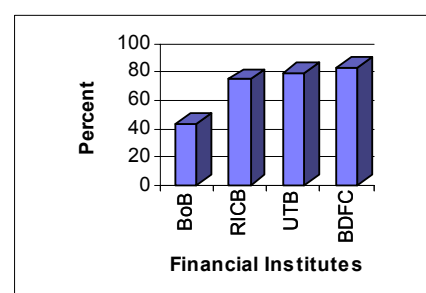
As of June-end 1995, its total assets stood at Nu. 3806 m, of which convertible foreign currency reserves accounted for about 98% (For details on RMA, refer to Chapter 31).



Bank Of Bhutan (BOB)

The Bank of Bhutan is the oldest financial institution, established in 1968 through a Royal Charter. At present, nearly 80% of BOB's shares is held by the Government, while the remaining 20 percent is held by the State Bank of India, with which BOB has an institutional association. The total asset recorded at the end of June 1995 was Nu. 3.147 billion, of which BOB's capital accounts for about 10% (see figure 13.1).

Over the years, BOB has established 26 branch offices throughout the country. Its total loan outstanding at the end of June 1995 was Nu. 1.343 billion of which the private sector accounted for about 39%. Until 1993, the BOB also took the responsibility of managing Bhutan's Indian Rupee reserve.



Bhutan Development Finance Corporation (BDFC)

The BDFC was established through an Article of Incorporation and commenced its operation in 1988 primarily to promote the industrial, agricultural and commercial development of Bhutan. Essentially, it was expected to play the role of a multipurpose development finance institution. Its equity is shared between the RGOB, BOB, and the RICB. The main sources of funds for the BDFC are external concessional loans and grants, grants from the RGOB and a line of credit from the RMA.

At end June 1995, the total assets of the BDFC amounted to Nu. 309.4 m (see Figure 13.1). At the same period, the BDFC's loans and advances amounted to Nu. 281.5 m which represents 83% of assets. Nearly 92% of the loans was directed to the private sector.

Royal Insurance Corporation of Bhutan (RICB)

The RICB was established in January 1975 by a Royal Charter to provide life and general insurance. Of the total equity, 39% is held by the private sector and 61% held by the government. The RICB's total assets at the end of June 1995 stood at Nu. 968.9 m, of which only 7% was accounted for by its own capital. The bulk of the RICB's liabilities are not insurance-related but are funds obtained from the GEPF (Government Employee Provident Fund) for which an assured return of 10% per annum must be provided. Loans and advances amounted to about Nu. 727 m at the end of the same period.

Unit Trust of Bhutan (UTB)

The UTB was established in 1980 through incorporation of its Memorandum and Articles of Association. Its main objectives are to mobilize savings through the sale of units, accept deposits through various schemes and to allocate the funds for productive investments. UTB will become a fully-fledged commercial bank by the end of the 7 FYP.

As of June 1995, UTB's total assets stood at around Nu. 656 m (see Figure 13.1). It operates five saving mobilization schemes, of which the unit share scheme is the most popular. The funds collected through unit shares amounted to Nu. 378.5 m at the end of this period accounting for 85% of the total deposit liabilities. Its loan portfolio accounts for 79% of the total liabilities.

Financial Sector Reforms to be Initiated during 8FYP

Overview

Although many reviews and reforms have been carried out since the 6 FYP, the changing and increasing needs of the economy warrant further reforms and improvements in the financial sector. The reforms under consideration at the end of 7FYP for implementation during the 8 FYP are envisaged, in general, to create a competitive environment, greater mobilization of resources and improvements in financial intermediation, to deepen and widen the capital and money markets and help the development of the private sector. In particular, the reforms are expected to address the following concerns:

- The government budget deficits are partly financed through direct borrowing from the RMA. Deficit financing of such nature has adverse consequences of expanding money supply and thereby causing inflationary pressures in the economy;

- The rapid increase in convertible currency assets not matched by the absorptive capacity of domestic market. This has led to the build-up of large excess liquidity in the banking sector. The "excess liquidity" presents the potential to create loose credit causing instability in the financial sector;
- At present, the RMA does not operate the full range of flexible policy instruments that are normally available to monetary authorities, that will check excessive credit expansion. However, at present these additional instruments may not be effective in a situation of excess liquidity; and
- The administered interest rate structure has contributed to some degree of market distortion.

Objectives for 8FYP

- Strengthen prudential supervision of the financial institutions;
- Develop effective monetary policy tools to enhance indirect monetary control;
- Sterilize the excess liquidity in the banking system;
- Improve the viability and competitiveness of the financial institutions;
- Promote domestic credit expansion consistent with balance of payments objectives and sustainable growth in output.

Strategies and Programmes for 8FYP

The process of liberalization of the financial sector which began during the 7 FYP will also continue during the 8 FYP.

Introduction of Government Bonds

In order to avoid direct government borrowing from the RMA, minimize the cost to the government, and support the development of indirect instruments of monetary policy, the introduction of government gilt-edged bonds, along with the issuance of RMA Bills, which are currently in operation, will be pursued.

Preparations for the issue of government gilt-edged securities were completed towards the end of 7FYP with assistance from IMF. A high level debt management committee is envisaged to coordinate debt and monetary management policies, oversee debt management and be responsible for the timing of auctions, the type of security (short, medium, long term securities), and the size of each auction.

At present, apart from the Cash Reserve Ratio (CRR), the RMA does not have any other policy instrument through which it can exercise control over the required liquidity in the financial system. CRR is normally imposed on commercial banks as a means of controlling their credit

creation capacity by requiring them to maintain a certain percentage of their loanable funds in the form of deposits with the central bank. At present, the RMA imposes a CRR of 15% of total deposit liabilities of the Bank of Bhutan. However, in view of the large excess reserves the Bank maintains with the RMA, this instrument is largely ineffective as a means of controlling credit expansion and additional instruments are also not needed.

The instrument of monetary policy which is most commonly used for controlling liquidity in the financial system is Open Market Operations, sale of government securities and central bank bills in time of excess liquidity and their purchase by the central bank in times of inadequate liquidity. So far, the RMA Bills alone have managed to sterilize about 50% of the excess liquidity and, with the introduction of the Government bonds, the entire liquidity overhang would be removed.

The active participation of the financial institutions in the securities market is expected to develop a modest secondary market, the RMA encouraging repurchase of transactions to enhance their liquidity in the secondary market.

Interest Rate Liberalization

The existing controlled interest structure does not reflect the actual cost of intermediation of the financial system and is therefore partly responsible for growth of excess liquidity, especially with the Bank of Bhutan.

The liberalization of the interest structure is an essential ingredient of the present financial sector reform. The introduction of the RMA Bills and the Government Bonds will open the way for interest rate liberalization. The discount rate determined through the interplay of supply and demand for RMA Bills will establish a short-term rate of return which the market participants determine appropriate for such a maturity. The yields offered on bills and bonds will reflect as benchmarks for interest rates bills for short-term and bonds for long-term risk-free rates of interest.

The immediate step in liberalization on interest rates will be the deregulation on corporate deposit rates. At present, the non-bank financial institutions and large government corporations are depositing their financial surpluses with the BOB. The Bank, by virtue of being the only commercial bank, has the obligation to accept the deposits at the rates fixed by the RMA. Since the demand for loanable funds from the private sector does not keep pace with the deposits, the Bank accumulates excess reserves, jeopardizing its profitability and causing distortions in the financial sector. The RMA Bills and the Government Bonds will absorb the excess liquidity but, without liberalizing the interest rates, the instruments will not be effective.

The liberalization of interest rates is expected to improve resource mobilization of financial savings by the financial sector and boost the efficiency of allocation of those resources for investment. Lending rates would reflect the underlying cost of the resources mobilized, cost of intermediation, and the general credit and business risk.

Restructuring GEPE

The current practice of offering a guaranteed 10% fixed rate of return has placed RICB in a financially unsustainable position. In its attempt to generate high rates of return, the RICB has been either forced to invest in high yielding investments, especially mortgage loans, or deposit with the Bank of Bhutan at lower interest rates. The former investments have inherently higher risk and have led to high default rates and accumulation of bad debts, while the deposits with the Bank not only result in losses for the RICB, but also contribute to the liquidity overhang in the financial system.

In an attempt to reform the GEPP, so that funds can be appropriately invested and maintain a healthy financial position, the current high fixed return on funds will be reviewed. On the other hand, in order to avoid erosion of funds in real terms, some guaranteed minimum level of return on these funds will be established. This minimum level of guarantee should be offered within the budget allocation thus creating a contingent liability. Any additional income must depend exclusively on the performance of the financial institution. The restructuring of GEPP will also be examined with a view to establishing it as a distinct entity, either as a corporation or as a charitable trust under its own Board of Directors, and thus dissociating it from the RICB.

Elimination of Foreign Exchange Restrictions and Adoption of IMF's Article VIII Status

Statistical evidence on the external sector shows that Bhutan has, since 1989/90, maintained a viable overall balance position and a healthy import cover. Over the past five years, import cover, measured as a ratio of imports to gross reserves has been averaging around 13 months. These facts have led to a recommendation that the RGOB should consider the adoption of Article VIII of the Articles of Agreement of the IMF.

This particular Article requires the members not to impose restrictions on payments and transfers for current international transactions. It also requires that the Ngultrum be treated as a convertible currency. Though the acceptance of the obligation under this article is viewed as a sign of economic and financial maturity of a country, the real test of this argument should be based on the nation's potential current account(excluding official transfers) position which should be maintained at sustainably low levels to maintain macroeconomic stability and growth.

The current account balance, excluding official transfers, has not performed well enough during the past five years. Although the position measured by the percentage of current account(excluding official transfers) to GDP has been steadily improving, the current level of 21.5%, is still too high. Until this ratio is brought down to a satisfactory level, it is felt that adoption of Article VIII status should not be pursued.

Non-performing Assets

The latest statistics based on December 1994 performance show, after allowing for provisions for bad debts and doubtful loans, the ratio of bad debts in total loans standing at about 17%, which is high. The Loan Recovery Committee will therefore act under its clearly defined mandate to bring about the necessary legislative and administrative changes which will help to restructure the balance sheets of the financial institutions concerned.

Further Development of the Capital Market

In 1993, with the assistance of ADB, the Royal Securities Exchange of Bhutan was established. At inception, there were seven listed companies. The four financial institutions, namely, BOB, RICB, UTB, BDFC were founding members of the RSEB, each establishing a fully owned subsidiary brokerage firm. The recent Penden Cement primary offering was conducted through the Exchange. All the RMA bills and Bonds transactions will be carried out by RSEB. It is envisaged that the activities both in terms of volumes and new listings of companies will greatly increase during the 8 FYP which will deepen and widen the financial system.

CHAPTER 14. POPULATION AND DEVELOPMENT

Overview

Population in Bhutan is growing at a rapid rate of 3.1% per annum. At this rate, the population of Bhutan is expected to almost double in 20 years. The population will continue to grow for many years even if fertility is reduced drastically to the replacement level of two surviving children per woman by 2012, as targeted by the RGoB. This is attributed to population momentum, resulting largely from a young age structure. Given a total fertility rate of 5.6, and a youthful population (below 15 years of age) constituting 43% of the total, Bhutan's economic and demographic prospects look very grim. The high dependency burden has not only a great in-built potential for rapid population growth, but is also detrimental to the economic growth, as it neutralizes much of the gains obtained through developmental efforts and leaves little surplus for investment after meeting the social overhead costs of maintaining the increasing number of dependent population.

The persistence of high rate of population growth will seriously impair the country's prospect of achieving the goal of sustainable development. The economy which is already under strain to provide for the existing population will find it even more difficult to provide for the growing population. To achieve the replacement level fertility of two surviving children per woman by 2012, there has to be a drastic reduction in fertility by 61% within a short period of 15 years (from 5.05 in 1997 to 2.10 in 2012). The burden on the government exchequer to meet the basic needs of the growing population will be much heavier, if the goal of achieving the replacement level fertility is delayed even by 5 years, from the targeted year 2012 to 2017. This is amply demonstrated by the findings of the medium variant projection with the objective of achieving the same by the year 2017.

Population and development issues

Growth and size of the population

The total population is expected to increase from 600,000 in 1996 to 931,711 by the end of the projection period (2017), if fertility were to drop to the replacement level of two surviving children per woman in 2017, from its level of 5.32 in 1996. It shows that the total population of Bhutan will continue to increase considerably even under the assumption of an accelerated decline in fertility.

School age population

There will be a considerable increase in school age population and cost of schooling at all levels, even if fertility were drastically reduced, except for the primary level. The junior and high school population of age 13-16 years will be around 79,965 (51%) larger in the year 2017 than in 1996. The primary school going population will be around 95,899 (21.2%) lower in the year 2017 than in 1997. The size of primary school age population will marginally increase by 1.14% from 118,168 in 1997 to 126,244 in 2017.

The estimated recurrent cost of schooling at junior and high school levels, at the current level (adjusted for inflation), will be around Nu. 342.5 m (71%) higher in the year 2017 than in 1997. The cost of schooling at primary level will increase by 12%, from Nu. 231.0 m in 1997 to Nu. 258.5 m in 2017.

Working population

The size of the working population of Bhutan enumerated at 336,000 in 1997 will increase to at least 623,000 or by 81% in 2017. At least 267,000 new jobs must be created to provide employment at the level of 1984 to the growing labour force by the year 2017. This would indeed be a difficult task to accomplish, even to create minimum units of new jobs, as this will require huge investment of national income. A large labour force also will require an investment of a good proportion of the national income (some three times the annual percent rate of increase of the labour force) to prevent productivity (per head) from falling. Given the estimated growth rate of labour force, 7 to 9% of national income must be invested during the period 1997-2017, only to keep the productivity at the current level, let alone the increment required for economic investment.

Health facilities

Basic Health Units

The number of Basic Health Units (BHUs) required, at the current level, will be 190% larger in the year 2017 than in 1997. To provide for the additional number of BHUs to meet the needs of the growing population, the RGoB has to spend an amount of Nu. 86.7 m (111%) larger in the year 2017 than in 1997. The required number of doctors, nurses and hospital beds will be 46% larger in the year 2017.

Pressure on land carrying capacity

The per capita availability of agricultural land which is already one of the lowest in the world will further deteriorate with the increase in population. If the 3.1% rate of growth remains unabated, the per capita availability of agricultural land will drastically reduce by 54.5% in 23 years, a bleak prospect to contemplate. Even if the RGoB is successful in achieving the replacement level fertility by the year 2012, the per capita agricultural land will be reduced by 27%. However, if the replacement level fertility is achieved five years later i.e., in 2017, the land-man ratio will be reduced to 33% lower than in 1997. The per capita availability of land would be much lower than what was estimated, if allowances were made for the loss of agricultural land to meet the growing needs of housing, schools, hospitals, roads, factories, recreation space, etc., associated with high rate of population growth.

Shortage of food

Other factors remaining constant, the shrinking land-man ratio will lead to shortage of food supply, as more food will be required from the same or declining agricultural land. At the current rate of per capita consumption, Bhutan will need, an additional 37,597 and 22,000 metric

tons of wheat and rice respectively in the year 2017, even if we are able to achieve the replacement level fertility by the same year.

To meet the additional demand of rice, the RGOB has to spend, at the current price, about Nu. 144.31 m in 2017, over and above the expenditure of Nu. 31.78 m that would be required to meet the deficit of rice in 1997. The corresponding expenditure will be around Nu.120.68 m in 2017 to meet the deficit of wheat over and above the expenditure of Nu.62.6 m that would be required to meet the shortage of wheat in 1997.

The pressure on the limited and shrinking agricultural land will not only lead to food shortage but also to the fragmentation of landholdings and increasing incidence of landlessness and marginal non-subsistence land-holdings.

Rapid urbanization

The failure of agriculture to absorb the growing labour force and limited non-agricultural activities in rural areas will lead to the exodus of people from rural to urban areas in search of employment opportunities. The increasing rate of rural to urban migration, as a consequence of higher rate of population growth, will lead to rapid urbanization of Bhutan. Even though the population of Bhutan is predominantly rural, the process of urbanization is accelerating mainly due to migration from the rural areas. According to one projection, the urban population will increase by 327% in 2020. This will put severe strain on the existing inadequate urban services and pose serious developmental and environmental problems such as increasing noise and air pollution levels, shortage of safe drinking water and electricity, inadequate hygienic and sewerage facility, unemployment and proliferation of urban slum and squatter settlements due to shortage of housing.

Environmental degradation

The decline in per capita availability of agricultural land and shortage of foodgrain, due to high rate of population growth, and lack of alternative job opportunities outside of agriculture in rural areas, will lead to over-exploitation of resources, including cultivation of marginal land and steep hilly terrain to meet the increasing demand of the growing population. This will not only damage natural resource base - land, water and air, but also threaten the sensitive balance of a fragile mountain eco-system. Some of these likely adverse impacts are already in the horizon. For example, in some valleys, the forest lines are receding to make way for cash crop plantation such as oranges, apple and cardamon. The pressure on the forest will further increase with over grazing and accelerated use of forest products for fuel wood, fodder and construction due to persistent high rate of population growth. The depletion of natural resource base and the adverse impact on forest, which threatens the existence of all life, are matter of serious concerns for sustainable development of the country. This underscores the need of formulating a comprehensive population policy and programme by closely examining the implications of population growth and spatial distribution for employment, environment, health care, quality of life, and overall sustainable development.

Demographic objectives during 8FYP

Short Term Objective

Against the backdrop of the preceding analysis, it is clearly evident that the unabated high rate of population growth will pose a serious challenge to the sustained economic growth and sustainable development of the country. This calls for a drastic reduction in growth rate within the shortest possible time. With this objective in view, the RGOB aims to reduce growth rate by 1% during the 8 FYP, from 3% in 1996 to 2.48% in 2002. During the 8FYP, the Total Fertility Rate (TFR) is slated to decline by 26%, from 5.05 in 1996 to 3.74 in 2002. For the corresponding period, the crude birth rate will decline from 37.7 in 1997 to 30.8 in 2002, while the Crude Death Rate (CDR) will decline from 8.5 in 1997 to 6.0 in 2002. To attain this goal, the Contraceptive Prevalence Rate (CPR) has to be doubled from its current level of 24.16% in 1997 to about 45.44% in 2002. It implies an increase in number of current acceptors of modern contraceptives by 188%, from 18.8 thousand in 1997 to 46.6 thousand in 2002. At the current price, about US \$ 0.95 million will be needed to provide contraception for 195,000 users during the 8 FYP period. The year-wise projected targets for fertility reduction, population growth rates and total fertility rates, with the required contraceptive prevalence rate are given in Table 14.1.

Table 14.1 Projected population size, growth rates and TFR and corresponding CPR (1997-2002)

Year	Population (in July)	Mid-Year CBR	Mid-Year CDR	Rate of Natural Increase	TFR	CPR	# of Eligible Couples Using ('000)
1997	618557	37.7	8.5	2.92	5.05	24.16	18.8
1998	636499	36.4	8.4	2.80	4.79	28.32	23.6
1999	654288	35.3	8.2	2.71	4.52	32.49	28.7
2000	671984	33.5	7.2	2.63	4.26	36.49	34.3
2001	689603	31.9	6.4	2.55	3.99	40.81	40.3
2002	707173	30.8	6.0	2.48	3.74	45.44	46.6

Although the relative mix of practice of different methods will be determined on the basis of voluntary choices, a year-wise projection of users of different methods is prepared for the 8 FYP, based on current pattern of method mix. The data are presented in Table 14.2.

Table 14.2 Yearwise contraceptive prevalence rates and number of users by method mix, 1997-2002

Method	Prevalence						No. of Users (000)					
	1997	1998	1999	2000	2001	2002	1997	1998	1999	2000	2001	2002
Pill	7.73	9.06	10.40	11.73	13.06	14.54	6.02	7.55	9.19	10.98	12.90	14.91
Condom	5.03	5.89	6.76	7.62	8.49	9.45	3.91	4.91	5.97	7.31	8.38	9.69
IUD	0.97	1.13	1.30	1.47	1.63	1.81	0.75	0.94	1.15	1.38	1.61	1.86
Injection	8.00	9.38	10.75	12.13	13.51	15.04	6.23	7.82	9.50	11.35	13.34	15.42
Male Sterilization	2.20	2.58	2.96	3.33	3.71	4.13	1.71	2.15	2.61	3.12	3.66	4.24
Female Sterilization	0.24	0.28	0.32	0.37	0.41	0.47	0.18	0.23	0.28	0.34	0.41	0.48

Long Term Objective

The long term objective of the RGOB is to achieve replacement level fertility of two surviving children per woman by the year 2012.

The demographic goals envisaged to be achieved by the Royal Government, to be ambitious, are not out of reach. The necessary political and logistical support services are available to ensure successful implementation of the programme. These include, among other things, the following:

- strong political commitment on the part of the RGOB to reduce drastically the population growth rate,
- an adequate, improved and expanded, nation-wide primary health care network to be put in place to deliver reproductive health care and family planning services at the grassroots level and
- expansion of primary health care and maternal and child health services to improve the physical quality of life of people in rural areas.

Policy approach and strategy

To achieve the desired demographic goals, a multi-pronged approach will be adopted to influence key variables that will impinge on fertility and lead to an accelerated decline in growth rate.

The specific strategy that will be adopted to achieve the cherished demographic goals includes the following:

Awareness raising

Revise the activities already being undertaken by the various sectors so that the value of small family, particularly its benefits on the health of mothers and children; economic, social and health benefits of delayed marriage and spacing of births; various methods of contraception - their advantages and disadvantages are understood, appreciated and practised.

Supply/access to contraceptives

Improve access to wide range of contraceptive facilities including most modern, safe, affordable and effective methods.

Strengthening of existing maternal and child Health Services

Strengthen the maternal and child survival component of the family planning programme through the nationwide primary health care network to reduce the infant, under-five and maternal mortality rates. The infant, under-five and maternal mortality rates in Bhutan are estimated to be around 70, 96 and 3.8 per 1,000 live births respectively which are still high by world standard. It, therefore, calls for immediate reduction of infant, under-five and maternal mortality rates. This will be addressed through provision of neo-natal care including safe delivery of births, reduction of high risk pregnancy and provision of tetanus toxoids to mother and immunization of children.

Quality of care

Provide unhindered support to quality of care by implementing routine pre-natal and post-natal care at all levels, arranging detection and referral of high risk pregnancy cases to specialists.

Supporting special programme for adolescents

Bring the adolescents and youths aged 15-24 years under the programme by catering to their special reproductive and sexual health needs. In Bhutan, about one-third of births in a given year are attributed to women in the age-group, 15-24 year. But only less than 1% (0.73) of women in the age-group, 15-19, and 7% of women in the age-group, 20-24, are currently practising contraception. This may have adverse consequences, both at the individual and national level.

Beyond family planning measures

Education, particularly female education, has been and continues to be the single most important predictor of fertility in which education is inversely related to actual and desired fertility and positively to the use of contraception. However, the effect of education on fertility behaviour is more pronounced beyond primary level.

Bhutan is yet to attain 100% enrolment ratio at primary school level. The gross enrolment ratio at primary school level was only 72%. Also, the enrolment ratio is higher for males than females and this holds good for every level of education. For example, the number of girls constituted 73%, 58% and 41% of boys enrolled at grades 6, 8 and 10 respectively in 1993. Every effort will be made to attain 100% enrolment ratio at primary level and beyond for both boys and girls. To

promote enrolments in schools, consideration will be given to provide modest stipend to the poor but meritorious students, particularly females.

Female participation in gainful activities is also considered one of the important measures to enhance women's social status and to curtail fertility. There is evidence to suggest that access to resources, particularly credit facility, empowers rural women by strengthening their economic roles and this leads to higher use of contraception. Strategies would therefore be worked out to empower women through vocational and skills training, income generation and credit facility in rural areas.

Greater participation of the community

Involve community in planning and implementation of the population programme to ensure greater success of the programme by fostering in community a sense of ownership. A detailed mechanism on community participation will be worked out during the 8 FYP.

Legal measures

Vital registration

Existing vital registration law involving both birth and death will be amended, to the effect that birth certificate will be required to prove age for marriage and for other public purposes such as admission in school, appointment in government services, issue of passport, etc., while death certificate will be required to settle legal matters particularly inheritance. Health outreach personnel will play a major role.

Multi-sectoral approach

Promote well coordinated multi-sectoral population policies and programmes in which all the sectoral ministries and agencies, particularly those which maintain regular public contact, viz. Ministry of Health and Education, Bhutan Broadcasting Service, Ministry of Trade and Industry, Ministry of Agriculture, etc. will be required to incorporate population concern into their mainstream development activities and employ their outreach and extension workers and facilities, whenever feasible, for demand creation and service delivery. Each sectoral ministry shall identify a focal person responsible for integrating population concerns into the ministry's regular programme of activities and the concerned ministry shall be responsible for implementing its own population scheme under its administrative control.

Role of each sectoral Ministry

The activities of sectoral ministries are identified as follows:

The Health Division, Ministry of Health and Education will be responsible for advocacy and delivery of reproductive health care including family planning services through its primary health care network.

The Education Division, Ministry of Health and Education will continue to emphasise on population education in the syllabus and curricula of formal educational institutions at all levels and in the programme of adult education. The Division will also consider developing special programmes for training in population and related matters for religious teachers to enlist their support in the task of promoting small family size norm.

The Bhutan Broadcasting Service will develop innovative messages on the social, health and economic benefits of delayed marriage, postponement of first birth and wider spacing of birth and the overall value of small family and deliver these messages to every eligible couple in the country using radio and television.

The Ministry of Trade and Industry will offer Family Welfare Education Programme for the workers in the organized sector.

The Ministry of Agriculture will be integrating family planning, health and nutrition activities in its agricultural extension programmes. Under the programme, the extension workers of the Ministry will be given training on aspects of reproductive health, nutrition and family planning and their support service will be solicited for the promotion of small family size norm, family planning, health care and nutrition education.

The Ministry of Planning will be responsible for integration of population concerns into development planning at all levels, preparation of integrated population and development plan, data collection, research and external evaluation of the programme.

Institutional Framework

Coordination Committee(s)

In addition to the institutional frameworks that currently exist to implement the policies and programmes for population management, there may be a need to constitute a policy making body on population. The Committee will be mandated to issue broad policy directives, and to coordinate, monitor and review all population programmes in the country, and to develop specific policies and programmes on population and environment.

There may also be a need to establish such Coordination Committees at national and district levels to ensure successful implementation of multi-sectoral population programmes. The Health Division will work out the details of a suitable monitoring and coordination mechanism and determine data needs for proper coordination.

Research

Strengthen national capability to conduct basic, applied as well as evaluation research to formulate population policies and programmes based on scientific knowledge and information. The major areas of research identified include the following: (i) socio-cultural determinants of fertility, (ii) the dynamics of relationship between population, poverty alleviation, environment,

sustained economic growth and sustainable development, (iii) demographic impact of population policies and programmes, including development programmes and projects, (iv) operational research to improve programme efficacy and management and quality of services, and (v) reproductive and contraceptive research on the safety, effectiveness and acceptability of different contraceptives in the socio-cultural context of Bhutan.

Training

Support training of manpower in the collection and analysis of socio-demographic and health related data, policy and programme formulation and evaluation, and management of reproductive health and family planning, undertaking policy analysis and operational research and training of field workers in all aspects of reproductive health care, including counselling.

Data Collection

Strengthen national capability, in general, and the capability of the Central Statistical Organization (CSO) of the Ministry of Planning, in particular, in the collection and analysis of valid statistical data for population programmes and project development, implementation, monitoring and evaluation; through regular conduct of population census, sample surveys, intercensal studies, etc. For this purpose, the technical competence of CSO will be strengthened.

In this respect of data collection, the Management Information System (MIS) unit of the Health Division of the Ministry of Health and Education will also be strengthened to collect and analyse necessary service statistics to effectively carry out the tasks of proper management, monitoring and internal evaluation of the programme.

CHAPTER 15. RENEWABLE NATURAL RESOURCES

Basic Situation

Structure of the Sector

The renewable natural resources (RNR) sector under the Ministry of Agriculture, covers forestry, livestock and agriculture, including horticulture.

Economic Activity

Although the economic importance of the RNR sector has declined in recent decades as the economy has diversified, it remains the single most important sector accounting for 40.7% of GDP in 1993 down from 56.7% of GDP in 1980. 85% of population are engaged in farming. Between 1990 and 1993 agricultural output grew by an estimated 2% p.a, livestock production by 2.3% and forestry output by 2.7% p.a. in real terms.

The monitoring of economic trends in the RNR sector is made difficult by the lack of reliable and consistent information on cropping areas, yields and production, and by the absence of time series data. However, it is estimated that arable and horticultural production together account for about 53% of sector output, with rice and maize being the principal food crops. The most recent crop production estimates are those provided by the agricultural extension service for 1992 (Table 15.1).

Livestock production is estimated to account for around 21% of sector output. Cattle predominate and are owned by 90% of households. Meat and livestock products are mostly retained for home consumption and consequently, marketed surpluses are small. Cattle have a crucial role in the farming system as providers of draught power and manure. Apart from a steady increase in the number of cross-bred cattle, no clear trends are discernible in livestock populations, reflecting problems with recent livestock census data. Although stocking densities are regarded as close to their sustainable limit, there is no consistent evidence of grazing pressure causing long-term land degradation.

Forest products account for 26% of sector output and consist of timber and firewood supplied to domestic markets and the export of sawn timber and unsawn logs to India.

Exports of wood and wood products to India were valued at Nu 271 m in 1993 (including plywood and particle board exports totaling Nu 100 m). However, there has been a downward trend in recent years reflecting the RGOB's concern to place forest utilization on a sustainable basis. The recent closing down of the Gedu Wood Manufacturing Corporation is a clear indication of this sensitivity.

The RNR sector has continued to contribute a significant positive trade balance. Imports, primarily of rice, wheat, livestock products and edible oils are more than offset by exports mainly of cardamom, oranges, apples, timber and logs.

Land Use

Table 15.1 Crop Production Data, 1992

Crop	Area (ha)	Yield (Kg/ha)	Production (t)
Maize	55,473	1,358	75,332
Rice	45,086	2,392	107,845
Millet	10,319	0.887	9,153
Wheat	9,568	1,123	10,745
Buckwheat	7,290	0.883	6,437
Barley	4,406	1,100	4,487
Mustard	4,782	0.770	3,682
Potato	5,631	7,694	43,325
Vegetables	5,990	3,715	22,253
Orange	8,040	3,877	31,171
Apple	1,966	1,907	3,749
Cardamom	6,893	0.570	3,975

Source: Ministry of Agriculture

Updated estimates for land cover, based on analysis of 1989 satellite data, show that forest accounted for over 72% of land area (64.4% forest tree cover, and 8.1% scrub forest), while cultivated areas accounted for 7.8%. In the arable areas, virtually all accessible and moderately sloped land is being utilized. Around 18% of farm households own less than 1 ha. Households with insufficient land of their own enter into tenancy contracts and sharecropping arrangements to get additional land for food production.

Production Systems

Bhutan's mountainous environment produces a wide range of agro-climatic conditions, reflecting differences in soil, rainfall, temperature, and slope. This allows a considerable variety of different crops to be grown. Crop production, livestock and forestry activities are closely interrelated and interdependent. Agriculture derives organic material, fuel, fodder, timber, feed, bedding materials and other basic resources from the forest. Livestock provides the draught power and organic nutrients required for food production and in turn utilize feed and fodder from crops. The forests provide over 90% of domestic fuel in the rural areas as well as the timber used in rural housing and farm buildings. They are also a source of supplementary food supplies in the form of edible roots, tubers, fungi and leaves of certain plants. Lemon grass, other essential oils and medicinal herbs provide a significant source of cash income to some rural communities.

Population growth is resulting in increased pressure on traditional production systems. With little scope for increasing agricultural land area, this is leading to resources being used more intensively. While this poses environmental threats from increased livestock numbers and reduced fallow periods, it also opens up opportunities arising from the introduction of the technologies required to intensify production and from the creation of new markets.

Opportunities and Constraints

The Scope for Increased Production

Despite Bhutan being a relatively high cost producer in both local and regional markets, there is considerable scope for increasing production and incomes from the RNR sector:

Horticulture

Bhutan has significant regional and seasonal comparative advantage in the production of horticulture crops, particularly in sub-tropical and temperate fruits and in the supply of potatoes and vegetables to off-season (summer) markets in neighbouring areas of India and Bangladesh. There are also opportunities for export of high value crops such as asparagus, strawberries, stone fruits and mushrooms. Production of non-perishable products such as essential oils, medicinal herbs, nuts and dried fruits can bring the benefits of the market to remoter areas.

Traditional Food Crops.

Recent research has shown that there is ample potential for intensifying the production of traditional food crops and this has been reflected in the uptake of new rice and maize varieties. Providing farmers with the technology to intensify production of staple crops contributes towards ensuring household subsistence requirements and food security, and also enables resources to be released for cash crop production.

Livestock.

Livestock provide draught power, manure to the farming system and milk and milk products to households. Religious sentiments against the culling of cattle limit the scope for supplying meat and livestock products for the market. Expanding demand in local markets provides opportunities for increased small-scale dairy farming, rearing of pigs and poultry.

Forests.

There is a wide scope for increasing the sustainable utilization of forest resources through improved forest management, more efficient logging techniques and improved sawmill technology. There are also opportunities for increasing revenues from national parks and protected areas through eco-tourism.

Factor Constraints

The availability of the main factors of production of land, labour and capital together with access to technology determine the range of production opportunities available to the farmer:

Land.

Population pressure has led to fragmentation of land holdings, and an increase in the number of economically marginal farms. Migration from the rural areas has helped to alleviate land pressure to some extent. Diversification and the introduction of higher value crops offer opportunities to increase production and income on small farms.

Labour.

In Bhutan labour shortages and seasonal bottlenecks are regarded as key constraints to increasing agricultural production and incomes. Employment opportunities imply that returns to labour are often higher outside of agriculture. Small field size and terrain limit the scope for mechanization. Bhutan's relatively high labour costs and less favourable growing conditions go to show that the production of traditional crops such as cereals becomes less attractive once subsistence requirements are met. Responding to perceived labour shortages therefore implies the introduction of cropping patterns with less marked seasonal labour peaks and diversification into crops for which labour returns are higher.

Capital.

Limited capital restricts the ability of many small farmers to invest in the development of horticultural production, particularly fruit and tree crops. It also constrains the development of small businesses providing input and marketing services to the RNR sector.

Technology.

Although agricultural research has achieved notable success, the advice available to farmers does not adequately reflect the range of agro-ecological conditions. Poor agronomic and post-harvest practices result in excessive crop losses reducing food security and lowering returns to cash crop production. Research and extension need to become more broad-based, less prescriptive and more responsive with the aim of providing a "menu" of technological options to farmers.

Environmental Constraints

Bhutan's mountain environment poses a number of constraints:

- Climate and topography. In the higher altitude areas of the temperate zone, low temperatures limit the growing season and the range of crops which can be produced. The very steep terrain, also limits the availability of suitable arable land so that, with increasing pressure on land resources, farmers have to take recourse to cultivating steeper slopes with shorter fallow periods than in the past. The environmental impact of such changes will be monitored and measures taken to alleviate land pressure since this could lead to long-term degradation.
- Diversity. The diversity of Bhutan's mountainous ecology, and hence of its farms considerably increases the costs of providing effective agricultural research and extension services.
- Inaccessibility. The ability of rural communities to develop beyond subsistence production depends crucially on their access to markets. Over half of the rural population live more than half a day's walk from a road head. However, the scope for expanding the road network is limited by constraints of terrain, high investment and road maintenance costs. Identifying niche market opportunities for high value/low weight rural products has an important role in providing enhanced income opportunities to remote communities.

Institutional Constraints

Government services to the agricultural sector continue to face a number of institutional constraints which adversely influence their effectiveness:

Information and Data

The lack of reliable data on farming systems and land use has hampered efforts to develop appropriate policies and programmes for the RNR sector. During the 7FYP considerable progress was made in addressing these constraints through the work of the Land Use Planning Section in MOA. However, there remains an absence of basic agricultural statistics and only limited information is available on farm-level production systems and constraints.

Trained Manpower.

Limited professional and technical capacities in the research and extension services have severely restricted the ability of the MOA to provide appropriate advice and assistance to the farming community. Alleviating these constraints through graduate and diploma level training was a major emphasis in the 7 FYP.

Management.

Capacity limitations, inadequate management structures and procedures within MOA and lack of management continuity has often reduced the effectiveness of field-based programmes.

Institutions

Ministry of Agriculture (MOA)

The MOA is responsible for the promotion of agricultural development. The MOA employs a total of 2,171 staff of whom 1,160 are in professional and technical positions. The Ministry Headquarter has two service divisions (the Administration and Finance Division and the Policy and Planning Division) as well as the Natural Resources Training Institute at Lobeyasa. The services provided by the Ministry are delivered through three operational divisions:

- The Research, Extension and Irrigation Division (REID) is responsible for promoting innovation and development at the farm level. REID operates through RNR research centres, the Dzongkhag RNR offices, 157 agricultural and 112 animal husbandry extension centres in the gewogs.
- The Crop and Livestock Services Division (CLSD) responsible for animal health, livestock breeding, mechanization and input supply services. Under CLSD are the Agricultural Machinery Centre (AMC), the Royal Veterinary Epidemiological Centre, 4 regional veterinary laboratories (RVLs), 1 satellite laboratory, a vaccine production centre, 10 livestock breeding farms and 42 artificial insemination centres.

- The Forest Services Division (FSD) responsible for the sustainable management of forest and protected areas. FSD operates through 10 territorial forest divisions and also manages the 10 national parks and protected areas. During the 7FYP a social forestry and forestry extension programme was initiated with the appointment of Forest Extension Officers to each Dzongkhag.

Public Corporations

There are four public corporations that are involved in the RNR sector:

- The Food Corporation of Bhutan (FCB) is responsible for: (i) import of foodstuffs (mainly rice and edible oils); (ii) the management of WFP assistance; and (iii) the operation of permanent and seasonal auction yards for horticultural produce.
- The Bhutan Logging Corporation (BLC) undertakes logging operations under commercial forest management concessions on behalf of the FSD.
- The Druk Seed Corporation (DSC) was established in 1995 and took over the commercial seed and plant supply operations of the former National Seed and Plant Production Programme.
- The Bhutan Development Finance Corporation (BDFC) through its network of branches in the Dzongkhags, is the main source of credit for the agricultural sector. New lending by BDFC to the RNR sector in 1995 totaled Nu 37.6 million divided between 731 seasonal and 2,097 term loans.

Private Sector Operations

It has been policy of the RGOB to promote the role of the private sector in providing services to the RNR sector. The marketing of agricultural produce is entirely in the hands of private traders, the MOA's role being to facilitate improvements through measures such as the FCB auction yard system and the provision of information on prices and quantities traded.

Review of Past Performance

Objectives of the 7FYP

- Sustainable development of arable production to enable self-sufficiency in food production: involving concepts of household and national food security such that: (i) households in the rural areas would be able to meet their food requirements; and (ii) for the country as a whole, agricultural exports would be sufficient to meet the costs of food imports.

- Improvement in the incomes, living and nutrition standards of the rural population to be achieved through promotion of commercial horticulture and diversification in food crop production at the household level.
- Sustainable utilization of natural resources involving the management of forest and protected areas and steps to ensure that agricultural intensification was accompanied by measures to maintain soil fertility and prevent land degradation.

Strategies in the 7FYP

- Integration and strengthening of project planning and implementation. This required greater integration between planning and implementation of government interventions which had previously been fragmented along fairly rigid sub-sectoral lines.
- Institutional strengthening. Capacity within MOA was to be strengthened through recruiting additional staff and a greater emphasis on staff training. The private sector was to be encouraged to take a more active role in agricultural marketing and input supply. A greater community involvement in project planning and implementation was to be achieved.
- Strengthening of regional development. The area development projects (ADPs) were to be integrated into a regional structure to support greater decentralization of programmes to the Dzongkhag level.
- Integration of environmental sustainability into all agricultural activities. Sustainable development was to be based on the introduction of sound conservation practices, land management and land use planning which were to be introduced into the planning of Dzongkhag programmes.

Attainment of Objectives

The lack of consistent time series information on production, rural incomes and land use, means that it is impossible to develop a full picture of the extent to which the objectives set for the 7 FYP have been achieved. However, a number of indicators suggest the direction of developments in the sector:

- The trade balance in the sector has continued to remain positive although horticultural exports have been affected by large fluctuations in the volume of citrus exports.
- Production.- Evidence from the level and distribution of FCB grain imports, nutrition studies, and the uptake of new grain varieties suggests that production of staple grains has kept pace with population growth in the rural areas. Production of horticultural crops has continued to increase and, together with plantation crops it accounts for around 13% of sector output.

- Nutrition surveys of the rural population show that calorific intakes are generally adequate, but that vitamin A deficiencies and anaemia are common. Nutritional problems in children are closely related to the incidence of diarrhoeal diseases, rather than dietary deficiencies, although there remains scope for improving the quality of diet.
- With the creation of the Land Use Planning Section in MOA, more systematic information on land use has become available. This indicates that the area of forest cover remains well in excess of the Government's long-term target of 60% of total land area, and suggests that long-term land degradation caused by agricultural activity remains limited.

Implementation Performance

Table 15.2 shows the actual and expected capital and recurrent expenditures on RNR sector (MOA and Dzongkhag) programmes for the first four years of the 7 FYP. The overall implementation percentage achieved was 103.7% of the 7 FYP target, reflecting considerably higher than anticipated expenditures on the Paro Valley Development Project (PVDP) and the Agricultural Mechanization Centre (AMC) which together have accounted for 39% of RNR sector expenditures over the four year period.

A little over one tenth of RNR sector expenditures are currently incurred on Dzongkhag implemented programmes (funded from both Dzongkhag budgets and the ADPs). Improvements to farmer support and advisory services will require a greater share of resources being allocated to Dzongkhag programmes. However, programmes implemented at the Dzongkhag level have continued to emphasize achievement of input supply targets, rather than impact, and there is a need for a much stronger technical content in these programmes. This will require closer collaboration and support between Dzongkhag RNR offices and MOA.

Table 15.2 7 FYP Budget Performance - RNR Sector (Nu million)

MOA and Dzongkhags	7 FYP Allocation	Actual 1992/93	Actual 1993/94	Actual 1994/95	Est. 1995/96	Total 1992/93-1995/96	Implementation %age
Capital	1,275.5	283.5	458.9	516.5	529.9	1,788.8	140.2%
Recurrent	1,158.1	157.4	170.9	194.6	212.8	735.7	63.5%
TOTAL	2,433.6	440.9	629.7	711.1	742.7	2,524.5	103.7%

Project monitoring and review reports have generally indicated satisfactory implementation progress, although, for some projects, implementation has been constrained by staff shortages. There have been no excessive delays on projects involving construction work. Disbursement shortfalls have tended to reflect over-optimistic programming assumptions about the time taken to secure aid financing and for project mobilization, as well as over-budgeting of project costs on some aid funded projects. Information on project impact is not readily available and the development of an effective monitoring and evaluation capacity remains a priority for MOA.

Input supply programmes have continued to face difficulties such as commission agents' having insufficient working capital leading to delayed delivery of fertilizers and seedlings and low levels of efficiency in the livestock breeding programme. Further commercialization and privatization are seen as the eventual solution to these problems.

In recent years, around three-quarters of the RNR sector budget have been financed from aid sources, including almost one third of recurrent costs. Domestic resource constraints sometimes make it impossible for the RGOB to provide adequate recurrent financing for projects after their completion. This is a problem which will be addressed through the development of a realistic medium-term financing perspective for RNR sector programmes that takes account of both domestic and aid resources.

Institutional Developments

Human Resources Development.

The number of graduates working in the MOA increased from 90 at the end of 1991 to 142 at the end of 1995. However, only 6 out of 20 Dzongkhag RNR offices have graduate staff attached to them, and only 34% of technical (Scientific Support Cadre) positions are filled by diploma level staff. The shortage of trained staff has been addressed through two initiatives: (i) the Natural Resources Training Institute (NRTI), which began operation in 1992 and offers three-year diploma courses in agriculture, animal husbandry and forestry; and (ii) an expanded programme of professional training funded by the European Union which, on completion in 1999, will have funded 50 undergraduate and 30 postgraduate training placements.

MOA Reorganization

A major reorganization of the MOA took place in 1993 aimed at achieving better integration and efficiency in the services provided to farmers. This involved merging the agriculture, livestock

and forestry research services and combining responsibilities for agriculture and livestock extension services under a single Research, Extension and Irrigation Division. Veterinary and input supply services were brought under the Crop and Livestock Services Division. The mandate of the Forest Services Division was left largely unchanged. Linked to the implementation of the reorganization was a review of research and extension policies and practices. This led to reorganization of the research system with 4RNR Research Centres (RNR-RCs) each having a regional mandate. Extension officers are being posted to the RNR-RCs to ensure closer integration between the research and extension services and to improve technical support and supervision of the Dzongkhag RNR programmes. Measures to strengthen the planning base for the sector have included the establishment of a land use planning section in the Policy and Planning Division of MOA.

Community Participation

The importance of increased community participation in RNR sector programmes has been emphasized both as a way of reducing demands on the government budget and as a means of ensuring the long-term sustainability of programmes beyond their development phase. Considerable progress has been made in transferring responsibility for irrigation schemes to Water Users' Associations (WUAs) which were introduced under the new irrigation policy adopted in 1992. By the beginning of 1996, around 100 WUAs had been established. Following the winding up of the Bhutan National Potato Programme (BNPP) in 1994, the establishment of potato farmers' groups has been encouraged to provide input supply and marketing services. A total of 10 groups were in operation at the beginning of 1996.

Commercial and Private Sector Development

Commercialization and privatization of input supply and marketing services are seen both as a means of reducing demands on the Government budget and of increasing the range of services available to farmers by providing additional opportunities for entrepreneurial activity. In the 7 FYP greater autonomy was given to FCB and BLC which now operate as fully commercial corporations. Seed supply has been brought under the Druk Seeds Corporation (DSC) which will become fully commercial by 1998. Agricultural input supply, formerly the responsibility of MOA, was transferred to private sector commission agents providing opportunities for the delivery of additional services to rural communities. Meat processing plants at Phuntsholing and Samdrup Jongkhar, milk processing plants at Phuntsholing and Bumthang and a fruit processing plant at Bumthang have been privatized.

Objectives, Strategies and Programmes for the 8 FYP

Objectives

The objectives for the RNR sector for the 8FYP are:

- National Food Security. The objective of national food security has three aspects:
 - Maintaining broad national self-sufficiency level whereby the export of crops for which Bhutan has comparative advantage provides sufficient foreign exchange to cover the costs of food imports.

- Achieving a minimum of 70% self-sufficiency in food grain production compared with the current level of around 65%.
- Ensuring household food security whereby the population have assured access to food at all times.

The national food security policy has implications beyond the RNR sector alone and call for a much broader cross-sectoral approach, the requirements of which were addressed under the Comprehensive Food Security Programme developed during the 7 FYP.

- Conservation of Natural Resources. An over-riding objective of RGOB is to protect Bhutan's fragile mountain environment and its unique flora and fauna for future generations. This requires that natural resources are utilized in a sustainable way and involves trade-offs between short-term economic gains and sustained long-term economic development. The protection and management of forest areas and improved land husbandry practices in agriculture are essential to achieving this objective, and will be actively pursued during 8 FYP.
- Sustainable Economic Production and Enhancement of Rural Income. At the farm level, production has to be both economic and sustainable. The RGOB will therefore aim to ensure that: (i) appropriate, viable, and ecologically sustainable agricultural technologies are available; (ii) rural communities have access to the benefits provided by the market; and (iii) an enabling regulatory framework is in place which allows economic activity to flourish while ensuring the conservation and protection of the natural resource base.
- Social and Regional Balance and Equity. The support and services provided by RGOB in the RNR sector will be available and accessible to all, while reflecting differences in local natural and economic conditions.
- Role of Government. The role of Government in the RNR sector is guided by the principle that agriculture, animal husbandry and to some extent forestry are primarily private domains in which farmers and local communities take initiative, provide their own labour and capital, and take the risks and consequences of their actions. The RGOB therefore cannot direct and manage economic activity in the sector. Instead, its role is that of facilitator, extending the range of available opportunities through constructive regulatory measures, appropriate fiscal policies, provision of infrastructure, and cost-effective research, technical support and advisory services.

Strategies for the 8 FYP

The strategies for the RNR sector for the 8 FYP focus on the broad cross-sectoral policy measures required to: (i) maintain the natural resource base in the sector, (ii) promote economic growth and development; and (iii) ensure the efficient use of scarce public sector resources.

Improving the Planning Base for the Sector

The limited statistical base, lack of key agro-climatic data and limited understanding of the principal farming systems severely constrain efforts to develop appropriate policies and programme interventions for the RNR sector and to monitor and evaluate programme implementation. Steps to be taken to improve the planning base for the sector will include (i) the strengthening of agricultural statistics collection, analysis and dissemination; (ii) the provision of consistent land use information; (iii) a more farmer-centred approach in agricultural research and extension; (iv) a greater emphasis on monitoring the impact of government policies and programmes; and (v) strengthening of professional capabilities, particularly at the regional and Dzongkhag levels.

Ensuring an Enabling Regulatory Framework

One of the most important roles of RGOB in the RNR sector is to ensure an enabling legal, economic and social environment that encourages the best possible use of the available natural, human and capital resources. Certain aspects of the present regulatory framework, particularly in the areas of land use, taxation and trade are inconsistent or place inappropriate restrictions on the rural population. Greater attention needs to be given to assessing the economic and social impact on the RNR sector of existing and proposed legislation as part of an on-going review and updating of the legislative framework for the sector.

Strengthening Natural Resources Management

The management of Bhutan's natural resources is the responsibility of both the RGOB and local communities. Ensuring the sustainable management of the state forests and protected areas, requires that the costs to the government are minimized. In the forest areas, therefore, revenues from forest utilization will be recycled to finance forest conservation and management, while the costs of managing the protected areas are increasingly being covered from the Bhutan Trust Fund. To strengthen natural resource management in the agricultural areas, greater emphasis will be placed on land husbandry practices in agricultural research and extension, and the integration of social forestry into the extension programmes. The legislation on Tseri land passed during the 7 FYP will be implemented in a way that is sensitive to its social and economic impact.

Introducing Improved Technologies

The introduction of technologies and practices that improve the viability of grain production will be pursued, so as to increase self-sufficiency. Improved agronomic and post-harvest practices will also be promoted to help Bhutan to realize its regional and seasonal comparative advantage in horticultural crops. Initiatives to increase productivity in the livestock sub-sector will focus on intensification and measures to ensure sustainability of traditional production systems. Within this context the role of the research and extension services is to provide a "menu" of technological choices to farmers. To cater for the wide range of agro-climatic zones in Bhutan, the research programme will be conducted across a broad front, emphasizing the utilization of research results from elsewhere rather than focusing on experimentation at a limited number of sites.

Promoting People's Participation

Local communities are already involved in the planning and monitoring of RNR sector programmes in their areas through the structure of GYT and DYT. The role of private individuals in providing input supply and marketing services and basic curative animal health services will be encouraged. Greater emphasis will also be given to promoting farmers groups to manage rural infrastructure, deliver services and market agricultural produce, building on the successful experiences from the water users' associations.

Ensuring Well-Managed, Cost-Effective and Responsive Public Services

There remains considerable scope for improving the efficiency and effectiveness of public services in the RNR sector. Critical to this will be measures to strengthen management within the MOA. This will require the elimination of unnecessary bureaucracy, allowing managers greater flexibility in the implementation of their programmes, and better technical back-stopping and supervision of field-based staff. Research, technical and advisory services will be (i) restructured to make them more farmer-responsive and cost-effective; and (ii) subjected to regular monitoring and impact assessment. The imbalance in funding of national programmes implemented by the MOA and district programmes implemented by the Dzongkhags will be addressed and measures introduced to ensure better integration between MOA and the Dzongkhag RNR offices.

Promoting Commercialization and Privatization, and Reducing Subsidies

Input supply services are most appropriately the domain of the private sector which can respond quickly to the demands of the market. During the 8FYP, the policy of commercialization and privatization will be extended to cover mechanization services and livestock breeding services. Cost recovery will be sought for technical and advisory services provided to commercial horticulture and the scope for such services being provided directly by independent organizations, such as growers' associations, will be investigated. Input subsidies distort resource allocation and impose considerable costs on government. In future, such subsidies will be retained only where there is a strong economic and social justification.

Improving Access to Markets

For many communities, the opportunity to increase incomes and living standards depends on improved access to markets. This requires continued emphasis to be given to the development of rural access roads and mule tracks. Price controls, which may distort market mechanisms and discourage local production, will be reviewed.

Promoting Human Resources Development

The human resources, most decisive for the development of the RNR sector, are those of the rural communities themselves. Primary education and literacy programmes have a crucial role in opening up capacities for innovation and development among rural communities. The benefits of education can be enhanced by making curricula more sensitive to the needs of rural life. Extension programmes in the RNR sector also help to promote knowledge and understanding

among the adult population in the rural areas. The RGOB's aim is to improve the quality of education and extension services by providing an appropriately qualified teaching and extension staff, backed up by adequate resources and supervision.

Management and Utilization of External Assistance

In 1995/96 almost 75% of the RNR sector budget was funded under external assistance programmes. During 8 FYP efforts will be made to ensure that external assistance to the RNR sector reflects more closely government policy and programme priorities, supports institutional capacities and programmes in the sector, and avoids the creation of separately managed project structures which cannot be sustained. An appropriate balance will also be sought between capital financing, recurrent expenditure support and technical assistance.

Programmes for the 8 FYP

During the 8FYP, government interventions in the RNR sector will be brought within a stronger "programme framework" approach. Activities in the sector will be grouped under six principal programmes: (i) management and planning services; (ii) farm systems development; ; (iii) crop and livestock production services; (iv) forest management services; (v) export horticulture development; and (vi) human resources development. The definition of programmes in the sector reflects closely the management of government interventions in the sector. The introduction of the programme framework approach will be initiated through a series of review exercises which will determine medium-term financing requirements for each of the main programmes in the sector.

Management and Planning Services

The strong emphasis under the 7 FYP on human resources development will suggest that by the end of the 8 FYP there will be well-trained personnel in the RNR sector at both the professional and technical levels. Utilizing these manpower resources effectively will require improvements in the planning and management of programmes in the sector.

RNR Programme Management

A series of measures will be taken to strengthen the management of RNR sector programmes. The aim will be to make central programmes more responsive to demands from rural communities. The RNR research centres (RNR-RCs) and Regional Veterinary Laboratories (RVLs) will be progressively staffed and equipped to provide technical backstopping and supervision to RNR staff in the Dzongkhags. The administrative and budgetary decentralization will be further promoted.

Within MOA Headquarters, attention will be given to streamlining decision making and improving programme supervision. Work planning by the Divisions will be strengthened, while programme monitoring and reporting requirements will be reviewed to make them more relevant. Steps will also be taken to restructure the Dzongkhag RNR office and improve communications

by equipping headquarters divisions, RNR-RCs and Dzongkhag RNR offices with computers, fax, E-mail and telephones.

Policy and Planning Activities

Measures to improve the planning base for the sector and establish consistent time series data will involve collaboration with the Central Statistical Organization, in strengthening the collection and analysis of agricultural statistics. Priority will also be given to building up reliable agro-climatic data to provide a better basis for research and extension planning. A stronger economic input will be brought into research and extension programmes following the posting of agricultural economists to each of the RNR-RCs.

Greater emphasis in the work of PPD will be given to analyzing the impact of regulatory and policy measures, which generally fall outside the purview of the operational divisions in MOA. An effective programme of impact monitoring and evaluation will be established, the results of which will feed back into programme review and design. The Land Use Planning Section (LUPS) will broaden its activities becoming more fully integrated into the work of PPD, its work focusing on land policy analysis, farming systems analysis and the strengthening of RNR planning capacities at the Dzongkhag level.

Budgeting and Financial Administration

In collaboration with the Ministry of Finance, necessary reforms will be made to budgeting and financial administration in MOA. These will emphasize greater delegation, along with flexibility, to field-based managers and the establishment of a medium-term budgetary framework for programmes in the sector.

Farm Systems Development

The farm systems development programme falls under the Research, Extension and Irrigation Division of MOA. Its objective is to facilitate the process of change and development within the RNR sector through agricultural research, irrigation development and the provision of extension services.

Research

The objectives of the RNR research programme are:

- to facilitate agricultural and horticultural intensification, so that national food security and the income and employment potential of small farm households is enhanced through sound conservation and economically and ecologically sustainable farming practices;
- to enhance productive and regenerative capacity of forest resources safeguarding against any degradation of forest and water resources and loss of biodiversity; and

- to contribute to (i) increasing the importance of livestock to the household economy and the nutrition of the rural and urban population; and (ii) raising farm productivity while reducing environmental pressures through improvement of livestock breeds, feed and fodder availability and maintenance of livestock health.

The research structure is based on four geographic regions and four sub-sectoral national research programmes covering field crops, horticulture, livestock and forestry. Research centres at Yusipang, Bajo, Jakar and Mongar will coordinate research activities within their regions with each centre also being responsible for coordinating one of the national research programmes. Integrated into the research system are two technical service units, the Soil and Plant Analysis Laboratory and the Plant Protection Service.

The research system has to date focused primarily on experimentation. However, the 1995 RNR research policy emphasizes its broader role in: (i) contributing policy advice; (ii) managing linkages both with those outside the research system and with the farming community; (iii) coordination with other agencies involved in research or the introduction of new technology; (iv) managing and making available information; and (v) regulating the introduction of technology to avoid inappropriate or harmful introductions. The research programme will be expanded to take on this broader role. The number of scientists working in the RNR research system is expected to increase from 27 at the end of 1995 to around 50 by 2002. This will require increased investment both in research facilities and in the financing of research programmes.

Irrigation

The objectives for the irrigation programme for the 8 FYP are: (i) to raise productivity of existing rice-based irrigation schemes through improvements in water delivery and management; (ii) to increase rural incomes by diversifying the range of irrigated crops; and (iii) to rationalize the irrigation assistance programme with a view to increasing the role of water users and the private sector and reducing recurrent government investments on irrigation schemes.

The focus of the irrigation programme will continue to be on promoting community involvement in irrigation development and management with the RGOB providing technical support (civil, irrigation and geotechnical engineering and sociology), and management support and advice to WUAs. Financial assistance, on a cost-sharing basis, will be made available to defer the costs of construction and rehabilitation of food crop-based irrigation schemes. Investment in irrigation systems for cash crop production will be fully funded by the farmers involved. It is planned to decentralize technical support, design and supervision functions of the Irrigation Section to the RNR-RCs. During the 8 FYP the Irrigation Programme Strengthening Project will support MOA with the implementation of the irrigation policy, providing assistance for field studies, testing and institutional development. Funding for irrigation development and rehabilitation will be provided through the Dzongkhag budgets with external resources being made available under the ADPs.

Extension

The objectives of the extension programme during the 8 FYP will be: (i) to support the development of self-reliance by rural households and communities; (ii) to support and promote the development and use of management strategies by rural households for sustained utilization of natural resources; and (iii) to support the participation of rural households and communities in their own economic development.

In order to achieve these objectives, extension activities are being reorganized into eight distinct sub-programmes (input supply, crop and livestock production, post-harvest management, farm management, organizational support, farm surveys, and environmental management) aimed at addressing the totality of farm problems including post-harvest issues, farm management and organizational development which have previously been relatively neglected. This will involve considerable expansion in the range of extension activities and much greater flexibility in budgeting arrangements to allow Dzongkhags to plan and implement extension programmes in ways that are better adapted to local conditions and demands.

Implementation of the new extension system will also require much stronger links between the MOA and the Dzongkhags, and between the research and extension services. This will be facilitated by the appointment of Extension Programme Officers who will be located regionally to: (i) provide a link between the extension service and the RNR-RCs; and (ii) assist Dzongkhag staff with programme planning, monitoring and evaluation and by providing technical backstopping.

The allocation of extension resources has tended to be supply-led, based on posting of an extension agent in each discipline per gewog. Under the RNR approach agriculture and animal husbandry extension services will become integrated at the field level. The social forestry and agro-forestry programmes will also operate through this unified extension service. Implementation of this strategy will allow extension resources to be allocated on the basis of need with additional resources being made available to the more populous gewogs or where there were special considerations relating to agro-ecological potential or marketing opportunities.

Crop and Livestock Production Services

The Crop and Livestock Services Division (CLSD) is responsible for animal health services and for input supply programmes. Policy during the 8 FYP will be to commercialize and, where appropriate, privatize input supply services in order to encourage greater efficiency and reduce the cost burden on the Government.

Animal Health Services

The objectives for the animal health services for the 8 FYP are: (i) to control, prevent and eradicate the economically important livestock diseases; and (ii) to develop a strong epidemiological database for economic analysis of major livestock diseases.

With the completion of the restructuring of the animal health services and the investment in the national and regional laboratory system, the emphasis for the 8 FYP will shift to strengthening preventive animal health services. This will involve: (i) epidemiological studies and analysis; (ii) drawing up of control programmes for the major animal diseases; (iii) upgrading and

updating of technical staff; (iv) decentralization of responsibility to the regional laboratories for all aspects of animal health services in their areas; (v) involvement of the extension services in training of farmers in basic animal health; (vi) introduction of a computerized disease information system; (vii) problem/field oriented research including research on traditional medicines; (viii) improved supervision of quarantine stations and slaughter houses; (ix) measures to make the animal health inputs supply system more efficient and financially sustainable; and (x) monitoring and evaluating of the animal health programme.

Livestock Breeding Services

Breeding Farms. MOA operates a network of 10 breeding farms which distribute improved breeding stock to rural communities. An evaluation of these farms carried out under the Livestock Master Plan found that unit production costs were excessive and that major restructuring and rationalization of operations were required. In response to these findings, MOA is introducing partial commercialization of the farms with non-staff operating costs to be covered from revenue. Despite these measures, the economic viability of government breeding farms remains uncertain and lower cost alternatives such as encouraging specialist breeders in the private sector will be examined.

Artificial Insemination Services

Artificial insemination services were first introduced in 1982. The objectives of the service are: (i) to improve the genetic base and productivity of dairy cattle through a scientific cross-breeding programme; (ii) to identify, characterize and conserve animal genetic resources; (iii) to promote the formation of breeders' associations to be collectively responsible for cattle genetic improvement; and (iv) to establish a gene bank. During the 7 FYP the performance of the AI service has fallen well short of targets with less than 25% of the total Plan target having been achieved during the first three years with the result that a number of AI Centres have operated at well below economic capacity. A review of the programme will be undertaken, and underutilized AI centres closed so that resources can be concentrated on developing a viable service in those areas where demand is greatest.

Agricultural Input Supplies

Progress was made in commercializing agricultural input supply services during the 7 FYP. Fertilizer supply which was previously undertaken by the extension services has been taken over by commission agents with farmers expected to pay the ex-MOA warehouse price while the costs of transport and agents' commission are met from the MOA and Dzongkhag budgets. From the start of the 8 FYP, all subsidies will be removed and farmers will pay the full cost including transport expenses and commission. RGOB's core funding to the Druk Seeds Corporation is being phased out over a four year period and by 1998 the company is required to become financially viable.

Mechanization Services

In recent years the AMC at Paro has absorbed a major share of agricultural sector financing. For 1995/96 the budget for AMC is Nu 109 million. An evaluation of the programme undertaken in 1992/93 highlighted its high cost and limited impact. During the 8 FYP the machinery maintenance operations of AMC are planned to be privatized and only a small machinery development and testing unit retained under the MOA.

Agricultural Credit

The Bhutan Development Finance Corporation(BDFC) continues to be the main source of seasonal and medium-term credit for the agriculture sector. Annual lending by BDFC to the RNR sector is projected to increase to Nu 175 m by 2002. By the end of the 7 FYP, BDFC had introduced a rural savings scheme and a group lending programme on a pilot basis in two dzongkhags.

Agricultural Marketing

Direct RGOB involvement in the marketing of food and agricultural produce is through the Food Corporation of Bhutan (FCB). During the 8 FYP the role of FCB in the marketing of horticultural produce will be reviewed.

Forest Management Services

The 7 FYP has seen significant progress towards the development of a forest policy and strategy that balances requirements for conservation with the needs of local communities. In the 8 FYP forest management activities will focus on three major programme areas: (i) sustainable forest management; (ii) nature conservation and protected area management; and (iii) social forestry and extension.

Sustainable Forest Management

The sustainable forest management programme in the 8 FYP will involve the following main activities:

- **Forest Protection:** covering both protection of forests against encroachment and illegal felling, fire protection measures, and surveillance and preventive measures against pests and diseases.
- **Sustainable Management for Multiple Use:** involving strengthening forest management and placing it on a more scientific basis following the preparation by FSD of forest management plans. Currently, about 25% of national demand is being met from areas under forest management plans. During the 8 FYP institutional capacities to implement the programme will be strengthened, and measures taken to ensure greater sensitivity to traditional community uses of the forest.
- **Commercial Forestry Operations:** involve bringing commercial logging operations under forest management concessions, ensuring better linkage between

forest logging operations and forest management and considerably reducing budgetary demands on government. Wood prices will be adjusted to reflect economic values to facilitate efficient utilization of forest resources, make an appropriate contribution to RGOB revenues, and improve the viability of Bhutan Logging Corporation.

Nature Conservation and Protected Area Management

The protected areas consist of four national parks (Jigme Dorji, Black Mountains, Royal Manas, and Thrumshingla), five wildlife sanctuaries (Phipsoo, Kulong Chhu, Sakteng, Bomdelling and Khaling) and one strict nature reserve (Torsa). Together, these account for 26% of the total land area of Bhutan. By the end of the 7 FYP, management plans were prepared for the Royal Manas National Park, the Jigme Dorji National Park and the Black Mountain National Park. During the 8 FYP management plans will be completed for another four areas (Bomdelling, Thrumshingla, Khaling and Sakteng). Priority will be given to protected areas in the south that include endangered species such as tiger, one-horned Indian rhinoceros and elephant, and where wildlife populations are most threatened.

Social Forestry and Forestry Extension

The social forestry and extension programme aims to address the demands of the rural population for forest products and involve rural communities in the management of forest resources. The programme has three main aspects: (i) designation of community forest areas to be managed by village forest management units; (ii) community afforestation/reforestation initiatives in degraded areas; and (iii) agro-forestry and private forestry on privately owned agricultural land. Implementation of the social forestry programme will be the responsibility of the Dzongkhag Forest Extension Officers who form part of the unified RNR extension service at the Dzongkhag level. The programme, which is currently being implemented on a pilot scale mainly in the Eastern Dzongkhags, will be expanded during the 8 FYP.

Export Horticulture Development

Export horticulture provides one of the best opportunities for economic growth in the RNR sector and raising of living standards among the rural population. For the 8 FYP, a twin track approach to promoting horticultural production will be adopted. First, horticulture is included under the research and extension programmes where the focus will be on the role of horticultural crops within the household farming system. Second, an innovative programme for promoting export horticulture will be developed. The starting point for this initiative will be assisting Bhutanese growers in exploiting opportunities in horticultural export markets, but it is expected that it will develop to cover the commissioning of research and the provision of technical advice and services to growers. Because of its commercial emphasis, the programme will be most appropriately organized outside of government, perhaps under a representative organization such as a horticultural growers' federation. The eventual aim will be for the programme to become self-financing.

Human Resources Development

Diploma level training of MOA staff is undertaken at the Natural Resources Training Institute (NRTI) at Lobeysa in Wangdue. During the 8 FYP, existing gaps in MOA staff establishment are expected to be filled, after which the diploma training programme will focus on replacement requirements (estimated at 25-30 per year) and refresher courses for long-serving field staff. A review of NRTI will be undertaken towards the end of the Plan period to determine its future role. Training of Forest Guards is undertaken at the Bhutan Forestry Institute (BFI) at Taba which offers a one year certificate level course. The maximum intake at BFI is 40 with the actual intake adjusted according to the level of establishment vacancies. Following completion of the European Union assisted graduate and postgraduate training programme, professional training requirements of the Ministry are expected to be financed through the National RCSC HRD programme and through individual projects in the RNR sector. It is estimated that 12-15 undergraduate and 3-5 postgraduate placements will be required each year to meet the future manpower requirements of the ministry.

Financial and Manpower Requirements for the 8 FYP

Financing Strategy

Domestic Financing

Domestic financing for the RNR sector is not projected to increase in real terms during the 8 FYP. This has a number of implications for the Government's programme for the sector:

- There will be considerable upward pressure on personnel costs as the proportion of qualified graduate and diploma level staff in MOA increases. In order to accommodate these additional costs, MOA will have to look to reducing its overall staffing level.
- It will be important to develop unit costs for key services to ensure an appropriate balance between wage bill and operations expenditures.
- The on-going initiative to eliminate unnecessary subsidies and to commercialize (and where possible privatize) input supply services will need to be intensified.
- Programmes which are not performing satisfactorily will need to be reviewed with a view to downsizing or closure.
- It will be necessary to continue to secure aid financing to meet a significant proportion of the recurrent costs of RNR sector programmes. Already aid financing covers 28% of the recurrent budget of the MOA, and 23% of the RNR sector as a whole.

Aid Financing

Aid financing requirements for the sector are not expected to increase in real terms for the 8 FYP. Instead the emphasis will be on increasing the efficiency of resource use in the sector. In managing aid funding, particular attention will be given to ensuring that: (i) projects are consistent with the wider sub-sectoral programme framework to which they relate; (ii) the accountability of projects to the management structure of MOA is clearly spelt out; (iii) aid proposals do not distort resource allocation by making available levels of funding which cannot be sustained in the longer-term; (iv) realistic assumptions are made about the speed and capacity of MOA to take over the recurrent financing commitments being covered under aid financed projects; and (v) aid projects are subject to regular monitoring and impact assessment.

Aid funding for the sector is expected to continue to be provided through two main types of projects:

- Programme support projects: which provide direct support to a programme or sub-programme in the sector by: (i) supporting the development and management of the programme; and (ii) financing programme activities where these are not covered by an ADP.
- Area development projects: which fund the activities of a number of RNR programmes or sub-programmes within a particular Dzongkhag or group of Dzongkhags and which will be integrated into the technical support structure provided by the RNR-RC network. Currently 17 out of the 20 Dzongkhags are covered, or are scheduled to be covered by ADPs.

Technical Assistance

The costs of technical assistance personnel represent a significant share of the external assistance to the sector. In recent years there has been an imbalance in the use of technical assistance with too much emphasis on the preparation of sector analysis and master plans and insufficient attention being given to supporting the implementation of programmes in the field. During the 8 FYP it will be necessary to utilize technical assistance resources more efficiently by:

- (i) appraising requests and proposals for foreign technical assistance more stringently;
- (ii) utilizing junior experts and volunteers for positions which do not require the experience of a senior expert; and
- (iii) giving greater emphasis on the posting of technical assistance personnel outside of Thimphu to support the implementation of programmes.

Manpower

CHAPTER 16. COMMUNICATIONS SECTOR

A. Sector Direction

Basic Situation

The Communications sector is responsible for development of infrastructure services which include telecommunications, roads, transport, water, and human settlement in urban as well as rural areas. Its overall objective is to promote and enhance the social and economic development of the country, on a sustainable basis.

The environment within which infrastructure services operate is changing quite rapidly. Over the years, the demands on infrastructure services by households and business have greatly increased, quantitatively and qualitatively, and this necessitates changes in the manner in which infrastructure services are delivered. These include wider application of commercial principles, encouragement of competition, and increased involvement of users.

The growth in the physical stock of infrastructure does not necessarily guarantee sustainability, however. Already, there are evidences of infrastructure breakdown such as roads, water supply, communications etc. In 8 FYP, therefore, increased efforts will be made to ensure sustainability. This will be required not only for operational sustainability, for which resources for maintenance must be adequate to prevent deterioration of the infrastructure, but also environmental sustainability. For this, the provision of infrastructure services and their delivery must be based upon "meeting the present needs without compromising the ability of the future generations to meet their own needs".

The strategies to operationalise the guiding principles of effective services delivery will be pursued through; *sector reform, master planning, setting up a regulatory framework, institutional strengthening and capacity building, introducing user charges, decentralization and private sector participation.*

Regulation

While all the sectoral programmes are reflected in the respective chapters, this particular programme shall be executed by the Ministry of Communications. In future plans, most of the telecommunications services are envisaged to be either corporatised or privatized, for which a regulatory mechanism has to be developed.

The trend in telecommunications services globally is towards liberalization and privatization, and most governments in the region are in the process of privatizing them. In Bhutan's context, however, while privatization will be an ultimate goal for telecommunications services, for the short to medium term, the objective will be to transform the telecommunications services into an efficient state-owned corporation. At the same time, a proper regulatory framework will be established.

As the telecommunications network develops, opportunities for private sector involvement in the operation and delivery of telecommunications services will increase. This will demand an autonomous regulatory body, but in the meantime the regulatory cell in the Ministry will be strengthened to oversee the telecommunications services.

Objectives and strategies

- To help deliver accessible and reliable telecommunications services on a competitive basis;
- To draw up a comprehensive Telecom and Radio Communication Act to guide development of telecommunications services in the future;
- To draw up a Frequency Utilization and Management Plan;
- To Build up institutional regulatory capacity in the Ministry of Communications.

Programmes for 8 FYP

The Bhutan Telecom Act, under preparation at the end of 7 FYP, will be completed to provide the basis for establishing the Corporation at the beginning of 8 FYP.

The National Frequency Unit will be strengthened and all necessary equipment to set up fixed and mobile stations procured.

Frequency Assignment will be based on international frequency allocation, but terrain characteristics governing Bhutan will be taken into account. A "National Frequency Plan" will be formulated, and include a plan for different spectrum use and a long term frequency utilization plan.

A National Master Frequency Register will be created and all spectrum users will be categorized according to National Frequency Assignment.

A Frequency Management Unit will be established to carry out the following activities:

- Surveillance of Operating Conditions (According to National Utilization Plan)
- Surveillance of Unassigned frequencies (Checking of Licences)
- Surveillance of quality (Inspection of infrastructure of stations)
- Observation of occupancy (Monitoring Communications traffic)
- Observation of Utilization (Monitoring traffic time)
- Investigation of Interference (Monitoring)
- Counter-measures against jamming (Co-ordination with different users)
- Entrusted measurement (Finding slots for allotment)
- Collection of reports for Non-confirmation (Measuring spurious emission and power)

The National Frequency Management Unit shall co-ordinate with different international bodies with regard to the use of certain spectrum and on matters related to spectrum management.

The National Frequency Management Unit shall also draw up a comprehensive pricing plan for spectrum use based on types of Radio Communication used and price the users and service providers accordingly.

Financial and Manpower requirements for 8 FYP

	Nu. in million					
	1997/9 8	1998/9 9	1999/0 0	2000/0 1	2001/0 2	Total
1. Capital Cost	3.36	0.41	0.41	0.41	0.41	5.00
2. Recurrent						
3. Total Cost						
4. Manpower	1	1	1		1	4
5. Tech. assist.						

B. Telecommunications

Basic Situation

Difficult topography and scattered settlements caused problems in delivering telecommunications services in the past. While conventional analog strowger switching systems were in place in a few urban centers, the majority of the Dzongkhag headquarters relied on short wave wireless as the only mode of telecommunication. Remote rural communities had virtually no access to telecommunication services. From 7 FYP, the conventional Strowger exchanges were replaced by digital switching systems and now all eastern, central, south-eastern regions are linked by digital microwave transmission systems, while the network for the Western region is scheduled for completion by the beginning of 1999.

Structure

The Telecommunications Division is divided into 6 operational areas headed by an Area Manager. The other specialized units are the Central Maintenance, Billing and Revenue units.

Constraints

Low utilization capacity at all exchanges and lack of adequate qualified and trained professional staff are the main constraints confronting the sector.

Review of Past Performance

Objectives of the 7 FYP

The objective of the telecommunications sector for the 7 FYP was to deliver efficient and reliable telecommunications services.

Strategies

The main strategy was to establish the East-West Digital Microwave Network.

Achievements

The open wire trunk lines were replaced by digital microwave transmission systems, and the old switching systems replaced by SPC digital switching systems in all eastern, central, south-eastern dzongkhags. Total installed capacity was increased to 9126, from 4090 at the beginning of the 7 FYP. Total working connections have also doubled (5387 lines), with this, inter- and intra-connectivity has been substantially enhanced. Eastern, central and parts of western Bhutan have direct dialing facilities. The telecommunications network in existence till 1995 is provided in Map 16.1.

Objectives and Strategies for the 8 FYP

A modern communications system is essential to the development of the country's economy. Efficient and reliable telecommunications will help reduce costs and enhance productivity. Most important, by eliminating distance, telecommunications facility brings together all kinds of partners, saving time and resources which are valuable factors in economic development and national integration.

Objectives

To continue the provision of efficient, reliable and accessible telecommunication services on sustainable basis. Specifically, to complete the digital network in the western region and to provide telecommunication services further down to the gewog level.

Strategies for 8 FYP

- Transform the Telecommunication sector into a State-Owned Corporation to deliver Telecom services increasingly in line with commercial principles;
- Enhance capacity utilization through a combination of tariff adjustment and other incentive packages;
- Improve penetration level by adopting technology such as digital wireless loop;
- Provide value-added services and data communications in selected areas;
- Complement the existing wireline system for local network based on consumer demand;
- Conduct a feasibility study to create an enabling environment for private sector participation with a view to bringing in competition for improved service delivery.

Programmes for 8 FYP

Digital Microwave Phase IV & V

Completing the Digital Microwave Network for the western region under Phase IV & V will be an important pre-occupation for the first half of the 8 FYP, with completion tentatively scheduled for March 1999. The network is estimated to cost about Nu. 480 m. which includes a government contribution of Nu.50m.

Rural Communication

Rural communication will be a priority during 8 FYP. Efforts will be made to take telecommunications services to dungkhags, service centres, institutions and gewogs during the second half of the plan. To be cost-effective, the short term rural penetration parameters will be set around 10 kms, or 2.5 hours walking distance to telecom services from any village, which could be reduced over time. The estimated cost is approximately Nu. 525 m.

Institutional capacity building

The institutional capacity of the telecom sector will determine to a large extent, the reliability, sustainability and efficiency of telecom services. Therefore a comprehensive training programme, consisting of 340 man-months, will be implemented during the 8 FYP.

Provision of value-added services

The present telecom technology offers a variety of options for value-added services ranging from facsimile, data communications to tele-medicine. These will be available depending on demand.

Financial and Manpower requirements

Table 16.1 Financial and Manpower Requirements for 8FYP

Nu. in million

	1997/98	1998/99	1999/2000	2000/01	2001/02	Total
1. Capital	480.00	270.00	270.00	270.00	270.00	1560.00
2. Recurrent	76.23	76.23	76.23	76.23	76.23	381.14
3. Total cost	556.23	346.23	346.23	346.23	346.23	1941.14
Manpower	3	7	7	6	6	29

CHAPTER 17. ROADS

Basic Situation

As a land-locked country, Bhutan's socio-economic development depends largely on an efficient and reliable roads network. Roads infrastructure development has therefore been given priority in all the past five year plans. There is now over 3,200 km length of road in the Kingdom serving almost all district headquarters and a large proportion of the rural settlements.

Structure

Roads infrastructure falls under the Public Works Division of the Ministry of Communications. There are ten field divisions including a Central Workshop at Gaylephu and Central Stores at Phuntsholing.

Constraints

The country's steep and fragile terrain presents a serious challenge to the construction and maintenance of roads, as well as the lack of trained and skilled manpower, combined with budgetary limitations.

Review of Past Performance

Objective of the 7 FYP

The seventh plan objective was to construct and maintain the roads network and bridges to facilitate efficient movement of goods and services.

Strategies

Expansion of the roads network was limited to ensure that the capacity for essential maintenance was sustained. As far as possible, roads construction and maintenance works were privatized.

Achievements

A total of 41 kms length of new roads was completed during the 7 FYP, along with 450 km length of resurfacing, including 303 km of resurfacing under an ADB project. Five private companies were engaged in resurfacing under the latter project. A nation-wide roads network is portrayed in Map 17.1.

Three degree level training slots were implemented, as well as in-country training for middle and lower level technicians.

Objectives and Strategies of 8FYP

Objectives

- To develop a sustainable and regionally balanced roads network that is safe, convenient and economical to use;
- to preserve the past capital investment in roads, to reduce cost of vehicle operation and the travel time of road users, and to develop road construction and maintenance (resurfacing) capabilities in the private sector.

Strategies

- Apart from promoting privatization, the Public Works Division will gradually withdraw from direct involvement in road works and concentrate increasingly on design, estimates, supervision and quality control specifically through;
- Development of a long term comprehensive roads master plan to guide future road development;
- Preparation of an inventory of the existing roads network;
- Development of a suitable pavement maintenance management system;
- Improvement of geometric features so as to reduce accidents;
- Timely resurfacing of existing roads to reduce vehicle operating costs;
- To reduce travel time, possibilities of shortening existing roads, in particular the trade routes, will be explored;
- The institutional capacity will be strengthened through further training;
- Locally available materials will be utilized wherever possible in place of imported materials.

Programmes for the 8FYP

New Roads Construction

From the ongoing roads construction programme, formation cutting 15 kms, base course 54.5 kms, black topping 54.5 kms, permanent works 25 kms, on the Tala - Raidak and Mathanguri - Pangbang is likely to spill over to the 8 FYP. The emphasis of road construction shall therefore be on completing the spill-over works which will require Nu.105 m.

Requests for over a thousand kilometers of new roads for 8FYP were received from various dzongkhags. Considering the limited capacity of both PWD and private contractors and using population density, agricultural and industrial potentials and accessibility criteria, prioritization has been done and 163 km length of new road constructions up to formation cutting level have been earmarked for the 8 FYP. Construction of these roads will be considered in order of priority subject to the availability of funds amounting to Nu. 397.50 m.

Road Maintenance Programme

Resurfacing

Timely maintenance is essential to prolong the life of roads and to preserve the past capital invested in them. In the past, for financial and other reasons, timely resurfacing was not carried out and it is now overdue for almost all roads. During the 8 FYP, the resurfacing programme for 1500 kms of roads has been based on the existing capacity of the private companies as well as of PWD. This cost amounts to almost Nu. 600 m.

Routine Maintenance/Monsoon Damages Restoration

Routine maintenance and monsoon damage restoration are annual and seasonal features, in road maintenance. The entire stock of roads infrastructure will require annual routine maintenance, while the extent of monsoon damage restoration will depend on the amount of damage caused during the monsoons. Based on past annual expenditure, the cost of routine maintenance and monsoon damage is estimated at Nu.490 m and Nu.150 m, respectively, making a total of Nu.450 m for 8 FYP. This does not include an estimated maintenance cost of Nu. 226.324 m for the next five years for the 735 kms of road currently maintained by Project Dantak.

Widening and Improvement

In response to the increasing volume of traffic and the need to improve safety, a total of 70 kms of geometric improvement will be carried out in 8 FYP at a cost of Nu. 70 m.

Realignment

To reduce travel time and costs, realignment of 50 kms of roads on the national highway will be carried out during the 8 FYP at a cost of Nu.150 m.

Bridges

Many bridges on the highway are temporary steel bailey bridges. These were built long ago and have outlived their design life. In view of the increasing traffic volume, and for safety, it is urgent that some of the critical ones be replaced by permanent RCC bridges. During the 8 FYP, 10 such bridges will be replaced at a cost of Nu. 268.500 m, in addition to three bridges to be undertaken by the Government of India namely Aie, Rongkhola and Sarpang bridges under Sarpang Dzongkhag which are spill over from 7FYP.

Institutional Capacity Building

At present, there are no specialized engineers in the road sector. During 8 FYP, provision for in-service training will be made on a selective basis for specialized training abroad, priority being given to structural engineering, pavement and maintenance management, geotechnical, survey

and design. For middle level engineers, in-country training as well as training in the region will be organized. Seventeen slots of 18 mm each are included in the RCSC HRD Programme for specialization in the above- mentioned fields.

Roads Sector Master Plan

In the past, in the absence of any framework within which to plan surface transport, development of roads infrastructure has been largely adhoc. In order to guide future investment in roads over the next twenty years in line with national development priorities, sectoral requirements and socio-economic realities, the preparation of a Roads Sector Master Plan will receive priority during the 8 FYP. The exercise is estimated to cost around Nu.9 m, involving 36-40 man-months of specialized consultancy input.

Mechanization of road works

In view of the terrain and the shortage of both skilled and unskilled labour, mechanization of road works is important to increase productivity and output. Continuation of the existing mechanization programme requires replacement of the old road construction and maintenance equipments, at a cost of Nu. 120.51 m in the 8 FYP.

The present annual output of the PWD Central Workshop does not justify the cost involved, and during 8 FYP an attempt will be made to manage the workshop on commercial lines, possibly with a management contract, so that costs are met out of income. Overall responsibility for the workshop will need to remain, however, with the PWD.

Privatization of road works

During 7 FYP, five companies were involved in resurfacing of the lateral highway, while two large companies were engaged in new road construction. Several other individual private contractors were involved in routine maintenance and monsoon restoration works. Further private sector participation will be encouraged during the 8 FYP.

Financial and Manpower Requirements

Table 17.1 Financial and Manpower Requirements for 8FYP

	(Nu. in Millions)					
	1997/1998	1998/1999	1999/2000	2000/2001	2001/2002	Total
Capital Cost	495.21	442.38	349.00	306.88	277.05	1870.52
Recurrent	130.10	130.10	130.10	130.10	130.10	650.50
Total cost	625.31	572.48	479.10	436.98	407.15	2521.02
Manpower	-	-	-	-	-	-
TA	-	-	-	-	-	-

CHAPTER 18. HUMAN SETTLEMENT

Basic Situation

Bhutan has a wide variety of settlements influenced by climatic conditions, physical terrain, farming and trade patterns, historical backgrounds, and the impact of modern public administration and development. It is estimated that 85% of the total population lives in rural areas. Although there is no clearly defined distinction between urban and rural settlements, 44 settlements with populations ranging from 500 to over 30,000 have been recognized as urban. Rural settlements vary from single homesteads to a cluster of 30 to 40 dwellings and village sizes vary from 2 to 100 houses.

Structure

The Human Settlement sub-sector forms a part of the Public Works Division. It covers many activities ranging from water supply and sanitation to urban planning, housing, settlement, and municipal affairs. While headquarters concentrates mainly on the planning, designing, co-ordination and framing of rules, legislation and execution of central programmes, the Dzongkhag Administrations through their Engineering Units are responsible for implementing decentralized sectoral activities at the Dzongkhag level. Provision of municipal services is the responsibility of the City Corporations in Thimphu and Phuntsholing and Municipalities or Dzongkhag Administrations in other urban areas.

Despite past efforts to strengthen the institutional capacity of the sector both at headquarters and dzongkhag levels, with further decentralization of sector activities, manpower, in relation to the increased workload at the dzongkhags, still remains inadequate.

Constraints

Lack of legal framework, master plans, housing policies, financial and professional manpower resources have been, and still are, the major constraints faced by the sector.

Review of Past Performance

7 FYP Objectives

- To achieve a balanced development of all urban centres and create a functional, healthy and aesthetically pleasing physical environment for urban living;
- To increase the provision of improved water supplies from 40% to 57% of the population;
- To improve the water quality from existing supply schemes so that, by 1997, 45 % of the population have access to safe water from improved schemes;
- To universalise the use of household latrines and assist 11,000 households to build hygienic latrines;

- To assist 6,000 households to have smokeless stoves, thus increasing their use from 8% to 15% of the population;
- To enable 90 % of rural primary schools, community schools, monastic schools and health units to have sustained use of safe water and hygienic conditions;
- To construct 50 new suspension bridges, maintain 150 existing bridges and provide tools, plant and materials for construction and maintenance of mule tracks;
- To promote Human Resource Development and Institution Building, particularly at the DYT and GYT levels.

Achievements

Urban Development and Housing

Development plans were prepared for 14 towns and action area plans for 16 towns. Surveys of 6 additional towns were also carried out. Development activities in most of the towns could not be initiated, however, primarily due to financial constraints. Nevertheless, infrastructure development at Khuruthang in Punakha and Tingtibi in Zhemgang was commenced with assistance from the Governments of India and The Netherlands, respectively. However, the work on these two townships is expected to spill over to 8FYP.

A proposal outline for a housing scheme for Thimphu, starting with low-income housing, was prepared, Water and Sanitation Rules were formulated and a Municipal Act prepared.

As a preparation for the Second United Nations Conference, "The City Summit", a National Committee was set up by the Ministry of Planning to prepare a National Report. However, the Committee was designed as a continuing stimulus to human settlement development.

Rural Drinking Water Supply and Sanitation

About 1,760 Rural Water Supply schemes were constructed. The approach in the past was target and achievement oriented. Studies have indicated that about 30% to 40% of the schemes completed before the mid-1980s required either major or minor repairs and maintenance. Low quality materials, lack of professional technical input and trained caretakers contributed to the poor upkeep of the schemes. Based on this experience, there was a major shift in strategy towards, "quality rather than quantity", during the 7 FYP.

According to the Evaluation report on the Rural Water Supply schemes (May-June, 1995) the coverage increased from 31% in 1987 to 58% by 1995. Of the 7 FYP target of 325 new water supply schemes, 112 were constructed, and 230 out of 300 schemes were rehabilitated by the end of June, 1995, with assistance from the EU through UNICEF. By the end of 7 FYP, the

objective of 57% coverage was achieved. Similarly, over 2,300 smokeless stoves were installed and 3,562 latrines constructed during the first three years of 7 FYP.

Installation of smokeless stoves was done by more than 270 women trained for the purpose in the period 1991-1993. From 1992, user households started paying Nu. 60 for stove installation. However, in the case of improved latrine construction, withdrawal of the subsidy contributed to slow progress.

Significant non-quantifiable outcomes of the programme included: qualitative improvements in the lives of the rural population, increased capacity of the planning, designing and implementing staff, strengthened community participation in the management of facilities, and the increased involvement of women.

Urban Drinking Water Supply and Sanitation

With the objective of improving the living environment in the urban areas, large projects such as Urban Water Supply and Sewerage, Solid Waste Disposal Management and River Training Works, were implemented.

River training works at Phuntsholing at a cost of Nu. 10 m and the Solid Waste Disposal Management Project in Thimphu at Nu. 13 m were also implemented with grant assistance from DANIDA; the Urban Water Supply Project under ADB and DANIDA funding covered six towns, namely Thimphu, Phuntsholing, Paro, Gaylegphu, Trashigang and Samdrupjongkhar, thereby improving the existing water supply system.

A further major project undertaken comprised the consolidation of water supply systems in the six towns and the sewerage scheme for Thimphu and Phuntsholing towns, at a cost of Nu. 507.00 m. with a RGOB contribution of Nu. 82.00 m.

Metering of water to control wastage and facilitate the collection of service charges on the basis of actual consumption, was also introduced. As a new concept for consumers to accept, initial charges were set at the nominal rate of only Nu. 1.25 per cubic meter of water consumed, but on a progressive scale.

Water supply shortages, sanitation, waste disposal and management problems in bigger towns have necessitated a regulatory framework to govern the operation and maintenance of urban utilities on a sustainable basis. Accordingly, the Ministry of Communications, with assistance from DANIDA, formulated "Water and Sanitation Rules" to ensure efficient management of urban utilities - a prerequisite for a healthy living environment and sustainable urban development.

Suspension Bridges

The RGOB launched the suspension bridges construction programme in the 4 FYP to improve accessibility to the remote rural settlements, by end of which 80 bridges were built throughout the country. Another 128 suspension bridges were built during the 5 FYP. From the 6 FYP, the

emphasis shifted to improving quality. With advanced technology in trail bridges, bridge design standards, material and construction quality improved significantly. There are now 295 bridges spread throughout the country, which have greatly enhanced access to rural settlements and improved transportation of goods and services to and from the rural areas. During 7 FYP, 50 new bridges were constructed.

Mule Tracks

Pack animals were the traditional means of transportation in Bhutan, and are still used in the remoter rural settlements. Mule tracks were built and maintained through community resources and participation. During the 7 FYP, 165 kms of new mule tracks were constructed and 409 kms of track maintained with a subsidy from the government.

Objectives and Strategies for the 8FYP

Objectives

- To achieve a balanced and sustainable development of human settlements, provision of basic infrastructure, conservation of environmental character and culture, and provision of affordable and climatically suitable housing for all;
- To increase the use of improved water supplies to 80% of rural and 100% of the urban households;
- To increase access to and use of basic sanitary facilities;
- To improve understanding among beneficiaries of the relationship between water borne diseases, hygiene, water quality and sanitary conditions;
- To further improve accessibility to the more remote areas by constructing 50 more suspension/suspended bridges;
- To promote human resource development and institutional strengthening.

Strategies

- Preparation of a water resource inventory and catchment area management master plan will be given top priority;
- Existing Master Plans for City/Municipal Corporations will be reviewed and implemented after incorporating necessary changes;
- Selected regional growth centres and district towns will be planned, designed and their development implemented;
- A legal framework and housing policy will be formulated;

- To support sustainability, the key principle, tariff and service charges will be established to meet at least the cost of operation and maintenance of water supplies. The contributions and involvement of users will receive high priority.
- To protect and safeguard the existing water supply and sanitation infrastructure, priority will continue to be given to rehabilitate old and non-functioning schemes;
- Alternative low cost rural water supply through the protection of traditional springs for scattered isolated houses, introduced in 1994, will be further promoted;
- Technologies, most appropriate for conditions in Bhutan, in design, construction, operation and maintenance of services, will be emphasized;
- Institutional development and HRD will be given high priority, including specialization in different fields of expertise.

Programmes for the 8FYP

Urban Development and Housing

Urban Management

To develop the basis for sustained improvements in the management of all urban settlements, particularly Thimphu and Phuntsholing, for the enhancement of the living conditions of all inhabitants, emphasis will be given to strengthening municipal and other local bodies, including community based organizations and voluntary groups. Special attention will be paid to streamlining urban management structures so as to coordinate the key components - land management, infrastructure, municipal finance, environment and urban poverty relief.

Housing

Lack of shelter for those falling in the low and middle income groups needs to be addressed as a matter of urgency. RGOB is considering the establishment of an important Housing Division to avoid creating slums and shanties in the urban areas. A comprehensive review of the shelter sector will therefore be initiated, including supply, demand and affordability, and of housing finance facilities currently available through existing financial institutions, with a view to establishing appropriate new modalities for wider promotion of affordable housing.

Private Sector Participation

Private sector participation in urban management activities such as plumbing, electrical and general repair works, street cleaning and solid waste management will be encouraged.

Municipalities

The urban development and improvement activities in the Municipalities will be implemented by the respective Dzongkhag Municipalities except for Thimphu and Phuntsholing where they function as autonomous corporations. The 8FYP will include activities such as survey, demarcation and land acquisition; construction and maintenance of roads, footpaths, drainage, water supply and sanitation, recreation areas, parking, and river protection works. Municipal capital programme activities, however, will be included in the respective Dzongkhag plans. Therefore, the outlay of Nu. 8.850 m. is exclusive of the Dzongkhag Municipal programmes.

City Corporations

While management within the Thimphu city boundaries is now the responsibility of the City Corporation, with a modest capital and recurrent budget for 8FYP, Phuntsholing is in the process of transition, and both its capital and recurrent costs still being included under the Ministry of Communications. Furthermore, in both these rapidly growing urban centres, the greater part of the physical development planned for 8FYP is included in the preceding chapters dealing with roads, human settlement and surface transport. Therefore, only a brief summary of the developments to be undertaken in 8FYP in Thimphu and Phuntsholing are mentioned here.

Thimphu City Corporation

The capital city, Thimphu, has experienced very rapid growth and urbanization during the last two decades. The infrastructure has not pace with the growth in many cases. With the extension of the municipal boundaries, the existing Master Plan for the roads network is inadequate, and a major constraint for needed improvement and maintenance of the existing roads has been the lack of finance. The 8FYP programme therefore includes provision for the most important roads.

Improvement and extension of the drainage system in the city, originally constructed in the 1970's, is also badly needed so as to reduce the incidence of diseases due to the stagnation of storm water in residential areas, and help control urban run-off from contaminating the Thimphu river. During the 8FYP, it is proposed to construct 13.1 km of new primary and secondary storm water drains and 25 km of tertiary drains.

Thimphu City Corporation at present provides waste collection service to approximately 80% of the area within the city boundaries. The collection system is a mix of door-to-door collection in densely populated areas and public waste bins placed at convenient locations in the less densely populated areas, with collected waste being emptied at a landfill site 9 km from the city.

The sewerage project has significantly improved the waste management system in the central areas of Thimphu, but with the expansion of the city boundaries and population growth, further expansion of the services will be carried out in 8FYP.

The rapid growth of traffic in Thimphu has not been matched by adequate provision for parking and traffic regulation. To reduce congestion, during 8FYP, besides widening of roads it is proposed to establish appropriate off-street parking areas at 5 locations, which will provide for

passenger and commercial vehicles. However, as the majority of the urban population walk to their destinations, the Corporation plans include improvements to pavements and footpaths.

Other plans include the provision of semi-permanent housing for municipal workers, the construction of an electric crematorium, river protection works on the right bank of the Thimphu river and a programme of tree planting as part of the City's environmental protection campaign.

Phuntsholing City Corporation

The main requirements to meet the rapid growth of Phuntsholing in recent years which will be addressed in 8FYP are very similar to those of Thimphu. Thus the 8FYP includes programmes for road development and vehicular parking, as well as the provision of pavements for the benefit of pedestrians.

Urban areas with high rainfall such as Phuntsholing, the provision of adequate drainage is essential and improvements to, and extension of, the existing system will be carried out. Also for environmental reasons, a systematic arrangements will be introduced for the collection, transport and disposal of solid waste.

As in Thimphu, an electric crematorium will also be constructed in Phuntsholing during the 8 FYP and some essential river training works will be undertaken. Further addition to the existing street lighting will be carried out.

Drinking Water Supply and Sanitation

Rural Water Supply and Sanitation

Programmes for the 8 FYP:

- Construction of new rural water supply schemes to increase household coverage to 80%
- Rehabilitation of old existing schemes to the desired standard
- Protection of traditional springs and all spring sources used for drinking water supply
- Construction and promotion of sanitary facilities in institutions
- Demonstration of different types of household latrines as part of promoting and educating the rural population. Sanitary marts as part of sanitation promotion will be introduced
- Formulation and dissemination of policies, procedures and approaches to rural water supply and sanitation

- Development of Institutional capacity through training at village, dzongkhag and central levels for different categories of staff
- Strengthening the Dzongkhag Engineering Units with adequate, trained technical staff, support facilities such as transport, survey and camping equipments, tools and office equipments
- Revision of technical design criteria based on the revised policy and procedures on water and sanitation.

Urban Water Supply & Sanitation

- Undertaking feasibility studies on water supply systems in all urban centres based on the final approved urban development plan leading to the preparation of a Master Plan
- Extension of water supply system to cover the extended area of Thimphu
- Extension of sewerage system in Thimphu and Phuntsholing (Phase II)
- Strengthening of the Urban Water Supply and Sanitation unit under Public Health Engineering Section to take up survey, design, tendering and technical supervision of urban water supply systems. This unit will also provide support to City and Municipal Corporations to operate and maintain the water and sanitation infrastructure
- Improvement and extension of water supply and sanitation facilities in two district towns viz. Mongar and Trashiyangtse and one satellite town
- Conducting an information campaign on health, hygiene and safe water. Control of water wastage through regulations and by creating awareness among beneficiaries
- Protection of the urban environment by developing appropriate solid waste disposal systems and drainage for different size and categories of towns
- Provision of public toilets at public places of gathering and at strategic areas in town
- Incorporating the provision of proper sanitary latrine facilities in the Building Regulations and ensuring observance during building plan approval and construction
- Preparing a Water Resources Inventory, and introducing water quality testing on a regular basis and ensuring corrective follow-up.

Water Resources Management Master Plan

Formulation of a national Water Resource Management Master Plan, will be given high priority during the 8 FYP. Although with an abundance of water, the need for management has not yet arisen, the increased and diverse demands, for water, of modern development such as rapid urbanization, and industrialization, will inevitably create a need for water resource planning. The preparation of a Master Plan will be taken up under the Technical Assistance component of the Urban Water Supply and Sanitation Programme.

Suspension bridges and Mule Tracks

- Construction of 60 new suspension/suspended bridges with improved technical specifications with a budget outlay of Nu.51.962 million
- Maintenance of existing bridges; 50 major, and 125 minor bridges, with a total budget outlay of Nu. 6.10m
- Construction of 500 km of new mule tracks and rehabilitation of 1000 km of existing ones throughout the country, with a total budget outlay of Nu. 5.530 m.(2.765 mil. each).
- Institutional building and training in suspension bridge design and construction at a total cost of Nu. 30.754m

Institutional Strengthening and Human Resource Development

Failure to fully achieve planned targets in the past was frequently attributable to the lack of technical manpower, at virtually all levels.

Additional activities call, therefore, for a more proportionate increase in technical manpower to cope with the increased work load. Taking account of existing capability and the 8 FYP programme, a total of 141 additional technical personnel will be needed to ensure satisfactory implementation and successful completion of the programme.

Human Resource Development programmes will continue to receive high priority. Specialized training courses, dovetailed to the Human Settlement Sector programmes and geared towards strengthening the professional capacity for planning, designing, managing and maintaining infrastructure and services on a sustainable basis, will be implemented during the 8 FYP. In-country training at community/beneficiary level for proper and sustainable operation and management of schemes will also be continued.

Financial and Manpower Requirements

Table 18.1 Financial and Manpower Requirements for the 8FYP

	Nu. in million					
	97/98	98/99	99/00	00/01	01/02	Total
1. Capital costs	154.5 4	189.7 6	187.0 7	122.5 7	121.3 0	775.2 3
2. Recurrent	45.68	45.68	45.68	45.68	45.68	228.3 8
3. Total cost	200.2 2	235.4 4	232.7 5	168.2 5	166.9 8	1004
4. Manpower						141

CHAPTER 19. SURFACE TRANSPORT

Basic Situation

Road transport remains the main mode of passenger as well as freight movement within the country and to the neighbouring Indian states. Over the years, with the development of the road network throughout the Kingdom, the number of trucks, buses, and taxis has increased manifold. At present, the Surface Transport Division only regulates public passenger transport in terms of route allocation, fare level, frequency and safety, while operation of both passenger as well as goods transport are private sector activities. Licences by way of registration are currently being issued by the Division of Revenue and Customs, Ministry of Finance, for taxis and trucks, but the charges for transportation of goods and passengers are left to market forces.

Structure

The Surface Transport Division as well as the Driving Training School at Phuntsholing are under the Ministry of Communications.

Constraints

At present, different organizations are involved in the transport sector in regulating, licensing, legislation and registration of motor vehicles with little coordination. This has hampered the rational development of surface transport. Only bus transport is at present regulated, leaving taxis and trucks unregulated. Infrastructure in terms of booking offices and bus terminals is not available in many places, and arrangements for HRD are inadequate.

Review of Past Performance

Objectives of the 7FYP

The policy of the RGOB for passenger transport for the 7 FYP was to facilitate the provision of efficient, safe and convenient private sector bus services, and to maintain fares, within the reach of every citizen, while ensuring the success of the ventures. The responsibility of managing and operating buses were to be privatized. The programmes of the Surface Transport Division for the 7FYP plan were the following:

- to provide adequate and efficient passenger transport service at reasonably low tariff;
- to ensure the safety, convenience and comfort of passengers ;
- to develop the private sector by establishing appropriate instruments for regulating and monitoring standards and practices ; and
- to create adequate physical infrastructure and other facilities for the benefit of private operators as well as the commuters.

Achievements

During 7 FYP, it became clear that while all bus services had been privatized, it was necessary for RGOB to provide basic facilities such as booking offices, bus terminals and bus parking garages, for the benefit of both the public and private operators. Bus terminals were, therefore, created with adequate facilities including convenient booking offices, waiting rooms, luggage rooms, as well as office space for the private operators, at Phuntsholing and Samdrupjongkhar. New bus terminals have been built at Gelephu and Thimphu. A bus parking garage was also constructed at Thimphu and the provision of similar facilities was started in other important towns.

To provide an alternate means of transport for Thimphu residents, a study was conducted in July/August 1995 by two consultants from the Netherlands under the Sustainable Development Programme. Follow up on this report will be undertaken in 8FYP.

In order to cater to the needs of the rural, as well as the urban population, an efficient network of passenger transport services has been created by grouping profitable and unprofitable routes. Bus/truck services are now generally available wherever motorable roads exist.

To ensure the safety and comfort of traveling passengers, the Division reinforced its monitoring activities, checking bus services on a continuous basis followed by thorough checking of the physical condition of buses, and the overall management practices of operators, every six months. The delegation of responsibility to individual Dzongkhags to monitor the functioning of private operators in terms of overloading of passengers and luggage, has greatly helped in improving the safety of these services.

Objectives and Strategies for the 8FYP

In place of the rather ad hoc development of surface transport during 7 FYP, it is intended that development during 8 FYP should be guided by a Surface Transport Master Plan, the need for which was clearly identified towards the end of 7 FYP.

Objectives

- To promote a safe, efficient and reliable transport system in general and passenger transport system in particular, with the formulation of new guidelines, regulations and an improved system of control and enforcement;
- To optimize utilization of different categories of vehicles - trucks, buses, taxis and others;
- To create further physical infrastructure such as booking offices and bus terminals for the convenience of the commuters;
- To develop the institutional capacity of the Division and promote the training of operators.

Strategies

At present, the Surface Transport Division only exercises responsibility for monitoring and regulating the operation of passenger transport vehicles. During 8 FYP, the coordination and consolidation of all surface transport related activities such as vehicle registration, renewal, ownership transfer, drivers' licensing, vehicle fitness, regulation of trucks, taxis and passenger transport vehicles, will be brought within the purview of the Surface Transport Division.

A Surface Transport Master Plan will be prepared as an aid to the rational long term development of the surface transport system. An HRD programme will be aimed at both public and private sector participants in surface transport.

Programmes for the 8FYP

The following activities are planned for the 8FYP:

- Creation of physical infrastructure, will mainly focus on the construction of bus terminals at different important towns, bus sheds for protection of arriving and departing passengers during rainy season;

- Computerization for data storage and retrieval, so as to facilitate the coordination and transfer of licensing, registration and associated activities;
- Preparation of a Surface Transport Master Plan;
- Institutional capacity building, through training;
- Introduction of a city bus service for Thimphu as a follow-up of the study conducted under the Sustainable Development Programme during 7 FYP;
- A feasibility study for ropeway transport;
- Expansion of the National Driving Training School.

Continuing efforts to produce adequate numbers of competent national drivers will involve the provision of additional infrastructure, training vehicles and equipments. Enrolment will also be increased so that not only will driving standards improve, but the dependence on expatriate drivers will be minimized.

Financial and Manpower Requirements

Table 20.1 Financial and Manpower Requirements for the 8FYP

	Nu. Millions					
	1997/98	1998/99	1999/00	2000/01	2001/02	FYP Total
1. Capital Costs	32.23	3.00	4.35	4.00	4.00	47.58
2. Recurrent	3.12	3.12	3.12	3.12	3.12	15.59
- Existing	-	-	-	-	-	-
- Project Related	-	-	-	-	-	-
Total	35.35	6.12	7.47	7.12	7.12	63.17
Manpower						41
TA	8.5	-	-	-	-	8.5

CHAPTER 20. CIVIL AVIATION

Basic Situation

Bhutan is dependent on a single airport situated at Paro. Since the start of air transport services in March 1983, Paro airport has been restricted to handling international flights operated by the national airline Druk Air. At present, Druk Air operates services to and from Delhi, Calcutta, Kathmandu, Bangkok and Dhaka, with two 80 seater BAe-146 aircrafts. Druk Air's operations are governed and regulated by the Civil Aviation Division, which was established in January 1986.

For several months of the year, dense and often unpredictable cloud cover reduce visibility over Paro to the point where it is necessary for Druk Air to postpone flights or, in the absence of an alternative airport in Bhutan, to abort landing at Paro and land overnight instead at Calcutta.

The improvement of transport facilities is crucial for a land-locked country like Bhutan. The limited road network and extremely difficult terrain, compel travel by road from east to west taking several days. The need for further development of Bhutan's air transport infrastructure is, therefore, important for both domestic and international services.

Structure

Air transport is the responsibility of the Civil Aviation Division, with its head office and operations office at Thimphu. The Division consists of four technical sections: Flight Operations, Signals, Airworthiness and Aerodrome.

Constraints

The absence of a Civil Aviation Master Plan restricts the Division's ability to plan future demands for air services. A lack of trained air crew and ground staff persists, but the position has improved during 7FYP through the provision of technical assistance.

Review of Past Performance.

Objectives for the 7FYP

The objectives were to assess aviation needs, study the feasibility of establishing adequate infrastructure for the operation of additional international flights, introduction of domestic air services, and ensure the highest operational and safety standards of the air services specifically :

- To ensure planned development of civil aviation infrastructure such as airports, air traffic control system, navigation and communications, aviation security and human resources development;
- To formulate relevant statutes, rules and regulations essential for the operation of airlines based on recommended practices of the ICAO and execute bilateral agreements with other countries to facilitate the establishment of air linkages;

- To prepare a Civil Aviation Master Plan for the planned development of civil aviation in Bhutan.

Strategies and achievements

The strategy for expansion of civil aviation in Bhutan included the rehabilitation of the existing facilities at Paro airport and continuous development of human resources.

The Development of Paro Airport was implemented with technical and financial assistance of the Government of India, at an estimated cost of Nu. 127.269 million, which comprised a new terminal building, control tower, VIP lounge, cargo complex, site development and beautification works, and expected to complete by the end of 7 FYP.

During 6 FYP and 7 FYP, the Civil Aviation Division also received technical assistance from the UNDP, mainly for the recruitment of international experts to streamline the functioning of the Division, including formulation of statutes, rules and regulations, development of human resources, and purchase of communication/navigation equipments (DVOR/DME). These have greatly contributed to the safe and efficient operation of the international air service.

In addition to other minor works at the airport, such as upgrading the Chang road, activities of 7 FYP included:

- Consultancy service for Paro Airport Maintenance & Emergency Planning Programme, a study undertaken by the Swedish Government at an estimated cost of US \$ 101,000.
- Aerodrome site selection and evaluation, an aid to the identification of a suitable site for the construction of a second international airport, undertaken by the UNDP with Norwegian Government Trust Funds at an estimated cost of \$ 60,900: two Air Traffic Service related consultants were also fielded for some two months at a cost of \$ 86,800.

Objectives and Strategies of 8FYP

The Civil Aviation Division will continue to place emphasis on the improvement and upgrading of the legal and regulatory provisions governing the operation of Druk Air Corporation, taking into account the international obligations and standards and recommended practices laid down by ICAO. Airport security will also be given high priority. While continuing to expand and improve the quality of international air services, the introduction of domestic air services will be thoroughly explored.

Objectives

- To guide and regulate the operation of airlines, with due consideration to the International Conventions and the guidelines laid down by ICAO;
- To maintain the airport infrastructure at Paro, including the establishment of an appropriate system of airport security for safe and reliable operation of the airline;
- To build up required institutional capabilities within the Division;

- To explore the feasibility of introducing domestic air services.

Strategies

- Building of institutional capabilities through recruitment and training of suitable, qualified staff;
- Establishment of appropriate procedures and systems for the maintenance of airport infrastructure;
- Preparation of a Civil Aviation Master Plan.

Programmes

Table 20.1 Summary of programme for the development of civil aviation

		Nu. Millions					
Sl. #	Programmes/ Activities	1997/9 8	1998/9 9	1999/0 0	2000/0 1	2001/0 2	FYP Total
1.	Maintenance of paro Airport (eqpt)	12.52	-	-	-	-	12.52
2.	Airport Emergency Service	5.60	-	-	-	-	5.60
3.	Aviation Security	6.30	-	-	-	-	6.30
4.	Search and Rescue Operation	-	4.55	-	-	-	4.55
5.	Implementation of CNS/ATM	-	3.30	-	-	-	3.30
6.	River Protection Works	-	-	4.50	-	-	4.50
7.	Fencing around the Airport	-	-	-	2.00	-	2.00
8.	Water Supply to the Airport	0.80	-	-	-	-	0.80
9.	Feasibility study for Domestic Air Services	-	-	3.25	-	-	3.25
10.	Formulation of Civil aviation Master Plan	6.13	-	-	-	-	6.13
11.	Training (proposal submitted separately to the RCSC)	-	-	-	-	-	-
Total		31.35	7.85	7.75	2.00	0.00	48.95

Table 20.2 Financial and Manpower Requirement for the 8FYP

		In Nu.					
Millions		1997/98	1998/99	1999/00	2000/01	2001/02	FYP Total
Capital Costs	31.345	7.850	7.750	2.000	-	-	48.945
Recurrent	4.86	4.86	4.86	4.86	4.86	-	24.3

- Existing	-	-	-	-	-	-
- Project Related	-	-	-	-	-	-
Total	36.205	12.71	12.61	6.86	4.86	73.245
Manpower						
TA	18.025	8.050	1.750	-	-	27.825

CHAPTER 21. POSTAL SERVICES

Basic Situation

As a result of rapid advancement of modern communications technology, coupled with emergence of several private couriers, postal services throughout the world are facing severe competition today. Postal administrations worldwide are adopting various measures, including structural adjustment, to meet these challenges. As part of the global postal network, Bhutan is also making institutional changes to increase postal efficiency and competitiveness. Towards the end of 7FYP, steps were initiated to convert the Postal Service into a Corporation.

Structure

The Postal operation is divided into three zones and operates 83 offices, 20 Agency Post Offices and 17 Fax/Telegraph offices. At present, the postal sector handles about 2 million mail items per annum with an annual revenue of approximately Nu. 12.000 million.

Constraints

As is common in most sectors, the constraints faced by the Postal sector are geographical terrain and lack of financial and professional manpower resources.

Review of Past Performance

The immediate objective during the 7 FYP period was to bring about both qualitative and quantitative improvement to the overall postal services by enhancing operational efficiency and achieving cost effectiveness at all levels through the following programmes:

- introduction of new services/products/technologies;
- expansion of existing services;
- improvement of quality of services and operation;
- development of human resource capacity;
- induction of modern equipment;
- consolidation/integration of services;
- reforming of management system.

Expedited Mail Service (EMS) and Facsimile services were introduced, as a result of which international postal deliveries are now much quicker. International EMS has been expanded to about 45 countries and Facsimile Service covers all parts of the world.

In the domestic sector, Facsimile service was introduced in 17 places including 14 dzongkhags and expansion of Domestic EMS is under progress. Mail transmission improved considerably with the launching of the departmental Mail Transport Service between Thimphu and Phuntsholing. Fax Money Order has also been started.

Objectives and Strategies for 8FYP

Objectives

- provide efficient and economical postal services to all parts of the country;
- cover recurrent and capital costs through revenue;
- be fully self-reliant and able to pay a return to RGOB on the assets transferred to it.

During 8 FYP, the first step will be to reduce the level of operating deficits which have been a feature of the postal service in the past.

Strategies

- Strengthening institutional capacity through management and HRD;
- Focussing attention on customer needs;
- Opening Community Mail Agencies;
- Changing the status of Post Offices into Post Office Agencies;
- Introducing Agency/financial services.

Programmes for the 8FYP

The postal corporation is confronting a deficit of about Nu. 8 million at the moment. The thrust of the 8FYP Programme is geared towards reducing the deficit in a rational manner through improved and enhanced services and management.

Financial and Manpower Requirements

Table 21.1 Financial and Manpower Requirements for the 8FYP

	Nu. Million					
	1997/98	98/99	99/2000	2000/01	01/02	Total
1.Capital costs	2.20	6.60	2.20	2.20	5.10	18.30
2. Recurrent	19.18	19.18	19.18	19.18	19.18	95.89

3. Total cost	21.38	25.8	21.38	21.38	24.28	114.1 9
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4. Manpower

5. Tech. Asst.

CHATER 22. TRADE SECTOR

A. Sector Direction

Basic Situation

The Ministry of Trade and Industries (MTI) is one of the largest ministries with responsibilities covering trade, industries, geology, mines, power and tourism. The MTI deals with various public and joint sector corporations and also interacts very closely with the private sector in general and the Bhutan Chamber of Commerce and Industries (BCCI) in particular on various issues relating to the promotion of the private sector development.

Structure

The services provided by the MTI are delivered through five operational divisions for Trade, Industries, Power, Tourism, Geology and Mines, details of which are given in this and subsequent chapters (See Chapters 22-27).

The MTI secretariat consists of the Policy and Planning Division (PPD), the Legal Unit and the Administration and Finance Division (AFD) whose functions and responsibilities cuts across the work of the other divisions . There are also four Regional Trade and Industry Offices (RTIOS) in Thimphu, Phuentsholing, Gelephu and Samdrup Jongkhar under the purview of this Ministry.

Policy and Planning Division

The PPD serves as a coordinating office for the MTI's programmes and projects and represents a link with the Planning Ministry in the formulation, review and monitoring of developmental activities under the MTI.

The Legal Section

The Legal Unit deals with a range of issues requiring legal opinion and legislations including the administration of the Companies Act. The Unit as the Registry of Companies has been working to streamline procedures relating to administration of the Companies Act in building up data base on Bhutanese companies. The Unit has also started the preparation of the Industrial Property Law and Copyright Law which will continue in the 8 FYP. A project for setting up an intellectual property system has been prepared with the help of the World Intellectual Property Organization.

The Administration and Finance Division

The AFD has two sections - Administration and Finance. With the merger of administrative and financial functions of erstwhile departments (now divisions), the work of AFD has increased considerably. AFD is responsible for provision of all administrative, financial and supporting services to various Divisions in MTI.

Regional Trade and Industry Offices

With the decentralization policy, the RTIOs work more closely with the Dzongkhag authorities in their respective jurisdictions for promotion and implementation of trade and industrial projects and programmes besides their regular licensing works even though the trade and industrial activities were not decentralized to the dzongkhags. The RTIOs are also entrusted with work of consumer protection as well as implementation of maximum retail price (MRP) in their region. To bring the trade and industrial activities closer to the people, the MTI will set up two more regional offices in Trongsa and Trashigang.

Objectives and Strategies of 8FYP

Objectives and strategies

- Creation of a conducive policy and legal framework for promoting trade and industrial development; and
- Promotion of efficiency and effectiveness in the delivery of programmes and services;
- A system for the protection of intellectual properties will be established;
- greater attention will be paid to improve coordination among the organizations within MTI as well as with relevant organizations outside MTI;
- required support facilities will be provided with a view to improving work efficiency; and
- emphasis will be placed on training of existing officers and staff and employment of additional persons as required.

Programmes for the 8FYP

The programmes for the MTI secretariat are geared towards strengthening of the Administration and Financial services, and creation of an appropriate policy and legal framework for the development of trade and industries in the country.

Establishment of an intellectual property system

Bhutan became a member of WIPO in 1994 to benefit from WIPO's technical assistance in this field. The project is designed to create a simple but effective system to provide information to safeguard the interest of creators and inventors in Bhutan. It will also train officials in enforcing the new legislation that would be issued on the subject. Development of trademark and patent information system is another objective of this project.

Strengthening of the Legal Section

The work of the Unit has rapidly increased in recent years with the need for new commercial legislations, administration of Companies Law and development and administration of the intellectual property law. The Unit will be institutionally strengthened under the project.

Strengthening of Regional Trade and Industry Offices

With the emphasis placed on decentralization, it is necessary to bring the administrative set up close to the people. Accordingly, it is proposed to open two regional offices in Trongsa and Trashigang under the project in addition to the existing four. Further, the existing four offices will also be institutionally strengthened during the 8 FYP under the project.

Financial and Manpower Requirement

Table 22.1 Financial and manpower requirement

(Nu. in millions)

	1997/98	98/99	99/2000	2000/01	01/02	Total
1. Capital costs	4.74	4.74	0.43	0.43	0.43	10.77
2. Recurrent	5.02	5.37	6.26	6.69	7.31	30.65
3. Total	9.76	10.11	6.69	7.12	7.74	41.42
4. Manpower	10	9	7	-	-	26
5. TA(mm)	24	12	-	-	-	36

B. Trade Sector

Basic Situation

Structure of the Sector

During the last three and half decades commercial activity has grown rapidly. Exports to India increased significantly while exports to third countries, especially Bangladesh, also grew. During the 7 FYP the domestic trading sector developed reasonably well and 5,793 trade licences were operational in the country by the end of 1995. During this period two important programmes affecting the sector were instituted, namely the de-monopolization exercise and the decentralization of the export trade.

Constraints

The main constraints are the high costs of transport resulting from Bhutan's landlocked position, the difficult terrain, and limited transport infrastructure especially affecting the export trade. But high transport costs, inadequate infrastructure and services also affect internal trade. The lack of entrepreneurial skill, and of experience in accounts, quality control and related issues, have in the past been met in part by the employment of expatriates, but government policy to encourage employment of national labour force means that a commensurate effort is being made to train and employ more nationals.

Institutions

The Trade Division, under the Ministry of Trade and Industry consists of two sections, one for internal and one for external trade, the latter looking after both exports and imports. There are four Regional Trade and Industry Offices located at Thimphu, Phuntsholing, Gelephu and Samdrupjongkhar. A Trade Promotion Centre and Consumer Protection Unit are also being developed. The Division works closely with the Bhutan Chamber of Commerce and Industry (BCCI).

Review of past Performance

Objectives of the 7 FYP

- To increase the contribution of the retail and wholesale trade, hotels and restaurants to GDP by an average of at least 2.4% per annum.
- To improve the trade balance by increasing exports to India and third countries.

Strategies

A greater role was given to market mechanisms, accompanied by further privatization. Procedures for obtaining trading licences were also relaxed and simplified and public awareness of licensing rules and regulations increased.

Achievement

In respect of internal trade, additional dealers for 36 principal Indian companies dealing in 306 items were selected under the de-monopolisation exercise. The Packaged Commodity Rules aimed at making imported goods available at the Maximum Retail Price marked by the Indian producers, were developed and implemented initially in Phuntsholing and Thimphu for all packaged goods. Quotas for LPG and SKO from India were also increased during this period to 300 MT and 15000 KL, respectively.

Rules & Regulations for carrying out temporary contract works of a highly specialised nature by non-Bhutanese companies were framed and modifications made to the existing Trade Rules & Regulations. An exercise on the elimination of fronting in the trading sector on a phased manner within a period of three years from 1995 was also initiated.

Under external trade, a Trade Development Board was set up which simplified export and import procedures, rules and regulations. The export trade was decentralised and 90 export licences were issued to private individuals. The existing trade agreement between India and Bhutan was renewed in February, 1995 for a period of ten years and additional road/rail routes in India for trade with Bangladesh and Nepal were incorporated. In order to increase imports from Bangladesh, 6 import houses were formed and two trade exhibitions on their products were held in Thimphu and Mongar.

SAPTA (South Asian Preferential Trade Arrangement) was launched on December 7, 1995 and its member countries have agreed to initially reduce tariffs on 226 products in the region including 11 products for Bhutan. A project proposal for development of traditional handicrafts and its export to The Netherlands was also formulated and is under review. Another project was initiated towards the end of 7 FYP with EC funding to strengthen the institutional capacity of the Trade Division.

Objectives and Strategies of the 8 FYP

Objectives

Internal trade

- To improve the efficiency and management of small trading ventures.
- To promote consumer awareness and protection.

External trade

- To Promote trade and improve the balance of trade with India.
- Expand trade with SAARC and other countries.

Strategies

- Upgrade and increase the number of national wholesale dealers in the country and streamline their operations. Indian principal companies will be approached to solicit their co-operation in the appointment of additional dealers.
- Initiate appropriate measures to deal with complaints received from consumers on the prices and quality of products sold and to undertake regular inspections.
- Conduct training programmes on the use of cash registers, basic book keeping, salesmanship and other related issues on a yearly basis for the private sector.
- Promote diversification of trade both product-wise as well as area-wise through private initiatives.
- Reinforce export promotion, especially with India, by market studies to explore the potential for Bhutanese products.
- Provide assistance to the private sector to participate in SAARC trade fairs and exhibitions. Internal trade fairs will also be held.
- Conduct training courses/workshops for the private sector on export documentation procedures, business negotiation, changes in the world trade scenario and adjustments required.

- Liaise with the Government of India with regard to the road, transit, customs and related facilities in India.

Programmes for 8FYP

Global System of Trade Preferences (GSTP) and International Trading Environment

The GSTP Agreement sets a global framework for trade relations among developing countries on a preferential basis besides supplementing and reinforcing the sub-regional and regional groupings like SAPTA. Accession to the GSTP will enable Bhutan to avail benefits that would accrue from the arrangement through improved and preferential trading access to the markets in the developing countries.

Bhutan may join the World Trading Organization (WTO) in the near future in order to keep pace with the ever-changing international trading environment and avail benefits from the globalization process. This project will familiarize Bhutan with the system. To this end, Bhutan would initially apply for an observer status to WTO.

SAARC Preferential Trading Arrangement

The SAARC Preferential Trading Arrangement (SAPTA) has come into force with effect from 7th December, 1995. All the contracting Member States have ratified the Agreement. As a start, they have negotiated tariff concessions on 226 products, but formal trade under this arrangement is yet to begin.

Bhutan Trade Development

To promote increased export activities this project will develop effective export services, impart training to the exporters and undertake initiatives to overcome specific constraints including creation of third country markets for Bhutanese products. The project is also geared towards strengthening the capability of the Bhutan Chamber of Commerce and Industry (BCCI).

Improvement of Trade and Transit facilities

The project will work towards further enhancing road links and transit facilities at the various entry/exit points on the Indo-Bhutan border to expand trade with India, our major trading partner.

Financial and Manpower Requirement

Table 22.2 Financial and manpower requirement

(Nu. in

millions)

	1997/9 8	98/9 9	99/200 0	2000/ 01	01/0 2	Total
1. Capital costs	1.97	1.97	1.97	0.83	0.83	7.56
2. Recurrent						
3. Total						
4. Manpower	4	-	-	-	-	4
5. TA(mm)	12	12	-	-	-	24

CHATER 23. INDUSTRIES SECTOR

Basic Situation

During the 7FYP, development of the industrial sector continued at a steady pace. Considerable investment was made in new industrial ventures as well as in the expansion of existing enterprises.

Structure

Wood based Industries

A conservative policy is followed while promoting wood based industries because of their direct implications on the environment. By June 1995, 151 wood based industries were licensed. Under DANIDA assistance a new project, Wood Crafts Center, was initiated in Thimphu in the 7 FYP.

Agro based Industries

This sector continued to grow during the 7FYP and, by June 1995, a total of 72 licenses had been issued. Also, under a UNDP grant, 20 lemon grass units were fabricated for distribution.

Mineral based Industries

Progress in this sector has been promising and, by June 1995, 29 licences had been issued. BFAL (Bhutan Ferro Alloys Limited), expansion of PCAL(Penden Cement Authority Limited), Lhaki Cement and Export of Boulders to Bangladesh feature as economically significant projects that took advantage of the availability of cheap hydro-power.

Services

A total of 1506 service licenses which mainly cover repair workshops, hotels/restaurants, and tourism activities, have been issued.

Contract and other licences

A total of 921 contract licences have been issued most of which fall under the "C "and Petty class categories. There are 33 and 21 registered companies in Class A and B respectively. There are also 51 licenses which do not fall in any specific category mentioned above.

Industrial infrastructure

Currently there are three industrial estates at Gelephu, Samdrupjongkhar and Phuentsholing, and a Service Center at Changzamtok, Thimphu. The Gidakom Industrial estate is being developed with assistance from the Government of India.

Constraints

The significant factors which have contributed to the relatively slow pace of industrial development are a weak entrepreneurial orientation, high transport costs, small domestic market, an under-developed infrastructure and lack of a resource inventory. There are also policies which influence the industrial development and the trade-offs between economic growth and environmental concerns regarding the exploitation of natural resources, and access to imported skills and the need to develop the indigenous labour force. The lack of competition between the financial institutions has also restricted access to investment. This and other constraints which adversely affect incentives in industry and promotional services will be addressed during 8 FYP.

Institutions

The Industry Division under the overall guidance of the Ministry of Trade and Industry is responsible for all industrial activities in the Kingdom. The Division has a Project Development Section, Entrepreneurship Promotion Center, Industrial Licensing & Monitoring section, Industrial Estate Development Section, Essential Oils Development Unit and four Regional Trade & Industry Offices at Thimphu, Phuentsholing, Gelephu and S/Jongkhar, respectively. Besides governmental support to industrialization, BCCI has a leading role in the promotion of industrial activities.

Review of past Performance

Objectives of the 7 FYP

- Increase revenue generation and the share of the manufacturing sector to GDP from 7% in 1989 to 13% by 1997 (at an average growth rate of 13.4% per year);
- Increase the contribution to GDP from retail and wholesale trade, hotels and restaurants from Nu.268.8 m. in 1989 to Nu. 325 m. in 1997;
- Improve the trade balance by increasing exports both to India and third countries;
- Substitute imports through domestic manufacturing, and
- Increase foreign exchange earning through tourism.

Strategies in the 7FYP

The main strategies followed were: reliance on market based mechanisms, provision of support services to industrial development and broadening the base of industrial ownership.

Achievement

Feasibility studies were completed for Glass Bottles, Silicon Carbide, Cement Project and Magnesium Metal, Calcium Carbonate, Construction materials, Tungsten Mining & Beneficiation and Agro based Industry in the East.

Under the Entrepreneurship Promotion Center (EPC), the Cottage, Small & Medium scale Industries (CSMI) carried out the annual Comprehensive Entrepreneurship course in cooperation with the four financial institutions. So far, 73 entrepreneurs have been assisted under four such courses under the EDP (Entrepreneurship Development Programme) loan scheme. Another activity of the EPC is the Industrial Extension Services which includes Performance Improvement Program, Integrated Firm Analysis and Assistance to “walk in clients”. The CIDP (Cottage Industry Development Programme) is the third activity of the EPC which provides support in reviving and strengthening Bhutan’s cottage industry sector. The main activities under the CIDP include tailoring & designing course, Khoma weaving project and the CIDP showroom in Thimphu. Besides the above activities other projects like vegetable dyeing, traditional bootmaking, broadloom weaving, pottery and ceramics were identified for implementation.

The industrial service center at Thimphu was established and work on the Gidakom industrial estate is ongoing to cater to the needs of the manufacturing industries in the Western region. Infrastructural work on the 42 acres of land at Gidakom was largely completed by the end of 7 FYP. The industrial service center was completed with 37 sheds available for allocation. Sites for industrial estates for the central, eastern and Phuntsholing regions were also identified and the feasibility studies completed.

Two buffer stock POL depots were established under the MTI in Dechenchholing and Dewathang in order to ensure an uninterrupted supply of petroleum products during the monsoon when supplies are frequently disrupted. Both depots were fully operational by the latter part of 7 FYP.

A network was established on industrial safety and health regulations to facilitate the exchange of information between the ILO and the Industries division.

A preliminary survey was carried out by a mission from the Bureau of Indian Standards on the feasibility of setting up a Bhutan Standards Institute.

The development of the essential oils industry was further promoted. This has had a significant impact on the incomes of the large number of participants in the eastern region. With the assurance of a guaranteed market, preliminary studies for commercial exploitation of other indigenous essential oil species are promising.

The financial packaging for the Dungsum Cement Project (DCP) was successfully finalised and signed the agreement with the Government of India in March, 1996. The DCP located in Samdrupjongkha district will have an annual turnover of 0.5 million tonnes per annum.

Other Activities

The BFAL, the Wood Craft Center and the Bhutan Agro Industries were established during the 7FYP period. In addition PCAL increased its production capacity from 400 tpd to 800 tpd and Lhaki Cement by 50 tpd. The BBPL (Bhutan Board of Products Limited) started its RTA (Ready

to assemble) furniture unit. Mining of boulders was further expanded to meet the increasing export demand. A total of 996 licenses were issued during the current plan period. Furthermore, in pursuance of its policy on privatization the RGOB continued to privatize public undertakings and reduce its shareholdings. Among the most notable were the full sale of RGOB's BCCL shares, and partial sale of BBPL, BTCL and PCAL shares.

Shumar Gypsum Mines, the Penden Drukpa Coal Company in Samdrup Jongkhar and the Sha Slate mines were auctioned or leased for a ten year period to private parties. The Agro Industries was further strengthened with the addition of a Fruit Processing and the Salt Iodisation plant at Phuntsholong was sold to a private individual. Further, monitoring of the Government workshops leased to the private sector was undertaken by the Industries division. Many other industrial ventures in different Dzongkhags were also assisted to acquire land for their industrial activities in coordination with the Forestry service division and the Home Ministry.

Objectives and Strategies for the 8 FYP

Objectives

- Increasing the contribution of industry to the GDP, and to government revenue, on a sustainable and environmentally friendly basis;
- Increasing the profitability of indigenous industries;
- Promoting industrial development through private enterprise; and
- Broadening employment opportunities and skills development to increase opportunities for women in industrial activity.

Strategies

- Continuation of private sector support and privatisation;
- Provision of industrial incentives;
- Making optimal use of indigenous raw materials;
- Creation of an enabling environment, industrial estates and infrastructure;
- Strengthening of service and promotional activities of the Industry division
- Promotion of cottage and small industrial enterprises;
- Preparation of feasibility studies for medium and large industries;
- Development and implementation of an appropriate HRD programme.

Promotion will include provision for RGOB investment to initiate large and medium scale industries with sound prospects, until such time as the private sector is able to make the necessary commitments.

Programmes for 8 FYP

Entrepreneurship Promotion Programme

The Ministry of trade and industries will continue with the Entrepreneurship Promotion programme to assist in starting new projects, conducting training courses for existing entrepreneurs to improve their business management skills. The following projects will be implemented under the programme:

- Small Industry Support Project (BHU/93/003), will assist the starting of new small enterprises and also provide advisory services to existing enterprises in improving their operations.
- Cottage Industry Development Project is aimed towards reviving and developing traditional Bhutanese crafts especially the Zorig Chusum and assist the development of small handicraft based enterprises.
- Small Enterprise Development Project (on-going), will provide sponsorship for entrepreneurs seeking support for skills acquisition, upgrade the market value of vocational training by offering relevant work oriented training and institution development support to the BCCI.

Industrial development programmes

- Industrial Projects for which Reports are available on the resource and industrial studies carried out to facilitate establishment of industrial projects.
- Feasibility Study of Medium & Large Projects to assist the private sector in identification and promotion of viable industrial projects.
- Study of Projects on Waste Recycling to promote an environmentally friendly industrial development through the productive utilization of waste materials, minimization of pollution and the treatment of toxic waste.

- Preparation of Industrial Master Plan to assess the project development programme, which will provide long term industrial plan for future planning and industrialization thereby providing an overall framework for industrial development.
- The establishment of an Integrated Agro-based (pilot) Project, a pilot project in Mongar, to promote agro-processing in different parts of the country and marketing support to fresh/processed agro products.

Industrial Monitoring programme

- Bhutan Standard Institute, will be established to monitor quality standards of Bhutanese industrial products and to prevent the export and import of sub-standard goods, protect the rights of the consumers and also enable Bhutanese exporters to introduce their products in respectable international markets.
- Occupational Safety and Health Network Center, will help in achieving the adoption of safety and health measures in all the industries and work-places to protect employees and improve working conditions.

Industrial Estate Development

- Development of Industrial Estates and Service Centers, is aimed at enhancing income and employment through a regionally balanced development and by grouping of industries so that ecological damage can be reduced and pollution control measures can be effectively implemented. The programme includes the Development of a)Gidakom Industrial Estate in Thimphu, b)Gedu Industrial Estate in Chukha, c)S/Jongkhar Industrial Estate, and d)Upgradadtion of the S/Jongkhar Service Centre.

Development of Essential Oil Industry

The production and distillation of plants for essential oils has been identified as a significant potential area for providing income for low income farmers since it is a high value, low volume product produced by small farmers in remote areas. This project is a continuation of the 7FYP project which has carried out grass-roots level studies to improve the commercial exploitation of these resources, established appropriate distillation technology, improved yield and quality of the oil, and also developed the national capacity to run an essential oil industry. The continuation of this project in the 8FYP will focus on diversification, establishment of a processing unit and also look into the possibilities of expanding the project area to a few other dzongkhags.

Fire Fighting System for POL Depots

Financial and Manpower Requirement

Table 23.1 Financial and manpower requirement

	(Nu. in millions)					
	1997/98	98/99	99/2000	2000/01	01/02	Total
1. Capital costs	50.83	49.33	39.41	32.13	32.13	203.89
2. Recurrent						
3. Total						
4. Manpower	25	8	4	5	-	42
5. TA (mm)	56	25	18	13	1	113

CHAPTER 24. ENERGY SECTOR

Basic Situation

Structure of Sector

The development of Bhutan's energy sector is of crucial importance to the country, and in recent years high priority is placed on this sector. In the past the major source of energy was fuel-wood which, together with kerosene and LPG, is still widely used for domestic purposes, followed by diesel and petrol, predominantly for transport. Now, hydroelectric power is assuming the leading role in the consumption pattern of energy.

Hydroelectric Power

The country is endowed with large hydropower generation potential, the total capacity estimated at over 20,000 MW. The Power System Master Plan (PSMP) study conducted during 1990-93, identified 91 hydropower potential sites above 10 MW capacity. The list of potential sites is not exhaustive, for many inaccessible sites were not surveyed by the study. The 1995 update of the techno-economically exploitable hydropower potential is over 16,280 MW.

During the 7FYP, the power sector accounted for some 25% of government revenue. The annual domestic consumption of electricity increased from 216.455 GWh at the end of 6FYP to 340.773 GWh by the middle of 1995. The distribution network also increased, along with the number of consumers from 19,626 to 29,000. There are at present 23 hydroelectric generating stations with 344 MW installed capacity plus 13 MW Diesel Generator sets. The commissioning of Chukha tail race tunnel and Rangjung hydro power project during 7 FYP added 20 MW to the overall generation capacity.

Table 24.1 National Power Generation Data during 1990-95 in GWh (million Units)

Source	1990-91	1991-92	1992-93	1993-94	1994-95
Mini hydel	6.619	7.364	5.046	5.488	5.880
Micro hydel*	0.876	0.876	1.445	2.015	2.015
Chukha Hydel	1542.40 8	1554.37	1677.81 2	1679.23 9	1623.31
Diesel power	0.046	1.315	3.059	1.085	1.069
Total generation	1549.94 9	1563.92 5	1687.36 2	1687.82 7	1632.87 8

* Estimated at 25% average plant use factor.

Solar Energy

The solar power programme was launched to provide electric light to institutions in the remoter areas. By the end of 7FYP, there were 1316 photovoltaic panels throughout the country distributed to schools, monasteries, basic health units and some to remote animal husbandry farms. With the good sunshine hours available in Bhutan, this recent and renewable form of energy has proved to be a viable alternative to grid supply where it has low economy of scale.

Fuel-wood

Fuel-wood continues to be the main source of energy for lighting, heating and cooking in the rural areas. At the national level it accounts for more than 75% of total energy consumption. It is estimated that per capita consumption of firewood is 1.2 ton which is one of the highest in the world. In order to minimize wood consumption, extensive rural electrification was launched in consecutive five year plans.

Fossil fuel (Petroleum products)

With the development of communications, transport facilities also expanded rapidly during the 7FYP, thus increasing the consumption of imported petrol and diesel oil. While the consumption of kerosene has also increased in the rural areas for cooking and lighting, LPG is now in general use for cooking in the urban areas.

Table 24.2 The import of petroleum products during the period 1991-95

Fuel import	1991	1992	1993	1994	1995
LPG	-	720 ton	1,800 ton	1,741 ton	1,675 ton
Kerosene	6,253 kL	7,122 kL	8,078 kL	6,691 kL	7,961 kL
Diesel	16,173 kL	16,778 kL	16,461 kL	17,647 kL	20,035 kL
Petrol	3,574 kL	3,506 kL	3,469 kL	3,530 kL	3,690 kL

Constraints

Finance

As a result of financial constraints, major projects such as Kurichu and Basochu Hydro-electric Projects, transmission grids, urban electrification and rural electrification were delayed. These capital-intensive projects which were expected to be completed during 7 FYP, could not be launched until the second half of the plan and completion will therefore take place in 8FYP.

Manpower

Most Power Sector activities are labour-intensive, and the lack of sufficient labour is a constraint which often hinders timely completion and maintenance of projects. In addition to unskilled and semi-skilled labour, there is also an acute shortage of skilled manpower for line maintenance and supervision in the field. The Division of Power staff strength is only 685, inclusive of finance and administrative personnel, against the projected requirement of 1411 for 7 FYP.

Technical

The power sector with its large establishment and distribution network is faced with an acute shortage of transport. The Department also lacks sufficient tools and plants for proper maintenance of the existing system, and portable communication sets to coordinate simultaneous activities in the field between two or three groups working on the same line.

Institutions

Hydropower

The Division of Power, is responsible for coordinating activities related to hydropower generation and distribution, and is also the main central agency for power generation and distribution from small hydels. Altogether, under its Operation and Maintenance and Project Wings, it controls 20 hydel units and coordinates the activities of 7 decentralized Electricity Supply Units.

The Chukha Hydro Power Corporation (CHPC) is an autonomous body under a Board of Directors. Similarly, Kurichu Project Authority (KPA) is overseeing the general administration and overall coordination of Kurichu Hydropower Project activities under the guidance of the Board of Directors.

Fuel wood

The Division of Forest, Ministry of Agriculture, regulates the fuel wood supply. In the rural areas fuel wood from dead wood is free but cutting of live trees is regulated by permit issued by the local Dzongkhag Forest Ranger. In the urban areas fuel wood is supplied by licensed contractors and to a certain extent by the registered saw mills.

Fossil fuel

Two private companies supply petroleum fuel products in the kingdom. There are 24 fuel depots situated at convenient points in various Dzongkhags. The Ministry of Trade and Industries regulates the price and supply of fossil fuels.

Review of past Performance

Objectives of the 7FYP

- Increase Government revenues through the generation of power for sale to India and to domestic industries;
- Fulfil demand for electrical energy at minimum cost, and as far as possible on a uniform basis, to all the consumers through a safe, reliable and efficient distribution system;
- Ensure balanced regional growth through the provision of energy for industrial development; and
- Ensure environmentally sustainable use of hydropower resources.

Strategies

- Coordinate efforts with other sectors in protecting water resource catchments;
- Ensure environment friendly, and safe construction of hydropower generation, transmission and distribution infrastructure, including rural electrification;
- Mitigate the shortage of manpower by HRD as well as by contracting more work to the private sector.

Achievements

Power generation programme

The construction and commissioning of the 2.2 MW Rangjung Hydel Project was completed. The plant is in operation and providing additional electricity to the distribution network for urban and rural electrification in Tashigang and Tashiyangtse Dzongkhags. It covers 7 gewogs and give electricity to more than 3,000 consumers (households).

Kurichu Project (45 MW) was only about 40 % completed, and about 20% in the case of Basochu Hydropower Project (60.8 MW). These two projects will be commissioned during the 8 FYP.

Transmission programme

The construction of 40/20 MVA, 220/66/11 kV substation at Semtokha and 50/20 MVA, 132/66/11 kV sub-station at Gelephu under Government of India grant assistance was completed. The construction of a 20 km 66 kV line between Lobesa and Basochu was begun and is expected to be completed by the beginning of 8FYP. This line will provide the construction power to Basochu Hydropower Project initially, and later on evacuate power from Basochu stage I (22.2 MW) to feed into the existing grid at Lobesa.

The feasibility study for the construction of 35 km 220 kV line between Basochu and Semtokha 220 kV substation was also completed. Grant assistance from the Government of Japan is

expected for the construction of this 220 kV line and its substation bays. It would be commissioned within 8FYP in parallel to the commissioning of Basochu stage II.

On the Eastern and South-Eastern grids the walk-on survey of transmission lines and substations was completed in 1993-94, and with Government of India funding these transmission lines will be completed in the 8FYP.

Urban Electrification and Sub-transmission & Distribution Programme

In Thimphu numerous substation & underground cable upgrading was carried out to meet the growing demand for power. The construction of a dedicated 11 kV line between Gelegphu & Sarpang, and 33 kV line between Gomtu & Samtse, to meet the growing demand in these two Dzongkhags was completed.

The sub-transmission and distribution programme funded by the Government of India for the 6 Dzongkhags (Ha, Paro, Tashigang, Pemagatshel, Lhuentse and Samdrupjongkhar) was completed by the end of 7FYP. This programme brings electricity to Pemagatshel. Lhuentse sub-transmission & distribution network was upgraded and improved to receive power from the proposed Gangjur micro hydel which is to be upgraded to 70 kW capacity.

A total of 46 sets of solar panels were also distributed to public institutions in Gasa Dzongkhag where there is no electricity.

Rural Electrification Programme

The rural electrification scheme achieved over 80% of its target in the 7FYP despite financial delays. By the end of the plan the electrification of 107 villages was undertaken from internal resources, plus a further 47 villages with grant assistance from the Government of India and from the Dutch Government under the Sustainable Development Programme. 5,990 rural households received electricity during this plan period. The programme for the remaining villages will be completed in 8 FYP.

Hydropower investigation and feasibility study

The spill-over works of the Power System Master Plan from the 6FYP were completed in 1993. The National Hydrological and Meteorological networks were established with trained manpower. The Pre-feasibility study of four hydropower project sites was carried out, and Detailed Project Reports (DPR) for Tala (1020 MW), Wangchu (900 MW), Bunakha(180 MW) and Sankosh (4060 MW) projects were prepared. Investigation of Gyetsa pondage scheme to augment the peaking power in Bumthang was also completed by the end of the 7FYP.

Unspecified schemes

During the 7FYP, a number of unspecified schemes were implemented, including rehabilitation of mini hydels of Thimphu, Chenary in Tashigang and Gangjur in Lhuentse to produce original rated capacity. An additional tail race tunnel at the cost of Nu 33.540 million was constructed in

order to generate 18 MW more from CHPC. Further, a Small Transformer Production (STP) project was implemented in collaboration with Interlife/PMU of Sweden to manufacture small transformers within the range of 16 kVA to 125 kVA in the country.

Objectives and Strategies for the 8 FYP

Objectives

- Implement construction, selectively, of power projects for which detailed project reports have been completed;
- Enhance revenue collection by efficient operation of the existing hydropower stations and its distribution system;
- Encourage the use of energy sources like hydropower which are renewable, environmentally clean and sustainable ;
- Extend rural electrification;
- Liaise with other government agencies to ensure the protection of existing and future hydro-power catchment areas.
- Develop policy guidelines and power tariffs conducive to the promotion of bilateral and multilateral cooperation in hydropower development.

Programmes for 8FYP

The programmes are to be implemented at National and Dzongkhag levels. The National level programmes are: Power generation construction and transmission, feasibility studies of new projects, alternative energy, research & development and institutional development. The Dzongkhag level programmes consist of urban and rural electrification in the respective Dzongkhags.

Power Generation (Construction) Programme

Kurichu Hydroelectric Project (45 MW) and Basochhu Hydroelectric Project(60.8 MW), will be commissioned around the middle of 8 FYP. The Kurichu Hydroelectric project will provide 45 MW of power, 322 GWh of energy, in the Eastern part of the country, facilitating economic activity in the 5 Eastern Dzongkhags, as well as the construction of Dungsum Cement Project at Nanglam. On completion, the Basochu project will produce 291 GWh of energy and feed the existing Western transmission grid being supplied by Chukha Hydro Power Corporation, thereby increasing the reliability of power supply to ten Dzongkhags in the western part of the country.

The Detailed Project Report (DPR) of Tala Hydroelectric Project (1020 MW) was prepared in 1994 and the agreement for financing, power purchase and project implementation was subsequently signed with the Government of India in 1996 during His Majesty's visit. It is envisaged that the pre-construction and infrastructure development activities will commence on the eve of the 8FYP, with construction extending beyond 8 FYP and commissioning around the middle of the 9 FYP. This project will generate 3962 GWh of energy per annum and will be one of the biggest power plants in the country.

The Bunakha Reservoir scheme (180 MW) project is also ready for implementation in 8 FYP, with commissioning in 9 FYP. According to the Detailed Project Report, it will generate 688 GWh annual production (90 % dependable year) and contribute 101 GWh of additional energy to the existing Chukha hydel project and further cascade effect on the Tala project.

The Wangduephodrang Hydro-Power Project I (760 MW) is techno-economically feasible and one of the best project sites ranked in the Power Master Plan Study (1993). It is estimated to produce 3305 GWh of energy per annum on its completion at the end of the 9 FYP. Government of Japan funding for the DPR study which is expected to be ready by the middle of the 8 FYP, is envisaged, with investment and commencement of the construction before the end of the plan.

While the above mega projects are designed mainly for export, a number of small hydro power projects for local domestic supply and distribution to neighbouring Dzongkhags will be constructed in 8 FYP:

- Lhuentse Small Hydel Project (1 MW)
- Tashiyangtse Small Hydel Project (3.2 MW)
- Tongsa Small Hydro Power Project (10 MW)
- Panbang Mini Hydel Project (200 kW)
- Khen Buli Mini Hydel Project (1200 kW)

Power Transmission Line Programme

New Lines & substations

Construction will include a 220 kV line from Basochhu to Semtokha and a 66 kV line from Basochhu to Tsirang and diversion to Dagana. Similarly, under the Eastern grid plan, for evacuation of Kurichu power, a 132 kV transmission line from Gyelposhing to Nanglam, and a 66 kV line from Gyelposhing to Trashigang via Mongar and Pemagatsel to Deothang, are to be constructed. The construction of a 132 kV transmission line from Nanglam to Gelephu via Tintibi forming a south-central grid is also being explored. A walk-on survey for the eastern grid as well as the south-central grid has been conducted. Successful implementation of these transmission networks, especially the eastern grid will provide much needed power in this densely populated part of the country.

Improvement & Upgrading of Transmission Lines & Sub-stations

- One third of the 66 kV transmission line towards Gomtu and Samtse is in a land slide zone and many towers are liable to be washed away during heavy rains. At least 10 km of the 27 km line will therefore be realigned. The 66/11 kV sub-station at Gomtu is likely to reach its capacity after the upgrading of production capacity of PCAL. More over, the power supply to Samtse and the surrounding villages need to be carried over the 33 kV line. Accordingly, it is proposed to install one 5 MVA, 66/33 kV transformer and substation.

- The existing 6 MVA 66/33/11 kV will be adequate to meet the demand for Gedu as it is an industrial area and selected site for headquarters of Tala Project during construction. It will therefore be upgraded to a 20 MVA, 66/33/11 kV substation.
- Under Phuentsholing Electricity Supply Unit, the Singyegaon 6MVA, 66/11 kV substation will be upgraded to 10 MVA, 66/33/11 kV in order to meet the growing demand from the mushrooming small industries at Pasakha and to electrify the villages in Bhalujora Gewog. Similarly the existing 6 MVA substation for distribution in Phuentsholing town is to be augmented with another 10 MVA transformer to meet the increasing demand for power in the urban area.
- The tripping of line and snapping of conductors at high altitude and during snowfalls interrupt power supply when it is most required. As a remedy it is proposed to install snow-rings for transmission lines passing through the snow zone, which will prevent snow flakes accumulating on the conductors. A few troublesome transmission towers will also be relocated in order to minimize maintenance work.

Power Distribution Programmes in each Dzongkhag

The implementation of the Power Distribution Programme will be carried out at the Dzongkhag level because the distribution of electricity is delegated to the Electricity Supply Unit (ESU) of each Dzongkhag. The programme has the following schemes:

Rural Electrification Scheme

It was not possible to complete all the rural electrification schemes planned for 7 FYP, so that some are carried over to 8 FYP. These will be consolidated into the 8 FYP rural electrification scheme based on proposals from the Dzongkhag GYT's and DYT's, and availability of generation capacity. The scheme will include grid extension, the constructing of micro/mini hydels and, in some cases, the provision of photovoltaic panels, and, overall, provide electricity to 7,500 rural consumers.

Urban Electrification Scheme

Taking account of Dzongkhag plans for township development, new sub-transmission and distribution networks will provide electricity to 4500 new consumers in these urban areas. The scheme will be implemented through grid extension where electricity is available now, and will involve construction of a 33/11 kV sub-transmission line and 440/230 volts distribution lines & substations with matching maintenance centers.

Improvement of existing supply in rural and urban areas

This scheme will focus on the improvement of efficiency, voltage regulation and quality of the existing Electricity Supply Services (loss reduction, reliability improvement, energy conservation) by system upgrading, systematic maintenance and replacement of old parts,

including existing photovoltaic panels. The scheme will also augment the existing network by adding new lines and substations.

Consumer Safety, Awareness and Training Programme

To protect and safeguard life and property a consumer awareness programme will be launched on the safety and general knowledge of the efficient and judicious use of electricity. Booklets on safety and consumers awareness will be distributed, and demonstrations using audio-visual aids will be conducted. Also, in order to promote good wiring, repair and maintenance of internal house wiring, community wiremen will be trained at Gewog level in consultation with the respective Dzongkhag administrations.

Hydropower Feasibility Studies

Feasibility studies on the following major hydropower projects will be undertaken during the 8FYP:

- Wangduephodrang Hydro Power Project stage I (site 3.120) - 760 MW across Punatsangchhu below Jala/Ula villages. It is proposed to start construction of this project by the middle of the 8FYP.
- Wangdiphodrang Hydro Power Project stage II (site 3.230 B) - 650 MW below Daga Uma village.
- Mangdechu Hydro Power Project (site 4.020)- 265 MW near Kunga Rabten

Institutional Development

The increasingly important role that the power sector will play in the future of the country and its economy, will inevitably give rise to substantial opportunities for employment. Accordingly it is proposed to prepare a long-term HRD master plan for the power sector, and to establish a Power Training Institute during 8 FYP, for the construction of which the Government of India has already committed the funds.

Other Programmes

Apart from the above major programmes, a number of miscellaneous studies and research activities will be carried out related to the long-term development and sustainability of the sector.

Financial and Manpower Requirement

Table 24.3 Financial and manpower requirement

	Nu. in					
millions						
	1997/9	98/9	99/200	2000/0	01/0	Total
	8	9	0	1	2	
1. Capital costs						
2. Recurrent						
3. Total						
4. Manpower	41	41	41	43	45	211
5. TA (mm)	144	177	230	203	141	895

CHAPTER 25. GEOLOGICAL SURVEY

Basic Situation

Structure of the sector

With effect from the beginning of the 8 FYP, the present Geological Survey Section of the Division of Geology and Mines (generally referred to as the Geological Survey of Bhutan or GSB) will be renamed as the Division of Geological Survey in the Ministry of Trade and Industry.

The Division of Geological Survey has 3 Sections: a) Geological Survey and Exploration b) Engineering Geology and c) Laboratories. Its two main responsibilities are as the national geologic mapping/survey organisation and as the agency for the exploration and assessment of the country's natural resource base of minerals, fossil fuels, ground water, etc.

Constraints

The 30% of Bhutan which has been geologically surveyed is almost entirely in the southern part due to the rugged terrain and limited surface transport infrastructure which has restricted accessibility to the other parts of the country. Other major constraints have been lack of trained and specialized manpower and equipment. In the past, therefore, much of the geological survey work has been undertaken in conjunction with the Geological Survey of India.

Objectives and Strategies in 7 FYP

Objectives

In furtherance of government's national objectives of self-reliance and sustainability, efficient utilization of natural resources, and diversification of the economy, the objectives for Geology and Mines were:

- To increase the share of mining and mineral-based industries in GDP,
- To increase the self-sufficiency of the Department of Geology and Mines in mineral exploration, geological mapping and engineering geology

Strategies

- Improvements to laboratory facilities
- Training of geologists and engineers
- Conducting of geo-technical assessments for environmental impact.

Achievements

Some progress was made in the institutional strengthening of the Division of Geological Survey. The Government of India provided funding for the construction of new buildings and for laboratory equipment and training. The Division implemented a number of field projects during the 7FYP, and its Engineering Geology Section also carried out several field investigations: two successive expeditions to the Lunana region to study hazardous glacial lakes, stability studies and drilling in Basochu hydro-power site.

Objectives and Strategies for 8 FYP

Objectives

To develop the DGS into a specialized geological and mineral survey organisation -with scientific functions tailored to the needs of the country through:

- Enhancement of the GSB's ability to provide reliable geoscience and mineral resources information to relevant RGoB agencies or institutions and private sector.
- Provision of increased development-related services, such as ground-water exploration and geologic hazard/risk assessments.
- Evolving and carrying out cost-effective mineral exploration programmes.
- Undertaking a regional geochemical exploration programme.

Strategies

To develop the national capability for laboratory analyses and research in geosciences through:

- Building up the country's geological and mineral resources data bank and maps production unit using computer facilities.
- Implementation of a vigorous HRD programme to develop the GSB' capability for geotechnical studies, geochemical, ground water surveys, etc.
- Strengthening the GSB's Topographic Survey Unit.
- Establishing professional links with geoscience organizations outside the country.

Programmes for 8FYP

Institutional Strengthening

- Development of Geoscience and Mineral Resources Information Management System
- Strengthening of the GSB Survey and Drawing Cell

This programme will facilitate the strengthening of the division thereby enabling the division to become fully functional as the national geoscientific organization by the end of the 8 FYP.

Mineral Resource Development

- Regional Geochemical Survey (prospecting)

- Systematic geological mapping and prospecting in 5 target areas and
- Detailed Geological mapping and exploration of 3 target areas

At present, the mineral resources information is far from complete warranting coverage of relatively unexplored areas with special emphasis on on mineral surveys. This programme will increase the overall knowledge of Bhutan's geology and minerals.

Geologic Hazards and Risks Assessment programme

Regional Seismic zonation of Bhutan Himalayas

Bhutan lies in an seismically active belt. The preparation of a Seismic Zonation Map of Bhutan, therefore, assumes grave significance in view of the ongoing social and economic development which requires an increasing level of construction of heavy engineering structures and relatively high buildings. The preparation of Seismic Zonation Map of Bhutan will enable landuse and infrastructure planning with regard to seismic risk factors indicated for zones. This programme includes the preparation and publication of a Seismic Zonation map of Bhutan and will also create public awareness for earthquake disaster prevention and mitigation.

Site-specific studies of geologic hazards

The project will produce an inventory of Bhutan's glacial lakes and thereby a Glacial Lakes Map of Bhutan. The project activities will also include the location of glacial lakes with potential hazards to facilitate future monitoring; carrying out of hazard, risk and vulnerability assessments of risk prone areas; identification of mitigation measures; and creation of awareness amongst the concerned RGoB authorities regarding the dangers from glacial lake outbreaks.

Several old dzongs and sites with historic and spiritual values are prone to ground or structural instability which might lead to disasterous losses if remedial measures are not carried out on time. This project will also carry out detailed study of old dzongs so that remedial measures can be carried out on time, and also on important urban centers with potential dangers from ground instability and provide data to enable better landuse planning in townships and areas designated as industrial sites.

Financial and Manpower Requirement

Table 25.1 Financial and manpower requirement

	Nu. in million					
	1997/ 98	98/9	99/200	2000/0	01/0	Total
1. Capital costs	11.24	11.24	6.61	6.61	2.32	38.02
2. Recurrent						
3. Total						

4. Manpower	8	5	4	3	-	20
5. TA	36	33	12	24	12	117

CHAPTER 26. MINERAL DEVELOPMENT

Basic Situation

There have been small scale mining activities in Bhutan for over a thousand years. Modern mineral exploration only began in the early 1960's. Only about 30% of the country has been mapped geologically, but surveys have revealed deposits of coal, limestone, dolomite, talc, marble, gypsum, slate, lead, zinc, copper, tungsten, graphite, iron, phosphate, pyrite, asbestos and gold. The commercial exploitability, in respect of most of these deposits has yet to be determined.

Structure of the sector

With effect from the beginning of 8 FYP, the Mining Section of the Division of Geology & Mines will be established as a Division of Mines (DOM) within the Ministry of Trade & Industry, with two sections: a) Mines Evaluation & Development, and b) Mines Inspection & Regulation.

The over-riding responsibility of DOM will be, while promoting the mining industry through the evaluation of deposits and their leasing for exploitation, to ensure that mining is carried out in a scientific manner with minimum adverse environmental impact. As the regulatory body they will also ensure that there is strict observance of the Mines and Minerals Management Act of 1995.

Constraints

Inaccessibility has meant that 70% of the country has not yet been subject to geological survey. Other constraints are lack of trained manpower and equipment.

Review of past Performance

Objectives and Strategies in 7 FYP

Objectives

- To increase the share of mining and mineral-based industries in the GDP; and
- To strengthen the Department of Geology and Mines in mineral exploration, geological mapping and engineering geology

Strategies

- To develop adequate research and analytical laboratory facilities
- To train an essential cadre of geologists and engineers for the Department and for the private sector.

Achievements

The achievements of the mining section of DGM during the 7FYP include:

- An increase in the mineral sector's contribution to the GDP attributable mainly to an increase in the number of small-scale mines/quarries (mostly captive), and hiking of mineral royalty rates and other mineral levies.
- The enactment of Bhutan's Mines and Minerals Management Act 1995 which provides a legal framework for regulating the mining industry.
- Continued assistance by the DGM to private entrepreneurs in the development of mines.

Objectives and Strategies for the 8 FYP

Objectives

- To explore opportunities for the expansion of mineral-based industries consistent with Bhutan's comparative advantage, and to increase government revenue from this sub-sector.
- To ensure optimal utilisation of the country's mineral resources with regard to mines safety precautions and minimum environment degradation.

Strategies

- To carry out feasibility studies on known mineral deposits in the country, and explore the possibilities of establishing power-intensive mineral based industries and to conduct market surveys in neighboring countries.
- To extend the Division's professional services to environmental science by working closely with the NEC.
- To undertake the formulation and enforcement of Bhutan Mining Rules and Regulations, and the classification of mineral resources.

Programmes for the 8FYP

Capability enhancing for mines planning and design

The Division of Mines and the existing mining companies do not have adequate expertise and facility for preparing acceptable mining plans which are implementable in a geologically disturbed and environmentally fragile himalayan country like Bhutan. This project will improve the national capability to plan and design mines that would facilitate mining practices which are

both efficient and environmentally friendly. The project will enable the division to design underground mining ensuring minimum environmental adverse impacts.

Formulation of mines environment and rehabilitation management plan and monitoring

This project will enable the formulation of an environment management masterplan for Bhutan's mining industry. The project will assist the National Environment Commission to develop environmental quality standards and environmental impact assessment guidelines for the minerals sector.

Inspection, Evaluation and regulation of mines/quarries

This project will result in improving mining methods which will take into consideration mines safety, minimizing environmental degradation, reduction in mineral wastage and mine restoration. The project aims at ensuring that all mining operations are carried out in a scientific manner in accordance with the Mines and Minerals Management Act of 1995.

Financial and Manpower Requirement

Table 26.1 Financial and manpower requirement

	Nu. in million					
	1997/9 8	98/9 9	99/200 0	2000/0 1	01/0 2	Total
1. Capital costs	7.87	7.87	4.44	1.22	1.22	22.62
2. Recurrent						
3. Total						
4. Manpower	4	-	-	2	1	7
5. TA	24	-	12	-	-	36

CHAPTER 27. TOURISM

Basic Situation

Before its privatization in 1991, tourism was run and operated by the Bhutan Tourism Corporation as a Government enterprise. After the privatization process was undertaken a regulatory body the Tourism Authority of Bhutan (TAB) under the Ministry of Trade and Industries was established to oversee and guide the tourism industry operating under the private sector. Although no specific programmes and strategies were prescribed for the sector in the 7 FYP in view of the transition taking place after privatisation, the immediate objective for the sector was to increase revenue and foreign exchange earnings, while at the same time focussing on quality so as to strike a healthy balance between economic gains and the protection and preservation of the country's rich cultural, religious and natural heritage. During 7 FYP the TAB was mainly engaged in, formulating and implementing sound rules to guide private tour operators; training and certification; filming; product and infrastructure development and promotional activities.

Constraints

The TAB lacks adequate manpower and finance. Both the TAB and the hotel/tour industry face an acute shortage of trained personnel in all disciplines. There is also a shortage of hotel beds at the height of the season, with private operators resorting to makeshift arrangements that are not in keeping with the desired quality of service.

Past Achievements

Bhutan's tourism infrastructure has steadily grown and is making a substantial contribution to the economy. At the beginning of 1996 there were 33 licensed tour operators and 32 hotels, lodges and guest houses approved by the TAB for tourist accommodation. During the previous three years tourism ranked sixth amongst the top revenue earners and is amongst the top three in terms of foreign exchange earnings. Table 27.1 indicates the growth of tourism from 1992 to 1995.

Table 27.1 Tourist Arrivals and Earnings 1992-1995

(millions US \$)

Year	Arrivals	Gross earnings	Royalties to RGOB	%
Annual increase				
1992	2,748	2.973	1.105	-
1993	2,984	3.227	1.173	6.14
1994	3,971	3.069	1.394	19.42
1995	4,765	5.829	2.099	69.94

Objectives and strategies for the 8FYP

Objectives

The objectives of the RGOB to ensure a regulated growth of the tourism sector will continue to be pursued through the 8FYP. The immediate objective of maximising foreign exchange and revenue will be guided by the policy of “high value-low volume” tourism so as to maximise earnings while maintaining the number of visitors at an acceptable level.

Strategies

- The RGOB regulated tariff rate & structure will continue subject to such changes/revisions as may be necessary.
- The TAB will develop a set of standards for tours, hotel accommodation, food and beverages, guide service and transport.
- Continued efforts will be made to make Bhutan's tourism industry responsible and sensitive to the environment through the promulgation of rules and regulations for tourist activities and increasing awareness and training of tourist and hospitality industry personnel.
- TAB will coordinate with other government authorities to further streamline the issue of approvals and permits for various tourist activities, and develop an effective system of ensuring observance of regulations and guidelines.

Programmes for the 8FYP

The TAB's routine functions during the 8 FYP will involve monitoring and control of tourism, training of tourism and hotel industry personnel, annual trek route and campsite clean-up operations, participation in international fora and standardisation of brochures.

Master plan for development of tourism

The Tourism Masterplan which is being prepared will be completed during the 8 FYP providing a guide to future development of the tourist industry.

Drugyal Dzong Ruin Protection

In view of its historical and architectural significance, restoration works is being carried out and will continue into 8 FYP in order to prevent the dzong from collapsing. At the same time, the dzong and its surroundings will be developed as a place of interest for visitors.

Feasibility Study on Helicopter rescue operations

A feasibility study of developing helicopter rescue services will be undertaken during the 8FYP.

Financial and manpower requirement

Table 27.2 Financial and manpower requirement for the 8 FYP

	Nu. in millions					
	1997/9 8	98/9 9	99/200 0	2000/01	01/0 2	Total
1. Capital	10.38	10.38	6.00	0.00	0.00	26.75

costs

2. Recurrent	1.30	1.80	2.50	3.20	3.50	12.30
3. Total	11.68	12.18	8.50	3.20	3.5	39.05
4. Manpower	1	1	10	4	-	16
5. TA						

CHAPTER 28. HEALTH SERVICE

Basic Situation

Structure of Sector

Since the introduction of modern health care services in Bhutan in the 1960's, careful attention has been given to traditional practice and the people's perception of illness. This has ensured the option for the people to seek services from the system they are comfortable with, and greatly enhanced their participation in making informed decisions about their own health.

From the beginning, an integrated health care delivery system was foreseen as an effective strategy to reach the scattered population in Bhutan's rugged terrain. The declaration of Alma Ata in 1978 adopting a Primary Health Care approach to achieve Health For All, therefore, has also served to accelerate health service development in this direction.

The health status of the population has improved remarkably, particularly during the last ten years. Between the 1984 and 1994 National Surveys (see Table 28.1), there has been dramatic fall in mortality rates and significant improvements in many of the other indicators. However the declining mortality rate with a more or less stationary birth rate has increased the country's population growth rate to 3.1%.

Constraints

Human Resources

The scarcity of adequately skilled personnel, is a major constraint in health service delivery and in promotional and preventive programmes. To alleviate this, the Health Division has to rely, for the time being, on the employment of expatriates. The finalization and implementation of a human resource master plan for the health service is expected to improve the situation by the end of 8 FYP.

Table 28.1 Results of 1984 & 1994 National

Indicators	1984	1994
Infant Mortality Rate per 1000 live	142	70.7
Maternal Mortality Rate/1000 live	77	38
Crude Birth Rate per 1000 population	39.1	39.9
Crude Death Rate per 1000	19.3	9.0
Population Growth Rate (percent)	2.0	3.1
<u>Life Expectancy at birth (years)</u>	<u>48</u>	<u>66</u>

Scattered population and rugged terrain

Further improvements in coverage and access to health services are adversely affected by the difficult terrain, remoteness of some settlements and sparsely scattered population. Remoteness and isolation also militate against prompt referral and backup services due to communication problems.

Limited resources

Resources being limited, trying to meet the increasing expectations of the people from the health services, raises the question of sustainability. Increased community participation in maintaining their own health and phasing in some payment for some services is an option to be addressed in the near future.

Institutions

The Health Division under the Ministry of Health & Education is responsible for planning, directing and monitoring health care activities in the country in collaboration with the Dzongkhag Administrations. The Division has three main units: Health Care Unit, Programme Unit and Support Unit, apart from the Planning and Development, Personnel and Establishment, and IECH sections.

Health services are delivered through a four-tiered network consisting of a National Referral Hospital, Regional Referral Hospitals, District Hospitals and Basic Health Units.

Basic Health Units

A Basic Health Unit is a primary level institution in the health care system and caters to about 3000-5000 population and is staffed by a Health Assistant, Auxiliary Nurse Midwife and Basic Health Worker. Each BHU has an average of about 3-6 Out Reach Clinics (ORCs) through which services to the most distant villages are delivered.

A BHU I is usually situated in a Dzongkhag/Dungkhag headquarters, and has a Medical Officer in addition to the above staff.

District Hospitals

District Hospitals are the first level referral institutions and are equipped to provide curative, promotive, preventive and emergency services.

Regional Referral Hospitals

These are the second level referral facilities. Specialist services are available in these hospitals which include: Mongar, Yebilaptsa (proposed) and Jigme Dorji Wangchuck National Referral hospitals, the regional referral hospitals for the Eastern, Central and Western regions respectively.

National Referral Hospital

The Jigme Dorji Wangchuck National Referral Hospital is the apex hospital in the country. It has 200 beds at present and when the construction of the new complex is complete the bed strength will be 300 to 500 beds with almost all specialties and state of art facilities.

Indigenous Hospital & Indigenous Dispensaries

Indigenous Dispensaries are attached so far to six Dzongkhag Hospitals, and there is an Indigenous Hospital in Thimphu. The indigenous medical service is a part and parcel of the Health Services and is available to whoever prefers to use it.

Training Institutes

The two training institutes, i.e. Royal Institute of Health Sciences and National Institute of Traditional Medicine, are the main institutions where nurses, paramedical staff, technicians, Dungsos and Menpas are trained. The National Institute of Family Health provides in-service training.

Review of Past Performance

Objectives in the 7FYP

The major goals of the Health Services in the 7FYP were to expand the coverage of services to ensure accessibility, strengthen and consolidate the existing facilities and achieve the mid-decade goals as outlined in Table 28.1.

A further objective was to provide a wider range of services so as to reduce the need for patients to seek treatment outside the country.

Strategies in the 7FYP

The strategies to achieve the above objectives were:

- expansion of outreach activities through more out-reach clinics, involvement of voluntary workers and members of the community,
- upgrading and maintenance of existing dispensaries, Basic Health Units and hospitals, and improvement in health services through manpower development, better utilization of resources, strengthened information systems, and supply of adequate drugs and materials,
- sustaining health education and promotion activities and creation of institutional structures for health promotion,
- phased integration of existing vertical programmes into the primary health care system,
- provision of free medical care and protection, and promotion of the health of vulnerable population groups like women, children and the elderly, and
- integration of complementary traditional medicine into the regular health care services.

Table 28.2 Health Infrastructure, 1995

Number of Hospitals	27
Number of Indigenous	1
Number of Basic Health Units	85
Number of Dispensaries	55
Number of Out-Reach Clinics	46
Number of Training Institutes	3
Number of Malaria Centres	19

Source: Health Services Division, Ministry of Health and Education

Achievements

The achievement of some of the major goals, especially in relation to maternal & child health and nutrition, and associated improvements in water and sanitation are outlined in Table 28.3.

Coverage of Health Services

The health service coverage in 1992-93 was about 70%, but it increased to over 90% during the 7 FYP with opening up of additional BHUs. In addition there are 466 outreach clinics (ORCs) compared to 350 in 1992.

Consolidation and Strengthening of health care delivery system

To consolidate and strengthen health care delivery, 6 Grade II BHUs are in the process of being upgraded to BHU I, 2 BHUs relocated, 21 dispensaries upgraded to Grade II BHUs and adequate manpower developed to staff the facilities. Upgrading, relocation, reconstruction and training of manpower have progressed well, and the construction of Pema Gatsel & Riserboo Hospitals were completed as spill over from the 6FYP. Yebilabcha Hospital has also been constructed and expanded to a 40-bedded hospital.

Objectives and Strategies for the 8FYP

Long term objective of Health Services

The long term objective of the health service is to promote the health of the whole population so as to enable every citizen to lead a socially and economically productive life and, in so doing, to contribute to the wellbeing of the nation.

Table 28.3 7FYP goals and achievement

7FYP Goals	Status as of start of 7FYP	Achievement
Reduce IMR to 50/1000	142 (1984)	70.7
Reduce U5MR to 70/1000	195	96.09
Eradicate Polio	0 cases reported	No cases reported
Eradicate neonatal tetanus	8-14 cases/1000 reported	1 case in 1995
Reduce measles cases to 1/1000 population	11 cases per 1000 people	65% reduction
Reduce measles death by 95%		100% (1991)
Maintain at least 85% immunization coverage	84% (1990)	90% (1994)
100% coverage of child-bearing age women with tetanus toxoid		60% (1994)
Reduce MMR to 358/100000	770	380
100% access to FP services and Education	CPR of 8.8 per 1000	
100% access to trained attendant during delivery	10% access	
100% access for referral of high risk pregnancies	5%	
Reduce severe & moderate malnutrition to 19%	38%	
Reduce LBW (<2.5 Kgs) to insignificant levels	36% (Hospital records)	15% (1994)
Virtual elimination of iron deficiency anaemia	68% (Pregnant women)	
Reduce Vit A deficiency to 14% in 0-5 children	Virtual elimination	
Reduce IDD to minimum levels	20% in women, 14% school children	
Strengthen existing breast feeding practices (0-4 months)	95% breast fed for >1 yr	
Universal use of growth monitoring as a tool to nutritional	90% access to PHC/road to health card	

Ensure adequate nutritional status of the population	To be verified	
Increase access to safe drinking water to 60% (piped water)	25% access	58%
100% access to latrines (not necessarily sanitary)	62% access	70%

Source: Ministry of Health & Education, Thimphu.

Objectives for the 8FYP

- Intensify population planning activities,
- Consolidate and strengthen existing health infrastructure,
- Promote self reliance and sustainability in the health sector,
- Strengthen human resource development for effective implementation of health services,
- Enhance the quality of health care services,
- Extend health care services to those unreached areas, and
- Review the Health-For-All status and to make renewed efforts to achieve the remaining goals.

Strategies for the 8FYP

Intensification of Population Planning activities

As a rapidly increasing population will put undue strain on social services, employment opportunities, land holding and quality of life as a whole, family planning and related programmes will be intensified to reduce the growth rate from its current level of 3.1% to 2% or below. Both Family Planning and Maternal and Child Health Care activities will be intensified within the scope of Reproductive Health. This programme is directed to strengthening health facilities and services so that men and women have access to safe, effective and acceptable methods of family planning and other methods of regulating fertility. It also aims to enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant. The provision of the cafeteria-approach to family planning services will also be continued and intensified.

Consolidation and Strengthening of existing health infrastructure

Due to the high priority accorded to the development of the health sector in all previous plans, it is now close to the optimal level, quantitatively, in terms of physical infrastructure. The emphasis during the FYP8 will therefore be on consolidation, improvement of quality and strengthening of the existing infrastructure.

Health Facilities

A thorough review of the existing physical infrastructure will be made. If an existing health facility is inappropriately located, thereby limiting its use by the intended beneficiaries, relocation to a more suitable site will be considered. If a facility has reached such an age or is dilapidated, rehabilitation will be effected. Great emphasis will be placed on the proper maintenance of all health facilities, including such work as fencing, site development, and protection. Furthermore, where appropriate, all smaller health units will be gradually upgraded to either BHU II or BHU I level wherever necessary.

Communications

At present, the optimal use of many health facilities is curtailed by inadequate means of communication. Referral to higher levels of care, especially during times of emergency and life threatening situations, has also been impeded. Plans are therefore being made to extend communication to the remoter areas through a network of telephones and wireless facilities.

A computer network will also be developed between the Dzongkhag headquarters and the Health Division, thus providing for prompt two-way communication.

Transport

The ability of health service teams to provide timely service is dictated by the availability of reliable transport. This is more so when a team must respond to an emergency such as road-traffic accidents or when a critically ill patient must be moved to a higher level care centre. Emphasis will be placed, therefore, on the improved maintenance of the available fleet of ambulances and replacement where necessary, and on strengthening the entire logistic system so that the procurement and distribution of drugs and essential medical items are not hampered.

Promotion of self-reliance and sustainability in the Health Sector

Up to the present time, health services have been provided free of charge to all patients. In view of the increasing demands for such services on the one hand, and the many demands on a limited government budget, on the other, ways and means of increasing participation by communities in maintaining their own health will be addressed in 8 FYP. During the next ten years or so, with the expectation of continued budgetary constraints, this will be necessary if improved levels of service are to be sustained. Strategies during 8 FYP include:

Intensified Information, Education and Communication on Health

The general health services as well as specific programmes will intensify mass communication to provide health information and education to the community through IECH.

Community Participation

Community participation will be fostered through the active involvement of local people in health care activities. Already over a thousand Village Health Workers have been trained facilitating the provision of health services to their own villages, and more will be recruited where necessary. They will be further trained and provided with the basic necessities for simple curative services. They are not envisaged as substitutes for formal health workers, but as catalytic agents in the interactive process of achieving health care amongst people in their own communities.

Further, efforts will be made to encourage communities to take increasing responsibility for the maintenance of health facilities in their own areas. This will also include labour contribution for construction and periodic maintenance, as well as better utilization of established health facilities.

Research

Research will be conducted to explore sustainability of the health service, including a major focus on ways of increasing cost-effectiveness.

Human Resource Development

HRD Master Plan implementation

The health sector is a manpower-intensive service. With the increasing need to provide multi-disciplinary services to an ever increasing population, the availability of well-trained and qualified workers to deliver services is of paramount importance. A Human Resource Master Plan is already completed which will provide the broad framework for health sector HRD during 8 FYP. Special arrangements will also be made with outside institutions such as Vellore, to provide technical support.

Strengthening of Training Institutes

There will inevitably be attrition due to retirement, promotions and so on, as well as some additional staff as population increases and services diversify. The Royal Institute of Health Sciences (RIHS), the National Institute of Family Health (NIFH), and the National Institute for Traditional Medicine, (NITM) serve to train new health workers as well as those already in service. These institutions will therefore be strengthened by providing facilities and equipment as well as adequately trained teachers.

Enhancing the quality of health care services

Establishment of standards

Whether for instruments, process or services, it is essential to have standards for comparative and cost-effective analysis. Where no such standards exist, the first task will be to establish them. These will be used so that services can be assessed quantitatively and qualitatively in relation to the resources used. Such standards will also serve as bench marks for future assessments of performance of the Health Sector.

Information and Monitoring

Information and monitoring systems will be strengthened as an essential means of promoting the effectiveness and quality of health care. Information needs will be clearly identified to limit information gathering to what is needed and used, and data storage and analysis will be computerised at headquarters and Dzongkhag level as appropriate.

Supervision

The capabilities of the Dzongkhag staff to carry out competent supervisory visits to health facilities will be strengthened. These are not merely to identify shortcomings, but to provide on-site, hands-on training to peripheral health workers. Therefore, the mobility as well as supervisory skills of the Dzongkhag Medical Officers and Dzongkhag Health Supervisory Officers will be enhanced. As well as renovating the staff quarters in all health facilities, basic camping equipments will be provided for work and supervision.

Training

The HRD Master Plan will identify the training needs of different categories of health workers. Both pre-service and in-service training will be given high priority in order to enhance the quality of services. This will be further augmented by the Medical Council Act which provides the legal basis for ensuring quality and the competence of health care providers.

Extension of health care services to the unreached

While consolidation and strengthening of the health infrastructure remains the central objective, attention will be given to providing health care services in the following ways to those communities that have not yet been reached.

Extension of Primary Health Care activities

The aim will be to provide at least basic health care services, within the framework of Primary Health Care. This will entail increasing out-reach services in some areas.

New Construction/Renovation/Upgrading

In areas with no health facilities, additional BHU's will be constructed. Other BHUs will be renovated, resited or upgraded as appropriate.

Staff strengthening

Where access is particularly difficult for the delivery of health services, staffing norms will be relaxed to meet the needs of such areas.

New Programmes

In the 8FYP, two new programmes will be introduced; namely Community Based Rehabilitation, and Mental Health. These are intended to benefit those not yet reached, as well as to enhance the quality of the life of our disabled people.

Programmes for the 8FYP

Health Infrastructure

To establish an effective health service delivery system, renovations, resiting, reconstruction and new construction, wherever necessary, will be undertaken to consolidate and strengthen health infrastructure.

Hospitals

The construction and establishment of the Eastern Referral Hospital in Mongar, planned for 7FYP, will be completed early in 8FYP. This hospital will serve the local population and also provide referral backup for hospitals in the east. Trashigang Hospital, will be reconstructed as a 40-bedded district hospital. The expansion and construction, into a 300 bed hospital, of the Jigmi Dorji Wangchuck National Referral Hospital will spill over into the 8FYP. Major renovation and reconstruction of Tsimalakha and Phuntsholing hospitals will also be carried out by the project authorities of Tala and Chukha.

Basic Health Units

Basic Health Units are responsible for the delivery of primary care. For 8 FYP, 19 new Grade II units, 6 relocations, 19 upgrading from dispensaries, 10 reconstructions and 4 renovations are planned. In addition, 1 dispensary will be relocated, 5 malaria centres opened and 1 BHU Grade I at Ranjung will be taken up. Also, 3 BHUs and some Dispensaries are to be reopened during 8 FYP.

Outreach Clinics (ORCs)

To further increase the health service coverage and access, 165 new ORCs are planned. Communities will be responsible for the construction and maintenance of such facilities, the Health Division providing only an initial, fixed contribution for roofing and building materials.

Disease Control Programmes

Expanded Programme on Immunization (EPI)

Coverage of this essential programme will be maintained to reduce morbidity associated with vaccine preventable diseases and infant and under five mortality.

National Tuberculosis Control Programme (NTCP)

Tuberculosis is a serious communicable disease in the country that kills many and disables even more. Its effective control, one of the goals of Health for All by 2000, will be pursued. This involves provision not only of the basic diagnostic and treatment infrastructure, but also increased awareness of tuberculosis by the community and health workers alike.

Acute Respiratory Infections Control Programme

Acute respiratory infection is now emerging as the biggest contributor to morbidity. As yet there is no clear data on mortality, but it is believed to be significant and under-reported. The programme will be strengthened to heighten community and health staff awareness of ARI and to train staff to deal with it quickly and effectively.

National Control of Diarrhoeal Diseases Programme (NCDDP)

Diarrhoeal Diseases are one of the major problems in Bhutan and also the leading cause of morbidity and mortality especially amongst infants and pre-school children. According to the nation-wide household case management survey of diarrhoeal diseases, the annual diarrhoea incidence in children under 5 years was 3.93 episodes per child per year. The NCDDP will therefore aim to reduce overall morbidity and mortality due to acute diarrhoeal diseases with emphasis on the vulnerable age group.

Leprosy Control Programme

Although leprosy cases are declining year by year, due to the long incubation period (3 to 5 years or sometimes much longer), and the contact with countries with infectious cases, new

cases will appear for a number of years despite falling prevalence. Efforts will therefore continue to be made to eliminate leprosy.

Primary Eye Care

The programme to prevent and control the major avoidable causes of blindness and to make essential eye care services available to all, will be continued along with the services that are available in hospitals.

National STD/AIDS Prevention & Control Programme

The Royal Government is fully committed to the prevention and control of AIDS and other STDs, and the detection of the first few HIV infections has raised serious concern. With the rapid spread of AIDS in many parts of Asia and the alarming epidemic of HIV/AIDS in neighboring countries, combined with the possible rapid spread of the infection in the country once introduced, an aggressive prevention and control programme will be implemented.

Non-Disease Programmes

Information, Education and communication for Health

As health is largely dependent on individual, family and community action, people will be encouraged and assisted to promote their own health and to judiciously use health services available to them. Efforts will also continue to involve the community in the planning, development and maintenance of health services and in monitoring the effects on individual and community health.

Reproductive Health & Population Development

Reproductive health is a crucial part of general health, central to human development, which also sets the stage for health beyond the reproductive years for both men and women, and has pronounced effects from one generation to another.

A strategy will therefore be developed focussed on adolescent reproductive health care, safe motherhood, family planning, RTI/STD/HIV, prevention and management of complications of abortion, infertility, cancers of reproductive tract and breast, as well as the problems of elderly women such as osteoporosis and aging, and other problems related to women's health.

Transport and communications

The prompt delivery of vital lifesaving services depends very largely on a good transport and communication system. The telecommunication network will be further expanded and strengthened and backed up by the provision of adequate ambulances and other transport facilities.

Human Resource Development

Human resource development will be pursued during 8 FYP based on the HRD Master Plan for Health. This will be regularly reviewed to incorporate any changes needed during implementation.

Village Health Workers

More than one thousand VHWs have been trained throughout the country. They play an important role in extending primary health care to the rural population and creating community participation and health awareness, which role will continue during 8 FYP.

National Community Based Rehabilitation

Rehabilitation is an integral part of health care services in Bhutan. Efforts will continue to ensure that those who are disabled through accidents or other causes receive physical as well as vocational rehabilitation and are integrated into and supported by their own community as well as by social welfare institutions.

Strengthening the Public Health Laboratory

The Public Health Laboratory (PHL) will be strengthened to analyse water (both bacteriologically and chemically) for safe consumption, as well as food salt analysis for iodine content, and monitoring of epidemics/outbreaks.

Royal Institute of Health Sciences

The quality of Health Services in the country depends to a large extent on the quality of pre-service and in-service training of health personnel. To ensure the quality of training required, the Institute's needs will be addressed for experienced, qualified and dedicated trainers supported by adequate training facilities and a library with up-to-date reference books and periodicals.

National Institute of Traditional Medicine (NITM)

Traditional Medicine is popular in Bhutan, both in urban and rural areas. To meet the widespread demand, the production and distribution of traditional medicines will be strengthened.

Medical Supply Unit and Essential Drugs Programme

This Unit is responsible for procurement and distribution of drugs to all the Health Centers in the country. The programme will continue to provide essential drugs and supplies throughout the year and maintain availability of drugs above 90% in all the Health Centres, in conjunction with the National Essential Drugs Programme which aims to ensure a regular supply of safe, effective and need-based drugs of acceptable quality at reasonable cost.

Other Health Programmes

Other health programmes to be pursued in 8 FYP comprise Mental Health, Oral Health and School Health which are centrally coordinated by the Health Division..

Manpower and Financial Requirements

Table 28.4 Manpower Requirements of Health Services

<i>Categories</i>	<i>Actual 1996</i>	<i>Require ment 2002</i>
Doctors include. Expatriates	100	152
Drungtshos	22	30
DHSOs	21	21
Health Assistants	103	179
Basic Health workers	138	183
GNTMs	91	168
ANM	106	126
Asst. Nurses	140	202
Technicians	166	228
Others	655	842
Total	1542	2131

Table 28.5 Financial and Manpower Requirements of Health Services

	1997/98	1998/99	1999/00	2000/01	2001/02	Total
Capital	624.244	531.276	164.967	141.958	142.105	1604.55
Recurrent	304.82	304.82	304.82	304.818	304.818	1524.09
Total	929.06	836.09	469.79	446.776	446.923	3128.64
Manpower (Numbers)	354	383	235	132	114	1218
TA (Months)						

CHAPTER 29. EDUCATION

Basic Situation

Structure of Education

The modern, western form of education in Bhutan started in the 1950s. Until then, monastic education was almost the only form of formal education available in the country. While monastic education continues to be an important part of the national culture, western education has been promoted and expanded since the beginning of the 1FYP to help meet basic educational needs as well as to develop human resources essential for the further socio-economic development of the country. Within a period of three and half decades, the government has been able to create a modern education system from primary to tertiary level. Enrolment at all levels has grown at an impressive rate over the years as a result of the RGOB's commitment to education. The gross primary enrolment rate is estimated to be 72%. There are a total of over 77,276 students enrolled in 288 schools and institutions of the Kingdom in 1995(see Table 29,1).

Educational Institutions

The present educational structure consists of one year Pre-Primary (PP), 6 years Primary, 4 years secondary (2 years Junior High and 2 years High), 2 years Junior College and 3 years Under Graduate programme. Access from one level to the other is based on merit and determined by the national and external examinations, as well as by the student space available and, at higher levels, by national human resource considerations.

Division of Education

The Division of Education is responsible for policy planning, programming and implementation of all the educational programmes in the country, with the exception of some technical training. There are 10 sections within the Division: Planning, Personnel, Inspectorate, Curriculum and Professional Services, School Planning and Building Cell, Technical and Vocational Education Section, Board of Examinations, Youth Guidance and Counselling Section, Non-Formal Education and School Liaison unit. While the Division of Education directly administers higher, technical and teacher training programmes, financial and administrative responsibility for the primary and secondary schools is now exercised by the respective Dzongkhag Administrations. However, curriculum, inspection, certification and initial teacher recruitment are within the direct perview of the Education Division. The number of schools and educational institutes as well as the enrolment and teachers therein are indicated in Table 29.1.

Primary Education

As of May 1995, there were 102 community schools, 143 primary schools and 7 private schools catering to primary education in the country. Besides, all the 19 junior high schools had primary sections attached to them. In all, 59,718 students were enrolled in primary education programme (PP-VI) in these schools out of which 25,872 (43%) were girls.

Primary education is directed to providing basic literacy and numeracy skills as well as knowledge of the country's history, geography and traditions. Functional skills such as fundamentals of agriculture, environment, health and hygiene and population education are also incorporated in the school curriculum. Of late, moral science and value education are also being given special attention within the educational process. All these are being provided within the framework of the new system of activity based learning which has been adopted by all the schools.

Secondary Education

Progression from the final year of primary education to the first year of secondary education is determined by the student's performance in the All Bhutan Class VI Common Examinations. At present, about 83% qualify to continue their education while the rest either repeat, go back to the farms, join a training programme relevant to their level or get employment in the government or private sector. Similar examinations are conducted at the Junior High level (Class VIII) and High (Class X). To cater for secondary education, there were 19 junior high and 9 high schools in 1995. Out of the 9 high schools, 4 were also providing junior college education (XI-XII). The enrolment during this period at the junior high level (Class VII-VIII) and high level (Class IX-X) was 8,123 and 3,432 respectively. In classes XI and XII, the enrolment was 667. Girls enrolment constituted 5,120 (42%) at these levels.

The curriculum at the secondary level has largely been localized to reflect the national needs. However, the process has been slow because of the need to appear for an external examinations set by the Council for Indian School Certificate Examinations. Steps are underway to fully nationalize this examination by 1997.

The progression from Junior High to High and then to Junior College (XI and XII) is dependent not only on the performance of the students in the examinations but also the availability of places at these levels of education. Those who do not qualify to continue their studies are encouraged to join technical and teacher education programmes.

Higher Education

Higher Education institutes consist of Sherubtse College which offers general and honours courses for Bachelor of Science, Arts, and Commerce degrees and the National Institute of Education in Samchi for Post Graduate Certificate in Education, B.Ed and primary teacher training courses. The enrollments in Sherubtse College and the National Institute of Education in 1996 were 445 and 189, respectively.

Teacher Training Institutes

In addition to the National Institute of Education, the Teacher Training Centre in Paro provides 2 year primary teacher training programmes in general subjects and Dzongkha language. The TTC had an enrolment of 177 in 1996 which is to be expanded to 300 by the end of the 7 FYP.

Technical and Vocational Education

The structure of school education has also been diversified to some extent by provision of technical & vocational education and training facilities. School leavers at Class VI gain entry to trade level education and training courses, and those from Classes VIII and X to craft and technician level courses respectively.

There are two formal technical institutes in the country: the Royal Technical Institute in Phuntsholing and the Royal Bhutan Polytechnic in Deothang. The Royal Bhutan Polytechnic provides 3 year diploma courses in electrical, civil and mechanical engineering. In 1996 the Institute had an enrolment of 239. The Royal Technical Institute offers 4 year certificate courses in motor mechanics, general mechanics, electrical, building construction and draughting. The Institute also provides a 1 year trade-level course in plumbing, house-wiring and carpentry. In 1996, the Institute had an enrolment of 265.

Other Institutes

Simtokha Rigney school which caters to the study of Dzongkha language and traditional arts, the National Institute for the Disabled which provides education for the visually disabled as well as coordinates educational programmes for other forms of disabilities and the Sanskrit Pathsalas which provide Sanskrit education in the South are other institutes which are directly administered by the Education Division.

Other institutes which are under the various relevant parent ministries and divisions include the Natural Resources Training Institute at Lobesa, the Royal Institute of Health Sciences in Thimphu, the National Institute of Family Health in Gaylegphug, the Forestry Institute in Taba, School for Fine Arts and Crafts in Thimphu and the Driving School in Phuntsholing.

Table 29.1 Enrollment and staff for each level of schools and institutions in 1995*

SCHOOLS	Enrolment				Teachers			Other Staff		
	No.	Boys	Girls	Total	Nat	Non nat.	Total	Nat	Non	Total
Community Schools	102	5502	4153	9655	218	10	228	11	0	11
Primary Schools	143	2781 1	2125 3	4906 4	104 9	307	135 6	233	2	235
Junior High Schools	19	5883	4586	1046 9	230	112	342	87	2	89
High Schools	9	3084	2212	5296	153	93	246	100	8	108
Priavate Schools	7	533	466	999	45	6	51	5	8	13
Sub-total	280	4281 3	3267 0	7548 3	169 5	528	222 3	436	20	456
Sherubtse College	1	404	104	508	13	32	45	43	12	55
National Inst. of Education	1	109	56	165	21	4	25	16	7	23
Teacher Training College	1	121	43	164	19	0	19	1	13	14
Royal Bhutan Polytechnic	1	198	28	226	24	14	38	19	4	23
Royal Technical Institute	1	188	51	239	25	14	39	13	4	17
Simtokha Rigney	1	335	105	440	24	0	24	17	2	19
Nat. Inst. for the Disabled	1	21	9	30	9	0	9	4	0	4
Sanskrit Patshala	1	12	9	21	1	0	1	0	0	0
Sub-total	8	1388	405	1793	136	64	200	113	42	155
TOTAL	288	4420 1	3307 5	7727 6	183 1	592	242 3	549	62	611

Note *: This does not include non-formal education as well as other education and training programmes which are not in the Education Division's charge, such as the Natural Resources Training Institute (NRTI). Source: General Statistics, May 1995, Education Division, Ministry of Health and Education.

Constraints

Teacher Shortage

Teacher shortage continues to be a major constraint. This is so despite the numerous measures taken by the government to make teaching careers more attractive and to increase the capacity of the teacher training programmes at TTC and NIE. Whereas in the past, these shortfalls could be met by employing expatriate teachers, mostly from India, the gradual fall in the remuneration level in Bhutan compared with India has limited the availability of good teachers from that country. Therefore, many schools continue to be under-staffed.

Students Expectations

One of the growing concerns facing the development of education in Bhutan is the increasing expectation amongst students for 'white-collar' employment in government. Related to this is the general reluctance to undertake any manual work and the preference, instead, for office-related jobs no matter how unproductive and lowly paid these may be. This has led to the disproportionate demand for academic education compared to training in technical and agricultural skills, which has further contributed to the emerging problems related to youth and rural-urban migration. While these problems are a reflection of wider social and economic influences, education is perceived as playing a pivotal role and, therefore, there is an increasing call from public and private sector institutions, as well as from parents, for the education system to tackle them.

Rising cost of education and its sustainability

The education budget has not kept pace with the growth of the education system. The growth of the education system does not commensurate with the growth of revenue. More attention, therefore, will have to be given to the sector to ensure quality in the provision of educational service.

Budgetary constraints have prompted the government to introduce cost-saving measures such as the withdrawal of free stationery in the urban schools and to reduce the proportion of government-funded boarding places in its schools. At the same time measures are being taken to improve the cost-effectiveness of the education system. Some of the more significant interventions are: multi-grade teaching, to enhance the utilization of the available teachers, continuous assessment combined with counselling to help reduce wastage in the form of grade repetition and dropouts, while at the same time providing realistic career guidance to students.

The existing free education policy does not mean that parental costs are non-existent. Besides the beneficiaries contributions to building and maintaining schools, especially community schools, the costs of school uniforms, travel to school, contributions towards the school welfare fund and boarding fees to augment the government stipend, add up to a sum beyond the reach of many farmers with limited income. The challenge therefore is to make education remain within reach of everyone, while at the same time instituting a system of accountability, with user charges for those sections of the population who can afford to pay a higher proportion of the education costs of their children. This means cost-reduction, cost-sharing and self-reliance, without compromising the quality of education services.

Limited Educational facilities

The Royal Government's effort to meet the goal of Universal Primary Education by the year 2000 without matching funds from the donors may be defeated. At the primary education level, the growth in enrolment has far outpaced the planned provision of places. During the 7 FYP, as against the planned expansion of 6% annually, the enrolment increased at an average of 8% per annum.

Secondary enrolment has so far been proportionately a rather insignificant component in the Bhutanese education system, comprising only 10%, 13% and 15% of total enrolment in 1994, 1995 and 1996, respectively. However, as is apparent by the growth in enrolment between 1994 and 1996, the relative demand for secondary education is increasing rapidly. This is mainly due to the expansion of primary education and the improvement in the retention capacities of the schools. This increased demand is putting great pressure on secondary school places. Secondary

education therefore needs to be expanded in order to fulfill the national objectives of Education For All, as well as to meet the human resource needs of the country.

Absence of a TVET System

TVET faces problems in policy making, coordinating implementation and serving national needs for socio-economic development. There is a structural imbalance in the domestic supply of trained manpower in relation to demand and a mismatch between the aspirations and expectations of job seekers, and the requirement of employers. These problems are deepened by the need to expand and diversify available services, improve performance of TVET institutes, and ensure greater relevance by closer partnership with industry and end-users.

Review of Past Performance

Objectives of the 7 FYP

The objectives of the Education Sector during the 7FYP were:

- increase the coverage of education to bring about equitable access and meet the target of universalization of primary education by the year 2000,
- enhance the relevance and quality of education particularly at the primary level within the overall framework provided by the New Approach to Primary Education,
- enhance the literacy rate through alternative forms of education such as non-formal and adult literacy programmes,
- strengthen technical and vocational education in view of the shortage of technical people and the envisaged development in the industrial sector,

Achievements

Primary Education

In 1992, the enrolment level between pre-primary and Class VI was 51,411. By 1996, this had increased to 69,968. The proportion of girls enrolled during the same period increased from 42% to 44%. Of the 96 community schools planned for the 7 FYP, 67 were actually established before 1992. Out of the remaining 27 community schools, 18 were established between 1992-1996. Similarly 5 new primary schools were established during this period.

Secondary Education

A new High School at Drukgyel and 3 junior high schools, namely Yebileptsa, Tangmachu and Khuruthang Junior High schools were established during the plan period. Haa and Jakar Junior High Schools were both upgraded to high schools during the plan period. Similarly, Sarbhang, Samchi, Dremetse and Rangthangwoong Primary schools were upgraded into junior high schools. The planned introduction of +2 courses in Jigme Sherubling, Drukgyel and Punakha High School was also completed in 7 FYP.

Higher Education

The enrolment in Sherubtse College remained constant at around 500 during the plan period, while Honours courses were introduced in *Economics, Commerce, English, Geography and Dzongkha*. The enrolment at the National Institute of Education increased from 146 in 1992 to 189 in 1996. The B.Ed course was diversified into two streams: primary and secondary level teaching.

The physical works programmed for the NIE campus master plan were completed. A new academic building, library and staff quarters for Sherubtse College were also completed.

Curriculum Development

The New Approach to Primary Education has been adopted and integrated into the national primary education system. The school curriculum now addresses issues related to Bhutan as well as global concerns such as population education, environmental conservation, sustainable resource use and health education.

At the secondary level, the social science curriculum has been localized to reflect Bhutanese History, Geography and Economics. The external examination system for class X is also now partly localized with the adoption of a joint examination and certification system between the Bhutan Board of Examination and Council for ICS Examinations

Teacher Training

The output from NIE, Samchi and TTC, Paro was also increased from about 110 in 1992 to about 170 in 1995. The TTC at Paro introduced an 18 month course for Dzongkha language teachers similar to the prevailing Primary Teacher Training courses. In addition, distance education has been introduced at NIE aimed at upgrading the knowledge and qualifications of the teachers already in service. Furthermore a detailed masterplan was developed for in-service teacher training programme and implemented at the national, dzongkhag and school levels.

Non-formal and adult education

After its initiation in 7 FYP as a pilot programme, Non Formal Education (NFE) was adopted for expansion as a means of enhancing the literacy level of the population. By 1996, about 4000 people have benefitted from this programme, out of which majority were women. The Division of Education now employs its teachers in the formal education system to impart NFE programmes, providing additional training and monetary incentives for this purpose.

Technical Education

The enrolment at certificate level at the Royal Technical Institute (RTI) decreased from 286 in 1992 to 265 in 1996, whereas at the Royal Bhutan Polytechnic (RBP) it increased from 176 to 239, in the same period. The RTI now also conducts trade level training courses in addition to its regular courses at certificate-level. However, enrolment for trade training during the past 3 years has averaged only around 10 trainees a year, raising questions to be addressed as to the course itself as well as to the career openings and conditions of employment of trainees. Technical education therefore continues to be generally under-enrolled, and especially so at the trade and certificate level training.

Notwithstanding this, technical education continues to receive government support as an important element in human resource and economic development. Workshop facilities at RTI have been upgraded recently. Similarly, major investments have been made at RBP in rehabilitating structures, providing additional workshops, equipments, academic and recreational facilities.

Objectives and Strategies for 8FYP

Objectives

The broad objectives for the Education sector are in line with national objectives of improving the quality of life, developing human resources, facilitating the meaningful participation of the population in the country's development activities, and preserving and strengthening the country's culture.

- Increase the number of children who attend school in order to meet the goals of Education for All.
- Increase the basic education level in the country from the existing class VI to class VIII level in order to meet the citizens' aspirations to more fully develop their potential as individuals and as participants in national development;
- Further improve the relevance and quality of education at all levels by consciously linking educational content to the skills and values essential for continued national progress;
- Make higher education at Sherubtse more relevant;
- Improve the efficiency of the education delivery system to make the education system more sustainable and cost-effective.
- Improve the content and delivery system of technical education programmes.
- Create and provide educational opportunities for the disabled and the disadvantaged for meeting their basic learning needs.
- Enhance the literacy rate through alternative forms of education such as non-formal, adult literacy programmes and continuing education.

Strategies

- Increase the number of schools particularly at primary level to meet the goals of universalisation of primary education and upgrade selected primary schools and junior high schools to junior high and high schools respectively to meet the growing demand for secondary education.
- Continue making curriculum relevant to the national needs and in particular introduce value and moral education,
- Introduce/strengthen those components of curriculum related to agriculture, life skills and vocations at all levels including in higher education.
- Enhance the number and quality of teachers by improving service conditions of teachers, better training, enhancement of training facilities, better management and motivation,
- Improve the education process through enhancing the facilities in the schools, provision of guidance and counselling as well as enhancing linkages between the school and communities,
- Establish/identify a body for coordinating and providing national direction for TVET sub-sector and make the TVET more meaningful by linking training with employment and production,
- Establish education programmes for the disabled and link it with provision of relevant skills to enable them to remain in the society as productive community members,
- Further improve upon and expand the non-formal education programme.

Programme for 8FYP

Enhance Educational coverage at both the primary and secondary level

In order to achieve a national gross primary enrolment ratio of 95% by the year 2002, it is necessary to accomplish a minimum annual growth rate of 5% during the 8 FYP. This increase will be achieved through the establishment of new community schools, consolidation and expansion of existing primary schools, and relocation of some schools to facilitate better coverage.

A higher growth rate for girls will be achieved through social mobilization, calling upon parents to send and keep their daughters at school, by improving the hostel facilities for girls and by strengthening pastoral care and counselling. The establishment of more schools which are easily accessible, such as community schools, will also help to keep more girls at school.

While the long term policy is to slowly do away with boarding facilities and promote smaller community maintained schools, the residential capacity of some of the schools will, however, need to be increased. However, boarding in the primary schools will be based purely on parental support and contributions, supplemented only by WFP meals.

The WFP feeding programme has also been responsible for increasing school enrolment and attendance. While this programme will continue well beyond the 8 FYP, the process of reducing the total food aid, initiated during the 7FYP, will be continued during the 8 FYP in keeping with the Government's policy of encouraging self-sufficiency. Both the midday and the two meal allowances will be confined solely to those schools which are in food-insecure localities. Furthermore, no community schools will be eligible for this aid since such schools are within easy walking distances from the homes of the school children concerned.

A decision to upgrade the basic education level to Class VIII was made by the government during the 7FYP. While the Junior Secondary classes will be expanded to cater for the progress of primary students to this level, classes IX and X will be geared to meet the demand at this level for training and employment as well as further education. This will entail expansion of this level of education by about 11% annually during the 8 FYP. This will be achieved mainly by upgrading selected junior high schools to high schools and expanding existing high schools.

Free boarding facilities at these levels of schooling are critical for ensuring that the children of less affluent parents in remoter parts of the country can participate, and therefore this facility will be continued during the 8 FYP. However, it will only be available to very needy students.

In addition to Yangchenphug, Jigme Sherubling, Drukgyel and Punakha High Schools, classes XI and XII will be introduced in Shemgang and Mongar High Schools during the plan period.

Curriculum Development

The process of simplification and promotion of Dzongkha to make it an effective and easy medium of communication amongst students will be continued and further strengthened in the 8 FYP. In addition to Dzongkha debates, elocution and drama that were encouraged in the 7 FYP, students will be encouraged to read widely. The introduction of class readers, and testing of general language skills outside the set texts is expected to encourage students to read more and help them gain confidence in the use of Dzongkha. The teaching of environmental studies in Dzongkha which was initiated at the end of the 7 FYP in PP will be introduced up to class III by the end of the 8 FYP subject to experience during the pilot programme.

Moral science and value education will be incorporated in the current syllabi and Teachers' Manual. Appropriate class readers based on Bhutanese themes both in Dzongkha and English will be developed for classes IV to VI level to enrich the language courses that are offered at this stage, and raise awareness of Bhutanese values which are implicit in the folk-tales and legends of this country.

Games and sports, cultural activities, arts and crafts as well as the inter-personal relationship that children experience throughout their school life, will be further strengthened. These will be as important as the formal courses to achieve national goals. Schools will also be encouraged to organize leadership development activities such as scouts and guides training.

Secondary curriculum materials will be further developed to include local and national themes. These will be supported with teacher's manuals to help explain the intention of the curriculum objectives.

The teaching and learning of sciences will be made more activity based through the development of proper laboratory facilities both for Junior High and High schools. In addition, computer courses will be introduced as important curriculum components in all High Schools. In addition to arts and crafts the teaching of relevant trades leading to vocational options will be considered for introduction during the 8 FYP.

Expanding and improving teacher education programme

Efforts will be made to enhance the quality of teachers through enhancing their service conditions and through instituting better selection processes.

Enrolment at the Teachers Training College, Paro and National Institute of Education, Samchi will be increased from the present 177 and 189 to 300 and 275 respectively. In addition the training courses of both the institutes will be streamlined to reflect the actual needs of the schools. Priority will be given to enhancing the quality of the faculty by fresh recruitment as well as upgrading the professional competence of the present staff through short and long term training/study programmes.

The present system of in-service training programmes will be further developed based on an impact study of the past programmes. Future programmes will be more focused on the areas where they are needed most. Specific attention will be paid to improving the quality of teaching of Mathematics, Science and Dzongkha.

The distance-education programme for in-service teachers initiated recently will be further strengthened with refinement of the course content, materials and mode of interaction. In addition to the structured courses leading to certification, there will be an educational information dissemination programme developed in addition to the Curriculum and Professional Service Section (CAPSS) newsletter using the broadcasting media to inform not only the teachers but also the parents about educational developments and update their knowledge without the need to attend long sessions at an Institute. Radio broadcasts, pamphlets and other suitable media will be used for these programmes.

Improving education facilities

Minimum basic standards will be formulated for each level of school covering all the essential facilities required to fulfill the children's needs as well as curriculum objectives. All the schools will be brought up to an acceptable level.

Very high priority will be given to the development of a proper and well stocked library for each school, resourced by a trained teacher librarian. Every effort will be made to encourage children to develop love for reading and good reading habits.

A system will be instituted at the school/institute level for regular maintenance work. Maintenance of buildings and minor repairs of rural schools are carried out by the communities concerned. To support this, a maintenance budget for buying materials such as nails, cement or paint will be assigned to each school.

The WFP feeding scheme will continue to play an important role in the development of education in the country. While avoiding dependence, efforts will be made to ensure that this important programme continues to reach needy schools and population groups.

Boarding facilities where necessary will be improved by providing a cleaner living environment and amenities, and better food. The stipend rates for boarding will be revised regularly to take into account the inflation in the cost of food and other commodities.

Improving the education process

In addition to improving the quality of teachers and physical facilities, other measures will be undertaken to ensure the effective implementation of educational programmes in the schools. These include strengthening school inspections as a means of improving standards of teaching, and developing a closer link between the inspectorate, other sections in the Education Division, and the Dzongkhag Administrations.

Guidance and career counselling will form an important component in providing additional support and direction to our students so that they are better prepared to face the challenges of life when they leave school. A system of guidance and career counselling for students will be established with relevant net works with other concerned sectors such as the RCSC.

Furthermore, a continuous assessment system will be developed as an effective school level monitoring and feedback mechanism to help teachers to achieve the curriculum goals. With the Class VI All Bhutan Common Examination to be done away within 1997, the Bhutan Board of Examinations will also conduct sample surveys to compare the quality of education between schools and within the system over time.

Higher Education

Sherubtse College will be developed into a full degree college with the phasing out of classes XI and XII and the amalgamation of these classes in selected high schools. Staff development will be given utmost priority in the college by additional recruitment of national staff and providing fellowships to help develop their professional skills. Furthermore, the physical facilities of the college will be enhanced on the basis of the master-plan developed in 1991.

Technical Education

To enable effective coordination in policy and implementation, a national level agency will be established to enable overall TVET system management. Programmes to reduce structural imbalances in the supply and demand of trained manpower will be expanded. Activities to minimise expectations mismatches between job seekers and employers through guidance and incentive schemes will be strengthened. TVET programmes will be restructured, quality improved, expanded and diversified to meet manpower and user needs.

The focus of institutional development will be on the consolidation of infrastructure and linking skills training more closely to the labour market through a diversified curriculum. This will involve a review of the role of the Royal Technical Institute (RTI), including a study of the introduction of a training-cum-production based curriculum. The reintroduction of the Village Skill Development Programme will also be reviewed.

Staff development will be a priority for the technical institutions as well as for the Technical and Vocational Education Section.

Education for the Disabled

An education programme will be established to cater for the specific needs of the disabled. The recently upgraded school for the blind, the National Institute for the Disabled, the Community Rehabilitation programme of the Health Division and the Technical and Vocational Education Section of the Education Division will formulate policies and programmes to address the educational needs of people with different forms of disabilities. Wherever possible, the programme will be community-based, and use the existing facilities. Apart from providing basic education, efforts will also be made to provide special skills which will help disabled people to become gainfully employed.

Teachers for the disabled will be sent on study/training programmes to learn the specialized skills needed.

Rigney Education

The Rigney School, the only one of its kind in Bhutan, provides instructions in Dzongkha language and Rigney(Dzongkha grammar and traditional arts) studies. During the 8 FYP, the facilities in Simtokha Rigney School will be upgraded, or a new Rigney will be established to incorporate all the facilities required of such an institute.

In addition Rigney faculty will be upgraded through the appointment of qualified and dedicated people, and the curriculum reviewed and upgraded. This will be undertaken with the help of eminent scholars in the country.

Monastic schools and Sanskrit Pathsala

The Monastic schools and Sanskrit Pathsalas are important institutions which not only reflect the diversity of the educational system but also help meet the educational needs of an important part of the community. These schools will be looked upon as important contributors to the development of education during 8 FYP.

Non formal education programme

The NFE unit has been strengthened and its programmes are coordinated by a full-time coordinator. Materials for NFE programmes are developed by the Division of Education. In addition to course materials, supplementary reading materials for the neo-literates will also be made available.

The NFE centres will be identified by the Dzongkhag Administrations, based initially on popular requests. The centres will normally be located in the compound of existing schools or institutes using their facilities. The programme will also use the teachers from the formal school system. In-service training programmes for the teachers who will undertake NFE courses will be conducted during the winter vacation.

Table 29.2 Financial and Manpower Requirements

	(Nu. in millions)					
	1997/98	1998/99	1999/2000	2000/01	2001/02	Total
Capital costs	329	358	397	407	445	1936
Recurrent costs	355	387	428	439	480	2089
a) Existing	334	363	403	412	452	1964
b) Project related	21	23	26	26	29	125
Total cost	684	745	825	846	925	4025
Manpower	289	317	323	325	236	1490
Technical Assistance	46mm	50mm	56mm	61mm	67mm	280mm

CHAPTER 30. CULTURE AND RELIGION

A. Council for the Ecclesiastical Affairs (Dratshang Lhentshog)

Basic situation

Bhutan is the only nation in the world where the Vajrayana form of Buddhism is practiced as the state religion. Since Guru Padmasambhava's visit to Bhutan in the 8th century AD, Buddhism has wielded profound influence both on the people's way of life as well as on the growth of the country's religious and cultural heritage and traditional customs.

Numerous scholars - saints and sages of different traditions of Buddhism - appeared in Bhutan from the 9th to the 16th century and established several monasteries and temples throughout the country. However, no one has had greater impact on the history of Buddhism in Bhutan than Zhabdrung Ngawang Namgyal. It was Zhabdrung who introduced the first Sangha (Clergy) with Khuenkhen Pekar Jungne as abbot, and 30 monks at Chari Dorji Dhen in 1620 AD. On completion of Punakha Dzong in 1637, the Sangha Community was shifted to Punakha and the number of monks increased from 30 to 600. Since then, the number of Dratshangs, Rabdeys, Shedras, Drubdeys and Gomdeys in the country has increased tremendously. The Sangha currently has a strength of little over 5000 monks.

In 1984, a nine member Council for Ecclesiastical Affairs or Dratshang Lhentshog was established under the personal initiative of His Majesty the King, to be chaired by His Holiness the Je Khenpo. The nine members of the Dratshang Lhentshog are His Holiness, the Je Khenpo (Chairman), four Ven Lopons of the Zhung Dratshang, two Royal Advisory Councillors (Monastic Representatives), Chairman of the Solzin Lhentshog, Secretary of Dratshang Lhentshog (as member secretary).

Since its inception, the Lhentshog has involved itself in social and religious activities. Besides being responsible for meeting the needs of the Sangha, in particular the Central Monk body, and consolidation of the various religious institutions, the Lhentshog also administers the Rabdeys (District Sangha Communities), Shedras (Buddhist Colleges), Dubdras (Meditational Centers) and other religious establishments in the country.

To deal with the administration, and to implement the policies of the Dratshang Lhentshog, a full fledged Council Secretariat has also been set up.

Review of Past Performance

Objectives during 7FYP

- To preserve and promote our most valued spiritual heritage;
- To promote the general well-being of the Sangha (Clergy) by improving their living facilities and establishing welfare schemes;

- Restoration of the Sangha's traditional relevance in a cautiously modernizing and more outward looking Bhutan by:
 - preserving the purity of the Buddha dharma,
 - standardizing the monastic learning process, and
 - promoting Buddhist studies through the improvement of facilities.
- Reorganization and consolidation of various religious institutions, giving them an effective administrative system;
- To encourage the clergy's participation in social welfare activities to improve both the physical and spiritual well-being of the people;
- To preserve ancient value-based institutions and centers, and to encourage new institutions where Bhutan's cultural and spiritual heritage can be studied to the highest level; and
- To encourage the clergy's participation in International Buddhist Seminars and Conferences for generating greater awareness of monastic activities outside Bhutan.

Achievements

- Completion of Tsirang Dratshang construction;
- Construction of a congregation hall and a public ablution facility at Bhutan Temple, Bodhgaya, India;
- A new Sheydra instituted at Dali Goempa, under Punakha;
- Renovation of Changgangkha monastery completed;
- Electrification of Haa Dratshang;
- Images of Guru Dorji Drolo installed at Punakha Dzong, Tsirang Dratshang, Zhemgang Dzong, Daga Dzong and at Wamrong;
- Installation of five statues, wall painting (Debri) and Choesham (Alter) installation completed at Tashigang Wamrong Zangto Pelri Lhakhang;
- Additional monastic schools instituted at Hongtsho Tashigang Goempa, Talo Ngoedrupchu and Nobgang;
- Construction of toilet and retaining wall at Tango Sheydra;
- Workshop on Religion and Health held in 15 Dzongkhags; and

- Ablution and sanitary facilities provided in at least 18 Dzongkhags;

Objectives and Strategies for 8FYP

- Preservation and promotion of Bhutan's rich spiritual heritage by upholding liturgical practices, and maintaining the purity of monastic discipline, practices and studies;
- Promotion of general well-being of the Sangha by improving facilities such as accommodation, health and sanitation;
- Enhancement of monastic welfare schemes for self-reliance by encouraging each monastery to establish a savings fund, arrange appropriate investment and utilize the proceeds for collective benefit;
- Encouragement of advanced Buddhist Studies by improving infrastructure, standardizing monastic education and by conducting Board Examinations.;
- Encouraging participation of monk body in the development process by continuing to engage them in the dissemination of health information, free performance of funeral rites for the poorer section of society, participation in international Buddhist meetings, workshops and seminars on relevant topics; and
- Improving the living quarters of the central monk body in Thimphu and Punakha.

Financial and Manpower Requirement

Table 30.1 Financial and Manpower Requirement

	1997/98	1998/1999	1999/2000	2000/2001	2001/2002	FYP Total
Capital	2.000	2.000	2.000	2.000	2.000	10.000
Recurrent	43.773	47.518	51.610	56.088	60.991	259.98
-Existing						
-Project Related						
Total Cost						
Manpower						
TA						

B. Special Commission for Cultural Affairs (Solzin Lhentshog)

Basic Situation

The establishment of the Special Commission for Cultural Affairs in 1985 and its reconstitution as the Solzin Lhentshog in 1995, is a reflection of the great importance placed upon the preservation of the country's unique and distinct religious and cultural traditions and values, expressed in the customs, manners, language, dress, arts and crafts, and which collectively define Bhutan's national identity. The Drukpa-Kagyue tradition of Mahayana Buddhism is the state religion from which Bhutan's cultural heritage draws its life blood.

Preservation of its religious and cultural heritage does not imply that Bhutan intends to remain static or isolated. The socio-economic development initiatives of the past development plans have brought about far-reaching improvements in the life of the people. At the same time, history bears witness to the futility of pursuing purely materialistic ends, without values that give meaning to life. Bhutan's aspiration, therefore, while preserving its values, is to provide a bridge between its value system and the benefits which accompany modern development. The Commission is the principal agency of the government charged with this responsibility. It was established by Royal Command in 1985 with 29 members, and subsequently reconstituted with 15 members by Royal Decree in 1995, with the Home Minister as Chairman. Its specific aims and objectives are:

- To consolidate and strengthen Bhutan's Ka-Nying Zung Drel Spiritual tradition;
- The promotion of Driglam Namzha;

- Renovation of ancient monasteries and temples;
- Preparation and maintenance of an inventory and photographic record of cultural sites, monuments and articles of antiquity;
- Preservation of ancient documents and literature;
- Strengthening existing cultural centers and institutions;
- Promotion of harmony between Buddhism and Hinduism in the country.

The Solzin Lhentshog has six divisions viz; the Secretariat, the Division for Cultural Properties, the National Museum of Bhutan, the Royal Academy of Performing Arts, the School of Arts and Crafts, and the National Library of Bhutan.

All these cultural institutions pre-date the Commission: the National Library and the Royal Academy of Performing Arts were established in 1967, closely followed by the others, the last being the Division of Cultural Properties in 1981. They are now effectively coordinated within the Commission.

Review of Past Performance

Objectives of 7FYP

The objectives of the Special Commission for Cultural Affairs during 7FYP, were to:

- Provide continuity in the development process through the preservation and adoption of culture during a period of change;
- Respond to the religious needs of the population whose values may be challenged;
- Encourage greater awareness and appreciation of Bhutan's cultural heritage both by the population and the outside world;
- Increase the popularity of Dzongkha as a medium of mass communication and of official correspondence.

Achievements

- The Commission continued to promote the cultural exchange programme under the Bhutan-India Friendship Association (BIFA). During 7FYP, a new Division, the Dratshang and Conference Division was established to promote this and other programmes of cultural exchange and Buddhist cooperation with other countries.
- Training in Driglam Choesum was carried out in all schools every year, and all graduates were similarly trained before employment in government service. On its

establishment, responsibility of writing the text for Driglam Choesum and Driglam Namzha was given to the Dratshang and Conference Division.

- The collection, conservation and display of Bhutan's artistic and cultural heritage was done at the National Museum, which continued to receive many visitors from home and abroad.
- The National Library also added several important texts to its collection of nearly 12,000 texts, including English reference books and scripts written in gold. The training of staff in librarianship was also carried out; further titles in Choekey were catalogued and rare documents stored on microfilm.
- Substantial improvements were made at the School of Arts and Crafts, which will be continued during 8 FYP.

- The Academy of Performing Arts continued to preserve traditional mask and folk dances, to send dance teachers to visit schools, and to perform at religious festivals and important ceremonies / performances, frequently benefitting tourists and guests as well as local people.
- The Division of Cultural Properties continued the conservation and protection of cultural properties and the preparation of the national inventory of cultural properties, including historical places, monuments and sites. The renovation of 24 Lhakhangs was completed and work on another 23 is in progress.

Objectives and strategies for the 8 FYP

- The consolidation and strengthening of Ka-Nying Zung Drel spiritual tradition;
- The promotion of Driglam Choesum and its relevance to contemporary national life;
- The renovation of 2,000 ancient monasteries and temples in the country. The priorities for renovation will be based on:
 - Historical and cultural significance,
 - Presence of valuable ritual objects and artifacts,
 - Availability of patronage and endowments,
- Preparation of inventory and photographic documentation,
- The preservation of ancient documents and literature, and the computerization of records,
- The strengthening of cultural centers and institutions, including the construction of a new integrated cultural center, and further institutional strengthening of the Royal Academy of Performing Arts, the School of Arts and Crafts and the National Museum,
- Promotion of culture through shared knowledge will be promoted by the Commission through publications, cultural activities, seminars and workshops,
- The promotion of harmony between Buddhism and Hinduism in the country.

Financial and Manpower Requirement

Table 30.2 Financial and Manpower Requirement

	1997/98	1998/1999	1999/2000	2000/2001	2001/2002	FYP Total
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Capital	44.082	44.082	44.082	44.082	44.082	220.41
Recurrent	16.502	14.340	15.950	16.240	18.610	81.630
-Existing						
-Project Related						
Total Cost		14.340	15.950	16.240	18.610	81.630
Manpower	14	12	12	12	12	62
TA						

CHAPTER 31. GENERAL PUBLIC SERVICES

The Judiciary

The judicial system of Bhutan has a long and ancient history. The first set of codified laws was promulgated by Zhabdrung Ngawang Namgyal in 1652 at the time of the first temporal ruler Deb Umze Tenzing Drugyel.

The codified and enacted laws of the National Assembly which are known as the *Thrimzhung Chhenmo* (Supreme law Book) separated the judiciary from the executive and legislative branches of government. Almost all categories of criminal offenses and their penalties are contained in the series of laws incorporated in the *Thrimzhung Chenmo*.

Many important laws were enacted during the reign of the third King, His Majesty Jigme Dorji Wangchuck, who established the National Assembly of Bhutan in 1953. On his initiative, the first comprehensive codified laws contained in the *Thrimzhung Chenmo* have been enacted by the National Assembly during several sessions in the 1950s. The largest number of laws were enacted by the National Assembly during the reign of the present King, His Majesty Jigme Singye Wangchuck. Most of these legislations were enacted to enable the laws to respond effectively to the changing needs of a rapidly modernizing nation.

The process of separating the judiciary from the executive and legislative branches of the government came to a final culmination when the *Thrimkhang Gongma* (High Court) was established in 1968. The *Thrimkhang Gongma* has both appellate and original jurisdictions. The High Court consists of the Chief Justice and eight judges. There are twenty *Dzongkhag Thrimkhangs* (District Courts) and two *Dungkhag Thrimkhangs* (Sub-Divisional Courts) which deal with both criminal and civil cases. The *Thrimpons* (judges) are head of the district courts and are assisted by the *Ramjams* (Registrars). The Judiciary as a whole had a staffing strength of 254 in 1996.

The *Chimi* (People's Representative in the National Assembly), *Gup* (village headman) and *Barmi* (negotiator who is well-versed in the law) have some judicial functions particularly with regard to effecting compromises between parties and thus saving them time and expenses of going to Court. While the legal system in Bhutan does not have the institution of solicitors and lawyers, it does permit the accused in criminal cases to appoint *Jabmis* (trained legal representative well versed in the law) to defend them.

A separate judicial cadre (JC-01) distinct from the civil service cadre was established to safeguard the independence of the judiciary and specific provisions have been made in the law to prevent the executive from interfering with the judiciary. The independence of the judiciary is one of the cornerstones of national policy.

Royal Audit Authority

The Royal Audit Authority (RAA) was created in 1985 as an autonomous agency from the restructured Royal Audit Department. It has its main office in Thimphu and two regional offices

in Samdrup Jongkhar and Gelephu. The RAA has audit jurisdictions over all accounts of ministries, divisions, other central agencies, dzongkhag administrations, autonomous and semi-autonomous organizations and foreign assisted projects and special projects (projects undertaken by NGO's). Its primary function is to ascertain and evaluate whether Government resources are utilized in accordance with laws, rules and regulations, and to recommend improvements in the systems accordingly. RAA's mandate requires it to audit every agency once in every two years, but due to financial and manpower constraints, this has not always been possible.

During 8 FYP one of the main objectives of the RAA will be to conduct thorough audits on time as required in its mandate. For this, additional finance and staff will be made available in 8FYP. In order to promote the effective and efficient use of government resources, RAA will identify significant issues adversely affecting the success of public sector policies and programmes, and make recommendations accordingly. RAA will also explore ways of improving the cost-effectiveness of its own audit activities.

Programmes for 8 FYP

- Intensification of HRD;
- Relocation of two RAA Divisions to strategic centres;
- Introduction of Value-for Money (FVM) auditing;

Bhutan Olympic Committee (BOC)

The BOC was formed in February 1983 and it secured the formal recognition of the International Olympic Committee (IOC) on 23 November 1983, making it possible for Bhutan to participate in the 1984 Summer Olympics in Los Angeles.

Since its admission to the IOC, the BOC has been actively promoting sports throughout the kingdom, generally carrying out its activities through the nine recognised national sports federations. In pursuance of government policy, it has accorded the highest priority to the promotion and development of sports in educational institutions. The BOC is also a member of the Association of National Olympic Committees (ANOC), the Olympic Council of Asia (OCA), the South Asian Sports Federation (SASF) and various other international sports organisations and federations. The major constraints faced by the BOC have been the lack of trained and experienced coaches and instructors, sports facilities, funds and equipments.

Nevertheless, during 7FYP the BOC and its federations carried out a number of activities with financial and technical support from external sports organisations and in cooperation with the Education Division. Its important activities included:

- Prepared athletes for participation in the Olympic, Asian and South Asian games, as well as in other international competitions;
- Organised 16 technical courses in popular disciplines of football, archery, table tennis, lawn tennis and basketball were organised;

- Trained 14 national coaches in India and the Hungarian University of Physical Education in different sports disciplines till December 1995;
- Organised annual Sports Leadership Courses for teachers and students in different disciplines;
- Supplied sports equipments and materials and held regional multi-disciplinary coaching camps for students;
- Disbursed over Nu. 1.4 m to different educational institutions for repair and construction of sports facilities;

During 8FYP BOC will continue to promote sports throughout the country; train young athletes for international competitions; encourage true sportsmanship and, in doing so, make a constructive contribution to the prevention of juvenile delinquency.

Programmes for 8 FYP

- Construction and equipping of multi-purpose gymnasium in all major towns and schools;
- Construction of basketball and tennis courts for High and Junior High Schools and providing table tennis equipment for schools;
- Introduction of archery in schools;
- Preparation of a Masterplan for the development of sports;
- Renovation of existing sports facilities (Changlimithang, Yangchenphug High School and Phuntsholing football field, the Swimming Pool Complex, basket ball courts and tennis courts);
- Introduction of tennis coaching programme for students (age range 9-12) under the Worldwide Tennis for Schools programme (International Tennis Federation);
- Continuation of the regular programmes and encouragement of other activities to popularize the sporting programmes in the country specifically among the younger generation.

Ministry of Foreign Affairs

The Ministry of Foreign Affairs in Thimphu comprises seven functional divisions, the Conference Division, Bilateral and Multilateral Division, Policy and Planning Division, Territorial Division, SAARC Division, Protocol Division and Administration and Accounts Division. As of 1996, the Ministry of Foreign Affairs had a staff strength of 147.

Bhutan has established diplomatic missions with the following countries:

- Royal Bhutan Embassy, New Delhi, India, which is accredited to Nepal and Japan;
- Royal Bhutan Embassy, Dhaka, Bangladesh, which is accredited to Thailand, South Korea, Sri Lanka and Pakistan;
- Royal Bhutan Embassy, Kuwait, which is accredited to Switzerland and Bahrain;
- Permanent Mission of Bhutan to the United Nations in New York;
- Permanent Mission of Bhutan to the United Nations Office in Geneva, which is accredited to Denmark, Sweden, Norway, Netherlands, Finland, Austria, the Council of the European Union and UN Agencies.

Bhutan has also appointed Honorary Consuls in Belgium, Canada, Thailand, San Francisco, Washington DC, South Korea, Netherlands and Japan.

In the context of aid management, the Ministry of Foreign Affairs plays an important role as described in Chapter 6 on External Assistance. It is the formal channel of communication between the Royal Government and its external development partners, and plays an important part in presenting Bhutan's case for international development assistance and in external resource mobilisation.

Ministry of Finance

The Ministry of Finance consists of a secretariat and three Divisions, namely National Budget and Aid Coordination Division (NBACD), Revenue and Customs, and National Property. During 8 FYP consideration will be given to the establishment of a small Policy and Planning Division in the Secretariat.

National Budget and Aid Coordination Division

The NBACD is responsible for aid coordination and allocation of donor funds. The annual budgeting of the government is another important responsibility of NBACD. It liaises closely with the Ministry of Planning to ensure congruence of the annual planning and budgetary processes, and for aid coordination. Budgeting procedures are in accordance with the Programme Budget Model as laid down in the Financial Manual, and based on functions/programmes/projects activities by organizational unit. Expenditure headings show services and activities to be rendered. The Budget appropriations are printed in three volumes viz; Vol. I (Budget Summary), Vol.II (Central Ministries and Departments) and Vol.III (Dzongkhag Administrations).

Budget preparation starts with the circulation of budget ceilings by NBACD for each agency for that financial year and, after review, budget submissions are then consolidated into a "Budget Justification Report" for approval by the RGOB. The financial year begins on 1st July, and Annual release of funds starts shortly thereafter. Budget accountability is ensured through periodic financial reports to the NBACD, in-house reviews, audits of budgets and periodic audits of activities by the Royal Audit Authority.

The overall objective of the NBACD during 8FYP will be to continue to improve and streamline the nation's budgetary and accounting procedures, and in conjunction with this to strengthen financial control and accountability, and to effectively coordinate all external assistance.

In furtherance of these objectives external TA will be enlisted for two specific programmes:

- Computerization of Government's Accounting System.
- Improvement of computerised budgeting, Accounts consolidation and External resources Management System.

Division of Revenue and Customs

Under the Ministry of Finance the DRC is the agency responsible for the management and administration of all national revenue, and for the formulation and implementation of Tax and Customs Rules. During 7 FYP, in accordance with the RGOB's decentralization policy, responsibility for day to day operations was decentralized to five Regional Revenue and Customs Offices. The main constraint to increasing revenue is the narrow tax base, as well as an inadequately developed taxation system. During 7 FYP, however, substantial progress was made to enhance domestic revenue through improved administration, simplification and standardisation of rules and procedures, wider use of automation, and the institutional strengthening of DRC itself.

During 8 FYP the overall objective will be revenue enhancement, in which broadening the tax base will play a major part, along with further improvements in revenue administration. In addition to equity, tax strategy will take account of the need to promote the private sector, contain inflation and external trade imbalances. Improvement in non-tax revenue will also be sought through cost-recovery for services provided by government agencies and by increased contributions to revenue from government corporations and quasi-commercial organizations.

Programmes during 8 FYP

- Revision of the 1992 Tax Policy, with revision of rates of direct and indirect taxes, and amendments of rules and procedures.
- Introduction of new taxes, including income tax on real estate, sales tax on domestic goods and services, and personal income tax.

- Promotion of the private sector will be initiated through consideration of tax holidays for small-scale and export-oriented enterprises during their gestation.
- Enactment of Customs and Excise Act.
- Revision of tariff and simplification of rules and procedures
- Continuation of institutional strengthening with the assistance of DANIDA, together with the implementation of a substantial HRD programme.

National Property Division

The Division of National Properties(DNP) is responsible for the maintenance of all important government buildings as well as all government quarters and offices other than institutional complexes such as hospitals and schools. In many cases, particularly with the older, important state buildings, maintenance involves reconstruction. An important constraint to date has been the absence of adequate storage for building materials so that procurement has perforce been on a piecemeal basis.

The Division is also responsible for the collection and auctioning of plants, equipment and furniture which are no longer required or are unserviceable, and for the issue on hire of items required for ceremonial occasions.

During 8FYP consideration will be given to the privatisation of DNP, but either way the following will be undertaken:

- An Engineering Store will be constructed.
- Equipment and facilities will be up-dated where necessary.
- Special attention will be given to the maintenance of real estate in particular routine maintenance of government quarters for sustaining the value of the national property.

Ministry of Home Affairs

The broad functions of the Ministry of Home Affairs relate to: Dzongkhag administration; law and order; registration of citizens; census, monitoring and regulation of immigration; control of narcotics, psychotropic substances and explosives; regulation of labour and wages; land records, survey and maps; and promotion of people's participation. In order to carry out these functions the ministry has five divisions: Home Secretariat, Planning and Coordination, Law and Order, Registration, and Survey of Bhutan.

Home Secretariat

Strengthening Dzongkhag Administration

The Secretariat of the Ministry of Home Affairs is responsible for strengthening the administration in each of the 20 Dzongkhags and 196 Gewogs throughout the country. It is directly responsible for the posting, promotion and transfer of administrative personnel and for coordinating their training. It also liaises with other government agencies regarding the deployment of other categories of personnel in the Dzongkhags.

Support to peoples participation in socio-economic development is addressed primarily through the DYT's and GYT's, which are now fully responsible for the mobilization and deployment of shapto-lemi for community based schemes. The Secretariat is also responsible for development of the National Work Force which offers employment to nationals as well as providing essential manpower to different government agencies. In addition, it liaises with the Special Commission for Cultural Affairs, of which the Home Minister is Chairman, in regard to the maintenance and preservation of the cultural and traditional heritage, and administers two specific programmes, *Migsel lemi* and *Zorig Chusume*, concerned with the restoration of buildings of cultural and religious importance.

The Division also has a section which coordinates the implementation of the civil construction programme with Dzongkhags and line ministries. It provides support to DYT's and GYT's by organizing capacity building programmes and Disaster Mitigation issues, although other institutional measures for this will be explored in 8 FYP.

The Ministry will also execute the following programmes;

- Renovation of Trongsa Dzong,
- Renovation of Punakha Dzong,
- Architectural and structural study of Dzongs; and
- Fire Fighting Services in all major Dzongkhags.

Law and Order Division

This Division implements the Ministry's mandate for the internal maintenance of law and order, and is responsible for control of the consumption of and trafficking in narcotic substances, the use of explosives, public welfare and emergency relief measures.

Registration Division

Responsibility for the conduct of the demographic census and for maintenance of computerised census data lies with the Registration Division, as well as the issue of multi-purpose and resident identity cards. It is also responsible for the control of immigration and for encouraging the optimal utilization of available national manpower.

During 8FYP, the basic activities outlined above will continue with programmes addressed to activities where specific strengthening is needed.

- An HRD programme will provide training not only for Dzongkhag administrations, DYT's and GYT's, but also to strengthen the Home Secretariat. Workshops will also be organized for the training of census and immigration staff.
- While continuing support for people's participation generally and through Shaptolemi, the Ministry will encourage greater use of the National Work Force in order to reduce dependence on imported labour.
- Following the Punakha Flash Flood during 7 FYP, consideration will be given to the formation in 8 FYP of a National Committee to take overall charge of disaster retention and mitigation measures together with an Emergency Relief Fund.

Survey of Bhutan

This Division's responsibilities include geodetic control, topographical, photogrammetric, cadastral and project surveys, as well as cartography, reproduction and printing and the maintenance of land records.

The Survey of Bhutan will continue to pursue the objectives listed in the 7 FYP, during the 8 FYP which are as follows:

- The existing geodetic control network will be densified by GPS for Zone I & II. Heights for highways by precision levelling will be provided for district and feeder roads. The magnetic observations for ten toposheets and gravimetric observations along Sarpang - Wangduephodrang and Chhuzom - Haa will be done.
- Ten topographical sheets in the scale of 1:50,000 will be revised during the 8 FYP out of the 81 toposheets for the country. A standard base map for development planning in the scale of 1:25,000 will be prepared for Thimphu after the original survey. The boundaries of six Dzongkhags and eight Gewogs will be verified and resolved in the 8 FYP. Standardization of geographical names as per the committee for Transliteration and Standardization shall be carried out. In addition the Division will also complete the work on network for cadastral mapping and project surveys as per indentures.
- This technique will be used for updating of ten toposheets and four sheets of original survey. Verification and compilation of thram will be carried out for sixteen Dzongkhags and revision of cadastral maps for the land ownership through Royal Kasho will be transacted and indentures will be updated.
- All pending transaction cases will be updated during the first year of the 8 FYP and archiving of land records will be improved through microfilming and lamination of old records.

- Database computerization of twelve Dzongkhags will be carried out. Nine of the Dzongkhag will be linked with the central Land Record Database through telecommunication links.
- The main activity of this Division will be to prepare fair drawings of the verified sheets and the original survey, computer aided drafting, and the preparation, reproduction and printing of wall map of Bhutan.
- Through Project Surveys carried out on a commercial basis, the Survey of Bhutan hopes to reduce wasteful demands on surveyors from indenting organizations, make surveyors more professional and productive, and survey activities more cost effective.

Ministry of Planning

The Ministry of Planning is the central government agency responsible for coordinating the planning and management of all development programmes. Internally, the ministry consists of three divisions, the Planning Secretariat, the Central Statistical Organization (CSO) and the Computer Support Centre (CSC). Functionally, the ministry is linked to all the Policy and Planning Divisions (PPDs) in the ministries, and to the Dzongkhags (for development matters) in particular the Planning Officers, who act as extended units of the Ministry of Planning.

The ministry suffers from a severe shortage of trained and experienced manpower. This applies to both the Secretariat and the CSO, and accounts, inter alia, for the lack of an adequate and comprehensive data base, as well as to the Dzongkhags for which adequately trained Planning Officers are not yet available in most cases. This has constrained the development of an effective system of monitoring and evaluation of plan implementation.

The Planning Secretariat

The Secretariat includes four smaller divisions and two project related sections:

- Administration and Finance,
- Macroeconomic Planning,
- Programme Monitoring and Evaluation,
- Strategic Information,
- two project related sections are;
 - a) Sustainable Development Cooperation Secretariat,
 - b) Efficiency in Government Project Office.

During 8 FYP, the ministry's primary objective will be the successful implementation of the 8 FYP, one element of which will be the improvement of development coordination. In addition, it will aim to carry out essential macroeconomic policy research and analysis, strengthen the planning and monitoring capacity of the Secretariat and Dzongkhags, and improve the database for social and economic development.

In coordination with sectoral ministries and executive agencies, the Secretariat will monitor implementation through Quarterly Progress Reports, selected programme/project reviews and Dzongkhag meetings. Visits to project sites will also be undertaken. The impact of major policies and programmes will be assessed as a basis for periodic review. Every effort will be made through HRD, to reduce current manpower constraints in the Secretariat, in Dzongkhags and in the CSO. The latter is essential if the data base is to be improved.

Central Statistical Organization

The CSO, initially established as a statistical cell in 1971, now has the primary responsibility for meeting the data requirements of the various user-ministries and sectoral agencies, as well as of the international organizations to which Bhutan contributes statistics. It operates through six Sectoral Units covering:

- National Accounts Statistics;
- Agricultural Statistics;
- Foreign Trade Statistics;
- Consumer price Index;
- Demographic and Social Statistics;
- Sample Survey and Data Processing

The CSO has virtually no professionally qualified statistical staff, and the existing computers need to be upgraded. The raw data and information needed for the compilation of regular annual statistical reports from both government sectoral agencies and private bodies, is frequently delayed, and inadequate liaison with the CSO by other agencies conducting surveys sometimes results in duplication or the publication of conflicting figures. The lack of adequate budgetary provision for the CSO as such and for specific surveys is also a cause of delay. There is also a need for statistical legislation.

The principal objective during 8 FYP will be to strengthen the CSO and produce more reliable and up-to-date statistically sound data, including three major surveys, the Agronomic Survey in 1997/98, Industrial Survey in 1999/2000 and a Demographic Survey in 2001/02. Strengthening the CSO will necessitate an ambitious and long-overdue HRD programme, for which details were prepared towards the end of 7 FYP, and the upgrading of computers. Efforts will also be made to ensure that adequate training is given to selected personnel at Dzongkhag level in handling data.

Computer Support Centre

Computerisation started in 1984 with UNDP assistance; since then almost all government, and many private sector, organizations are using computers. By the end of 7 FYP more than twenty local area networks and several E-mail systems had been introduced. Since its inception, the Computer Centre has provided software support and hardware repair and maintenance for all government agencies, until 1993, free of charge. Since then, nominal charges have been introduced, and during 8 FYP, bearing in mind that private sector firms are beginning to offer

such services, the Computer Support Centre will either be converted into a government owned corporation to operate on commercial lines, or will be fully privatised.

National Environment Commission

The National Environment Commission is a national policy making body and regulatory agency commissioned to preserve and sustain the country's natural resources. The commission is a high level, cross sectoral body of senior ministers and officers under the chairmanship of the Minister of Planning. It comprises the following members:

Minister, Planning Commission,	Chairman
Minister of Home Affairs	Member
Minister of Trade and Industry	Member
Deputy Minister for Environment,	Member Secretary
Secretary, Ministry of Agriculture	Member
Joint Secretary, Forest Services Division	Member

The Commission's long term objective is to ensure that the sustainability of natural resources will be fully integrated into every aspect of Bhutan's social and economic development, and its membership ensures that it is able to call for the assistance it needs from other government bodies. The Commission also monitors the impact of development on the environment and aims to put in place the necessary controls, regulations and incentives to the private/public sectors to achieve sustainable development through the judicious use of natural resources. The coordination of cross-sectoral programmes, the implementation of policies and legislation is also another important mandate of the Commission.

Objectives for 8 FYP

- serve as environmental adviser to the government on matters related to sustainable development.
- formulate a national environmental strategy, which will serve as a planning document for the country.
- institutionalise environmental impact assessments.
- enhance the sustainable use of natural resources in Bhutan.
- maintain the biological diversity of Bhutan governing the quality and productivity of plant and animal production, as well as the rich diversity of wild species and eco-systems.
- maintain essential ecological processes and life support systems (soil regeneration and protection, nutrient recycling, water regimes etc.)

During 8FYP the Commission will aim to: strengthen the overall management of the Secretariat; develop the technical capacities of institutions working in the environment sector, and develop professional capabilities in environmental law, environment impact assessment, environmental economics and environmental engineering.

Royal Civil Service Commission

The Department of Manpower established in 1973, was renamed as the Royal Civil Service Commission (RCSC) and established under a Royal Decree in June, 1992, as the RGOB's coordinating agency for planning and implementation of all human resource development and management activities. The Commission consists of fourteen members appointed by the Government, the chairmanship being rotated among Cabinet Ministers every six months. The Commission is assisted by a Secretariat in the implementation of its policies, rules and regulations.

The broad objectives of the Commission are:

- To formulate and review personnel policies for the Civil Service aimed at achieving efficiency and devotion to duty;
- To formulate, review and ensure implementation of Civil Service Rules and Regulations;
- To implement a rational system of administration for the recruitment, appointment, transfer, promotion, discipline, conduct and separation of civil servants;
- To motivate and promote morale, loyalty and integrity among civil servants;
- Measure the productivity of the organizations/institutions as well as the individual civil servants in the civil service;
- Continue to execute the HRD programmes; and
- Develop better employment exchange system, giving the job seekers (both educated and seasonal migrant workers from the farms) regular information on the availability of jobs.

The RGOB policy has consistently stressed the objective of maintaining a small, compact and efficient civil service. However, school leavers are expected to double between 1995 and 2000, thus creating increased demand for employment, advanced education and training, which for the first time may be beyond the capacity of in-country training institutions and funds for external training. It is expected that demands for employment will exceed the needs of the public sector, and a major focus during 8FYP will therefore be in the private sector, where necessary environment has to be created for generating meaningful employment. While, continuing to address the shortages of skilled personnel within the public service, the HRD programme for 8 FYP will direct more attention to manpower planning for the economy as a whole. The 8FYP HRD programme is also set in the context of a longer-term vision to the year 2017, as the macro-economic perspective of the plan.

Royal Institute of Management

The Royal Institute of Management (RIM) is the only institution which provides training in management, public administration, Bhutan's judicial system, computer appreciation/operation/programming, accounting and auditing, and secretarial services, as well as the training of customs and tax inspectors. Its programmes include both pre-service and in-service training courses for national public service personnel, thus providing for improved efficiency as well as reducing the dependence on expatriates.

RIM also undertakes a small number of research and consultancy programmes, and the Library Resource and Documentation Centre (LRDP), is set up to support RIM's training and research activities and to provide service to civil servants and the public. RIM was upgraded as an autonomous institute in 1990, under a Board of Directors and the scope of its activities was substantially increased during 7FYP. By the middle of 1996, it was able to move into its new complex at Simtokha.

During 8FYP, in addition to its existing training courses, amended where necessary in the light of a strategic planning exercise undertaken during 1996, RIM will launch four new courses, viz. a Diploma in Business Management, specifically geared to the needs of the private sector, diploma courses in Finance, Computer science and in-service Management training for middle and senior level public and private sector managers. Its research and consultancy programme and its library services will be expanded. To support the further expansion of its activities, RIM's staffing will be strengthened and a substantial HRD programme undertaken to improve the quality of the faculty.

Royal Monetary Authority

The Royal Monetary Authority (RMA), which is the de facto Central Bank, is an autonomous government body which is responsible for the conduct of monetary policy, as well as management of the country's reserves and for supervision of the banks and other financial institutions. The RMA has the sole right to issue currency notes and coins in Bhutan, and provides free facility for the exchange of domestic currency for the general public to ensure good condition of the currency notes in circulation.

RMA's fiscal and monetary policies during 8 FYP will include the maintenance of price stability by maintaining an established exchange rate link with the Indian Rupee, and by effectively controlling the money supply. During 7 FYP, the RMA laid the groundwork for proper monetary management by the introduction of instruments such as the RMA Discount Bills and Treasury Bonds. During the 8FYP these and other instruments will be used to control excess liquidity. With regard to credit policy, the deregulation of interest rates will be one of the principal objectives in the 8 FYP. The implementation of the provisions of the Financial Institutions Act (1992) will also be completed in 8 FYP, while the conversion of the Unit Trust of Bhutan to form a second commercial bank will be completed by the end of 7FYP. (The policies and strategies of the RMA during 8FYP are more fully outlined in Chapter 5, Fiscal and Monetary Policies)

Specific infrastructural developments during 8 FYP will include:

- Construction of a new Head Office Complex;
- Opening of a Branch Office at Phuentsholing;
- Automation of note sorting;
- Continuation of the RMA's HRD programme.

Dzongkha Development Commission

The Dzongkha Development Commission (DDC) is an autonomous government body established under Royal Command in 1986, its members are appointed by the Government, to advance the national language and coordinate all linguistic matters. For the purpose of carrying out the functions of the Commission it is served by a Secretariat consisting of three Divisions: Planning, Research and Human Resource Development Division; Dzongkha Promotion and Development Division; and Administration and Finance Division.

Planning, Research and Human Resource Development

This includes research into Dzongkha linguistics, development of computer programmes in Dzongkha, and the conduct of Dzongkha training programmes and courses for government staff, comprising Secretarial, Accounting; Computer, Audio-visual and general Dzongkha language skills.

Dzongkha Promotion and Development

The main activities of this Division are the writing of all school curricula activities in Dzongkha, the preparation of Teachers Manuals, revision of textbooks in Dzongkha, training of Dzongkha teachers, the writing of dictionaries and the translation of Acts, Rules and Regulations as well as of textbooks from both Choekey and English into Dzongkha.

Although Dzongkha has been accepted in principle as the medium of official correspondence since the start of Development process, it has not been as widely used as intended, largely due to the lack of resources to facilitate its adoption. Nevertheless, considerable progress was made during 7FYP by the Commission in the above activities to promote the use of Dzongkha, including the preparation of Primary Braille books in Dzongkha for blind schools, and the training of some 140 Dzongkha language teachers in the methodology of Dzongkha teaching.

The main objectives of the DDC for 8 FYP are a continuation and advancement of the work referred to above. This will include development of curricula material from secondary to degree level, writing of Moral Science and Value Education materials, and finalization of the Financial Manual and Civil Service Rules in Dzongkha. HRD will be given priority because of the lack of specialists in areas of importance such as writing textbooks, developing computer systems for Dzongkha or conducting research into the various local languages of Bhutan.

Table 31.1 Financial requirement for the 8FYP

	Nu. in millions					
Sectors	1997/98	1998/99	1999/200	2000/01	2001/02	FYP

Total	245.33	246.33	246.33	246.33	246.33	1230.7
Ministry of Planning						
Recurrent	9.201	10.241	11.000	12.001	13.031	55.474
Capital	49.657	21.132	21.132	19.565	0.000	111.486
Total	58.858	31.373	32.132	31.566	13.031	166.96
National Environment Commission						
Recurrent	1.05	1.05	1.05	1.05	1.05	5.25
Capital	21.07	21.07	21.07	21.07	21.07	105.35
Total	22.12	22.12	22.12	22.12	22.12	110.6
Royal Civil Service Commission						
Recurrent	6.10	6.37	7.48	8.684	12.164	40.798
Capital	420.000	420.000	420.000	420.000	420.000	2100
Total	426.1	426.37	427.48	428.684	432.164	2140.8
Royal Institute of Management						
Recurrent	8.082	9.082	10.082	11.082	12.082	50.41
Capital	49.71	49.71	49.71	49.71	49.71	248.55
Total	57.792	58.792	59.792	60.792	61.792	298.96
Royal Monetary Authority						
Recurrent	7.000	7.500	8.300	9.100	9.800	41.70
Capital	21.500	9.500	0.500	0.500	0.500	32.50
Total	28.50	17.00	8.80	9.60	10.30	74.20
Dzongkha Development Commission						
Recurrent	3.120	2.218	2.444	3.068	3.150	14

Capital	1.570	0.910	0.710	0.670	0.620	4.48
Total	4.69	3.128	3.154	3.738	3.77	18.48
Grand Total	2361.7	2279.4	2270.2	2269	2266	11446

Table 31.2 Manpower requirement for the 8FYP

Sectors	1997/98	1998/99	1999/2000	2000/01	2001/02	FYP Total
Judiciary	29	30	29	28	28	273.68
Royal Audit Authority	22	22	11	7	1	178.94
Bhutan Olympic Committee						93.504
Ministry of Foreign Affairs	5	3	1	2	1	919.83
Ministry of Finance						3027.7
Ministry of Home Affairs						238.87
Ministry of Planning	3	3	4	3	4	167.03
National Environment Commission	1	1	1	1	1	105.95
Royal Civil Service Commission	2	-	-	-	-	2138.4
Royal Institute of Management	25	10	8	8	3	50.41
Royal Monetary Authority	0	0	0	0	0	0
Dzongkha Development Commission	2	1				18.48
Grand Total	1671.6	1350.4	1339.7	1422.7	1428.3	7212.8

CHAPTER 32. PUBLIC CORPORATIONS

Bhutan Broadcasting Service

Previously a part of the Department of Information and Broadcasting, the Bhutan Broadcasting Service (BBS) was established in 1991. It currently consists of two Divisions: Management and Logistics and Technical. It is intended to establish a Library and Information Division as soon as qualified staff is available. The overall objectives of the BBS are derived from the universal goals of broadcasting, namely to entertain, inform and educate. Its responsibilities are particularly significant given the geographical inaccessibility of much of Bhutan, and the diversity of languages and literary issues. It is the only media in the country that uses the four major spoken languages.

Objectives for 8FYP

- Provide news and current international affairs in an objective manner;
- Provide a forum for participatory programmes on national development issues;
- Strengthen national cohesion through the communication of shared aspirations and perceptions, while respecting local characteristics;
- Improve the quality and reliability of services by establishing a relevant source of information; and
- Strengthen its capacity through an appropriate HRD programme.

Kuensel Corporation

Kuensel, published weekly, is the only national newspaper circulating in Bhutan. Published by the Kuensel Corporation in the three languages - Dzongkha, English and Nepali - it provides local news and comment, as well as items of international interest, and makes a significant contribution to education in an environment where reading material available to the majority of the population is limited.

In January 1993, the Corporation was de-linked from government and established as an autonomous organization, and subsequently registered under the Company's Act. In the past four years its total dependence on government subsidy has been reduced to 22 percent, and during 8FYP the Corporation will take further steps to achieve full autonomy.

A DANIDA-assisted project to upgrade Kuensel's printing division was signed in 1996 and by the end of 1997 it is expected that the new printing system will be running and Kuensel will be financially self-reliant on a sustainable basis. In the wider context, the corporation will also be able to meet most of the country's printing needs, including high quality colour printing.

The Kuensel newspaper will continue to be published in the three languages, but with an increasing circulation. The paper, which was expanded from 12 to 16 pages in Dzongkha and English and 8 to 12 pages in Nepali, in 1996, will be further increased to 20 or 24 pages within the 8FYP. An increase in the frequency of publication will also be considered, depending upon improvement in transport around the country. A significant development will be the expansion

of national news coverage with the appointment of correspondents in major centres around the country.

State Trading Corporation of Bhutan (STCB)

The STCB was originally established in 1969 as a government department to trade in essential commodities, the majority of which were controlled, quota or canalized items imported from India and had to be channelled through a government agency. As Bhutan's private sector was very undeveloped, the STCB was also called upon to purchase goods in bulk for public use.

In 1984, the STCB became an autonomous body and from then until 1990, in line with the Trade Treaty with the Government of India, was the only agency in Bhutan authorized to deal in imports and exports. Apart from developing trade with India it pioneered the establishment of formal trade with Bangladesh, including the export of horticultural produce, timber and mineral based products. From mid-1991, STCB's market share of both imports and exports dropped, as with the liberalization of the Indian economy, many items became decontrolled, thus allowing direct purchase, and with the privatisation of exports and imports, local Bhutanese businesses entered the market on their own.

In January, 1996, the STCB was formally incorporated under the Companies Act, and arrangements made for the divestment of 49% of the shares for sale to the public. The present structure of the Corporation comprises three divisions: Auto Division, importing and dealing in vehicles and spare parts; General Division dealing in construction materials, fertilizer, bitumen, explosives etc., and Office Equipment and Automation Division. In respect of the import and distribution of almost all these commodities, the STCB faces strong competition from other private sector businesses, and in some case from direct purchasing by government agencies.

Food Corporation of Bhutan

After a decade of operating as a department under the Ministry of Agriculture, the Food Corporation of Bhutan (FCB) was established as an autonomous corporation, on a self-sustaining basis, in 1992 under a Board of Directors, with the Head of the Ministry of Agriculture as chairman. Its functions fall under two categories; commercial and service oriented activities.

Commercial activities

Food Grain Trading

- Import of rice, wheat, sugar etc. from India, and edible oil from Malaysia. For this activity the FCB owns and operates a chain of 22 food stores throughout the kingdom. These commodities are available to the public through 59 Fair Price shops appointed as agents by FCB.

Sales to WFP

- This purchase and resale to WFP stimulates production and consumption of surplus local produce and also earns foreign exchange for the national exchequer. For 8FYP the FCB is expected to handle over 26,000 MT of WFP commodities.

Service oriented activities

Cash crop marketing

- The FCB operates permanent auction yards situated in Samdrup Jonkhar, Gelephu, Phuntsholing and Samtse, the majority of produce being sold for export.

Food reserve storage

- The FCB maintains the National and SAARC Food Security Reserves.

WFP operations

- The FCB acts as the managing agent for all WFP commodities, distributing food aid to 145 schools, 27 Health Centres and 13 road sites.

Objectives and Programmes for 8 FYP

The FCB is essentially a trading and service agency. The Ministry of Agriculture, through the Marketing Section of its Policy and Planning Division, which was established towards the end of 7FYP, is responsible for agricultural marketing policy and market studies, in consultation with the Ministry of Trade and Industry in regard to exports, and for coordinating the development of in-country market infrastructure for the benefit of producers and consumers. During 8 FYP, further growth is expected in cash crop production, particularly of horticultural produce, for both internal consumption and export, and the role of the FCB will need to be expanded, particularly with regard to packaging and quality control of export produce. Regular liaison will be maintained with the Ministry of Trade and Industry and the Ministry of Agriculture in regard to export market development to avoid duplication while ensuring that the potential of the FCB is appropriately utilized.

Table 32.1 Financial and Manpower Requirement

	Nu. in millions					
	1997/98	1998/1999	1999/2000	2000/2001	2001/2002	FYP Total
Capital						
Recurrent						
-Existing						
-Project Related						
Total Cost						
Manpower						
TA						

GLOSSARY

Ashi	Title for ladies of nobility and aristocracy
Chatrim	Rule and regulations
Chhu	River\Water
Chimi	Member of National Assembly
Chipon	Village functionary
Choekey	Language of Religion/Classical language
Chhosi	Dual system of government(Je and Desid)
Debri	Wall painting
Druk Desid	Temporal head
Do Zow	Mason
Driglam Namzha/	
Driglam Chhoesum	Code of etiquette
Drubdras	Meditation Centres
Dasho	Title conferred by HM the King with red scarf and ceremonial sword
Dzongda	District Administrator
Dzongrab	Deputy District Administrator
Dzongsel Woola	A form of labour tax for maintenance of dzongs
Dzongkha	National language
Dzongkhag	District
Dungpa	Head of a sub-district
Dungkhag	Sub-district formed by a few gewogs
Druk Gyalpo	HM the King of Bhutan
Dzong	Fort-monastery
Dratshang	An established monk body
DYT	District Development Committee
Gomchen	Lay Priest
Gelong	Ordained monk
Gakpa	Police
Gungda Woola	Labour tax based on household
Gup	Elected leader of the gewog
Goenpa	Monastery
Gewog	Block made up of several villages
Gyal yong lemi	National Work force
Je Khenpo	Chief Abbot of Bhutan
Ka-Nying Zung-drel	Harmonized tradition of Kgyue and Nyingma sect of Mahayana Buddhism
Kuensel	National Newspaper
Lhakhang	Temple
Lhenkhag	Ministry
Lhentshog	Commission
Lhengyal Shungtshog	Cabinet
Lopon	Teacher
Lyonpo	Minister

Laa	Mountain
Lam	Road
Lama	Priest
Mang Ap	Village elder (representative of a village or community to a body)
Rabdey	District monk body
Shunglam	Highway
Shing Zow	Carpenter
Sheydra	Buddhist College
Solzin Lhentshog	Commission for cultural affairs
Tshogpa	Committee member
Tshogdu	National Assembly
Thrimpon	District Magistrate
Thrimkhang	Court
Thrimshung Chenmo	Supreme Laws
Tsa-Wa-Sum	The Government, the Country and the King
Thrimpon Ramjam	Deputy Thrimpon
Zhapto Lemi	A form of labour tax (beneficiary contribution to a project)
Zhung	Government

ACRONYMS

A.I.	Artificial Insemination
AMC	Agriculture Machinery Centre, Paro
BOB	Bank of Bhutan
BTCL	Bhutan Tourism Corporation Limited
BHU	Basic Health Unit
BOC	Bhutan Olympic Committee
BOD	Bhutan Oil Distributors
BCCL	Bhutan Carbide and Chemical Ltd.
BCCI	Bhutan Chamber of Commerce and Industries
BHW	Basic Health Worker
BDFC	Bhutan Development Finance Corporation
BPPL	Bhutan Polythene Pipe Ltd.
BLC	Bhutan Logging Corporation
BBS	Bhutan Broadcasting Service
CLSD	Crop and Livestock Services Division
CSO	Central Statistical Organization
CSC	Computer Support Centre
CARD	Centre for Agricultural Research and Development
NBACD	National Budget and Aid Co-ordination Division
DYT	Dzongkhag Yargye Tshogchung
DAHO	Dzongkhag Animal Husbandry Officer
DAO	Dzongkhag Agriculture Officer
DOR	Division of Roads

DCP	Dungsum Cement Project
DWH	Division of Work and Housing
FSD	Forests Services Division
DTI	Division of Trade and Industries
DOP	Division of Power
FCB	Food Corporation of Bhutan
FSD	Forestry Services Division
GOI	Government of India
GYT	Gewog Yargye Tshogchung
MTI	Ministry of Trade and Industry
MOA	Ministry of Agriculture
NWAB	National Women's Association of Bhutan
NIE	National Institute of Education
NCS	Natural Conservation Section
NEC	National Environment Commission
NAPE	New Approach to Primary Education
NRTI	National Resource Training Institute
PCAL	Penden Cement Authority Limited
PPD	Policy and Planning Division
PHD	Public Health Division
RBA	Royal Bhutan Army
RBP	Royal Bhutan Police
RBG	Royal Body Guard
REID	Research, Extension and Irrigation Division
RIM	Royal Institute of Management
RCSC	Royal Civil Service Commission
RNR	Renewable natural resources
RNR-RC	Renewable natural resources-Research centre
RRCE	Rate of return on capital employed
RTI	Royal Technical Institute
RTM	Round Table Meeting
RICB	Royal Insurance Corporation of Bhutan.
RSPN	Royal Society for Protection of Nature
RMA	Royal Monetary Authority
RGOB	Royal Government of Bhutan
STCB	State Trading Corporation of Bhutan
UTB	Unit Trust of Bhutan
VVHW	Village Voluntary Health Worker