# BHUTAN AND SIKKIM

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### SIKKIM

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# BACKGROUND NOTE ON BHUTAN

#### A. Geography

Bhutan has an area of about 18,000 square miles, roughly rectangular in shape and extending about 200 air-miles from east to west and about 100 air-miles from north to south. Bhutan can be divided into three zones ---southern, central and northern. Southern Bhutan consists of low foothills covered with tropical forests and dense undergrowth. These forests are the haunt of the elephant, deer, tiger and other wild animals. Leeches also abound making travelling in this area difficult. Central Bhutan has beautiful valleys and some gentle hill slopes. The valleys are at the height of 6,000 to 8,000 feet. They are comparatively broad and flat. The peaks of the mountain ranges separating the valleys reach heights of 12,000 to 15,000 feet. Valleys in the central region of Eastern Bhutan are at heights of about 3,000 feet and upwards. They are narrow. The general direction of the ranges that separate the valleys is from north-west to southeast in Western Bhutan and from north-east to south-west in Eastern Bhutan. The hills in this region are covered with beech, ash, birch, maple, cypress and yew. Above 8,000 feet there grow rhododendrons, pines and firs. Northern Bhutan consists of high mountain ranges with their rugged peaks covered with snow and ice. The main backbone of mountains rises to 24,000 feet high peak in the west and runs eastwards with two prominent peaks about 21.000 feet high.

2. There are eight main valleys, where population in Central and Eastern Bhutan is concentrated. They are: (a) Ha, (b) Paro, (c) Punakha, (d) Thimphu, (e) Ten Chu, (f) Trangs, (g) Bumthang, and (h) Eastern Bhutan. There are five main rivers in Bhutan. Only one of these, Toorsa, rises in Tibet. All the others rise in the high mountains in Northern Bhutan. These rivers flow into Indian territory and join the Brahmaputra. The capital is Thimphu.

3. Because of its geographical features Bhutan has a wide variety of climatic conditions and vegetation. Its main agricultural crops are rice, buckwheat, barley and potatoes. Bhutan is known to have considerable mineral wealth. The preliminary surveys carried out by the Geological Survey of India indicate that Bhutan has substantial deposits of dolomite, limestone, copper, graphite, gypsum, coal, and pyrites. Bhutan also has considerable forest wealth and hydro-electric potential.

#### B. People, Religion and Culture

4. The present population of Bhutan is estimated to be about eight lakhs. The majority of the Bhutanese are Mahayana Buddhists and belong to the Dukpa Kargyu sect. They were converted to Buddhism in the 8th century A.D. by the Indian Guru, Padmasambhava. The people of Nepali origin are predominantly Hindu.

5. There are four main languages spoken in Bhutan, viz., (a) Dzongkha in Western and Northern Bhutan, (b) Bumthangkha in Central Bhutan, (c) Sarchapkkha in Eastern Bhutan, and (d) Nepali in Southern Bhutan. The variations among these various languages are such that those speaking one language cannot easily understand the other. However, Dzongkha is today the official language all over Bhutan.

#### C. History

6. The early history of Bhutan is enveloped in obscurity. About the middle of the 16th century when Mahayana Buddhism had become established in Bhutan

a form of government came into existence with dual control by the clergy and the laity, as represented by the Dharma Raja (Spiritual Ruler) and Deb Raja (Temporal Ruler). The first "Dharma Raja" is said to have been Shabdung Ngawang Namgyal, a Lama. He appointed one Tenzing Dukgyag to attend to general administration of the State and to deal with foreign powers. He became the first "Duk Desi" or Deb Raja. The Shabdung appointed four Penlops or governors to administer the country. Thus Thaga, Thimphu, Tongsa and Tashigang were created as the four provinces administered by the Penlops. One of these Penlops used to be appointed by the "Dharma Raja" as the "Deb Raja". In course of time the successive Dharma Rajas began to confine themselves more to spiritual affairs, and temporal power passed more and more to the Deb Rajas. In the later half of the 19th century real power was vested in the Penlop of Tongsa district. After the death of the then "Deb Raja" in 1904, his office ceased to exist. In 1907, the then Penlop of Tongsa, Sir Ugyen Wangchuk, was elected by a Bhutanese Council as the hereditary Maharaja. He was recognised as such by the British Government in India. Sir Ugyen Wangchuk was succeeded by his son, Sir Jigme Wangchuk, in 1926. After his death his son, Jigme Dorji Wangchuk, was installed as Maharaja on 27 October, 1952. The local title of the Maharaja is "Druk Gyalpo".

7. By a Treaty concluded in 1865 at Sinchu La by the Bhutan Government with the then Government of India, the former ceded the 18 duars of Bengal and Assam, to the latter and agreed to receive an annual subsidy of Rs 50,000. The British entered into another treaty with Bhutan, the Treaty of Punakha, in 1910 by which the Bhutan Government started a closer relationship with British India and agreed to be guided by the advice of the British Government with regard to foreign affairs and to refer its disputes with Sikkim and Cooch Behar for arbitration to the British Indian Government. The subsidy was raised from Rs 50,000 to Rs 1,00,000.

8. Soon after India's Independence a fresh treaty of perpetual peace and friendship was concluded between the Government of India and the Government of Bhutan on 8 August, 1949. Under this treaty Bhutan has agreed to be guided by the advice of the Government of India in regard to its external relations. The Government of India have in their turn undertaken to exercise no interference in the internal administration of Bhutan. The Government of India also increased the annual subsidy to Bhutan to Rs 5 lakhs and as a gesture of friendship returned to the Government of Bhutan about 32 square miles of territory in the area known as Dewangiri. The treaty also provides for free trade and commerce between India and Bhutan.

#### **D.** Government

9. The King of Bhutan governs his country through the Tsongdu (National Assembly), his Councillors, the Central Secretariat and administrative officers located throughout Bhutan.

10. The Royal Advisory Councillors are the Chief Secretary, the Deputy Chief Secretary, a Minister, two representatives from Monasteries and four representatives of the people of Bhutan. The Secretariat is headed by the Chief Secretary who oversees the work of the subordinate administrative officers.

11. The Tsongdu (National Assembly) was instituted by the present King of Bhutan to associate the people with the Government. It has a membership of 126 of whom 90 are elected. The system of election to the Assembly is that each village or a group of small villages elect, on the basis of one vote for each family, a person for nomination as the Headman who is formally appointed as Headman by the King. The Headmen so appointed, in turn, elect the representatives to the Assembly. The nominated members of the Assembly consist of important government officials, influential Lamas and the chief priest of Punakha.

#### E. Bhutan Today

12. Until very recently Bhutan had shielded herself from outside influences by a policy of self-imposed isolationism. However, His Majesty the King and other leaders of Bhutan, convinced that progress and strength could not be achieved by isolating themselves, began negotiations with the Indian Planning Commission for drafting a Five Year Development Plan, in 1959 after an earlier visit by late Prime Minister Nehru to Bhutan in 1958.

13. Bhutan's First Five Year Plan, wholly financed by the Government of India, was implemented during 1961-66. Of a total outlay of Rs. 170 million provided, approximately Rs 105 million was spent during the Plan period. Besides this, the Indian Border Roads Organisation has spent about Rs 300 million since 1962 on the construction of roads here. Since 1966, an approximately Rs 200 million Second Five Year Plan, also wholly financed by India, is being implemented. India sponsored Bhutan's membership of the Colombo Plan in 1963 and since then Bhutan has got some aid from this organisation. Apart from financing the Bhutanese development programmes, the Government of India have been assisting Bhutan by deputing technical personnel, training of Bhutanese in technical fields in India, granting of scholarships to Bhutanese students, supply of foodgrains and other items in short supply in Bhutan and foreign exchange for essential imports.

14. The break-up of the First Five Year Plan was as follows:--

[Rs. in million]			[Rs. in million]			
Roads		62.00			2.00	
Education		10.00	Power		1.60	
Transport		7.50	Animal Husban	dry	1.50	
Health		3.20	Industries		1.10	
Forest		3.20	Miscellaneous		9.10	

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We give below the highlights of the progress achieved.

(i) Roads-More than 800 Kms of roads constructed since planning began, has completely changed the pattern of life in Bhutan. The 208-Km-road linking Phuntsholing on the West Bengal border to Paro and Thimphu, crossing altitudes as high as 10,000 ft has opened up Western Bhutan, originally easily accessible only via Sikkim and Tibet, in a most remarkable manner. Another 112 Kms of roads nearing completion linking the confluence of the Paro and Thimphu rivers-128 Kms from Phuntsholing-with Ha, will bring the Western Bhutan's road network to within 2 days march to Phari Dzong in Tibet. Roads from the southern foothill towns of Sarbang and Gelegphu, running north to Chirang and Tongsa, and the 160-Km-road from Darranga on the Assam border to Tashigang in north eastern Bhutan, have opened up southern, central and eastern Bhutan. Work is proceeding on a 480-Km west-east lateral road between Paro and Tashigang, through the heart of the country and over the 13,000 ft high Pele La. and when this is completed, Bhutan will be completely served by a road network. Road building on this scale and tempo has been equalled only in the North East Frontier Agency of India.

(ii) Road Transport—In a country which had only seen beasts of burden and not even a single wheeled vehicle, the beginnings have been made after the construction of the roads to bring the benefit of motorised transport to the people. The Bhutan Government transport service organised within the last three years, now runs passenger and freight services on all the roads which, starting from the foothill towns on the West Bengal and Assam border, go right up to a belt within 60 Kms of the Tibet border. The organisation of a road transport service has made it necessary for starting automobile workshops at Phuntsholing and Thimphu.

(iii) Communication facilities—The age-old system of sending mails through casual travellers or special messengers from one Dzong to another, gave way to modern means. only after planned development began. To-day, there are 25 post offices in Bhutan; the mails are carried with the help of a jeep service as far as practicable. Eight more post offices will be opened during 1968-69. A Bhutan Philatelic Bureau has been started. The beautiful stamps, some of which have been designed and printed at the Government of India Press, Nasik, are esteemed by collectors all over the world. Telegraph facilities are expected to be introduced during 1968-69. To begin with, the facilities will be confined to Phuntsholing, Paro and Thimphu. The existing communication is through Government wireless. The Border Roads Organisation of the Government of India has provided telephone links between some principal towns in western and eastern Bhutan.

(*iv*) Education—Before planning commenced, there were only 36 lower primary schools and 23 upper primary schools in various parts of Bhutan. The total enrolment was about 2,500 children. 140 Bhutanese children were getting education in India, most of them on Government of India scholarships. Now there are over 108 schools, including two public schools, catering to 15,000 students, one teachers' training institute and one technical school. 500 Bhutanese students are receiving education in India.

(v) Power-Torrential rivers and streams in Bhutan have great hydro-electric potential. In 1961, Bhutan and India signed an agreement to harness the Jaldakha river for hydro-electric power. The project involved construction of an over two-mile long diversion, on the Bhutan-West Bengal border, for diverting electricity from the water brought to the power house. Bhutan will shortly receive 250 Kw of power free of cost. In addition, Bhutan will also receive a royalty of Rs 8 per Kw annually for the power taken by the Government of West Bengal. The engineers of the Indian Central Water Power Commission have helped the Bhutan Government in setting up a hydel directorate by loaning the services of technical personnel to Bhutan. The hydel directorate has constructed a 400 Kw hydel project to serve the capital, Thimphu, and another hydel project (400 Kw) to serve the needs of western Bhutanese town of Paro is fast nearing completion.

(vi) Medicine and Health-Only after planned development began was a Health Department established. Before that, there were 11 dispensaries and 5 hospitals, two in western Bhutan and one in central Bhutan and one in eastern Bhutan. At that time there used to be one leper colony in eastern Bhutan. Only two hospitals used to have doctors. The rest were being looked after by compounders. All these hospitals have been expanded now and qualified doctors appointed. Besides, three new hospitals have been constructed and the construction of a fourth is under way. 40 new dispensaries have been established. As against one mobile medical unit, there are now four medical units. BCG vaccination and malaria eradication have been undertaken. Trachoma and goitre (ordinary salt has been banned and use of iodised salt made compulsory) and VD control measures have been initiated. Water supply schemes for principal Bhutanese towns have been completed. A number of compounders and nurses have been trained both in Bhutan and India.

(vii) Agriculture—Bhutan is an agricultural country and its economy is also agricultural. Cultivated land, however, covers only a fraction of the total area of the country. A Department of Agriculture was set up only after planned development began. The activities of this department have been to start a large number of model agricultural farms, seed multiplication farms, agricultural research stations and development of extension work. One of the greatest assets of Bhutan is the availability of almost every conceivable type of agro-climatic region. Since the income of Bhutan from cultivation of horticultural crops in the hilly regions in general, and in the temperate regions in particular, is very high, concerted efforts have been made to increase the area under fruit and vegetable cultivation. Agricultural exhibitions are being held with increasing frequency.

(viii) Animal Husbandry—A Department of Animal Husbandry has also been set up only after the inception of planning. Half a dozen livestock farms in different parts of the country, the establishment of a sheep breeding farm, a Mithun breeding centre in eastern Bhutan and improvement of veterinary services facilities throughout the country, represent the achievements.

(ix) Forest—Bhutan has immense forest wealth. Since planning began, some Bhutanese have been trained at Indian institutes and Indian officers have manned the Forest Department of the Government of Bhutan. That department has initiated a wide range of measures for conserving the forest wealth and exploitation of the forest products wherever this has been possible. The sale of Bhutanese timber has been well organised. Saw mills are coming up in different parts of the country. A wild life sanctuary has been developed at Manas on the Assam-Bhutan border and it is attracting tourists.

(x) Minerals—A survey of mineral deposits from the point of industrial exploitation has been undertaken only after planning began. Extensive deposits of minerals like coal, dolomite, graphite, gypsum and lime-stone have been discovered in Bhutan in substantial quantities. Mica is found everywhere and there are immense potentialities for its exploitation. A unit of the Geological Survey of India has been working in Bhutan for some years now.

(xi) Industry—Bhutan has tremendous resources for industries. A distillery owned by an Indian entrepreneur, is giving sizeable revenue to the Bhutan Government. Possibilities for setting up of a rayon and a paper pulp factory and a match factory are being explored.

(xii) Scholarships—More than 400 Bhutanese have availed themselves of scholarships for studies in schools and colleges, provided by the Government of India, either directly or through the development aid, administered by the Bhutan Government. On return to Bhutan, these students have quickly made their mark and are playing a notable part in the building up of their motherland.

(xiii) Tibetan Refugees—Though beset with own her problems, Bhutan has not hesitated to provide succour to 3,000 Tibetan refugees. The Government of India pays for their rehabilitation (Rs 700,000 so far) and the Government of Bhutan has given them free land and exemption of tax.

Mar Martin Martin

## BACKGROUND NOTE ON SIKKIM

#### A. Geography

Sikkim has an area of approximately 2,800 square miles. Its shape is almost a rectangle, 113 Kms long and 64 Kms wide. In the north it stretches up to the great Himalayan range which is the water-shed between Tibet and Sikkim, with four main passes which are Sesela or Dachila 17,343 feet high, Kongrala 16,840 feet high, Nakula 17,290 feet high and Chorten Nymala 19,000 feet high. In the east the Dongya range separates Sikkim and Chumbi Valley. This range has a number of passes, the most famous of which are Nathu La and Jelep La, just over 14,000 feet high. In the west the Singalila range is the boundary between Sikkim and Nepal. In this range is to be found the Kanchenjunga, the third highest peak in the world. In the south there is no natural feature which marks the frontier between Sikkim and India except a part of the border where it runs along the Tista and Rangit The Lachen and Lachung valleys to the rivers. north east were used as grazing pastures by Sikkimese herdsmen. These valleys also provide maize, yam and now apples for their sparse human population. Cardamom which is one of the main exports is grown near Singhik and rice is the main crop in the lower Tista and Rangpo valleys. In the south, watered by the Rangit and its tributaries, the country is rich in rice, special sweet loose skinned, Sikkimese oranges and a large variety of vegetables.

2. Sikkim has a fertile agricultural base. The principal crops are maize, paddy, millet, wheat, barley, cardamom, apple, oranges, potato and buckwheat. Domestic animals include cattle and buffaloes, yak, sheep, goats, pigs, mules and poultry. Sikkim has some deposits of copper, coal, graphite, gypsum and iron.

#### B. People, Religion and Culture

3. According to the 1961 census, Sikkim had a population of 162,189 composed of three elements: Lepchas, Bhutias and Nepalese. The Lepchas, racially akin to some of the hill tribes of Assam, and Tamangs, Limbus and Rais from Nepal are believed to have been the original inhabitants of Sikkim. In course of time Bhutias and Nepalese came and settled in Sikkim. The Nepali settlers today constitute almost three-fourth of Sikkim's population. The large majority of the Bhutia-Lepchas are Buddhists and the majority of Nepalese are Hindus. Buddhism is the State religion. About 28 per cent of the population are Buddhists and the rest are Hindus. Lepcha, Sikkimese and Gorkhali are the local languages while English is used for official purposes.

#### C. History

4. Sikkim was settled by Lepcha migrants from the Assam hills as early as the 13th century. It became a political entity in 1641 when Phuntsog Namgyal became its first ruler.

5. During the tenure of the sixth Ruler of Sikkim, Tenzing Namgyal, Sikkim was subject to frequent attacks by the Bhutanese from the east and the Gorkhas from the west. Sikkim lost much of its territory to invading Bhutanese and Nepalese in 1788 and 1789. The reign of the seventh Ruler of Sikkim, Tsugphud Namgyal, witnessed the penetration of British power into the Himalayas and of British trade efforts across the Himalayas into Tibet. Sikkim was involved in the Anglo-Nepalese War and was considered an ally of the British. In 1815 the British helped to drive out the Gorkhas from many parts of south-west Sikkim and in 1817 the Treaty of Titalia was signed between the British and Nepal whereby the boundary between Sikkim and Nepal was established.

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6. In 1849 the alleged maltreatment of high ranking British officials travelling in Sikkim caused a serious crisis in British-Sikkimese relations. Sir Joseph Hooker, a distinguished botanist, and his colleague Dr. Campbell were imprisoned by the Sikkimese authorities while conducting explorations inside Sikkim. To avenge the alleged maltreatment of these British officers the British Government in February 1850 sent an expeditionary force to Sikkim. The expedition resulted in the stoppage of the annual grant of Rs 6.000 enjoyed by the Sikkim Ruler and the annexation of the Terai region of Sikkim. The British Government sent another expeditionary force to Sikkim in 1860 which led to the conclusion of a Treaty between the British Government and the Sikkim Government dated 28 March 1861. By the Treaty of 1861 Sikkim's political integrity as British India's Protectorate was confirmed by the British.

7. In 1890 the British made a Convention with the Chinese under which the Chinese acknowledged the British Protectorate of Sikkim, while the British accepted the Chinese delimitation of the Sikkim-Tibet boundary. It was during Sir Tashi Namgyal's benevolent and enlightened rule that the present Treaty relationship between India and Sikkim was evolved.

8. On India's Independence in 1947, a standstill agreement was entered into with Sikkim. On 5 December, 1950, the Government of India and Sikkim concluded a Treaty which governs their present relationship. The main provisions of the Treaty are as follows :

> "Sikkim shall continue to be a Protectorate of India and, subject to the provisions of this Treaty, shall enjoy autonomy in regard to its internal affairs.

> "The Government of India will be responsible for the defence and territorial integrity of Sikkim. It shall have the right to take such measures as it considers necessary for the defence of Sikkim or the security of India, whether preparatory or otherwise, and whether within or

outside Sikkim. In particular, the Government of India shall have the right to station troops anywhere within Sikkim.

"The external relations of Sikkim, whether political, economic or financial, shall be conducted and regulated solely by the Government of India, and the Government of Sikkim shall have no dealings with any foreign power."

"If any dispute arises in the interpretation of the provisions of this Treaty which cannot be resolved by mutual consultation, the dispute shall be referred to the Chief Justice of India whose decision thereon shall be final."

#### **D.** Government

9. The present Ruler of Sikkim is His Highness Major General Palden Thondup Namgyal, PV, OBE, Chogyal of Sikkim.

10. The premier political parties of Sikkim are the Sikkim National Congress, the Sikkim National Party and the Sikkim State Congress.

11. The first State Council was formed in Sikkim in 1953. By agreement between the Darbar and the political parties it had 12 elected members divided equally between the Bhutia-Lepcha and the Nepali communities and 5 nominated members. The leaders of the Sikkim State Congress and the Sikkim National Party were appointed Executive Councillors and they were placed in charge of certain transferred subjects, *viz.*, education, public health, excise, bazaar, forests, public works, agriculture, press and publicity. The life of the 1953 Council was to have been for three years but was extended by about 2 years up to 1958.

12. The next State Council elections were held in 1958 when the strength of the Council was raised from 17 to 20 seats, which were distributed as follows : 6 seats for the Bhutia-Lepchas, 6 for the Nepalese, 6 for nominees of the Chogyal, one for the monasteries and one general seat. The life of the second Council was also extended by

about a year and it was dissolved in April 1962. The elections to the third Council were proposed to be held in November/December 1962 but, as a result of the emergency they were held only in March, 1967.

13. The new Council has seven seats each for the Bhutia-Lepchas and the Sikkim-Nepalese, a reserved seat each for the Scheduled Castes, the Tsongs and the monasteries, a general seat and six seats to which members were nominated by the Chogyal. The Executive Council consists of three Excutive Councillors representing the Sikkim National Party, the Sikkim National Congress and the Sikkim State Congress and three Deputy Executive Councillors, two from the Sikkim National Party and one from the Sikkim National Congress.

#### E. Sikkim Today

14. Sikkim enjoys today a per capita income about double (over Rs. 700 per year) that of India. Educational facilities and medical cover for the population in Sikkim far exceed those available in neighbouring Himalayan hill regions.

15. Much of the credit for the progress made by Sikkim goes to the dedicated and progressive outlook of the Ruler and the people of Sikkim and the substantial aid that they have received from India in the last 16 years.

16. It was in 1952 when the late His Highness Sir Tashi Namgyal, the then Chogyal (Ruler) of Sikkim and the late Prime Minister Jawaharlal Nehru met that Sikkim's planned development with aid from India was decided upon.

17. A sum of Rs. 32.369 million was spent on the First Seven-Year Plan (1954-61). The break-up of expenditure under different heads was as follows :

	Head of Develo	pment	al expenditure es in million]
1.	Agricultural & F	Rural Develop-	and the
	ment		 1.300
2.	Horticulture		 1.121
3.	Minor Irrigation	Works	 0.155

	Head of development	Actua [Rupe	al expenditure es in million]	
4.	Animal Husbandry		0.292	
5	Dairying and Milk Supply		0.552	
	Forest		2.258	
7.	Co-operation		0.542	
	Power Project		2.983	
	Cottage Industries		0.387	
	Other Industries		1.440	
11.	P.W.D. (Roads and Buildings)		13.901	
12.	Communication (P & T)		0.001	
	Road Transport		1.670	
	Education		2.322	
15.	Medical & Public Health		2.273	
	Buildings		1.026	
	Cultural, Social & Publicity			
111	Organisations	04	0.146	
	Τοται	L	32.369	

18. A sum of Rs. 63.637 million has been spent on the Second Five-Year Plan (1961-66) of Sikkim. The breakup is as follows :

	Head of Development	ıt	Actua	l expenditure
	Property and a fail of	1 4 1/1	[Rs.	in million]
1.	Agricultural Producti	ion	1	2.892
	Minor Irrigation	M. Inhus	1	0.145
	Animal Husbandry		1.00 100	1.179
	Dairying			0.209
	Forests			5.379
6.	Soil Conservation			0.456
7.	Fisheries			0.026
8.	Co-operation & Fair	Price S	hops	0.315
	Power			5.305
10.	Cottage Industries			0.935
	Other Industries & I	Mining		0.241
	Roads			26.084
13.	Road Transport			4.400

	Head of Development	nt	Actual [Rs	expenditure . in million]
14.	Tourism			0.524
	Education			7.682
	Health			4.267
	Housing		\	0.632
	Publicity			0.140
	Press			0.440
20.	Cultural Activities			0.139
	Marketing Centres			0.174
	Secretariat Building			0.525
	Community Centre			0.306
	Planning & Develo	opment		
27.	Department			1.242
	in and the spectrum of	TOTAL		63.637

19. Both the First Seven-Year Plan and the Second Five-Year Plan were completely financed by the Government of India. A Third Five-Year Plan envisaging an investment of Rs. 90 million, out of which much will be in the shape of outright grants from the Government of India, is under implementation. India has also spent large amounts on defence, geological survey, construction of border roads and on the settlement of Tibetan Refugees in Sikkim. The Government of India have been assisting Sikkim by deputing technical personnel, arranging the training of Sikkimese men and women in technical fields in India, granting scholarships to Sikkimese students and supplying foodgrains and other items in short supply in Sikkim. The revenues of the Government of Sikkim have increased ten-fold in the last 15 years. We give below a bird's eve-view of the highlights of progress achieved in different sectors.

(i) Construction of Roads—Before 1954, there was only a 50 Kms motorable trunk road between Gangtok, the capital of Sikkim in East Sikkim and Rangpo on the West Bengal-Sikkim border and 292 Kms of other roads. This road mileage being insufficient from all points of view, several jeep tracks in lower Sikkim and about 153 Kms of the North Sikkim Highway connecting Gangtok with Lachen and Lachung in north Sikkim had been constructed by 1962. The North Sikkim Highway is the handiwork of engineers of the C.P.W.D. and the Border Roads. This road costing Rs. 50 million and entirely financed by the Government of India over and above the aid given for Sikkim's development, traverses places at an average altitude of 9000 ft. and facilitates the movement of forest produce and apples from North Sikkim to markets in the lower parts. Bridle paths between Rishi on the West-Bengal border and Jalepla on the Tibet border, some roads in east Sikkim and the road from the capital, Gangtok, to Nathula also on the Sikkim-Tibet border, have been developed into first class roads. They are the vital road-links for defence of Sikkim and India. The expenditure on these roads amounting to Rs. 90 million has also been completely financed by the Government of India in addition to the development aid. The Sikkim P.W.D. constructed 177 Kms of roads and 483 Kms of village paths since the inception of planning. A ropeway from Gangtok to Thegu, covering a distance of 50 Kms on the road to Nathu La caters to the requirements of the armed forces guarding Sikkim.

(ii) Road Transport—As a result of the impressive road construction programme undertaken since planning began, almost all parts of Sikkim are now within easy reach from Gangtok. The Sikkim Nationalised Transport operates services on the important routes. The S.N.T., apart from satisfying long-felt needs of the Sikkimese people, is a valuable revenue earner for the Government.

(iii) Communications—Under the 1950 Indo-Sikkimese Treaty, communications are looked after by the Government of India. As against only 2 Post and Telegraph offices, in the capital at Gangtok, today there are 9 post and telegraph offices in Sikkim. (iv) Education—Remarkable strides have been taken in this field. As against 2,500 children who were going to schools when planning started, the figure now is estimated at about 15,000. As against 88 schools at that time, today there are 191 primary schools, 13 middle schools, 7 junior high schools, 5 higher secondary schools, 1 public school, 1 basic training school and 1 monastic school. A college is likely to be established by 1971 at the end of the current plan. Four Adult Education centres have been recently started.

(v) Forest—Out of the total surface area of Sikkim, 748 sq. miles *i.e.* 29.8 per cent are forests. Soil conservation and afforestation, planting of ornamental trees and trees of economic value along all the principal roads and highways and the development of timber industry, some of which are being sold as sleepers to the Indian Railways, are the highlights of achievements under this head. This department also looks after an experimental tea plantation which was set up in 1966 in Western Sikkim. An achievement of great importance to the common man in Sikkim is the successful planting of quick growing trees by the Forest Department for use as fuel.

(vi) Power—Sikkim has considerable water potential. In the First Plan a thermal plant was set up (at a cost of Rs. 1.2 million) for improving the supply of electricity to Gangtok. The Rongnichu hydel project (2100 Kw) which is the principal source of power supply to Gangtok and the Sikkimese towns of Singtam and Rangpo today and which would be exporting power to adjoining areas in West Bengal, was completed in May 1965. It cost Rs. 7.1 million. The Government of India is assisting in the investigation of a hydel-electric scheme which has great potential at Lagyap (40,000 Kw).

(vii) Health-Before the commencement of planning, there were only two hospitals in Sikkim. As against this today there are 5 Government hospitals, 24 Government dispensaries, and 4 sub-dispensaries. Besides, there are chest, opthalmic and pediatric clinics at Gangtok. A successful campaign for the eradication of malaria and Kala Azar, launched in 1956, has almost rooted out deadly diseases. Preventive medical work to root out tuberculosis, VD and intestinal worms have also registered remarkable successes. 154 village water supply schemes completed during the last 15 years of planning have ensured clean water supply to a sizeable section and gradually effort is being made to cover the entire population.

(viii) Agriculture—In Sikkim agriculture has been influenced by the nature of the terrain and a diversity of cimatic factors due to wide variation in elevation and rainfall. 95 per cent of the people depend mainly on agriculture for their livelihood. The chief cereal crops are maize and rice in that order. The average yield is low and the country is deficient in rice. Potato, orange, cardamom and vegetables are among the other crops of major importance, while apples and pineapples are cash crops.

There was no department of agriculture before the First Plan. To start with, therefore, a department was set up which placed under trial improved varieties of crops from India and arranged for supply of quality seeds. The use of fertilizers to step up crop yields and adoption of plant protection measures to save the crops were taken up. Extension services were organised to impart information as well as supply of material for proper application of fertilisers and pesticides to the people who needed them. Demonstration centres were established at Tadung (vegetables, maize & paddy), and Lachen (vegetables, potato and apples), a nursery adjacent to Gangtok for sub-tropical fruits, an apple-orchard at Lachung, a seed multiplication farm (paddy, maize and vegetables) at Geyzing and a 200-acre potato seed farm at Ribdi.

(xi) Animal Husbandry—Livestock occupies an important place in the economic life of Sikkim. The productivity of livestock, however, is known to be low. The indigenous cows produce about 2 to 4 lbs. of milk a day and the bullocks are not efficient work animals. Only a coarse type of wool is yielded by the indigenous sheep. The local pigs provide pork inferior in quality and quantity. The average number of eggs laid by local poultry is about 55 in a year. Only after planning commenced was a department dealing with animal husbandry set up. A number of livestock and dairy farms were established. Other services organised were setting up of a sheep (Dentam and Lachen), a poultry (Tadung and Geyzing) and a piggery farms (Geyzing). Veterinary services have also been greatly improved. A bacon factory (Geyzing) and a sheep breeding centre (Dentam and Lachen) are likely to be set up soon.

(x) Cottage Industries—No mention of planning in Sikkim would be complete without an indication of the work being done at the P.T. Cottage Industries Institute at Gangtok. Since 1957 it has trained about 300 boys and girls in local handicrafts like carpet making, weaving, traditional religious paintings, toy making, embroidery, papier mache work, cane work and carpentry. In the Sikkim forests there is abundant raw material for producing quality paper. Taking advantage of this, the Institute produces hand-made paper which caters to localneeds besides the demand from India.

(xi) Mining—Since 1960 the Sikkim Mining Corporation, a joint undertaking of the Governments of India and Sikkim, has done pioneering work in the field of mineral exploitation. Mineral surveys of the Geological Survey of India have revealed appreciable quantities of copper, lead and zinc.

(xii) Co-operative Societies—The co-operative movement began on an experimental basis with the enactment of the Sikkim Co-operative Societies Act, 1955. 23 societies— 20 for agricultural credit, 3 for ex-servicemen—are functioning today. There are four fair price shops in the Zongu area outside Gangtok, initiated by the Lepcha element of the population.

(xiii) Small-Scale Industries—A fruit preservation factory, half a dozen grain grinding mills, a distillery, a wire-nail factory represent the achievements since the inception of planning. A tannery is likely to be established at Singtam.

(xiv) Industrialisation—The Indian National Council of Applied Economic Research recently undertook a technoeconomic survey of Sikkim. Feasibility studies of a paper pulp project have been completed. A well-known Indian consulting firm has completed the study in depth of the industrial potential of Sikkim.

(xv) Tibetan Refugees—4,000 Tibetan refugees are in the process of being re-settled in Sikkim, and the Government of India has spent more than Rs. 1 million in this connection. Besides the Government of India has financed the construction of an Assembly Hall of the Rumtek Monastery, sixteen kilometers from Gangtok which houses His Holiness the Gyalwa Karmapa, perhaps the highest ranking Red Hat Lama held in high esteem in Sikkim, Bhutan, Nepal, Ladakh and NEFA. Both His Holiness and his followers compelled to flee from the Tsurpu Monastery near Lhasa in 1959, have also been helped by the Government of India in the matter of their boarding and lodging.

(xvi) Namgyal Institute of Tibetology—The Government of India have donated about Rs. 1 million since 1958 towards the running costs of the above mentioned Institute at Gangtok where Mahayana Buddhistic studies are being carried on. The Institute has an excellent library of ancient Tibetan texts and a remarkable collection of icons and wall-scrolls.

(xvii) Scholarships—Over and above the development aid, the Government of India have, since the inception of planning, made available scholarships for studies in schools and colleges to Sikkimese. 250 Sikkimese have so far availed themselves of this facility provided by the Government of India. On return to Sikkim these students have quickly made their mark and are playing a notable part in the re-construction of Sikkim.

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