Chapter-7

INDIA’S ROLE IN THE DEVELOPMENT OF BHUTAN

I

Development: a political decision

Bhutan remained closed to the outside world till the late 1950s. The political
disturbances in Tibet, made it imperative for both India and Bhutan to strengthen the
ties that bound the two neighbours. Having opened itself, in order to keep pace with
the outside world she has accelerated the process of industrialization through
development planning, with more options in terms of choosing objectives, devising
strategies and arranging financing. India is helping her generously in this area.

Bhutan unhesitatingly acknowledges India’s whole hearted help for Bhutan’s
development and industrialization. The Trade Minister, Khandu Wangchuck in an
interview with me has upheld the view, since “India put no restrictions on trade barriers
and Indo-Bhutan trade is a free trade, so it has made easier for Bhutan to develop and
industrialize. Power and Cement industries were totally financed by India.” It was not
until Nehru’s visit to Bhutan in September 1958 with her daughter Indira that India-
Bhutan relationship was cemented. Because, “by temperament the Bhutanese was
suspicious of foreigners and preferred to deal with them at a distance”1. In the pre-
independence days, unlike India’s relationship with Sikkim, Bhutan had remained very
much aloof. The conduct of India’s relationship with Bhutan was the responsibility of
the Political Officer in Sikkim who maintained contact with the kingdom through the
Agent to the Bhutan government. His headquarter was situated at Kalimpong, in
Bengal. Rustomji, the Political Officer in Sikkim explained,

1. Nari Rustomji, Enchanted Frontiers: Sikkim, Bhutan and India’s North-Eastern Borderlands, (Calcutta,
OUP, 1973) p.159.
My impression is that while the Bhutan authorities would welcome aid for the implementation of their development projects, they are apprehensive of the implications and are reluctant to embark on any step that might have the effect of rendering them dependent on or under a sense of obligation to any external power. I made it clear to Jigmie (Doiji) that the Government of India have given Sikkim a completely free hand in the matter of administering the grant under Five-year Plan and that there cannot be grounds for criticism from any quarter that the grant is being used as a tool to effect any sort of control over the State or to influence its functioning, in any direction”.2

Rustomji pointed out, “There were few people at that time who were in a position to realise the tremendous significance of Nehru’s visit. ...It was a triumph and a tribute to Nehru’s prestige that, at a time when the Himalayan Kingdoms were apprehensive of any commitment that might involve them in the politics of the rival powers that hemmed them in on either side, Bhutan should have accorded him such a warmly and friendly welcome”.3

Development in Bhutan was primarily a political decision. The basic aim of Bhutanese politics was to ensure its status as an independent and sovereign country under the leadership of a hereditary monarchy. Both Bhutan and India shared a common perception of problems arising out of Chinese presence in the north. Bhutan realised that unless it opened up and pursued certain types of developments it would be difficult to achieve the aims of Bhutanese politics on a continuing basis and also to achieve security for the Indian territory. In the pre-1959 period, Bhutan was concerned more about what was happening in the north. It did not consider to respond to India’s suggestion. India at that time was more concerned than Bhutan in estimating the compulsions of geo-politics in this region. In the post-1959 period, Bhutan was more eager to establish links throughout the world to legitimise its aim in politics. India allowed Bhutan to develop as much links as necessary so that bigger powers than India

did not take advantage of the situation to the detriment of India's own interests. These points have important bearing on the working out of strategies of development for Bhutan.ª

A list of developmental and industrial projects that are in operation with India's help monetarily, by manpower, by technology and by personnel are as follows:

1. Road and Airport
2. Bhutan's Five Year Plans.
3. Hydel power projects.
4. Industries
5. Animal husbandry.
6. Telecommunications when the direct dialing service to India was introduced. (ISD)

In this chapter I intend to concentrate only on Roads and Airport, Five Year Plans and Industries for detailed discussion. The next chapter deals with hydel projects.

II

Roads

Before the plan period there was no vehicular traffic, nor any motorable road to Bhutan. From India one had to approach Bhutan through Sikkim via Nathula Pass touching Yatung in Tibet on the way. Travel was done by foot, horse, yak. There were foot tracks leading to Bhutan through the several Dooars but they were used sparingly

because of difficult terrain. In 1959 India offered to build Bhutan's first motorable road from Phuntsoling near the Indian border to the country's capital Thimpu, a distance of some 175 km.\(^5\)

The approach roads from West Bengal and Assam to Bhutan are entirely financed by the Government of India. The road from West Bengal to Bhutan is called Jainti-Sinchula road. It is estimated to cost rupees fifty lakhs. The road from Assam to Bhutan border, called as Garubhasa-Hatisar road is estimated to cost rupees twenty five lakhs. According to the Parliamentary Secretary to the Minister of External Affairs, J. N. Hazarika, these roads were constructed by the Public Works Department of the respective state governments and the entire cost was met by the Government of India. These roads were completed during India's Third Five Year Plan period. The Prime Minister and the External Affairs Minister Jawaharlal Nehru said, that there was no agreement between the two countries regarding the construction of these roads. But it was a matter that had been under discussion for a long time. It was referred to in the course of the talks between the Indian Prime Minister and Bhutan Prime Minister when the former visited Bhutan. Prime Minister Nehru further informed, "The Bhutan government and the Maharaja expressed their eagerness to have such a road built as soon as possible. It is a difficult road, of course. We are taking steps to build it on our side and it may be that on the other side of the border, it will be taken up too. It was the suggestion to take it up in the Third Plan, but probably it will begin earlier".\(^6\)

Nehru assured that India had undertaken a "programme of road building in Bhutan, roads from India to Bhutan and within Bhutan and we are helping them in building those roads".\(^7\)

Bhutan government included the construction of 800 miles motorable road and the two approach roads linking India with Bhutan in its First Five Year Plan. The first


\(^{6}\) Lok Sabha Debates, Second Series, Oral Answer, 31, 5 May 1959, Question No. 2226. "West Bengal – Assam-Bhutan roads". The question was put to the Prime Minister by L. Achaw Singh, pp. 14912-13.

\(^{7}\) Lok Sabha Debates, Second Series, Oral Answer, 31, 28 August 1959, Question No. 5, "Chinese Propaganda about Bhutan and Sikkim". The question was put to the Prime Minister by Sri Ram Subhag Singh and Sri Raghubir Sahai, pp. 4800-04.
link road, the Phuntsoling-Paro Road was completed in the First Plan period (1961-66). The other link road in this period was surveyed. Under the Third Five Year Plan of Bhutan financial aid was given by the government of India to renovate the old route connecting the district of Jalpaiguri, West Bengal with Bhutan. The road passed through the Chamurchi Tea Estate of Jalpaiguri. It was suitable for vehicular traffic. The Government of West Bengal in whose jurisdiction the road lay constructed a permanent bridge suitable for vehicular traffic across the river Daina near Chengmari. The Prime Minister of India further said that some principal roads were constructed between Bhutan and India on the Bengal side and Assam side since they were the main arteries of traffic.

China claimed that Bhutan and Sikkim were part of China and installed troops along the 500 mile border of Bhutan and Tibet. It closed the traditional route to Bhutan which passed through a portion of Tibet. India improved the other routes to Bhutan from India even though they were longer and more difficult routes. Prime Minister and Minister of External Affairs, Nehru conveyed this to Parliament on 28 August 1959 when the oral question was put to him by Ram Subhag Singh. However the Prime Minister avoided to say anything about the footpaths and bridle paths connecting Jalpaiguri and Bhutan though Jalpaiguri is just on the border of Bhutan and there is good volume of business between Jalpaiguri and Bhutan.

Government of India had also loaned the services of an Executive Engineer of CPWD, Gangtok to Bhutan who was assigned to build 5 roads in Bhutan.

Nehru informed the 13th Lok Sabha Session that India proposed to construct 5 link roads in Bhutan with an estimated cost of Rs. 15 crores as aid to Bhutan. The allocation


of Rs. 15 crores in 1959 was merged with Bhutan's five year and India's ten year programme. The roads were (1) Jaigon to Paro (2) Darranga to Tashigang (3) Sarbhang to Wangdiphodrang (4) Hthisar to Tongsa (5) Thimphu to Tashigang.

The opening in June 1961 of Bhutan's first motor road, the 120 mile highway from Phuntsoling on the India-Bhutan border to Paro, was an event of great significance. It opened the door to the Himalayan Kingdom. Until 1960 Bhutan was linked with India by a few narrow foot-and-mule paths which were very difficult and hazardous. The Border Road Development Organization, an unit of Indian Civil and Military Engineers with a work force of nearly 4000 labourers had laboriously cleared the dense forests and laid roads across the high ranges. With the completion of these roads heavy vehicles can reach Punakha in central Bhutan. About 400 miles of roads were constructed during the Bhutan's First Five Year Plan period. Altogether four main roads were constructed from the Indo-Bhutan border to different places in central Bhutan. These are : (1) Phuntsoling – Paro road, extended upto Thimphu and north of Wangdiphodrang on the Sarbhang-Punakha road. (2) Sarbhang-Punakha road, (3) Gaylegphug – Tongsa road (4) Samdrup Jongkhar (Darranga) - Tashigong road.

The Phuntsoling-Paro road extended to Thimphu is a marvel of road engineering zigzagging through high Himalayas at a height of 8000 ft. at many places. Many roads were constructed during the Second, Third, Fourth plan period. Internal roads were also constructed in the township of Sarbhang, Gaylegphug, Phuntsoling, Paro, Samchi etc. A 300 mile east-west lateral road was constructed between Ha (west) and Tashigang (east) bringing about greater integration between the western and eastern region of Bhutan and facilitating their economic development too. It runs across the high ranges of the Black Mountains via the 11,055 ft. Pela Pass to link Tashigang in the east and Ha in the west. The Indo-Bhutan Highway connecting north with south passes through important places like Tashigang, Byakar, Tongsa, Wangdiphodrang.


More than 1,770 kms of motorable roads, most of which are surfaced, connect different parts of Bhutan. Surfaced roads also link the main towns of Bhutan with West Bengal and Assam. About 30 miles of the eastern highway from Darrang, in Assam, to Tashigang had also been completed.\textsuperscript{14} The remote valley of Bhumthang in central Bhutan has been opened up to vehicular traffic. Feeder roads have been built opening up densely populated and agriculturally rich areas.\textsuperscript{15}

By the end of 1975, major roads with a total length of 11,550 kilometer had been constructed linking India to Thimphu, Paro in west Bhutan, Shomgang and Tongsa in central Bhutan and Tashigang in east.\textsuperscript{16} Shortage of road transport indeed could hold up Bhutan's development. However construction of roads had resulted in the opening up of the interior areas and helping considerably the expansion of industry and trade. The emphasis on development of roads is an indication of reshaping of the people's attitudes towards their neighbour as well as a recognition of the impracticability of continuing isolation in a world where communications everywhere are developing so fast that distance no longer forms a barrier. Ancient methods of transport, though still prevalent to a considerable extent, are giving way to modern means of transport wherever roads are built. With India's assistance Bhutan's road transport service was organised for the first time in 1965. It now runs passenger and freight services on all the routes which have been constructed on a regular schedule. Major highways completed upto 1990 are mentioned below.\textsuperscript{17}

\begin{table}[h]
\centering
\begin{tabular}{|l|c|}
\hline
Sector & Length in km. \\
\hline
Simthokha - Wangdi & 66 \\
Wangdi - Tongsa & 129 \\
Tongsa - Jakar & 68 \\
\hline
\end{tabular}
\caption{Table 1}
\end{table}

\textsuperscript{14} The Times of India, 15 September 1961.
### III

#### Air transport

The Government of India assisted Bhutan in the airport development. Bhutan's first airfield was constructed at Paro. A five member delegation from the National Airport Authority (NAA) of India led by Air Commodore (retired) Amritalingam arrived in Bhutan in November 1989. They wanted “to further cooperation between India and Bhutan in the field of civil aviation with particular reference to the construction of Paro airport runway, the hangar in Paro and the future operations of Paro airport”. The Paro airfield runway was further extended by 1400 metres and the construction of

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another airfield at Yongphulle in eastern Bhutan was completed. In the first week of August 1990 the new hangar and extended runway at Paro were formally declared open by the visiting Indian Minister for Energy and Civil Aviation, Arif Mohammad Khan. In a special message, the King informed, “The Paro Airport is one of the many important projects that have been made possible because of the unfailing support and generous technical and financial assistance provided by the Government of India”. A Memorandum of Understanding was later signed with the Government of India finalising the bi-weekly flights from Paro – Calcutta – Bangkok and Paro - Kathmandu - Delhi. A weekly air service between Hashimara in West Bengal and Paro in western Bhutan started functioning from December 1968. The service was operated by M/s. Jamair Company Private Limited, Calcutta. The airport at Yongphulle, near Tashigang was scheduled to serve the eastern part of the country. Constructed in the beginning of 1960, it had since then fallen into disuse. All important towns have helipads for the use of helicopters. Helicopter flights between Paro, Thimphu, and Hashimara are very common. During his stay in Bhutan for three days in June 1981 the External Affairs Minister, P.V Narasimha Rao expressed, “this autumn we hope to see Druk Air Corporation commence its operation between Paro and Calcutta. The agreement for collaboration by Indian Airline in setting up the Bhutan owned air service, Druk Air, which operates between Paro and Calcutta is another instance of close economic links between the two countries.

The Druk air service was inaugurated in February 1983 with a single aircraft. A second aircraft was commissioned in September 1983. The aircrafts are Dornier, bought from Germany. Bhutan had signed a big commercial loan to buy new Druk aircraft. The loan was signed in London on 7 September 1988. The loan of $ 22.65 million is taken from a consortium of bankers led by the Standard Chartered Merchant Bank of London. The total cost of the project is about US $ 30 million. The new aircraft, a

19. Indian Express, 14 June, 1977
21. Ibid, p. 2
BAe-146 was purchased in October 1988 to supplement the two existing Dornier aircraft. Druk-Air connects airports at Delhi, Calcutta, Bangkok, Dhaka, Kathmandu.25

IV

Planning in Bhutan

Nation building without economic development is unthinkable in any country in the modern world. The obstacles to developments are as follows: (1) Traditional education system failed to produce enough technicians and skilled labourers, especially for modern industries. (2) Railways as a means of communication was highly and improbable, in the mountainous regions. Due to the lack of roads, the landlocked country was virtually isolated from the rest of the world. (3) Arable land was confined only to mountain valleys and rivers. A major part of the forest was inaccessible and unexplored. Other natural resources were also not plenty and that too unexploited. (4) "The people were so attached to their culture and political independence that they were in no mood to face chances of bartering them away for material gains in the form of industrialization, modernization and economic development. The authorities of Bhutan knew fully well that without foreign aid economic development could not be initiated there in the existing state of their economy."26

According to V. H. Coelho, the idea of planned economic development of Bhutan was conceived in 1958 when Jawaharlal Nehru visited that country.27 Bhutan could not shed its suspicion about China’s motives which was clearly manifest in the


annexation of Tibet in 1959. Consequently Bhutan showed little interest whenever China made offers of economic aid to it".28

The Bhutanese leaders had become aware that the kingdom could not continue indefinitely in isolation. Schools and hospitals were increased in Bhutan’s border in the contiguous hill areas of India’s North-East Frontier Agency now known as Arunachal Pradesh. On its western border, Sikim had already launched its plan for economic development with Indian aid since 1952. A network of road communication was spread out in Sikkim to provide the infrastructure for multiple educational and health projects, bridges, power stations even in its remotest areas. All these did not go unnoticed by the Bhutanese. Bhutanese traders were passing almost every day through Sikkim driving their heavily laden mules across the 14000 ft. Nathula Pass to Gangtok and then onward to Kalimpong. High level Bhutanese officials and non-officials gradually began to realise the inevitability of change in their own country. Bhutan’s Prime Minister, Jigmie Dorji felt the danger in “freezing” the status quo.29

Dorji was convinced of the need of the development programme but was aware of the powerful elements in Bhutan who would finally resist any suggestion to change the old order. For support and advice he utilised the service of Nari Rustomji, who later became Adviser to the King of Bhutan.30 Both Dorji and Rustomji persuaded the King to adopt an extensive programme of road development. Batches of Bhutanese students were sent abroad for specialised courses so that they could serve the kingdom as doctors, engineers and experts in various fields.

4.1 FIRST FIVE YEAR PLAN

The First Five Year Plan for economic and social development of Bhutan was drafted by the Technical Team of the Planning Commission of India after their visit to Bhutan in June 1961. It was approved by the Government of Bhutan for the implementation during the period of 1961-66. The Government of India agreed to

finance the plan in its entirety. The total outlay of the plan was Rs. 17.47 crores. The Second Five Year Plan drawn up by the Planning Commission of India commenced in 1966 for the period of 1966-71. It was entirely financed by India. The total outlay of the plan was Rs. 20 crores. The Third Five Year Plan commenced in 1971 for the period of 1971-76. It was drawn up by the Technical Team of the Planning Commission of India after their visit to Bhutan in September 1970. Unlike the previous two plans the Third Plan was partly financed by Bhutan’s internal resources. Out of the total outlay of Rs. 35 crores, the Government of India contributed Rs. 33 crores. The sum of Rs. 2 crores was from Bhutanese resources. At the request of the Royal Government of Bhutan, a team of experts of the Planning Commission of India visited Bhutan in October 1975. The team assisted the Planning Commission of Bhutan in formulating their Fourth Five Year Plan (1976-81). The Planing Commission of Bhutan was formed in 1972. King Jigmie Singye Wangchuck became its Chairman. The Fourth Plan provided for a total outlay of Rs. 77.79 crores. India agreed to contribute a sum of Rs. 70.29 crores. The outlay of the plan was roughly six times bigger than that of the First Five Year Plan. The total contribution of India was nearly double of the Third Five Year Plan, but the relative share of Indian assistance came down sharply. The Foreign Minister informed the Assembly that during the Fourth Five Year Plan, the country received assistance worth Nu 6271000 from India and Nu 3260000 from the UN agencies and other countries.\(^{31}\) In terms of proportion, India’s share in Bhutan’s first two plans was 100% and in the Fourth it was about 56%. This means that India’s importance in financing the plan had gradually declined over the period and the trend has continued in the subsequent plans. In view of the changing circumstances mentioned above, the Government of Bhutan resolved in the 51st Session of the National Assembly:

"It would not be proper to continuously depend on the assistance from India, as they themselves are badly constrained by overpopulation and frequent natural calamities. Should the situation ever rise where Government of India is in a position to provide only 50% of the total

assistance they are providing now, the financial situation of Bhutan will become critical. Of course, owing to the able leadership of His Majesty and the people, assistance could always be sought from other sources. However Bhutan cannot rely on external assistance from all time to come. We cannot overrule the fact that our dependence on external assistance would prove detrimental to the sovereignty of the country... The goal of Bhutan is self-reliance.32

The concern about progressive dependence on external aid was also voiced by the King Jigmie Singye Wangchuck in his coronation address on 2 June 1974.

From year to year, Bhutan is receiving increasing financial and technical assistance from our good friend India. Although the process of socio-economic development was initiated in our country only a few years ago, we have achieved tremendous progress within a short span of time. In spite of this progress, our present internal revenue cannot ever meet a fraction of our government expenditure. Therefore, the most important task before us at present is to achieve economic self-reliance to ensure the continued progress of our country in the future. Bhutan has a small population, abundant land and rich natural resources and sound planning on our part will enable us to realize our aim of economic self-reliance in the near future.33

India promoted Bhutan’s admission to the group of Colombo Plan countries in 1965. India solicited the support of all the nineteen full members of the Colombo plan to the proposal of Bhutan’s admission to the Plan. Since then Bhutan received aid from the Colombo Plan countries. After the admission to the United Nations in 1971, again with India’s support and help, Bhutan became eligible to get technical and other kinds of aid from the organization.

Table : 2

Percentage Resource Mobilization from various sources from 1961—81.34

<table>
<thead>
<tr>
<th>Plan Period</th>
<th>India</th>
<th>UN system and other International Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Plan (1961-66)</td>
<td>100</td>
<td>———</td>
</tr>
<tr>
<td>Second Plan (1966-71)</td>
<td>99</td>
<td>———</td>
</tr>
<tr>
<td>Third Plan (1971-76)</td>
<td>90</td>
<td>3</td>
</tr>
<tr>
<td>Fourth Plan (1976-81)</td>
<td>77</td>
<td>13</td>
</tr>
</tbody>
</table>

The Governments of India and Bhutan accepted the recommendation of the Planning Commission Technical Team for a grant of 17.5 crores to Bhutan for the First Five Year Plan. The categories of Projects recommended and the estimated outlay is as follows35:

Table : 3

<table>
<thead>
<tr>
<th>Head of Development</th>
<th>Estimated outlay (1961-66) Rs. Lakhs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Agriculture Programmes including Animal Husbandry and Forestry</td>
<td>98.4</td>
</tr>
<tr>
<td>2. Power</td>
<td>33.5</td>
</tr>
<tr>
<td>3. Industry &amp; Mining</td>
<td>132.0</td>
</tr>
<tr>
<td>4. Transport, including roads and Road Transport</td>
<td>1195.6</td>
</tr>
<tr>
<td>5. Social Services (Public Health, Education etc.,)</td>
<td>264.6</td>
</tr>
<tr>
<td>6. Miscellaneous (Establishment charges, cultural activities, buildings etc.),</td>
<td>23.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1747.1</strong></td>
</tr>
</tbody>
</table>

Approx (17.5 crore)


A technical team of the Planning Commission consisting of eight members and led by M. S. Sivaraman, Adviser to the Planning Commission, visited Bhutan in June 1961. The team studied the availability of resources in Bhutan and prepared an estimate of total outlay according to what was technically feasible. The quantum of India's assistance to Bhutan was determined on the basis of this report. Although Bhutan Government liked to have a paper pulp factory, exploitation of her natural resource, development of food preservation industry and construction of hydel electric project, the Indian government gave emphasis to road development so as to enable Bhutan to "switch over from mule transport or mountain tracks to highways". The task of the team was to see how Bhutan could step up her resources along with Sikkim so that they could be self-reliant in the course of few years. The Trade Adviser to the Government of Bhutan, P. R. Balshi accompanied the team. Invited by the Prime Minister of Bhutan, Nehru inaugurated the 120 mile new road from Phuntsoling to Paro in April 1962. Bhutanese Prime Minister Dorji said that Bhutan government recruited a variety of technical and administrative personnel from India including Directors of the new Departments of Agriculture, Health and Forests and a Finance Adviser. As many as forty-five primary school teachers were recruited. They were largely Indians of Nepali origin. The medium of instruction was Hindi, with Bhutanese as the compulsory language at the middle school stage. The new Mineral Survey Department located at Samchi, in south west Bhutan was manned by twelve officers of the Geological Survey of India. About thirty miles of the eastern highway from Darrang in Assam to Tashigang had also been completed. Since it was difficult for Bhutan to procure adequate manpower India exported 3000 to 4000 labours to Bhutan. Three experimental-cum-demonstration farms were set up in central, east and south Bhutan. Telegraph and telecommunication facilities was proposed to develop. It was also proposed to explore the coal fields in south east of Bhutan to supply the north Assam tea gardens.

Referring to the development plans, Dorji said that Bhutan had received adequate aid from India, but "we have not been even able to utilize the money fully". He doubted if by the plan end, Bhutan would be able to achieve the targets because of the shortage of technical hands.36

The Plan provides for the generation of 20,000 kw of power. A town planning team from Kharagpur submitted a plan for the construction of the new capital in Thimpu. The buildings in the capital would have a combination of Bhutanese and modern architecture.37

In the First Plan period, it was planned to construct five national highways – four running from south to north and one from east to west will link the north-south highways. The first of these highways Phuntsoling-Paro highway had already been completed in February 1962. It has reduced 6 days hard trekking from Phuntsoling on the Indian border to Paro in Bhutan to less than a days journey by jeep.38

Since the Plan was launched in 1961, 350 miles of road and 230 miles of telephone lines had been completed. Two automatic telephone exchange and six post offices were opened.39

The kingdom’s development plan was implemented under the close personal supervision of the King. Progress in other spheres of development were: the State Transport Department had a fleet of over 100 vehicles. In the field of education, 104 schools have been established with over 15000 students on the rolls. One public school and the junior technical school had also been opened. Besides the establishment of five hospitals with modern equipments and dispensaries, the medical department had launched an extensive campaign for the eradication of malaria, tuberculosis, leprosy and goiter. Three agricultural farms and one orchard had been established. A good headway was made in implementing minor irrigation schemes. Four animal husbandry farms had been set up for improving the local breeds of cattle, pigs, poultry and five veterinary dispensaries established. Mineral deposits of gypsum, dolomite, limestone, copper, graphite had been discovered in substantial quantities. The Geological Survey of India had taken up the mineral survey under the “Aid Scheme” to Bhutan. The total estimated expenditure for the survey was Rs. 1 crore. It concerned a period of five years (1961-66) and it covered about 18000 sq. km. by general geological reconnaissance.40

40. Ibid, p.5.
Journalist J. T. M. Gibson writes in his article "Glimpses of Bhutan; A land in Transition",

Many Bhutanese would probably have preferred to continue in their traditional way of life, but faced with the alternatives of being overrun by China or developed with Indian aid, they have chosen the latter and I was greatly impressed by the good work being done in lonely places and living conditions difficult for those used to city life by civil engineers, doctors and nurses, teachers and forestry and agricultural experts from India. Motor roads are quickly taking place of mule tracks, new vegetable and fruit trees are being introduced, electricity is being generated and installed – there is a first class x-ray plant in the Thimphu hospital.41

Till 30 November 1964, the total expenditure on Plan Scheme amounted to Rs. 7.13 crores. Technical personnel of various categories were deputed from the Central and State Governments of India for service in Bhutan. These included engineers, overseers, doctors, and agricultural experts. Besides this the Government of India had been granting scholarships to Bhutanese students for studies in India in technical and non-technical subjects. The Geological Survey of India also investigated work for micro-hydel schemes.42

In the First Plan top priorities were specified for the economic and social development of the country such as (1) Investment in the development of sectors crucial for utilization of the known natural resources of Bhutan and the augmentation of its revenues. (2) Facilities for the training of personnel and investigation of additional resources and their developmental possibilities (3) Provision of the basic amenities of life which would promote greater efficiency in the overall production.43 The plan comprised of road projects and general development measures including schemes for education, health and mining. In this plan period the percentage outlay for Public Works

42. Lok Sabha Debates, 11th Session, Third Series, 38, No. 3, 19 February 1965, Question No. 148, "Bhutan's Development Schemes", The question was put by Ram Harak Yadav, Viswa Nath Pandey, Bibhuti Mishra, Krishnapal Singh to the Ministry of External Affairs, p.682.
and Transport is 65.7%. For the same sector the outlay in the Second Plan was 40.8% and 19.8%, 11.6% and 20.7% in Third Plan, Fourth Plan and Fifth plan respectively.44

Hence during the first ten years road construction and transport occupied the major attention of the planners. Long before planning, road construction for defence, political survival and trade was stressed by India. The situation became more adverse after the routes to Tibet were closed and trade suspended. As an alternative the development of roads to India suited the Bhutanese requirements as well. The plan also provided schemes to develop and improve farming and livestock, setting up of timber based industries, cottage, crafts, exploitation of mineral resources and development of power resources in the form of micro-hydel project.45 The stress was largely on the creation of infrastructure needed for the building up of Bhutan’s revenue resources and eventually of a self-reliant economy essential for the country’s economic and social development.

Even though the progress of the First Plan suffered from occasional jolts, owing to difference of opinion within the government on the question of priorities, it had no doubt, yielded impressive results. In most cases an integrated infrastructure for basic and development activities was set up. Directorates for agriculture, animal husbandry, education and health were started. The engineering and forest services were greatly expanded. A Development Wing was established for overall control and supervision. A hydel directorate was also formed for the construction of the approved hydel projects.46

The King completed a personal review of the plan in every department of the Royal Government. In the light of that review he felt that there was a need for readjustment of priorities, special attention being paid to communications, education and health. The Prime Minister of India, Lal Bahadur Shastri assured the King financial and technical assistance from India for implementation of Bhutan development schemes.47

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47. The Times of India, 13 January 1965, p.8.
4.2 SECOND FIVE YEAR PLAN

The Second Five Year Plan drawn up by the Planning Commission commenced in 1966. The plan period was from 1966 to 1971. This plan like the First Plan was entirely financed by India. The total plan outlay was 20 crores. The plan was formulated with the following objectives:

(1) The stepping up of agricultural and horticultural output.

(2) The expansion of the programme of primary and secondary education with emphasis on vocational training.

(3) Special attention to animal husbandry and poultry projects.

(4) Extension of communications, roads, transport services and other facilities.

(5) Establishing an industrial base linked with the country's forest and animal resources.

The Second Plan concentrated mainly on the improvement of agricultural and horticultural outlay, raising the level of education and creating cadres of qualified technical personnel, improvement in animal husbandry schemes, establishment of a network of communications to provide for economic outlets for surplus produce to the plains of India, restoration of the depleted forest reserves in southern Bhutan and proper afforestation of forests in northern Bhutan. Under the plan, industries, and exploitation of mineral resources also received attention. Bhutan started some revenue raising schemes in the small scale industries in this plan.

In this Second Plan period, the King expressed a desire to set up a state orchard, a tea garden and a cement factory in Bhutan with loans. During his talks with Indian Prime Minister Indira Gandhi, in Thimpu on 4 May 1968, the King expressed his appreciation of the work of various Indian units and organizations which were maintaining communications and also of the Indian police and military training teams in Bhutan. Gandhi inaugurated the first Bank of Bhutan in Phuntsoling. It is a state owned bank. Bhutan has developed a very well-organized postal system with the support and encouragement from Government of India. Lateral roads like Phuntsoling-Thimpu National Highway, Ha-Tashigang Highway and feeder roads to link smaller administrative centres off the main roads with Paro and Thimpu were built by the Border Roads Organization (BRO). The BRO launched a project called “Dantak” for departmental execution of the work. The BRO also layed down telephone lines and
exchanges. The BRO received all facilities from the Government of Bhutan including a workforce of 9000 workers.\textsuperscript{48} In the Second Plan the number of schools have risen to 105 with more than 16000 students enrolled. The scheme drawn up by the experts from the Indian Institute of Technology, Kharagpur, aimed at developing the Bhutanese capital of Thimpu into a modern township with fifteen miles of internal roads and civic amenities adequate for a population of 20,000. Bhutan had its first woman administrator – a young lady educated in Kalimpong and Uttar Pradesh.\textsuperscript{49}

Lest the rapid spread of education without matching expansion of employment opportunities should create a problem of unemployment, the emphasis in the Second Plan period was on vocational education with India’s help. The King’s own assessment was that India was “trying to do things a little bit too fast”.\textsuperscript{50} He therefore decided to go in for quality rather than quantity. Under the new arrangement, facilities for general education after a certain stage was available only to the best students, the rest had opportunities to learn crafts. In this plan period Bhutan also concentrated its attention on cottage and small scale industries rather than heavy industries. India provided a viable market for these products. To popularise these products in India, the Government of India proposed the establishment of an emporium in New Delhi. To ensure afforestation and stop destruction of forests, India helped Bhutan to open a full fledged department under a conservator of forests for this purpose. Geological Survey had explored limestone deposits in eastern Bhutan. Mrs. Gandhi assured Bhutan necessary aid to build a cement factory to exploit this mineral. From the third year of the Second Plan, agriculture was given highest priority and it continued for the next five to ten years. It was because, Bhutan which used to have surplus in rice, had suddenly turned deficit. The reason for this was influx of labourers for the development programmes. The difficulties in communications was a definite obstacle to free movement of food grains from surplus to deficit pockets. To increase agricultural production minor irrigation schemes and high yielding varieties of seeds were given priority. Strains which had been successful in India were being experimented by Indian experts in Government


\textsuperscript{50} Ibid, p.9.
research centres of Bhutan with encouraging results. As for example the Mexican variety of seeds had been successful in Thimphu as it was in India. Attention was simultaneously given to horticulture. With India's help a State Orchard was made at Yusipheng covering about 175 acres of land. The Yusipheng orchard supplied fruit plants to farmers in central Bhutan. The project ran very well since the demand for saplings had gone up from 60,000 in 1967 to 250,000 in 1968.51 This necessitated the establishment of a food preservation factory in the country.

One of the biggest difficulties of a comprehensive planning in Bhutan was the lack of statistics. The matter was discussed with India and a census was taken in Bhutan simultaneously with that in India.

With an initial capital of Rs 25 lakhs, the Bank of Bhutan, performed all kinds of banking business. At the opening ceremony, the King said, "With the help of God and the help of our Indian friends, we are entering into an era of unequalled prosperity in the history of Bhutan and this prosperity is all the more significant, for it is not limited to a few, but is equally shared by all my subjects."52 The Bank deals with current deposits, savings bank deposit and fixed deposits. It also undertakes purchase of rupees, sterling and US dollars and issues travellers' cheques. The Charter of this Bank which was established under a Royal decree was prepared by the Chartered Bank of the United Kingdom.53 With the introduction of Bank, the traditional barter system was replaced by the introduction of money as the medium of exchange. The King informed that the Bank would function as a commercial bank. It later functioned as a Central Bank.54

In her visit to Bhutan in May 1968, Prime Minister Mrs. Gandhi told, "we are here at your invitation, to help you in the manner you desire". She made it amply clear that India had no intention to dictate or regulate Bhutan's pace of progress because, "it is for Bhutan to determine its future, to chart its own course and to develop its institutions in accordance with its own genius and aspirations".55

52. The Hindustan Standard, 29 May 1968.
During this plan period Bhutan for the first time had a small, disciplined trained police force, thanks to the police training team lent by Government of India. Similarly the state also had a small army trained in the use of modern armaments by the Indian Military Training Team (IMTRAT).\textsuperscript{56}

At the close of the Second Plan in 1971, Bhutan had made noteworthy economic and social studies. One of the important achievements under the first two plans was the creation of infrastructural facilities. Bhutan had spent over Rs. 100 million from 1961 – 1966 during the First Plan when an infrastructure of development in vital fields had been created. It was the function of the Second Plan, therefore to develop further the infrastructure. The highlights of the Second Plan were the self sufficiency in agriculture and opening up of the inaccessible regions of Bhutan by constructing roads. While Rs. 35 million were spent on agriculture, approximately Rs. 70 million were spent on roads and electrification, making thereby a total of over Rs. 100 million, that is 50% of the total plan outlay.\textsuperscript{57}

4.3 THIRD FIVE YEAR PLAN

The Third Five Year Plan (1971-76) was partly financed with Bhutan’s internal resources. While in the first two plans emphasis was given on the development of infrastructure like roads, irrigation, social services and educations, the Third Five Year Plan has given more attention to the development of small scale industries.\textsuperscript{58}

By the end of 1975, major roads with a total length of 11,550 kilometers had been constructed linking India to Thimphu and Paro in west Bhutan, Shomgang and Tongsa in central Bhutan and Tashigang in east Bhutan. An east-west lateral road from Ha in west to Tashigang in the east began operating. Vehicular traffic used the remote valley of Bhumthang in central Bhutan. Feeder roads connecting population centres with agricultural areas were constructed. The Paro airfield runway was extended to 1,400 mts. At the end of 1975 the State Transport Department had a fleet of 146 trucks and


buses. Colombo Plan sources said adequate repair, maintenance, servicing and body building facilities were available in the country. Telephone lines connected major towns in west, central and east Bhutan. Eleven automatic exchanges were in operation and a wireless communication system linked the main administrative centres in the country. Twenty-five wireless stations, eight of them for transmitting flood warning data were in use. Tele-printer and telephone links were available from Thimphu to the outside world.59

A team from the Bhutan unit of the Geological Survey of India scaled the Black Mountain obtaining valuable information on mineral and other deposits in this complex of fourteen peaks. The survey established from fossils that the rocks of the system were 200-250 million years old. Surface studies indicated the existence of copper ore deposits. A. R. Gokul, the Director of the unit, disclosed that a geological map of Bhutan had been compiled indicating important mineral deposits surveyed during the past fifteen years over the area of 46000 sq. km. of the Himalayan kingdom. The important ores identified were limestone, dolomite, gypsum, lead, zinc, copper, coal, calcareous tufa, slate and talc. Geological Survey of India trained three surveyors and fifteen drillers for continuing the mineral exploration work. A total reserve of eighty-three million tons of cement grade calo-tuff was estimated. A cement plant with a capacity of 300 tons was under construction. It was planned to use the tufa deposits to enrich and increase the reserves of cement grade calo-tuff. Dolomite deposits discovered in the foothill regions along the Indo-Bhutanese border had been estimated at 10.5 million tons. About 5 million tons of medium grade graphite was located, suitable for economic exploitation. Nearly 26 million tons of gypsum had been found in Shongar district. Slate deposits were estimated at sixteen million cubic metres. Bulk samples were sent to the National Metallurgical Laboratory in Jamshedpur for analysis.60

4.4 FOURTH FIVE YEAR PLAN

The Fourth Five Year Plan (1976-1981) provided for a total outlay of Ngultrum 990.88 million (US $ 101.45 million, 1 Indian Rupee = 1 Ngultrum) as against Nu 462.81 million for the Third Plan. Like the Third Plan, the Fourth Plan aimed at revenue gathering projects with economic self-reliance. In this plan India’s relative share of assistance came down sharply. The sum of Nu 103.6 million was budgeted to come from multilateral agencies like the UNDP and UNICEF. Internal resources were also mobilized to finance the Fourth Plan.

The pre-investment survey of Forest Resources, launched in 1974 was completed in the Fourth Plan period. The area surveyed with India’s help included Ha, Paro, Thimpu, Punakha and Wangdiphodrang. These comprised of a total area of 7960.21 sq.km. It was revealed from the study that out of the total area, 4475 sq.km area has a total growing stock of (volume of trees) 62 million cubic metres and 52 million cubic metres of coniferous and broad-leaved species respectively. Based on these resources it was decided to set up four central saw mills, a hard board factory, two plywood mills, a pencil slate unit, shuttle and bobbin block unit, tea chest batten factory and a pulp paper or newsprint mill.

However even in the Fourth Five Year Plan, the country’s most important impediment was the inadequate development of power. The total availability of power in the country, hydro-electric terminal and power bought from India is about 4000 kilowatts. Fourteen township and forty-nine villages have been electrified.

Within the framework of its industrial policy, the country is encouraging private entrepreneurs to set up small units. Little industrial estates have sprung up in places like Phuntsoling, Gaylegpug, Samdrupjongkhar in south Bhutan producing a variety of consumer and industrial raw materials. Their development is aided by the ready availability of power and labour forces from India. Totally aided by India, Penden

61. The expenditure in the Third Plan originally envisaged as Rs. 35 crores. It exceeded to Rs. 40 crores. Ravi Verma, India’s Role in Emergence of Contemporary Bhutan (New Delhi, Central Publishing House, 1988), p.73.
Cement Factory built in southern Bhutan, started production by 1978 i.e., within the Fourth Plan. Indian National Industrial Development Corporation carried on survey in Bhutan to determine the industrial potential of the country. Small mineral based units have been set up like the graphite benefication plant at Paro. Feasibility studies were made for lead and zinc benefication plant by India’s Mineral Exploration Corporation.

The Ministry of Trade, Industry and Forests has set up an Export Division in Calcutta to handle marketing in India and elsewhere. The products like, timber, gum, resin, turpentine oil, lemon grass oil, pencil slate, medicinal herbs and agricultural commodities were exported by the Division. The Samchi distillery is exporting large quantities of rum, whisky and gin to India and Singapore. Dolomite is mined and sold to India.

India continues to be the largest source of aid for Bhutan. Bhutan Planning Commission Team visited Delhi to discuss the amount of aid for 1977-78. A sum of Nu 120 million was promised with an additional Nu 14.3 million for special projects including black topping of roads in eastern region and a microwave station.63

For the Fourth Plan, Nu. 22.5 million was sanctioned for road construction. For 1977-78 the allotment of roads is Nu. 5.31 million, excluding Nu. 9.8 million for black topping the roads linking Tashigang, Mongar, Shemgang with Tongsa. The country continued to import a large number of labours mostly of Nepali origin from the bordering states of India.

4.5 FIFTH FIVE YEAR PLAN

The Fifth Five Year Plan represents “a watershed in Bhutan’s socio-economic development,”64 The King expressed his concern about Bhutan’s dependence on India for financial and technical assistance. Bhutan’s internal revenue was inadequate to meet the Government’s expenditure. Secondly the King also felt that the development process


in the kingdom made the people more dependent on the Government. The direct involvement of the people in the development process is insignificant. So the specific objectives of the Fifth Plan were: (1) to achieve an acceptable and sustainable rate of growth of the economy. (2) to attain over time, economic self-reliance and specifically to attain a level of internal resource generation adequate to cover the normal maintenance expenditure of Government. (3) to achieve greater distributional equity among various sections and regions. (4) to involve the people directly in the planning and execution of development programmes.\textsuperscript{65}

In the light of these objective, His Majesty had enunciated five major strategies that were followed in the formulations and implementation of the Fifth Five Year Plan. The strategies were: (a) dzongkhag or district self-reliance (b) decentralization of development administration (c) people’s participation (d) control of maintenance expenditure (e) mobilization of internal resources.

The Fifth Plan proposed an outlay of Nu 4338 million. At the commencement of the Plan, this outlay was not fully under-written in terms of committed resources from external sources. Even as the process of plan implement proceeded, efforts to fill the resource continued. At the end of 1985, revised plan outlay stood, at Nu. 4648 million.\textsuperscript{66}

The sources of financing development activities in the Fifth Plan showed a trend towards greater diversification and the involvement of many international agencies. While the Indian contribution towards the financing of the general development plan and major projects like Chukha continued to be sizeable, the flow of financial and other inputs from specialized agencies of the United Nations and multilateral and bilateral donors continued to rise. Efforts towards internal resource mobilization through a contribution of fiscal and administrative measures were encouraged. The proportion of plan expenditures financed from internal resources reached the level of 31%. The proportion of assistance from the UN system reached 19%. Assistance from India accounted 41% and other sources provided 9%.\textsuperscript{67}

\textsuperscript{65} Ibid, p.10.


\textsuperscript{67} Ibid, p.3.
During the Fifth Plan, the total external assistance disbursed, both capital and technical, amounted to US $535 million. “India, the major development partner, contributed US $453 million or 80% of the total representing the Rupee equivalent of US $324 million in grants and US $100 million in loans. Only US $29 million remained undisbursed at the end of Fifth Plan. US $102 million was in the form of general budgetary grants. The most important project financed by India during the Fourth and Fifth Plans was the Chukha hydro-electric project, approximately US $220 million, on a 60% grant and 40% loan basis”.68 It was implemented on a turn-key basis spread over three plan periods, but predominantly in the Fifth Plan.

India promised help for the air service and in the setting up of a 20 kw transmitter for Bhutan’s broadcasting service.69 India had been a major participant in Bhutan’s economic development programme.

India’s assurance of continuing cooperation with Bhutan for its socio-economic development in the Fifth Plan was reiterated during the visit of King Jigme Singye Wangchuck to India from 16 to 19 March 1982. N. Sanjiva Reddy, President of India, suggested the setting up of joint industrial projects to give a new dimension to the economic relations between the two countries. The King expressed his gratitude for India’s unstinted financial and technical assistance.70 Till the Fifth Plan the coverage and rates of both direct and indirect taxation are low. In order to improve the situation and make fiscal system an important tool of economic policy, the Royal Government has been consulting the International Monetary Fund and the National Institute of Public Finance and Policy in New Delhi in order to identify suitable new taxation measures. A new tax manual giving a proper system and procedures for assessment and collection was prepared. A Companies Act in order to formalise the rules and regulations relating to the registration and functioning of business enterprises, including the auditing of accounts and the preparing of balance sheets was introduced with Indian help.71
In the Fifth Plan the Chukha bridge was completed. It is located approximately midway along the 179 km long Phuntsoling - Thimphu National Highway. The bridge cost Nu 5.25 million. It is 68.20 mts. long and 8.25 mts. wide.\textsuperscript{72}

King Jigme Singye Wangchuck visited India in January 1984. In a banquet in honour of the King, President of India, Zail Singh assured Bhutan of continued assistance in the economic development of the Himalyan Kingdom. He cited the Chukha project and the Penden Cement Plant in Bhutan as two examples of Indo-Bhutanese cooperation and said that several other schemes were under consideration. “I would like to assure Your Majesty that to the best of its ability, the Government of India will continue to participate in the development tasks you have undertaken”.\textsuperscript{73}

India and Bhutan in the Fifth Five Year Plan signed an Agreement for expanding and improving the scope of telecommunications services between the two countries. It included the establishment of micro wave link between Cooch Behar in West Bengal and Thimphu. Through this link, telecommunication services comprising telex, telegraph and telephone was provided between the two countries. “Bhutan through this link got access not only to the national network in India but also to the international networks through the electronic trunk exchanges at Calcutta and Delhi. Bhutan also got the facilities of a micro-processor based “store and forward” telegraph system installed at the Central Telegraph Office, Calcutta, in terms of this agreement. In course of time facilities like international subscribers’ dialing, international telex was also provided between India and Bhutan. The Agreement was signed between K. Thomas Kova, Secretary in the Ministry of Communications, India and Dasho K Letho, Secretary, Communication and Tourism, Bhutan.\textsuperscript{74}

In this official visit to Bhutan in September 1985, Prime Minister Rajiv Gandhi, described India’s involvement in Bhutan’s economic development as an Indian ‘privilege’. He said that India did not regard it as “assistance or aid, rather we consider it a sharing of resource for common benefit”\textsuperscript{75}

\textsuperscript{72.} Asian Recorder, 23-29 July 1983, p.17281A.

\textsuperscript{73.} Asian Recorder, 11-17 March 1984, p.17641A.

\textsuperscript{74.} Asian Recorder, 1-7 January 1985, p.18194A.

\textsuperscript{75.} Asian Recorder, 19-25 November 1985, p.18607A.
With the objective of bringing dry land under irrigation and converting tsheri land into permanent cultivation, farmers were encouraged to invest in terracing, contour bunding and drainage work. A physical target of 21580 acres was indicated in the Fifth Plan but 11079 acres had been already developed under this programme. The Social Forestry Programme was launched in 1979. Along with Social Forestry Programme, a Community Forestry Programme was also launched in 1979-80. The objective was to create small forests of suitable species near the villages so as to create a source of firewood, fodder and small timber for the village community. Forest Rangers and other executive officers had also been trained in India. Of them 28 officers had been trained in India during the Fifth Plan. Construction of forest roads and paths had been taken up to facilitate proper management and logging. Against the target of 150 kms., 48 kms of forest roads had already been completed in the Fifth Plan.76

Based on the massive deposits of limestone in Korungri and Morungri it was proposed to set up Nanglam Cement Plant in the Fifth Five Year Plan. The Cement Corporation of India (CCI) and the Geological Survey of India (GSI) were assigned the task of conducting drilling operations and testing limestone.

The Cement Corporation of India has also been entrusted with the task of preparing a detailed project document on the Nanglam Cement Plant, which had been completed in the plan period. The cost probability of the project was around Nu 1006 million. The Geological Survey of India explored the existence of 16 million cubic meters of slate in Wangdiphodrang. In Pema Gatshel, the Geological Survey of India explored a gypsum deposit of 17 million tons at Kothapa. The National Institute of Development Corporation (NIDC) of India conducted a preliminary study on the viability of a project to utilize this deposit. Mining work was started in 1983. The Geological Survey of Bhutan had a total of seventy-two personnel on its rolls. Fifteen mineral prospectors and fifteen drilling personnel were attached to the Geological Survey of India. Two assistant geologists were under training in India.77

The consumption of electricity in Bhutan in the Fifth Plan period had increased at an annual rate of 9.48%. Though domestic capacity had been enhanced by the addition of diesel generating sets at Thimpu, Samchi, Shemgang and Dagana, additional

77. Ibid, pp. 21-22.
requirements had been met mainly by importing energy from the neighbouring Indian states of West Bengal and Assam.\textsuperscript{78}

Keeping the objective of national self-reliance in view, successive plans had laid considerable emphasis on accelerated training and skill development programmes for strengthening national capabilities over a wide spectrum of activities. In January 1984, 187 students were attending higher level courses in India covering different branches of engineering, agriculture, veterinary science, medicine, mining, commerce etc..\textsuperscript{79}

Even today India remains by far the principal donor of aid for economic development of Bhutan, though financial commitments from multilateral agencies like UNDP were included for the first time for the Fourth Five Year Plan. The total planwise allocation made of the Royal Government during 1961-87 with India’s contribution therein is as follows.\textsuperscript{80}

\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|c|}
\hline
Plan & Total Allocation & India’s Contribution & % of India’s Contribution \\
\hline
First (1961-66) & 10.72 & 10.72 & 100 \\
Second (1966-71) & 20.22 & 20.22 & 100 \\
Third (1971-76) & 47.52 & 42.66 & 90 \\
Fourth (1976-81) & 110.62 & 85.30 & 77 \\
Fifth (1981-87) & 651.12 & 321.00 & 49.3 \\
\hline
\end{tabular}
\caption{Plan Allocation and India’s Contribution}
\end{table}

[All figures in Crore Rupees]

While earlier plans covered a five year period, the Fifth Plan covers a period of six years. Plan outlays have been doubling during successive plans. In the initial years, public works, road construction and improvements accounted for a large chunk of plan outlays. However, the proportion of plan outlays earmarked for public works has declined lately though the absolute amount has been increasing overtime. Intersectoral allocation of plan outlay from the First Plan to the Fifth Plan is shown in Table 5.\textsuperscript{81}

\textsuperscript{78} Ibid, p.23.
\textsuperscript{79} Ibid, p.25.
\textsuperscript{80} Country Note on Bhutan: Embassy of India, Thimpu, p.7.
Table 5

Outlays for Five Year Plan Periods, 1961-1985
(Nu Millions)

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<thead>
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<tr>
<td>Agriculture</td>
<td>1.9 1.8</td>
<td>21.6 10.7</td>
<td>58.3 12.3</td>
<td>259.0 23.5</td>
<td>423.6 15.4</td>
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<td>Animal Husbandry</td>
<td>1.5 1.4</td>
<td>5.8 2.9</td>
<td>24.2 5.1</td>
<td>61.5 5.6</td>
<td>79.6 2.9</td>
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<tr>
<td>Forestry</td>
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<td>6.9 3.4</td>
<td>28.4 6.0</td>
<td>110.3 10.0</td>
<td>156.9 5.7</td>
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<tr>
<td>Power (does not include experiment on Chukha)</td>
<td>1.5 1.4</td>
<td>9.1 4.5</td>
<td>30.0 6.4</td>
<td>50.5 4.6</td>
<td>84.9 3.1</td>
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<td>Industry and Mines</td>
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<td>1.0 .5</td>
<td>25.2 5.3</td>
<td>175.0 15.8</td>
<td>89.4 3.3</td>
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<td>Public Works</td>
<td>62.9 58.7</td>
<td>70.5 34.9</td>
<td>84.6 17.8</td>
<td>128.3 11.6</td>
<td>446.3 16.3</td>
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<td>Road Transport/Aviation</td>
<td>7.5 7.0</td>
<td>11.9 5.9</td>
<td>9.5 2.0</td>
<td>—</td>
<td>69.2 2.5</td>
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<tr>
<td>Posts and Telegraphs</td>
<td>.5 .5</td>
<td>5.9 2.9</td>
<td>11.4 2.4</td>
<td>16.9 1.5</td>
<td>105.5 3.8</td>
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<td>37.3 3.3</td>
<td>— —</td>
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<tr>
<td>Tourism</td>
<td>— —</td>
<td>14.1 3.0</td>
<td>12.5 1.1</td>
<td>22.4</td>
<td>— —</td>
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<td>Education</td>
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<td>90.0 19.0</td>
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<td>290.6 10.6</td>
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<td>38.1 8.0</td>
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<td>675.7 24.6</td>
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<td>Miscellaneous</td>
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<td>26.1 5.4</td>
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<td>Total</td>
<td>107.2 100.0</td>
<td>202.2 100.0</td>
<td>475.2 100.0</td>
<td>1,106.2 100.0</td>
<td>2,743.7 100.0</td>
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</table>
4.6 **Sixth Five Year Plan**

The Sixth Plan (1987-92) represents a major turning point in Bhutan's economic and social development. The basic infrastructure upon which development depends had already been established. Efforts had already started to decentralise governmental responsibilities closer to the people. A major source of hydro-electric energy had come into operation and some large industrial units were established. Total expenditure for the Sixth Five Year Plan was projected at Nu 9500 million. Government in this Plan period implemented a change in the fiscal year which now begins with effect from 1 July instead of 1 April. Of the total plan expenditures, 40% (Nu 3849 million) was allocated to current expenditures and 60% (Nu 5562 million) to the capital budget. Government revenues are estimated at Nu. 2800 million about 73% of planned current outlays. External assistance required for the Sixth Plan was estimated at Nu. 6560 million.82

For the Sixth Plan, Indian financial assistance was Rs. 400 crores (2612.714 Nu million) of the total outlay of Rs. 948 crores. India's budgetary grant was 1,610.00 Nu million and project related assistance was 1,002.714 Nu million.83

The Government's internal resource position has been steadily improving from an estimated 7% of Plan expenditure during the Third Plan (1971-76) to 28.3% in the Fifth Plan (1981-86) and an expected level of 30% in the Sixth Plan. While India continues to remain Bhutan's primary development partner, and a uniquely valuable one since a large part of its aid comprises grant budgetary support, the country's external assistance sources has steadily diversified. These sources include four international lending institutions and ten other organizations of the United Nations system; (like UNDP, UN Capital Development Fund, WFP, UNICEF, FAO, WHO, UNFPA etc); the EEC and eight bilaterals like Japan, Switzerland (Helvetas), Norway, Australia, U.K, Austria, Canada, Italy, Denmark and Kuwait fund etc. and some non-governmental organizations.84

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83. *Asian Recorder, 12-18 November 1990, p.21061F.*

Equipment of many types ranging from major capital equipment and machinery to small machine tools, vehicles and office equipment comprise a large share of externally funded inputs into projects assisted by donors. Procurement is carried out according to donor regulations, normally through international competitive bidding and tenders. In the case of Bhutan, for example India is the natural source of supply for many items, prominent among them are small machine tools and vehicles.85

Table : 6
External Assistance requirements for the Sixth Plan.86

Financing of the Plan is as follows :

<table>
<thead>
<tr>
<th>Source</th>
<th>Nu Million</th>
<th>%</th>
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<td></td>
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<tr>
<td>1. Revenues</td>
<td>2800.402</td>
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<td>2. Borrowings</td>
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<tr>
<td>Subtotal</td>
<td>3,300.402</td>
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<td>Government of India</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Budgetary grant</td>
<td>1,610.000</td>
<td></td>
</tr>
<tr>
<td>2. Project-related assistance</td>
<td>1,002.714</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>2,612.714</td>
<td>27.5</td>
</tr>
<tr>
<td>International Assistance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Bilateral grants</td>
<td>777.570</td>
<td></td>
</tr>
<tr>
<td>2. Multilateral grants</td>
<td>995.057</td>
<td></td>
</tr>
<tr>
<td>3. Multilateral loans</td>
<td>836.625</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>2,609.252</td>
<td>27.5</td>
</tr>
<tr>
<td>Resource gap</td>
<td>978.492</td>
<td>10.3</td>
</tr>
<tr>
<td>Grand total</td>
<td>9,500.860</td>
<td>100.0</td>
</tr>
</tbody>
</table>

85. Ibid, pp. 16-17.
86. Ibid, p.18.
Aid by type donor excluding India has been presented in Figure 19.

**Figure : 19**

**AID BY TYPE DONOR, 1990 (EXCLUDING INDIA)**

<table>
<thead>
<tr>
<th>Donor Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multilateral (UN)</td>
<td>36%</td>
</tr>
<tr>
<td>Bilaterals</td>
<td>42%</td>
</tr>
<tr>
<td>Multilateral (Others)</td>
<td>20%</td>
</tr>
<tr>
<td>NGOs</td>
<td>2%</td>
</tr>
</tbody>
</table>

A comparative picture of bilateral aid from India and multilateral aid from other donor countries and organizations can be had from the following Table 7.

**Table : 7**

**Aid Flows (India and other) 1981/82-1990/91**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total (Nu.m)</th>
<th>India %</th>
<th>Others %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981/82</td>
<td>654.5</td>
<td>83.3</td>
<td>16.7</td>
</tr>
<tr>
<td>1982/83</td>
<td>788.7</td>
<td>86.2</td>
<td>13.8</td>
</tr>
<tr>
<td>1983/84</td>
<td>1085.0</td>
<td>78.9</td>
<td>21.1</td>
</tr>
<tr>
<td>1984/85</td>
<td>989.0</td>
<td>82.9</td>
<td>17.1</td>
</tr>
<tr>
<td>1985/86</td>
<td>1224.3</td>
<td>62.1</td>
<td>37.9</td>
</tr>
<tr>
<td>1986/87</td>
<td>1268.8</td>
<td>65.0</td>
<td>35.0</td>
</tr>
<tr>
<td>1987/88</td>
<td>1046.6</td>
<td>62.4</td>
<td>37.6</td>
</tr>
<tr>
<td>1988/89</td>
<td>1086.3</td>
<td>74.4</td>
<td>25.6</td>
</tr>
<tr>
<td>1989/90</td>
<td>763.6</td>
<td>71.8</td>
<td>28.2</td>
</tr>
<tr>
<td>1990/91</td>
<td>1050.1</td>
<td>69.4</td>
<td>30.6</td>
</tr>
</tbody>
</table>

Source : Royal Monetary Authority
In the Sixth Five Years Plans master plans were formulated for four key sectors of the economy, forestry, hydro-electric power, tele-communications and civil aviation. This permitted planning and project identification in a more systematic way based on clearly identified priorities in each of the four sectors. The master plans include a shelf of well prepared priority investment and relevant technical assistance projects which would serve as the basis for internal and external resource mobilization. The Sixth Plan represents a new and significant stage in Bhutan's development planning. It is larger than the previous plans and it has laid the groundwork for more organized planning in future.

In the Sixth Plan a transit road between Bangladesh and Bhutan through India was opened in April 1988. The Indian Government allowed the use of road from Bhutan to Bangladesh via Chengrebandh border of India for entry into Bangladesh via Burimari border for movement of commodities by trucks and other roads transport between Bhutan and Bangladesh. Burimari is the last border railway station of Bangladesh under the Pargana Upazila of Lalmonirhat district. A 119 km long metal road connects Burimari and Phunabeling, the commercial and industrial town of Bhutan bordering India.87

During the Prime Minister, Rajiv Gandhi's visit to Bhutan on 23 September 1988, the King and the Prime Minister reviewed the developmental works in the kingdom in their talks.

The Memorandum of Understanding was signed by L. L. Mehrotra, Secretary in the Ministry of External Affairs and the Bhutanese Ambassador in India, Dasho Karma Letho, in the presence of the King and the Indian Prime Minister, Chandra Shekhar.

Prime Minister Rajiv Gandhi had sanctioned 1 Nu million towards the constitution of the new Kurjey Lhakhang and restoration of monasteries in the Bumthang Valley in the plan period.88

The Indian Aluminum Company Limited (INDAL) was assigned to complete “all the roofing and siding needs of various infrastuctural and industrial development projects coming up in Bhutan”.89

The Oil and Natural Gas Commission (ONGC) of India started preliminary survey for hydrocarbon deposits in the southern foothills of Bhutan by the mid-October 1989. The Deputy Minister for Trade and Industry, Dasho Om Pradhan said that another milestone had been achieved in Indo-Bhutan cooperation. "I am confident that the ONGC will leave no stone unturned in carrying out this work", he said.90

In an informal meeting between the Royal Government and a team from All India Radio (AIR) in August 1989, the two sides expressed satisfaction over the progress of the Bhutan Broadcasting Service (BBS) project in the Sixth Plan period. The Royal Government appreciated India’s assistance which included substantial studio and broadcasting equipment besides technical and professional training.91 The 50 k.watt radio station under the assistance of Government of India was executed by the AIR in a turnkey project including transmission component and the building complex.92

While visiting Militia Training Centre in Tencholing and Wangdiphodrang, to meet the first batch of students undergoing military training, that began from first week of May 1989, the King said, “It is only through the generous assistance extended by the Government of India that the army has been able to meet its training and administrative requirements. A total of ninety-four students completing twelve class, were being trained in the first group. The training included weapons training, field craft, survival training, discipline and team work, lectures on tactics and security and field exercise”.93

At 12.35 pm on 1 August 1989, the King spoke to the Indian Prime Minister Rajiv Gandhi. The direct dialing service was introduced. The call was made from the Royal Chamber in Tashichhodzong directly to New Delhi, inaugurating the kingdom’s first direct dialing telephone system and representing a major improvement in communications. The King expressed the Royal Government’s deep appreciation to Rajiv Gandhi for the establishment of the International Subscriber Dialing (ISD) service. Through this system callers can be assured of an interruption free conversation on one
hand and reduction of workload for the operators on the other. According to statistics in September 1988, there was on an average 1393 international calls per month, 81% of them to India. With the introduction of ISD, twelve incoming and twelve outgoing circuits had been added to the existing microwave system. The ISD costs Nu 36/- for 3 minutes with the minimum of Nu 40/- in the past. The ISD was made possible with the installation of transmission and switching equipment worth about Nu 1700,000/- from the Department of Telecommunications in India.\textsuperscript{94}

Another significant event of the Sixth Five Year Plan was the signing of the Nu.51.570 million Geylegphug Integrated Area Development Project. The project started in 1989-90 for a five year period. It emphasised on agricultural development with an allocation of Nu 41.164 million. The balance of Nu 10.406 million was spent on the development of livestock and poultry. The project was aimed at increasing food production, the income and living standard of the people. About 2258 acres of land was brought under irrigation, apart from improving the existing irrigational channels, which cover about 2700 acres. “Since the cooperation was established between the two countries more than a quarter century ago,” expressed Dasho C. Dorji, the Deputy Minister of Planning with satisfaction, “Bhutan’s economy has been transformed from a subsistence farming into a modern one. The past five years have been most gratifying as many of the joint Indo-Bhutan projects like the east-west highway have been completed”. “India stands committed to be a partner in Bhutan’s development progress, and this agreement is a part of that commitment”, assured Dayal, the Indian Ambassador to Bhutan.\textsuperscript{95}

One of the main objectives of the Sixth plan is to enhance the rural incomes. The bulk of country’s population live in rural areas. The lack of significant growth in the income of rural population is a matter of serious concern for the kingdom. Further the modest increase in rural income were being affected by inflation undermining the living standard of the villagers. Considering all these facts the Indo-Bhutan Geylegphug Integrated Area Development Project was a landmark event in the country’s Sixth Five Year Plan.

\textsuperscript{94} Kuensel, 5 August 1989, p.1.
\textsuperscript{95} Kuensel, 5 August 1989, p.2.
India had also hailed the financial delegation from Bhutan (representing the Royal Monetary Authority, Bhutan Development Finance Corporation and the Bank of Bhutan) who had a good cross sectional look at India’s financial institutions. The team visited India’s financial capital Mumbai too.96

In order to supplement the Royal Government’s budget deficit for the 1988-89 fiscal year, India arranged a weeklong exhibition in New Delhi displaying Bhutan’s heritage, rituals, traditions, customs and art work. It was called as Bhutan Week in India: A Way of the Dragon. It started on 10 March 1989. Her Royal Highness, Ashi Sonam Chhoden Wangchuck and S.D Sharma, Vice President of India inaugurated the exhibition jointly. Her Highness thanked the Indian Prime Minister and Finance Minister on behalf of the Royal Government for the kind assistance given by the Government of India.97

4.7 SEVENTH FIVE YEAR PLAN

The overall aim of the Seventh Five Year Plan (1992-1997) is to raise the living standard of all sections of the population with due emphasis on the quality of life as well as increasing income. The plan also aimed at lofty goals, such as (1) ensuring the spiritual and emotional well-being of the population, (2) the preservation of Bhutan cultural heritage and (3) the exploration of its rich and varied natural resources. The overall approach was based on six principles: (1) self-reliance (2) sustainability (3) efficiency and development of the private sector (4) people’s participation and decentralisation (5) human resource development (6) regionally balanced development.98

The total plan expenditure for the Seventh Plan was 15590.7 Nu million.

With privatisation gaining more importance in the Seventh Five Year Plan, the role of the Royal Government in productive activities was reduced. However Government continued to play a substantial role through the following activities “(1) providing a framework of law and order which foster economic activity, (2) macro-economic management including regulation of the currency, (3) managing

Bhutan's international economic relations including aid and trade, (4) providing and maintaining basic economic infrastructures, (5) providing and maintaining basic social infrastructure (education and health services) and developing the country's human resources, (6) direct involvement of the indigenous private sector in major enterprises (notably hydropower) where the Government is the custodian of the natural resources, and (7) generally seeking a national consensus of development objectives and strategy and acting as the custodian of national interests.99

Before 1980s the majority of the population in Bhutan was dependent on agriculture since there was no significant industrial production. In spite of well established trading links across the Himalayas, but due to people's reliance on porterage and pack animals trade was mainly in low volumes, though the value of the articles were high. 100

It is a practical requirement for Himalayan communities to be self-sufficient in basic necessities like foodstuff. In fact most production is for subsistence. Considerable capital was invested in terracing, irrigation and construction of religious and administrative building. “Because the economy was largely unmonetised, taxation - to support the administrative and religious establishment and to maintain community infrastructure - was in kind, in the form of labour contributions or grain taxes.”101

Economic and social statistics for the period from 1960-80 was very sparse. “But improvement in communications began a transformation of the economy which is still going on. Better communications made trade more feasible, and this in turn prompted increased monetisation and opened the way for more specialization in production. A striking example of such specialization has been the trend towards production of horticultural crops for export complemented by import of rice. Taking advantage of both better communication and the availability of low cost Indian labour, most industrial development took place near the Indian border, and the pace of modern sector development was generally faster in southern and western Bhutan than in the east”.102

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100. Ibid, p.10.
Royal Government of Bhutan claims to have a very open economy by the end of Sixth Five Year Plan. In 1989 its exports amounted to about 27% of GDP, while imports were 38% of GDP. Though Bhutan’s imports have exceeded exports, yet exports rose substantially from the mid 1980s. “India is by far the dominant trading partner for Bhutan: it has been the destination for more than 90% of Bhutan’s exports.”103 By the Seventh Five Year Plan new export markets were opened during the later part of 1980s with Bangladesh. In the Seventh Plan period, Bhutan’s main exports were electricity, wood products, agricultural products including horticultural crops and cement. The surge in exports was mainly due to the commencement of electricity sales from Chukha, and increase in exports of wood and wood products at the same time. “While the importance of India as a source of imports declined somewhat in the second half of the 1980s, 60–80% of Bhutan’s imports continue to come from India by the end of the Sixth Five Year Plan”.104

The value of imports have a substantial rise in Seventh Plan period for petroleum products, rice and electrical equipments. In services and transfers, receipts are lower than payments. The main items in receipts are income from tourism and interest from Royal Monetary Authority deposits in India.

Bhutan’s trade deficit has been supplemented by aid inflow. Foreign aid ranged from Nu 989 million in 1984/85 to Nu 1086.3 million in 1988/89. “Aid from India always exceed the aid from other sources, underscoring the importance of India as the major donor”.105 Until 1987/88 grants from India exceeded domestic revenues, but by 1989/90 domestic revenue amounted to more than the total of grants from all sources.106 Bhutan’s foreign exchange earnings is strengthened not only by foreign aid received but also by the fact that

“Aid from donors other than India is denominated in convertible currencies, while much of the expenditure that it finances is denominated in rupees. As a result, Bhutan was able during the 1980s to build up substantial reserves of convertible currency. However, rupee reserves

103. Ibid, p.17.
104. Ibid, p.17.
106. Ibid, p.16.
declined steeply in the later years of Sixth Five Year Plan. The Ngultrum has remained pegged to the Indian rupee at par since its introduction. Consequently its value against convertible currencies has followed that of the rupee. Likewise, given the open border and common currency area between India and Bhutan, inflation in Bhutan closely mirrors India’s and has averaged around 10% per annum during most of the 1980s. The value of rupee reserves tends to be exaggerated by the official exchange rate between rupee and the US dollar; equally the large decline in the dollar value of rupee reserves in 1991 reflected the devaluation of the rupee.107

Aid is of extreme importance financing Bhutan’s development as measured by the ratio of aid to GDP and the proportion of public expenditure financed by aid. In the early 1980s aid amounted to around 50% of GDP, but rapid economic growth combined with a fairly constant level of aid has reduced the aid/GDP ratio to about 20%.108

Figure: 20

AID AS % OF GDP 1981/82 - 1990/91

An important proportion of Indian aid is in the form of budgetary support, but not earmarked for any particular project. Besides this, India has funded a number of projects often implementing them in a turnkey fashion. As for instance, the Chukha Hydel power project was funded by a combination of grants and soft loans from Indian government. It was an addition to the basic Five Year Plan aid. India also has given technical assistance by training Bhutanese nationals. Indian experts have also provided services in developmental programme of Bhutan.

The composition of third country aid has changed significantly with an increasing proportion supporting capital projects rather than providing technical assistance. However, the Royal Government expects further shifts in this trend in the Seventh Plan period. Aid allocations have reflected national development priorities. The largest shares of technical assistance have tended to be provided to the following areas, in descending order: Human Resource Development, Agriculture and Forestry, Health and Population and Development Administration. Industry and Transport and Communications which take only a small share of technical assistance, have received a greater proportion of capital assistance, of which Agriculture and Forestry have received the largest share.\textsuperscript{109}

Education was an important part of religious life in Bhutan for centuries. Even today almost 4000 monks, nuns and lay priests receive education in religious institutions supported by the State. Besides this, there are people studying in private monasteries. Monastic education encompasses the study of religious rituals, literacy, numeracy, philosophy, astrology, literature, art and traditional medicine. In 1950 formal western education started in Bhutan. School enrollment grew from 1500 pupils in 59 schools in 1959 to over 70,000 in 195 institutions in 1990.\textsuperscript{110} The gross primary enrollment ratio was estimated at 66.9\% in 1990, based on an estimated population of 104000 children in the age group of 6-12 years. Following the Jomtein Conference, the Royal Government is committed to further improve the education system. Though formal education among children is expanding, illiteracy among the adults is quite high, for which the Royal Government is concerned. The formal education system consists of

\textsuperscript{109} Ibid, pp. 60-61.
\textsuperscript{110} Ibid, p. 72
one year pre-primary, six years primary, four years secondary, two years senior secondary and three years degree programme.

Enrollment of boys is more than that of girls. The system is dependent on non-Bhutanese nationals as teachers. As for example, in 1990, 43% of the teaching staff were mostly from India.\(^{111}\) Few of the non-nationals are teaching through the voluntary service organization of UK, Canada, Japan, Netherlands, New Zealand and the UN. Class VIII level of education is considered as the required level for basic literacy and numeracy. The policy of the Royal Government is to achieve universal access to primary education by the year 2000.

Until the Sixth Five Year Plan, the curriculum for the primary education was largely based on the Indian system. However, under the New Approach to Primary Education Programme, history, values and environment of Bhutanese people are incorporated in the curricula of pre-primary to Class VI. The curriculum in the higher secondary and university education levels is still based on Indian system.

In addition to the lack of school facilities, the education sector is constrained by an inadequate number of trained national primary teachers. The shortfall is compensated by the expatriate teachers from India, 40% of the teachers in primary schools, 51% in high schools, 34% in other institutes.\(^{112}\)

The Royal Institute of Management (RIM) provides an in-service training for civil servants and the private sector particularly at mid and junior management levels. Its pre-service and in-service course include personnel management; decentralised rural development; financial management and audit; communication and report writing; development policy orientation and computer training. It also undertakes research connected with management, public administration and training techniques.\(^{113}\)

The Sherubtse College has been affiliated to the University of Delhi. The students obtain degrees conferred by the University of Delhi. The Seventh Five Year Plan intends to upgrade the Sherubtse College to an autonomous body. It has intended to

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111. Ibid, p.72.
112. Ibid, p.74.
113. Ibid, p.75.
improve the Simtokha Rigney Institute, the Royal Bhutan Polytechnic and establish the
Ugyen Wangchuck University

Under the Seventh Plan there are three different kinds of activities to be funded
under the Human Resource Development Programme - (1) External training to be
funded in hard currency by various donors, (2) In-country training in specified
areas to be provided by external consultants which requires hard currency funds
(3) In-country training which form part of regular activities of Educational Institutes
in Bhutan provided by Government budget.114

Table : 8

Tentative Sources of Funding for the Seventh Plan.115

<table>
<thead>
<tr>
<th>Donor agencies</th>
<th>Proforma Cost in US $ ’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Government of Bhutan</td>
<td>86.50</td>
</tr>
<tr>
<td>UN system and special Agencies, UNDP Regional Programme</td>
<td>5885.70</td>
</tr>
<tr>
<td>UNDP-Country IPF</td>
<td>8000.00</td>
</tr>
<tr>
<td>Asian Development Bank</td>
<td>253.80</td>
</tr>
<tr>
<td>Helvetas</td>
<td>261.60</td>
</tr>
<tr>
<td>WUSC</td>
<td>94.8</td>
</tr>
<tr>
<td>Other NGOS</td>
<td>34.2</td>
</tr>
<tr>
<td>Other Institutions</td>
<td></td>
</tr>
<tr>
<td>(IRRI, DRC, East West Centre)</td>
<td>666.00</td>
</tr>
<tr>
<td>British Council</td>
<td>2872.50</td>
</tr>
<tr>
<td>Fulbright</td>
<td>360.00</td>
</tr>
<tr>
<td>Govt. of New Zealand</td>
<td>660.00</td>
</tr>
</tbody>
</table>

114. Ibid, p.91.
Donor agencies  Proforma Cost in US $ '000

Govt. of India  5093.60
Govt. of Japan  1444.80
Govt. of Italy  120.00
Govt. of Netherlands  882.70
Govt. of Germany  404.80
Govt. of Austria  85.50
Govt. of Switzerland  337.50
Govt. of Australia and CP  2094.00
Govt. of Singapore & CP  165.60
European Economic Community  14045.60
Unidentified  5793.20
Total  50,000.00

In May 1991 as many as 1019 persons were employed in the Department of Health Service with 90% employed in the service delivery points such as hospitals and peripheral units. Out of this 1019 people, 283 were expatriates. Remaining 10% of the people are employed in support institutes like Directorate of Health, training institutes and medical store depots. Nearly 50% of the people are employed in hospital sector and 40% in primary health care sector.\textsuperscript{116}

Bhutan is 66% self-sufficient in producing cereals like maize, barley, millet and buckwheat. But she is only 52% self-sufficient in rice, 24% in wheat, 20% in edible oil. To meet the food deficit cereals and edible oils are imported from India. Since unit production cost is substantially lower in India, than in Bhutan, imports of cereals are steadily displacing local produce. Farmers are consuming the imported cereals because of their greater access to markets and rising cash incomes from the sale of horticultural products. Some of the horticultural crops that are exported to India, Bangladesh, Singapore and Japan are oranges, apples, potatoes, cardamom, ginger, chilies, vegetables and processed fruit products. This has resulted surplus in agricultural

\textsuperscript{116} Ibid, p.94.
trade. Total agricultural revenues in hard currency has risen from US $0.17 in 1986 to US $6.5 million in 1989. Producers are encouraged to export to hard currency earning countries with a premium of 30%.117

The increased production from the Gedu Wood Manufacturing has increased Bhutan’s revenue earnings from wood and wood products which showed a rising trend during the Sixth Five Year Plan.118

Table : 9
Forestry Exports to India (Nu million)

<table>
<thead>
<tr>
<th>Type</th>
<th>1986</th>
<th>1987</th>
<th>1988</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timber</td>
<td>53.3</td>
<td>121.2</td>
<td>91.4</td>
</tr>
<tr>
<td>Blackboard</td>
<td>21.2</td>
<td>29.3</td>
<td>31.0</td>
</tr>
<tr>
<td>Sawn Logs and veneers</td>
<td>0.6</td>
<td>0.9</td>
<td>104.7</td>
</tr>
<tr>
<td>Total</td>
<td>75.1</td>
<td>151.4</td>
<td>227.1</td>
</tr>
</tbody>
</table>

Bhutan has to maintain a buffer stock of petrol oil lubricants (POL) to cover the domestic requirements when these imports are restricted or cease due to the closure of the border for incessant rains and landslides. Bhutan is completely dependent on India for the import of POL which comes to Bhutan by roads. Hence the country has decided to establish buffer stock of POL in 1989 to provide for two months of POL requirement if the supply is disrupted.119

The Royal Government of Bhutan has decided to establish trade promotion offices in New Delhi and Dhaka in Seventh Plan period, since these countries are currently major trading partners. Two senior officers were posted in these offices responsible for collection and dissemination of trade information, identification of entrepreneurs in Bhutan on the prospects for future growth. For the offices in New Delhi and Dhaka, funds were provided for rental of property, office equipment such as Telex and Fax machines etc., and purchase of vehicles.120

118. Ibid, pp. 136-137.
120. Ibid, p.263.
The Planning Ministry informed the 71st session of the National Assembly, in 1992 that from the First Five Year Plan to the recently concluded Sixth Plan, India as Bhutan’s closest friend had constantly been the largest donor. In the Seventh Plan also India continued to be by far the largest donor with a commitment twice as large as for the Sixth Plan, he said. His Majesty, the King, on behalf of the government and people of Bhutan moved a vote of thanks for the generous commitment extended by the Prime Minister and the government and people of India to Bhutan’s Seventh Five Year Plan. The King said that despite its difficulties the government of India had committed Nu 7500 million to Bhutan’s Seventh Plan.121

The King of Bhutan led a delegation on a four day visit to Delhi in March 1996. During this visit agreements were signed on two major joint ventures - Tala Hydro-electric Project and Dungsum Cement Plant, both of which began work in June 1996. India extended the team of an existing stand-by credit facility. India’s large size and population is viewed by Bhutan as a market of unlimited potential.122 Later that month Indian officials visited Thimpu to review the progress of Seventh Five Year Plan and a return visit to New Delhi took place in September 1996 to finalise the Eighth Plan.

4.8 EIGHTH FIVE YEAR PLAN

The Eighth Five Year Plan (1997-2002) has the following objectives:

(1) The achievement of the goal of national self-reliance depends largely on the continued progress being made in human resource development and the applications of technology appropriate to Bhutan’s development. It is also promoted through continued encouragement of local community participation and of selective privatization and decentralization.

(2) Sustainability is one of the main criteria in the Eighth Five Year Plan for the selection of social and economic programmes and projects. It requires that all development is consistent with environmental conservation and cultural values.

(3) The preservation and promotion of Bhutan’s unique cultural and traditional values will continue to be pursued in Eighth Plan.

(4) Security for the country, its people and its governing body, to lead a life of development of their own choice without unnecessary external interference is an overriding objective. Bhutan’s national security is also envisaged to benefit from continued collaboration with its friendly neighbours and donors.

(5) The objective of balanced development involves, providing as far as possible equal access to basic services and facilities of comparable quality to all Bhutanese, wherever they reside.

(6) To improve the quality of life in Bhutan raising the income earning capacity of the majority population is emphasised. It also includes improving access of the people to basic services like education, health and facilities such as clean drinking water, sanitation and communications.

(7) The strengthening of government institutions concerned with all stages of development from planning to implementation is addressed during Eighth Five Year Plan.

(8) Government’s objective is also to mobilize continued community participation for essential services to further decentralise functions on a selective basis. The privatization efforts made during the Seventh Five Year Plan continue in the Eighth Plan.

The budget outlay of the Eighth Five Year Plan is 35169.28 Nu million. “It is assumed that the Government of India continues to provide budgetary support in grant amounting to Nu 900 million per annum during the Eighth Plan”.123 The Government of India’s budgetary support grant is 4500.00 Nu million and her project-tied grant is 5678.34 Nu million.

At present Bhutan receives external assistance from as many as fifteen multilateral organizations, nineteen individual donor countries (bilateral assistance), four financial institutions (ADB, World Bank, IFAD and KFAED) and some non-governmental organizations.(NGO’s).124

124. Ibid, p.41.
Table : 10

<table>
<thead>
<tr>
<th>Source</th>
<th>1992</th>
<th>1993</th>
<th>1994</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>UN Multilateral</td>
<td>13.4</td>
<td>20.7</td>
<td>18.5</td>
<td>52.6</td>
</tr>
<tr>
<td>Non-UN Multilateral</td>
<td>6.1</td>
<td>6.7</td>
<td>4.7</td>
<td>17.4</td>
</tr>
<tr>
<td>Bilateral</td>
<td>59.8</td>
<td>64.5</td>
<td>49.3</td>
<td>173.7</td>
</tr>
<tr>
<td>NGOs</td>
<td>6.7</td>
<td>5.8</td>
<td>6.1</td>
<td>18.6</td>
</tr>
<tr>
<td>Total</td>
<td>86.0</td>
<td>97.6</td>
<td>78.7</td>
<td>262.3</td>
</tr>
</tbody>
</table>

The Bank of Bhutan established in 1968 through a Royal Charter, has an institutional association with the State Bank of India. Eighty percent of the Bank of Bhutan's shares is held by the government while the remaining 20% is held by the State Bank of India.125

Bhutan is a landlocked country. That is why road infrastructure development has been given priority in all 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 rural settlements. Since the temporary steel bailey bridges were built long ago and have outlived their design, so in the Eighth Five Year Plan, ten such bridges will be replaced at the cost of Nu 229.500 million of which Aie, Rongkhola and Sarpang bridges under Sarpang dzongkhag will be undertaken by the Government of India.126

During the last three and half decades commercial activity has grown rapidly. Exports to India and Bangladesh have increased. By the end of 1995, as many as 5,793 trade licences were operational in the country. In respect of internal trade, additional dealers for thirty-six principal Indian companies dealing in 306 items were selected under the de-monopolization 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 Phuntsoling and Thimpu for all packaged goods. Quotas for LPG and SKO from India were also increased during

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125. ibid, p.77.
126. Ibid, p.117.
this period to 300 mt and 15000 kl respectively.\textsuperscript{127} The export trade was decentralized and ninety export licences were issued to private individuals. The existing trade agreement between India and Bhutan was renewed on February 1995 for period of ten years and additional road/rail routes in India for trade with Bangladesh and Nepal were incorporated. One of the objectives of the Eighth Five Year Plan in the sector of external trade is to promote trade and improve the balance of trade with India. The Eighth Plan also emphasises expansion of trade with the SAARC and other countries. Aiming at these objectives, the Royal Government has also framed few strategies such as: (1) To upgrade and increase the number of national wholesale dealers in the country and streamline their operations. Some Indian companies were approached for their cooperation in the appointment of additional dealers. (2) To reinforce export promotion, especially with India, by market studies to explore the potential for Bhutanese products (3) to liaise with Government of India with regard to the road, transit, customs and related facilities in India.\textsuperscript{128}

For the improvement of trade and transit facilities both India and Bhutan further enhanced road links and transit facilities at the various entry/exit points on the Indo-Bhutan border. Through this Bhutan expects to expand trade with India. The exercise of negotiating with principal companies in India dealing in essential commodities in Bhutan has been further strengthened.

Progress has been made in the institutional strengthening of the Division of Geological Survey (DGS). The Government of India provided fund for the construction of new buildings and also for laboratory equipment and training. The Division implemented a number of field projects during the seven five year plans. Its Engineering Geology Section also carried out several field investigations. Two successive expeditions were sent to the Lunaha region to study hazardous glacial lakes. Stability studies and drilling in Basochu Hydro Power site were also undertaken.\textsuperscript{129}

Till May 1995, there were 102 community schools, 143 primary schools and seven private schools catering to primary education in Bhutan. Progress from the final year of primary education to the first year of secondary education is determined by the students’

\textsuperscript{127} Ibid, p.137.
\textsuperscript{128} Ibid, p.138.
\textsuperscript{129} Ibid, p.155.
performance in the All Bhutan Class VI Common Examinations. To cater for secondary education, there are nineteen junior high and nine high schools in 1995. According to the Royal Government the curriculum at the secondary level has been largely localized to reflect the national needs. “However the process has been slow because of the need to appear for an external examination set by the Council for Indian School Certificate Examinations. Steps were taken to fully nationalize this examination by 1997.130 Teacher shortage continues to be a major constraint. This shortfall is met by employing expatriate teachers mostly from India. “But 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 understaffed.131 At the secondary level the social service curriculum has been prepared 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 system between the Bhutan Board of Examination and Council for Indian School Certificate Examination.132

In the talks that preceded the Eighth Five Year Plan modalities for the release of funds by the Government of India have been simplified, reported by the Planning Minister, Lyonpo C. Dorji. The officials of the two governments decided that the category of assistance known as “projected assistance” would be done away with in the Eighth Plan. Assistance would be either budgetary support or project tied. The minister added that India would again be Bhutan’s main development partner in the Eighth Plan. “It is a privilege and source of pride for India to be associated with the development progress in Bhutan”,133 said A Ramesh, Joint Secretary (North) of the Indian Foreign Ministry. The areas having budgetary support and project tied assistance from India include: roads, bridges, power, culture, social sector, urban settlement, agriculture, civil aviation and human resource development.

Industries

Industrialization in Bhutan is a post-1960 phenomenon. But the drive towards such a process emerged in the 1950s. However the agrarian sector was given priority over the industrial sector. Small internal market, unavailability of labour power both skilled and unskilled, lack of high quality natural resources and ignorance of technological knowhow to explore the existing resource, lack of transport system, lack of education, all these factors acted as the hindrances for Bhutan’s industrialization. Bhutan had a traditional culture of agrarian economy and feudal social structure. But the administration was realistic enough to give priority to agriculture rather than industry in its initial years of development. It was only in the Third Five Year Plan that the industrial sector had been allocated 25.2 Nu million i.e., 5.3% of the total plan allocation.

In the First Plan India allocated only Rs. 1.10 million, for industries especially for surveys, infrastructure set ups and mining. In the Second Plan the allocation was Rs. 0.9 million and in Third Plan it was Rs. 1.68 crores. In the Fourth Plan, however the allocation for industries was Rs. 300.00 lakhs. Industrialization was delayed in Bhutan because otherwise it would have destroyed the very foundation of the subsistance economy, leading to such changes that would finally undermine the entire politico-socio-economic structure of such a closed system that Bhutan inherited. Those at the helm of state machinery were actively reticent to the idea of politico-socio-economic transformation of the old order of the society. The conservative elements in the kingdom “would resent interference in their traditional usage and not give their blessings to any move that might even remotely undermine their vested interests”

Historically, the British imperialism did not provide any impetus for the autonomous development in Bhutan. Due to lack of high quality natural resources and lack of labour, no surplus had created residues of which could have been used by the local elite for Bhutan’s internal development. Any autonomous development in Bhutan

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would have been dealt by the British through military means. Consequently the only alternative open to Bhutan was to pursue a dependent development strategy. Dispute regarding development strategy occurred in the past also. There were differences of opinion between the Governors (Penlops) of Paro and Tongsa on the issue of maintaining traditional ties with Tibet or to turn towards the British. When Younghusband mission was sent to Tibet, while the Penlop of Paro remained aloof, the Penlop of Tongsa, Ugyen Wangchuck welcomed the mission. He accompanied the expedition to Lhasa and helped in brokering a favourable Anglo-Tibetan Agreement. He showed keen interest in British India and its industries like cotton and paper mills, ironworks, the mint and the warships. Ugyen represented the progressive group of the Bhutanese society. Though he was invited to British India but his request for aid was rejected by the British.

India stands Bhutan in good stead in her industrialization process. During the Second Plan period a fruit preservation factory was set up at Samchi through a separate loan of Rs. 21 lakhs from the Government of India. Varieties of indigenous fruit are being processed in the factory and the products are exported to India. During this plan period emphasis was laid on conducting investigation for the development of tea and cement industries. Ambitious programmes were drawn up for the development of industries during the Third Plan. Bhutan has a good base in traditional cottage industries such as weaving, gold and silver works, bamboo and woodcrafts. The country is rich in forest reserves and mineral deposits. The industrial potential survey conducted by India revealed Bhutan's industrial development based on forests, minerals, water resource. Consumer based industries were also set up. A survey undertaken by an Indian team of experts revealed the potentiality of small scale units like match boxes, tea chests, pencils, lemongrass oil, newsprint, candle, washing soap, aluminum utensils, leather goods, ready made garments, plywood, paper, pine tar, resin, turpentine, shoe lasts, bread, biscuit and cattle and poultry feed.

137. Ibid, pp.197-98.
138. The Times of India, 2 February 1972.
Industrial centres were created at Phuntsoling, Thimphu, Gaylegphug and Samdrupjongkhar. Industrial loans were given to private enterprises. The principal industrial units were established with raw materials and power from India. Labour were also imported from India. Bhutan's industrialization totally depends on India's financial and technical help.\textsuperscript{139}

Indian capital, technical assistance, financial help, surveys have made deep inroads into Bhutan's economy to enable her to develop various industries since the 1960s. Industrial surveys and feasibility reports relating to agro-based, mineral-based and other services and ancillary industries, were conducted by appropriate Indian consultancy. The staff engaged in industrial extension service were deputed for training in Indian institutions like Small Industry Extension Training Institute Hyderabad, V. M. National Institute of Cooperative Management at Poona. A scheme for promotion of marketing of the local handicrafts was introduced with the assistance of Handicrafts and Handloom Export Corporation of India.\textsuperscript{140} Together with India's involvement, the foresighted and dynamic leadership of the Majesty, Druk Gyalpo Jigme Singye Wangchuck ushered in a phase of unprecedented industrial growth in the kingdom during the last twenty five years. Starting from a background of almost total dependence on agriculture in the 1970s the kingdom today can be proud of vibrant industrial enterprises. The industrial sector in playing a very significant role in the national economy by its increasing share of contribution of the gross national product, technological upgradation, employment generation, equitable opportunity for participation by all Bhutanese people.

The Cement Corporation of India was appointed by the Royal Government of Bhutan as consultant for a Nu 70 million cement project at Pagli in Gomtu. The Penden Cement Authority Ltd. was established in 1974. But it should be noted that with Indian technical and financial assistance the groundwork of this industry started as early as 1965. In 1977 the process of setting up a 300 TPD plant began. The factory started

\textsuperscript{139} Asia Year Book, 1979, Far Eastern Economic Review : p.149.

commercial production in 1981. The aggressive marketing strategy adopted by the Company over the years for its product has earned it a pre-eminent position in the cement trade in this region. Its network of agents in Bhutan and registered free sale agents in Indian retail markets has made Penden cement widely available. Institutional sales take place through Government undertaking in Bhutan, India, Bangladesh and Nepal. The prominent institutional users of Penden cement are:

1. Division of Works and Housing, Bhutan.
2. Division of Roads, Bhutan.
3. Chukha Hydel Project Corporation, Bhutan.
4. Kurichu Hydel Project Authority, Bhutan.
5. Basochu Hydel Project Authority, Bhutan.
6. Tala Hydel Project Authority, Bhutan.
7. Project DANTAK, Bhutan.
8. West Bengal State Electricity Board.
13. Assam State Electricity Board.
14. Telecom Civil Sub-Division II, Shillong.
15. Telecom Civil Sub-Division II, Guwahati.
18. Assam Police Housing Corporation Ltd.
21. Teesta Canal Hydel Project, West Bengal.

141. Penden Cement Authority Ltd., Gomtu, Bhutan
22. West Bengal Essential Commodities Supply Corporation.
23. Public Works Department, West Bengal.
24. Rensingtan Hydel Project, West Bengal.
25. Ramam Hydel Project, West Bengal.
26. Central Public Works Department, Guwahati.
27. Central Public Works Department, Cooch Behar.
29. Public Work Department (National Highway), Cooch Behar.
31. Director, Rural Development Authority Morigoan, Assam.
32. Public Health Engineering, Assam.
33. Exchange International Ltd. Dhaka, Bangladesh.
34. Sowdagor Overseas, Burimari, Bangladesh.
35. UNICEF, Nepal.

[B] The geological survey in Bhutan started since 1961 by the Geological Survey of India. Its Bhutan unit was based at Samtse. It was only on 7 April 1981 the Geological Survey of Bhutan (GSB) was formally established with the help of India. Its current manpower strength is 107, including seven geologists and two mining engineers. The commercial scale exploitation of minerals started after mid 1970s with the opening up of coal and slate mines. The mining industry in Bhutan became more prominent with the exploration of dolomite mines in Samtse dzongkhag. The mineral industry similarly gained prominence in Bhutan from the early 1980s with the operation of eight mines. By the end of 1998 there were forty-three mines in operation. The mines and mineral production is mainly concentrated in south-western part of the kingdom. By the year 1998, GSB has produced a considerable amount of industrial minerals like 300 thousand metric tonnes of dolomite; almost 400 thousand metric tonnes of limestone; 80 thousand metric tonnes of gypsum; 70 thousand metric tonnes of coal (fuel mineral); 45 thousand square feet of marbel (marble production started from

1989); 55 thousand metric tonnes of quartzite (quartzite production started since 1994); 600 thousand square feet of slate and 12 thousand metric tonnes of talc (talc production commenced from 1994). GSB provides geo-technical services to other organizations such as Public Works Division, Power Division, Ministry of Home Affairs, Ministry of Health and Education. The study of glaciers and glacial lakes and its remedial measures are the added responsibilities of GSB.

[C] Bhutan Board Products Ltd. (BBPL) was established on 20 April 1983 under the Companies Act of Bhutan 1983 at Tala. It has been built with the loan agreement with Kuwait Fund for Arab Economic Development. The company, manufacturing particle board, has projected for itself a growth oriented target for the future. The achievement of this target will be dependent on Indian political and economic situation since most of the sales are generated out of the Indian market. The company manufactures graded particle board of all grades, varieties, thickness, sizes, finishes etc. It was initially planned to set up a 40 cu.m per day capacity plant. However on reviewing various commercial, economic, technological and financial factors, a 80 cu.mt. plant was finalised by Kuwait Fund for Arab Economic Development appraisal mission. The Forestry Department of the Company is responsible for supplying wood raw material for the factory. Subsequently the BBPL Forestry Department is accountable for three main activities which will generate raw material to the factory-logging, forest road construction and maintenance and nursery and plantation.143

[D] Under the Royal Command the Army Welfare Project (AWP) was established initially as Government Welfare Project in 1974. In 1984 name was changed to Army Welfare Project and subsequently incorporated on 1 January 1994. This industry is working with technical collaboration with Mohan Meakin Ltd., India especially in the setting up of distillery. This industry is located at Samtse, Gelephu and Samdrupjongkhar. Working in collaboration with the Indian company since 1979, it was nationalised in 1991. The company makes only alcoholic drinks mainly for army consumption. The company imports raw spirit from India and add value to it and produce it for sale. Nearly 70% they keep for Bhutanese consumption and 30% they

sell to India especially to the Indian defense department called as Canteen Store Department of the Indian Army.\textsuperscript{144}

The AWP diversified into packaging industry in 1986. A Pilfer Proof Cap Manufacturing Unit at Gelephu and a joint venture Cardboard Box Manufacturing Unit at Samtse were established in 1986. The Joint Venture stands dissolved and a 100\% owned Cardboard Box Manufacturing was re-established at Samtse in 1998. The AWP set up a Caramel Manufacturing Unit in Samtse in 1994. In February 1995, in keeping with its phased development and expansion plans, the AWP commissioned a 7500 LPD Re-Distillation Plant at Gelephu. With an objective to develop local know-how, Royal XXX Rum was launched on 14 December 1988. This was followed by the launching of Black Mountain Whisky in September 1990. Two premium products, Royal Supreme Whisky and Dragon Deluxe Rum were introduced in May 1994 to phase out Bhutan Mist Whisky and Dragon XXX Rum. A major achievement was the establishment of a Research and Development centre and an in-house Flavouring Material and Chemical Manufacturing Centre in 1996.\textsuperscript{145}

\textbf{[E]} Bhutan Ferro Alloy Ltd. (BFAL) located at Pasakha was established in 1990 and started commissioning in April 1995. It was established by Bhutan’s largest private sector undertaking, Tashi Commercial Corporation. It is a joint venture with equity participation from Tashi Commercial Corporation, the Royal Government of Bhutan and Marubeni Corporation of Japan. The BFAL’s products are widely accepted by both Indian and International markets. The BFAL has a joint venture agreement with the (Norwegian Company ‘Elkem Asa Materials’, to produce and market micro Silica for domestic Indian and international markets. It is also financed by NORAD, the Norwegian Agency for Development. It has also signed a distributorship agreement with Victoria Alloys (UK) Ltd., England. The BFAL will produce high grade Magnesium Ferro Silicon to be marketed globally, for automobile and special foundry applications. The BFAL believes that it will enable the country to take giant leap towards self-reliance through industrialisation and economic growth. For the people of Bhutan, the BFAL

\textsuperscript{144} Interview with the officials of the company at the Trade Fair in Bhutan during the 25th year celebration of the King’s enthronement.

\textsuperscript{145} Army Welfare Project, 1999.
has introduced a dispensary at Pasakha and encouraged its own employees to participate in traditional sports like Archery, Khuru, Dego etc. It also runs an adult literacy programme.146

[F] Bhutan Polythene Company Limited (BPCL) also called as Druk Pipe was established at Phuntsoling in 1986. It started to manufacture from 1987. It is the first on the Indian subcontinent to offer gas pipes to supply gaseous fuels. It conforms to the internationally accepted standard ISO-4437. It has a special agreement with Solvay, Belgium for the provision of technical support and back-up. Its products, the high density polyethylene and medium density polyethylene pipes are used for various specialised application on the Indian sub-continent and has a state-of-the-art plant at Phuntsoling. The BPCL has been the major supplier to Government Departments in Bhutan and India and for projects in these countries funded by various international organizations. The BPCL is a major supplier to international organizations. It is also a major supplier of high tech gas pipes to India.147

[G] Bhutan Carbide and Chemical Ltd. is located at Pasakha. It was established in 1984 and started commercial commissioning in 1988. It is a joint sector project between Royal Government of Bhutan and Tashi Commercial Corporation. It produces calcium Carbide. The project was funded by World Bank and Kuwait Fund for Arab Economic Development. It not only encourages growth, prosperity and industrialisation in Bhutan, but also runs a school at Pasakha catering education to 375 children and also a dispensary in the Pasakha region.148

[H] The Chhoden Chemical and Industries Ltd. located in Samdrupjongkhar was established in 1991. Actual production of the company started from 1994. This industry was approved as a proprietory concern in 1989. The entrepreneur, Mrs. Sheka Chhoden who received training in industrial entrepreneurship in India and Bangladesh, undertook the venture. The company’s main market is Calcutta and Guwahati. Since

146. Growing Prospects in the New Millenium, Bhutan Ferro Alloys Ltd., Phuntsoling, Bhutan.
the raw-material in the eastern region is available in the country itself, the problem in marketing is not anticipated. It produces plaster of paris.\footnote{149}

[\textbf{I}] Vegetable development in Bhutan has no export significance. It is only meant for local consumption. About seventy-six vegetable crop varieties are available for general cultivation. Initially vegetables meant a few traditional varieties grown in their back yards for their own consumption. Now vegetable crops started pouring in from India in the late 70s in the form of cabbage, cauliflower, carrot, peas etc.\footnote{150}

[\textbf{J}] Since 1981 there has been significant impact on potato production, by the Ministry of Agriculture. It is an export item. The amount of potato exported has increased from 1046 metric tonnes in 1975 to 18193 metric tonnes in 1998. In 1998 potato alone earned Nu 147.201 million for Bhutanese farmers. The Ministry of Agriculture, Research Extension and Irrigation Division has also developed the cultivation of horticultural products like mandarin and apple. Both are exportable items. Approximately 18,647 metric tonnes of mandarin was exported in 1997 which earned Nu 178.93 million. Similarly in 1997, 4103 tonnes of apple were exported which earned Bhutan Nu 81,668000 (US $ 2249000).\footnote{151}

149. Chhoden Chemicals and Industries Ltd., Bhutan

150. Reflecting 25 years of Vegetable Development in Bhutan, Ministry of Agriculture, Research Extension and Irrigation Division, Royal Government of Bhutan, Thimpu.