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GOVERNMENT OF KERALA

DEVELOPMENT OF BEYPORE PORT

REPORT

ON

THE TRAFFIC SURVEY

**BUREAU OF ECONOMICS AND STATISTICS
TRIVANDRUM 1969**

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**GOVERNMENT OF KERALA
1969**

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PREFACE

The ports of Kerala are bound to play a vital role in the State's economy and as such any investment on their development will be a productive one. The question of developing smaller ports in the country has assumed much significance of late. Eventhough the development of modern port facilities dates nearly a century back, the large number of smaller ports remain neglected. With the advent of economic planning in India, serious attention has been given in this direction.

In Kerala too, the question of development of ports has engaged the earnest attention of the State Government and they have decided, inter-alia, that Indopole be entrusted with the task of ascertaining the feasibility of the development of some of the important minor ports in the State. Also, Government in their order G.O.Rt. 1514/67/PW dated 25-9-1967, have directed the Bureau of Economics and Statistics to undertake a traffic survey of Azhikkal, Beypore and Neendakara ports and their hinterland regions, with a view to estimating their potential traffic during the next two decades. Accordingly a preliminary draft report on the traffic survey of Azhikkal Port was prepared by the Bureau and submitted to Government in last May.

The traffic prospects of the port of Beypore on the studies conducted by the Bureau is presented in this draft report.

It may be observed, in this context, that the National Council of Applied Economic Research has conducted a traffic survey of Beypore port and its hinterland in 1962 at the behest of Government. They have assumed that the port of Calicut-Beypore functioning as an all weather deep-sea port might build up traffic to the estimated potential of 5.23 lakh tonnes by 1965-66. The present traffic survey undertaken by the Bureau, with its various limitations, however, discloses that if the Beypore port is properly developed, the traffic in general cargo at the port may go up from the existing potential of 5.20 lakh tonnes to 7.63 lakh tonnes in 1976 and 10.54 lakh tonnes in 1986.

Fairly extensive and good deposits of iron ore are reported to occur within a few miles of Beypore Port. Eventually, this can be advantageously exported through the port of Beypore if it is developed and provided with the necessary facilities. If the Scheme contemplated for the scientific extraction of iron ore is implemented,

the developed port is likely to handle on an average 20 lakh tonnes per annum by 1976 over and above the anticipated tonnage of general cargo.

The assessment of traffic potential will naturally depend on the extent to which programmes of agricultural and industrial developments are executed, the preference of trade and industries in the hinterland in using the port as against the established uses of other ports, the attitude of Foreign and Indian shipping companies to use it as a port of call and the timeliness with which suitable transport links with the port are provided.

The present assessment may therefore, be deemed to be provisional as the situation may be altered by important developments in the hinterland of the port consequent on the implementation of the Fourth Five Year Plan Schemes which have not yet taken concrete shape. It may then become necessary to review the present assessment of traffic.

In drafting this report the Bureau had the benefit of valuable advice of a number of leading agencies and institutions like the Malabar Chamber of Commerce, the Calicut Chamber of Commerce, the Fertilizers and Chemicals, Travancore Ltd., the Gwalior Rayons Ltd., etc.

This report was prepared by Sri P. P. Philipose, Deputy Director, Sri K. Balakumaran Nair, Assistant Director and Shri Gnanamuthu, Research Officer. Shri K. Selvaraj, Special Officer was in charge of the field enquiries connected with the traffic survey.

Dr. P. K. GOPALAKRISHNAN,
Director.

Bureau of Economics & Statistics,
Trivandrum; Dated, 16-1-1969.

DEVELOPMENT OF BEYPORE PORT REPORT OF THE TRAFFIC SURVEY

INTRODUCTION

Transport system plays a significant role in the economic development of a country. Planning for transport is a complex task. It is all the more so for ports. The crucial factor in proper planning of ports is the estimation, with a fair degree of accuracy, of what the traffic would be like and what the economy of ports and shipping would be like in the future, say, 20 to 30 years from now. The past trends of traffic alone are no guide for estimating the future traffic. Forecasting of traffic presupposes a fairly good idea of what the economy would look like 20 to 30 years from now.

The trend of modernisation in port facilities in India started nearly a century ago. However, its area of influence was limited to some of the major ports in the country till recently; with the result the smaller ports were left to remain virtually at the same primitive level. With the advent of the Five Year Plans the ports development programme assumed added importance and the last three plans witnessed a hectic period of port development in India. Measures for the rational development of small ports were also initiated. In Kerala also attention was focussed to the proper development of the minor ports.

Kerala has a long coast line with a number of ports studded on it. There are at present a major port of Cochin, two intermediate ports at Calicut - Beypore and Alleppey and ten other minor ports spread along the coast line. The port of Cochin is a nice natural harbour of national and international renown. In view of its strategic location on the South West Coast of India and on the cross roads of the east-west ocean trade, cochin port is at present the natural gateway to the vast potential markets of the South West India. The traffic handled in this port was only about 0.7 lakh tonnes in 1870 about 2 lakh tonnes in 1900 and 8 lakh tonnes in 1940; but it was as much as about 37 lakh tonnes in 1966-67. The general cargo handled at Cochin port during the past few years was as follows:—

Cargo handled at Cochin Port

(in lakh M.T.)

Year	* Loading	Unloading	Total
1961-62	4.08	18.78	22.86
1962-63	4.03	19.59	23.62
1963-64	4.22	20.34	24.56
1964-65	4.51	22.61	27.12
1965-66	4.59	24.13	28.72
1966-67	5.98	30.72	36.70

*excluding bunkers

Source.—Cochin Port Trust

Tables 0.1 and 0.2 in the appendix give the distribution of export and import at Cochin port according to commodities:

The question of developing the intermediate and minor ports of the State which have very little expansion for a long time received the urgent attention of the Government. The port of Beypore, a sub port of Calicut is located in the estuary of Beypore river, 9 K.M. south of Calicut and 141 K.M. north of Cochin by sea. In 1959 the Intermediate Port Development Committee visited Beypore and recommended that in the Third Five Year Plan period, detailed investigations should have to be made in respect of waves, wind, tides, river discharge influx and sediment load and model studies undertaken regarding the feasibility of making Beypore an all weather, deep water port. Accordingly the State Government has already undertaken a model study at the Poona Research Station which is now in progress. The Government have also entrusted Messrs. Indopol Limited to examine and evolve a scheme for the development of minor ports of the State including Beypore port.

With the object of assessing the quantity of cargo that will be available for the port after taking into consideration, the industrial and the agricultural growth of the hinterland, the Government in their Order No. G.O. Rt. 1514/67/ PW, dated 25-9-1967 directed the Bureau of Economics and Statistics to conduct a traffic survey of Beypore port and its hinterland.

Necessary data were collected by the Bureau during the period of three months from 1-3-1968, through field enquiries. Processing of the data was undertaken in July and August, 1968.

An attempt is made in this report to analyse and estimate the traffic potentials of Beypore.

CHAPTER—I

Hinterland of Beypore Port

A deep-water, all-weather port at Beypore is likely to command a hinterland ranging over the whole of Kozhikode district. The area comprising the iron ore deposits in Nammind, Naduvallur, Cheruppa, Eliyettimala in Kozhikode taluk, the fast developing industrial areas of Mavoor, Kallai, Feroke etc., are all encompassed within reach of Beypore port. Important towns and trade and commercial centres such as Calicut, Badagara and Quilandi, which at present look to Cochin or Mangalore for port facilities due to established transport facilities and trade channels, may turn to Beypore Port, if it is developed into an all-weather port. The traffic handled, at present, at Calicut Port can also naturally go via Beypore Port as some handling expenses could be saved by direct shipment from ship to shore and vice versa without interruption due to monsoon.

It is doubtful whether parts of Coorg and Mysore districts of Mysore State and Cannanore district of Kerala State can be included in the hinterland region of Beypore even though these areas have intimate trade connections with Kozhikode. This is particularly so in view of the development taking place or likely to take place in Mangalore and Azhikkal Ports. In spite of the Plantations in the Nilgiri district of Madras State having close affinity towards Kozhikode in trade and commerce even now, it may not be advisable to include the same in the hinterland of Beypore Port for the time being, in the absence of clear indications of its future pattern of trade.

Palghat district lying close to Kozhikode is also kept outside the hinterland of Beypore Port as it is strongly oriented towards Cochin Port. Moreover there is very little chance of attracting traffic from Palghat district to Beypore, in the context of the proposed development of Ponnani Port.

Cochin Port, otherwise known as the Queen of the Arabian Sea, situated at a distance of 141 K.M. from Beypore by the sea is capable of handling further 2 million tonnes if certain improvements are effected. As the broad gauge and metre gauge railways along with a good net work of roads and canals converge upon Cochin Port and its vicinity, the industrial Centres of Alwaye and Coimbatore are already oriented firmly to it.

As such, the hinterland of Beypore will naturally be confined to a smaller area and hence the whole of Kozhikode district is proposed as the hinterland region of Beypore Port.

Kozhikode district with an area of 6656.8 Sq. K.Ms is the largest district of Kerala accounting for 17.13 per cent of the area of the State. Geographically the district is divided into low land, mid land and high land. The low land is a narrow strip of region with a coastal line of 112 K.Ms and located within 25 ft. of mean sea level. The mid land lying between 25 ft. and 250 ft. sea level has fertile soil with luxuriant vegetation, the main cultivation being

rice, pepper, coconut, rubber, arecanut and tapioca. To the east of the mid lands and rising above 250 ft. sea level lies the high land region over run by forested hills and mountains. Tea, coffee, cardamom and rubber are the main crops grown here.

Bounded on the north by the Cannanore district on the east by the natural barriers of western ghats, by the Mysore district of Mysore State and the Nilgiri district of Madras State, on the south by Palghat district and on the west by the Arabian sea, Kozhikode district lies between north latitudes $10^{\circ}-47'$ and $11^{\circ}-52'$ and east longitudes $75^{\circ}-32'$ and $76^{\circ}-33'$.

The climate of the hinterland presents more or less equatorial conditions. Like other parts of the State, it has four seasons, the dry weather from December to February, hot weather from March to May, south-west monsoon from June to September and North east monsoon from October to November.

Records of rainfall in the hinterland are available from eight stations for most of which the data extend back to 90 years. The details of rainfall for the last ~~two~~ ^{year} years is given in table No. 1.1 appended. The average annual rainfall for the district was 4659 m.m. in 1960-61 and 2776 m.m. in 1966-67. The variation in the annual rainfall in recent years has been appreciable (vide table 1.2). On an average there were 124 rainy days (i.e., days with a rainfall of 2.5 m.m. and above) in an year.

Winds are generally light to moderate with some strengthening in the south-west monsoon season. Winds are stronger in the afternoon during the months of January to May. In the south-west monsoon months winds flow mainly from west to north west. In other season, north-easterly or easterly winds are more common in the morning while in the afternoon wind flow from directions between south-west and north-west. The mean wind speed at Kozhikode for the last three years are given in table 1.3 of the appendix.

Hail, dust storm, squall and fog are not common at the region (see table 1.4).

There are eight west flowing and one east flowing river in the hinterland.

The Murat river, otherwise known as Kuttiyadi river takes its origin from the thick virgin forests of the western slopes of Wynad hills. It has a total length of 74 K.M. and drain into the Arabian Sea at the historical palce known as Kottakkal about two miles from Badagara. The river basin down stream of Kuttiyadi is thickly populated. The river is used for navigation and floting of timber logs. Motor boats are also plying from sea mouth to Kuttiyadi.

Korapuzha river is formed by the confluence of two streams called Agalapuzha and Punnurpuzha. From this confluence the river flows in a south-westerly direction for about 1.6 K.M. before it falls into the back waters. Punnurpuzha, the main tributary of Korapuzha takes its origin from the Arikkan Kunnu Hills, flows in a south westerly direction and then joins Korapuzha. Agalapuzha, the second tributary originates from Kodiyanadu mala. The river and its tributories are all tidal in their lower reaches. Floating timber, along the river from the upper reaches is the main use of the river.

Kallai river originating from the mid lands of Cherukulathur village of Kozhikode district is connected with Chaliyar and Korapuzha by artificial canals. Even though the river is very small it is probably the most important river in the whole of the State from the commercial point of view. Kallai, one of the biggest centres of timber trade in India is situated at the mouth of the river. The river is tidal, and boats can go almost upto its origin. The river joins the sea near Calicut town after travelling a distance of 23 K.M.

Kabani river, an important tributary of Cauvery river has its origin in Wynad and flows towards the east of western ghats to join the main river. The river is formed by the confluence of two main tributories, Panamaram and Mananthody. From the confluence Kabani flows a distance of 8 K.M. through Kerala State, and 11 K.M. along the boundary limits of Kerala and Mysore before it takes a northern direction and flows through Mysore State.

The Mahe river originating from the forests of Velliyode, Nari-patta and Kanilampara amsams, after traversing 55 K.M. falls into the sea at the former French Settlement of Mahe. The river is navigable in all seasons upto Prakadam.

Tirur river is a small river taking its source from Atavanad in Tirur taluk and have an overall length of 48 K.M. The river joins the sea near Ponnani, town and is very important from the navigational point of view.

Pooraparambu river, another small river having a length of 8 K.M. is also important from the navigational point of view.

Kadalundi river, also known as Karimpuzha and Oravanpuram puzha at different reaches in its course, is formed by the confluence of two tributories Olipuzha and Velliari, and takes its origin from the silent valley. The length of the river is 130 K.M. Of all the rivers in Kerala, probably Kadalundi is one, which is subject to high flood damages, mainly due to the fact that it flows along the coast for a distance of about 32 K.M. in a comparatively shallow terrain. The river is important from the navigational point of view, as it forms a part of the west coast canal system.

The Chaliyar river, otherwise known as Beypore river in its lower reaches is one of the main rivers of the State. The main river starts from the Elambiler hills, and a number of tributories contribute their flow to the main river. The following are the main tributories:

1. Cherupuzha
2. Kingipuzha
3. Karumbanpuzha
4. Kanhirapuzha
5. Karimpuzha
6. Punnapuzha
7. Vadapurampuzha
8. Chaliyarpuzha

The main river Joins the sea at Beypore, and has a length of 168 K.M. The entire length of the river from Beypore to Nilambur is made use of for navigation throughout the year. Large quantities of timber are floated down to Kallayi through this river. The lower reaches of this river also forms part of the west coast inland navigational system. The details of rivers, are furnished in table 1.5 of the appendix.

Calicut-Beypore and Badagara are the two ports of the hinterland.

Calicut, the headquarters of Kozhikode district and Kozhikode taluk is one of the growing cities of South India. The early history of Malabar centred round Calicut. The historic city of Calicut had attained pre-eminence as a great centre of activities for trade and commerce during the 11th and 12th centuries. Historians have recorded the importance of Calicut as a large town and a flourishing port carrying on trade with all parts of the world. Travellers like Sheik Ibin Batuata and Abdul Rasak had reported that Calicut was so flourishing a port that merchants from far off countries used to visit and settled down there. The thirteenth century witnessed the rise and glory of Calicut under the Zamorin as an important centre for political power. The Chinese and Arabs were the first to trade with Calicut. The arrival of Vasco-Da-Gama, the first European visiter, at Calicut on 27th May 1498 marked the beginning of a new epoch in the political history of India. Albuquerque the Portuguese Governor established a port in Calicut in 1513. The advent of Portuguese in Cochin and consequent rise of the Cochin Port paved the way for the decline of Calicut as a commercial and trade centre. The British made Calicut the headquarters of the Malabar District. Even before the advent of foreigners from the West Calicut stood in the forefront amongst many places in Malabar in the field of education and culture. The annual congregation of scholars at Calicut under the patronage of Zamorin was regular feature in the past. It is still retaining its importance as the regional focus in many respects.

The port of Calicut situated in latitude 11°-11' north and longitude 75°-47' east, on the west coast of India is 660 K.Ms by rail from Madras and 905 K.Ms. south-east of Bombay by sea. It is 67 K.Ms south of Tellicherry and 150 K.Ms. north of Cochin by sea.

The port is an open roadstead with a number of reefs to the south of anchorage, but no piloting is required. Within 3 K.Ms off the coast, the sea is shallow and steamers have therefore to anchor outside this limit. Three rivers namely Kallai, Kadalundi and Beypore meet the sea within the port limits.

The port is open to foreign trade. Though the port is not completely closed to foreign traffic during the south-west monsoon, steamers do not generally call here, whenever there is heavy rain, as the port is an open roadstead. Aga automatic light, morse signalling, flag signalling (inter-national code) are available here.

Beypore town is situated about 9 K.Ms away from Calicut Railway Station, at the mouth of Beypore river. Beypore was treated as a census town in

1961 census, and it comprises of the area falling within Beypore and Cheruvanoor villages and some portion of Naduvattom village. Tippu Sultan selected Beypore as his capital of Malabar, but hardly the vestige of its importance has survived.

The Beypore port which is now only a declared wharf of Calicut port lies in latitude 11°-10' north and longitude 75°-49' east and is situated at the estuary of Chaliar river which has a perennial flow of water. The port is very ancient and was famous for ship building activities and trade with the middle-east and even with countries in Europe. It is well conneted by road and rail with the hinterland. There is also inland waterways connecting the area with the hinterland. As such the port could well serve the shipping needs of a large and fertile hinterland. The celebrated Malabar mud banks which lie off all rivermouths also show up here. Exceptional storms and littoral currents tend to move the mud banks up and down. The bar at the entrance of the estuary of Beypore port carries about 5 to 7 feet of water at low tide. At present there is only small wharf of 220 ft. length at Beypore.

The number and other details of tonnage of sailing vessels and steamers both foreign and coastal that called at the port of Calicut including Beypore for the last six years beginning from 1961-62 are given in table 1.6 of the appendix. 319 steamers and 502 sailing vessels with an aggregate tonnage of 6.66 lakhs called at the port of Calicut-Beypore during the year 1961-62. But the number of vessels called at the port for the subsequent years has decreased year by year and in 1966-67, 149 steamers and 913 sailing vessels with a total tonnage of 3.61 lakhs only called at the port. This decreasing trend was also noticeable in the case of cargo handled at the port. During 1961-62, the total volume of imports and exports from the port was to the tune of 272703 tonnes and except for the year 1964-65 when the traffic recorded was 302259 tonnes the cargo handled during the subsequent years showed a declining trend, and in the year 1966-67 it was only 214601 tonnes. Table No. 1.7 of the appendix furnishes the total tonnage of imports and exports handled at the port since 1961-62.

The coastal imports which in 1961-62 registered 54638 tonnes went down to less than half (25070 tonnes) in 1966-67, while foreign imports for the same period had gone up from 5261 tonnes to 70579 tonnes. But the coastal and foreign exports had fallen significantly in 1966-67 from 1961-62.

On a commodity-wise analysis of the imports and exports from the port for the last few years, it can be observed that rice, wheat, salt and fertilizer constituted chiefly the imports, while coconut and its allied products, wood and timber, tiles, tapioca and cattle food formed the main exports.

The number of harbour crafts owned by private parties and registered at the port was 135 in 1961-62 and 119 in 1965-66. A statement showing the number of harbour crafts registered at the port and owned by private persons is given in table 1.9.

The revenue from the port which was Rs. 3,63,375 in 1961-62 has risen to Rs. 4,74,465 in 1965-66. But in 1966-67 the revenue earned by the port has fallen to Rs. 4,05,447 (vide table No. 1.10).

Badagara the northern most town of the district, is located just north of Kuttiyadi river and is the headquarters of Badagara taluk. The town is linked with Calicut by the west coast road, and the railway line, the distance being 46.4 K.M. and 44.8 K.M. respectively. Badagara was the scene of many of the exploits of Tacholi Othenan, the hero of the ballads of north Malabar. The town is a centre of trade and commerce in pepper and coconut products such as copra, coconut fibre, yarn and coir.

Badagara port lies in latitude $11^{\circ}36'$ north and longitude $75^{\circ}34'$ east, and is 19 K.M. south of Tellicherry. The port is on the open roadstead and is open to foreign trade. But only small coastal vessels call at the port. Sailing vessels anchor at a distance of about 1 K.M. away from the shore, and the cargo is handled by Masula boats. Though the port is conspicuous by the absence of a pier or jetty facilities like flag signal, morse signal and Aga light flash are provided in the port.

In 1961-62, 109 vessels consisting of 84 steamers and 25 sailing vessels with a total tonnage of 62560 tonnes called at this port. The number of vessels called at the port has steeply declined in subsequent years and in 1966-67, 13 steamers and 21 sailing vessels with an aggregate tonnage of 12709 tonnes called at this port. Table No. 1.11 indicates the number of tonnage of vessels that called at the port of Badagara since 1961-62.

Ships usually call at Badagara port mainly for export and in 1961-62, out of the 24340 tonnes of cargo handled at the port 21988 tonnes were exports, and the imports constituted only 2352 tonnes. Just as in the case of ships, the tonnage of cargo handled at the port has fallen gradually and in 1966-67 only 6765 tonnes of cargo were handled, of which 5238 tonnes were exports and 1527 tonnes imports. The imports and exports from the port of Badagara since 1961-62 are detailed in table No. 1.12. The port of Badagara handles only coastal imports and exports and seldom foreign vessel touches this port.

Twenty three cargo boats including barges and one canoe owned by private parties were registered at the port in 1961-62, and the same number of harbour crafts existed in 1966-67 also.

The revenue from the port was Rs. 50,067 in 1961-62 and in subsequent years it had fallen. For the year 1966-67 the revenue was only Rs. 11615 (please refer table 1.10).

Table 1.13 and 1.14 in the appendix outline the commodity-wise import and export from the port of Calicut-Baypore since 1960-61.

Out of the total population of 169.04 lakhs (1961 census) of Kerala, 26.17 lakhs or about 15 per cent were in the hinterland. A table showing the Taluk-wise area and population along with the density (according to 1961 census) is given in table 1.15. The estimated population of the hinterland

from 1962 to 1966 along with the estimated density per square K.M. are given below:—

<i>Year</i>	<i>Estimated population (in lakhs)</i>	<i>Estimated density (per sq. K.M.)</i>
1961	26.17 (census)	393
1962	26.86	403
1963	27.55	414
1964	28.24	424
1965	28.93	435
1966	29.63	445

The density of population in the hinterland was only 393 persons per sq. K.M. in 1961 while the density for the State was 435. The percentage of urban population to the total population of the hinterland was 16.51 as compared to State percentage of 15.11.

The percentage of literacy (40.63) in the hinterland was lower than that of the State (46.85).

According to the 1961 census, the strength of working force in the district was 8.02 lakhs which formed 14.25 per cent of the workers of the State. The percentage of the workers to the total population of the hinterland (30.65) was lower than that of the State (33.31).

The percentage distribution of the workers of the hinterland according to occupation is given below:—

<i>Occupation</i>	<i>Percentage of workers</i>
I. Primary occupation	
1. Cultivators	15.95
2. Agricultural labourers	14.10
3. In mining, quarrying, fishing, forestry etc.	11.41
	41.46
II. Secondary occupation	
1. Household industries	6.49
2. In manufacture other than household industry	8.35
3. In construction	0.91
	15.75
III. Tertiary occupation	
1. In trade and commerce	6.63
2. In transport storage and communication	3.45
3. In other services	32.71
	42.79
Total workers	100.00
	100.00

About 30 per cent of the working force of the hinterland are engaged in agriculture either as cultivators or as agricultural labourers, 11.41 per cent of the working force are engaged in mining, fishing, quarrying, forestry and

other allied activities, 6.49 per cent in household industry, 8.35 per cent in manufacturing, 6.63 per cent in trade and commerce, 3.45 per cent in transport storage and communication and 32.71 per cent in other services. Table No. 1.16 in the appendix furnishes the number and percentage of workers in the hinterland according to occupation as available from 1961 census reports.

As already stated, the main occupation of the people in the hinterland is agriculture and its allied activities. The service sector is also significant. The formation of the new district of Kozhikode, together with the development activities undertaken under the five year plans, have contributed to a substantial increase in the service sector. The industrial sector also has grown significantly, during the past few years and the scope for its further development is immense. A brief idea of the agricultural and industrial base of the hinterland is given in the succeeding two chapters.

CHAPTER—II

The Agricultural base in the hinterland of Bepore Port

The hinterland has mainly an agricultural economy. It comprises an area of 6.62 lakhs hectares. The classification of the area of the hinterland is furnished in table 2.1 of the appendix from 1963-64 onwards. The net area shown in the hinterland constituted 50 per cent of the total area in 1966-67, while forests accounted for nearly 29 per cent and cultivable waste and fallow land together formed about 5 per cent in the same year. The hinterland region is an important area of Malabar, generating valuable agricultural exports.

The important crops grown in the region are rice, coconut, pepper, tapioca, rubber, coffee, tea etc. Commodities like coconuts, copra, pepper, cashew kernels, coir, tea, coffee and timber are exported from the hinterland. Tables 2.2 and 2.3 in the appendix present the details of area and production of important crops of the hinterland for the period 1964-1967.

Rice is the staple food of the population. Like the rest of the State, the hinterland too, is in chronic deficit in rice. The production of rice in this region in 1966-67 was only 1.08 lakh tonnes out of the State's total of 10.84 lakh tonnes, as against its annual requirements of 3 lakh tonnes of rice at the rate of 12 oz. per adult per day. Usually the deficit is made up by the supplies from Andhra, Tanjore and other adjoining districts of Madras State by means of rail and lorry transport. Rice and wheat are also imported from abroad through the ports of Cochin and Calicut. Under the rationing system food-grains are being distributed by Government to the hinterland for consumption.

The area under coconut plantation in the hinterland during 1966-67 was about 1.20 lakh hectares accounting for an estimated production of 753 million nuts.

Another important crop in the district is cashewnut which covered 14162 hectares of land in 1966-67 with an annual production of 15876 tonnes of raw nuts. Most of the raw nuts produced in this region are either exported to Quilon or Mangalore for processing while the rest is processed in the three cashew factories of the district and the processed kernels are exported.

Kozhikode ranks first in the matter of acreage under tapioca in the State with about 20337 hectares in 1966-67. The annual production is estimated to be 2.90 lakh tonnes. As a result of implementing special schemes for stepping up the acreage under the crop and its production, substantial progress has been achieved in the last few years and the acreage and production are likely to go up further in future. The traffic in tapioca and allied products can be expected to increase further.

Pepper is another cash crop of the district. The acreage under pepper in the district has remained steady for the last few years at about 16000 hectares, but the production has shown a declining trend. The production during 1963-64 was 2621 tonnes and it has gradually declined in subsequent years and in 1966-67 it was estimated to be only 2294 tonnes. Most of the pepper produced in the district are now exported to foreign countries through the port of Cochin.

Conditions prevailing in some of the upper regions of the hinterland are suited for rubber cultivation and the area under rubber in the hinterland was 20294 hectares in 1966-67 and the estimated production for the same period was 8287 tonnes. The area under rubber has remained more or less constant during the last few years, while the production went up from 5430 tonnes in 1963-64 to 8287 tonnes in 1966-67. Most of the rubber cultivation are of recent origin.

The area under tea in the hinterland which was 3988 hectares in 1964-65 has increased to 4310 hectares in 1966-67 and the production for the same period has increased from 6205 to 6478 tonnes.

The Malabar region particularly Kozhikode district is an important coffee growing area and of the total area under coffee in the State, Kozhikode district (hinterland) accounts for about 65 per cent. The area under coffee during 1966-67 was 16335 hectares with an estimated production of 6662 tonnes.

Forest Produce:—

Timber and other produce from the forests of the hinterland provide an important base for industry trade and transport. About thirty per cent of the geographical area of the hinterland ie. about 1.94 lakh hectares is under forests. A large part of the forest lands are the property of private owners. Timber from the forests are floated down the rivers to Kallayi, which is one of the biggest timber markets of the world. Table 2.4 in the appendix gives the out turn of timber in Kozhikode and Nilambur forests divisions for the last few years.

Fisheries:—

The sea, rivers and backwaters of the hinterland offer ample opportunities for the fishing industry. Kozhikode has a coast line of 115 K.M. The marine fish catch at the 17 fish landing centres of the district during 1966-67 was estimated at 92510 tonnes, the corresponding estimates for the previous two years of 1964-65 and 1965-66 being 108375 and 80602 tonnes respectively. Oil sardine, Prawns, mackerel, shark and silver bellies are the important varieties of fish caught here. Cured fish are exported to Ceylon, Burma, Malaya and other States in India. There is an ice making and quick freezing plant at West Hill, which manufacture ice and freeze prawns. The fisheries technological station a pioneer institution in the field of fisheries research - and the marine biological station which tackles problems connected with the biology fecundity, age and shoaling of fishes are also located in the hinterland.

The important fish landing centres in the hinterland are Tanur, Kadalundi, Quilandi, Parappanangadi, Pudiakadapuram, Badagara, Calicut, Bepore South and North. Details of marine fish landing in all the fish landing centres of the hinterland for the last three years since 1964-65 are given in tables 2.5(a), 2.5 (b), and 2.5(c) of the appendix.

CHAPTER—III**The Industrial base in the Hinterland of Bepore Port**

Traditional industries play a vital role in the industrial set up of the hinterland. Some of the important traditional industries are tiles, timber, handloom, coir, rice mills etc. Timber, engineering and cotton textiles are some of the large scale industries of the hinterland. Kozhikode district forming the hinterland is in a comparatively better position than the neighbouring districts of Palghat and Cannanore in respect of availability of timber, deposits of non-metallic minerals like clay etc. in abundance.

Among the major industries of the hinterland the timber industry occupies an important place. The forests of Wynad and Nilambur produce large quantities of timber, which are mostly so located that their exploitation is comparatively easy. A special feature of the timber industry in the hinterland is the concentration of units in and around Kallayi where water, rail and road transport facilities are easily available. There are about 65 saw mills in the district giving employment to 1677 persons. In these mills timber logs are sawn into different types of finished planks, reapers and sleepers for use in the railway. The finished goods are marketed locally and are exported to other parts of India and to foreign countries.

There were 27 other timber based industrial units which provided employment to 823 persons in 1966.

Furniture making is important in the hinterland. Different kinds of attractive pieces of furniture are made, and the products find ready and responsive market all over India, and even south east Asia. Most of the furniture making units are small in size even there are a few large scale concerns engaged in the manufacture of furniture.

Tiles are manufactured extensively in the hinterland as large quantities of white clay and pottery clay are available. Feroke is the pioneer centre for tile manufacture in the State. The tiles manufactured from the district are exported to foreign countries like Burma, Ceylon, Malaya and Australia. The tile factories also manufacture bricks, clay pipes, ridge tiles, flooring tiles, flower pots, pottery ware etc. In 1966 there were 21 registered bricks and tile factories in the district giving employment to 4144 workers. According to the annual survey of industries conducted in Kerala in 1964, the total capital invested in these factories was roughly rupees five crores and the value of annual production of tiles amounted to Rs. 9 crores.

Handloom industry is one of the major cottage industries of the district. The industry is worked partly on cottage industry basis and partly on factory basis. Handloom industry is mainly concentrated in Tanur, Balusseri, Panthalayani, Perambra, Koothali and Badagara. About one fourth of the looms are under factory fold. Some of the weaving establishments have set up dye houses of their own for colouring the yarn. The chief varieties of cloth produced are table clothes, bed sheets, dhoti, towels etc. The finished goods are marketed both inside and outside the State, and a portion is also exported to foreign countries.

There are at present 23 registered textile factories in the district employing 2291 persons. Of these, the most important is the Malabar spinning and weaving company which is under government management. There are also two registered hoisery factories, one at Calicut and the other at Feroke. The yarn for these factories as well as for the handloom industry is obtained mainly from Madras State.

Umbrella manufacturing is another well established industry of the district. Umbrella sticks are manufactured in large quantities. Parts of umbrellas like ribs, caps, clothes etc. are imported in large quantities for assembling umbrellas, which are exported after meeting the huge local demand. During the year 1966, 10 registered umbrella factories employing 357 persons were functioning in the district.

Coir manufacture is carried on both as a factory industry and as a cottage industry. While the spinning of coir yarn is mainly a cottage industry, the manufacture of mats, mattings, and rope are done in factories. During the year 1966, there were a 11 registered coir factories in the district employing 881 workers. The chief centres of coir industry are Kadalundi, Beypore, Parappanagandi, Elanthur, Quilandy and Tirur and the chief varieties of coir produced are Beypore, Quilandy, Tirur coirs and Pachachoody, Quilandy choody and Kottakkal choody. Adequate retting facilities do not exist in

the district as in other parts of the State, especially in the south and hence the entire quantity of coconut husks available is not used up. In spite of the earnest effort of the Government and the Coir Board to develop the industry the progress so far recorded is not appreciable.

There are only three cashew factories in the district employing about 1304 workers. In these factories raw nuts are processed and exported to foreign countries.

Soap manufacturing in the district has developed sufficiently enough to be classified as a large industry. The principal raw materials are oils, fats, rosin, caustic soda, common salt etc. There were 3 registered soap factories in the district employing 248 persons in 1966, besides the innumerable small scale units. Of these the Kerala Soaps and Oils Ltd., an undertaking of the Government of Kerala is the most important concern for the manufacture of soaps of various kinds like washing soap, toilet soap, shaving soap etc.

Beedi and Cigar making is another industry established in the hinterland though tobacco is not grown here. The raw materials of beedi leaves and tobacco are imported from Andhra Pradesh and Madhya Pradesh. The industry provided employment to 143 persons in factories besides those who are carrying on this industry on a household basis. The rapid growth of the industry has been facilitated not only by the easy availability of raw materials, but also by the cheap and abundant supply of intelligent labour capable of easily learning this craft. But the inclemency of weather is a handicap to this industry. In the rainy days tobacco is not fit to be rolled into beedi.

Copra making is carried on extensively in the hinterland. Most of the copra produced are exported, and the mill industry has not gained adequate importance in the district.

As pointed out elsewhere a major part (about 60 per cent) of the coffee produced in the State is from the hinterland. As an ancillary to the coffee estates, the coffee curing industry has been established here.

Tea manufacture is another industry connected with plantation produce, and during 1966, there were 17 registered tea factories in the district employing 804 persons in which raw tea leaves were processed into dust and leaf grade.

Rubber and rubber products including rubber retreading also occupies an important place in the industrial set up of the hinterland, and at the close of the year 1966, there were 19 registered factories of this kind giving employment to 258 persons. The rubber produced in the district are mainly exported for processing. There are also substantial number of small units engaged in rubber retreading.

The Government Hydrogenation factory at Calicut is the only factory of its kind in the Public sector of India. This factory has a capacity of producing 10 tonnes of Vanaspathi and 5 tonnes of refined oil per three shifts a day. The main raw materials required are groundnut oil, sesamum oil and cotton seed oil, which are mainly imported from Mysore and Madras States.

The Kerala Chemicals and Fertilizers have a factory at West Hill where chemical fertilizers are manufactured.

The Malabar fisheries at Chaliyam manufacture stainless steel utensils and tin containers. The Malabar Metal and alloys located at Calicut also produce Copper and brass household utensils.

Oil crushing, palmgur industry, pottery work and Khadi weaving are the Major village industries of the district.

The first sign of a break through to large scale industry began with the setting up of a rayon pulp factory at Mavoor by the Gwallior Rayon Silk Manufacturing Company in 1960. The production of the factory in 1967 was 52950 tonnes of rayon grade pulp, and they have proposed to increase the same to 63540 tonnes in 1976, and 67070 tonnes in 1986. The factory's requirement of bamboo is met from the Government and private forests of Nilambur and other areas of the hinterland, caustic soda from Alwaye, and lime stone from north Malabar. The factory provided employment to about 1832 workers at present.

An industry wise-distribution of the registered working factories in the hinterland, and the number of workers employed therein for the years 1963 to 1966 are given in table 3.1 and 3.2 of the appendix.

Minerals:—

Detailed prospecting of iron ore, conducted by the State department of Geology had revealed the occurrence of iron ore in Cheruppa, Nadavallur, Nanminda, Pavanthur and Edakkara amsams of Kozhikode district upto a depth of 20 metres from surface. Indications are that the reserves of the mineral will be considerable as there are every chance of the mineral to occur in deeper zones. The total estimated yield may be anything from 200 to 500 million tonnes.

The industrial base in the hinterland has been considerably enlarged during the last decade by the rise of new industries like the Gwalior Rayons and the expansion of existing industries. In the coming decades, the tempo of industrialization in the hinterland is expected to get added momentum resulting the expansion and enlargement of the present industries as well as venturing into new fields.

The National Council of Applied Economic Research, based on the Techno Economic Survey of Kerala in 1960-61 has proposed the following schemes for the industrial development of the hinterland.

1. A second Rayon Pulp factory with an investment of Rs. 650 lakhs and a production capacity of 150 tonnes of pulp per day.
2. Two particle board plants with a capacity of 15 tonnes per day per each plant.
3. Urea formalde hyde resin industry with a capital investment of Rs. 50 lakhs and a production capacity of 10 tonnes.

4. Expansion of Kerala Soap Institute to a production capacity of 700 tonnes per year with an additional investment of 7.5 lakhs of rupees.

The Rural Industries Project, Kozhikode in its survey of industrial possibilities in the hinterland, after taking into consideration the locational pattern, availability of raw materials and marketing facilities for finished products have also suggested the setting up of certain medium scale industries, among which the most important are:—

1. manufacture of rubberised coconut fibre
2. manufacture of desicated coconuts
3. Bell metal castings
4. manufacture of agricultural implements
5. leather tanning and footwear units
6. industry based on waste wood chips
7. bamboo boards manufacture
8. wood seasoning plant
9. fish meal making.

In the light of past developments in the industrial sector it can be said that the hinterlands' industrial base may soon reach the level that generates additional tonnages of industrial traffic for a deep-sea water Port at Beypore.

CHAPTER—IV

Communication in the hinterland

Traffic facilities by Roads, railways and waterways now exist in the hinterland. Beypore port is linked with the hinterland by road. The railway line is not far off eventhough the port is not connected by railway sidings. Inland waterways also connect the hinterland to other places in the State.

During the latter half of the 19th century appreciable strides have been made towards the development of roads. The establishment of Malabar District Board also largely contributed to the development of village and district board roads. The period which followed the independence of India, and the re-organisation of States witnessed further progress in the construction of roads. The most important roads in the district are:—

1. Calicut-Nilambur-Gudallur Road
2. Calicut-Vythiri-Gudalur Road
3. Calicut-Shoranur-Palghat-Madras Road
4. Calicut-Cannanore Road
5. Calicut-Mysore Frontier Road.

The details regarding mileage of roads under P.W.D. in Kozhikode district are given in Table 4.1. appended.

Besides the P.W.D., the Calicut Corporation and the Badagara Municipality also maintain roads within their limits. Roads are maintained by Panchayats also.

The details regarding the total number of motor vehicles of different kinds registered in Kozhikode district as on March 1967 are given below:—

<i>Classification of Vehicle</i>	<i>No. as on 31-3-1967</i>
Goods vehicles	1623
Stage carriages	497
Taxi Cabs	343
Cars	2819
Motor Cycles	744
Auto rickshaws	132
Tractor trailer	109
Others	79
Total	6346

There has been a phenomenal growth in the number of motor vehicles since the beginning of the present decade, and table 4.2 in the appendix presents the number of motor vehicles in Kozhikode district from 1960-61 onwards.

The Kerala State Road Transport Corporation extended its activities to Kozhikode district in 1957, after the formation of the Kerala State. The first transport service introduced in the district was the express bus service from Calicut to Kalpetta. This was discontinued in 1959, and in its place two ordinary bus services were introduced from Kozhikode to Sultan battery. Since then several services have been introduced connecting this district with the rest of the State, and to the Sister State of Mysore. The Fast Passenger service which began operation between Ernakulam and Cannanore, and Ernakulam and Payyannore in 1961 and 1962 respectively passes through this district. At present a number of ordinary routes are being operated by the Kerala State Road Transport Corporation in addition to the various fast passenger routes. The route distance of important fast passenger service serving the district and the number of trips per day are given below.

<i>Service</i>	<i>Distance</i>	<i>No. of trips per day</i>
1. Kozhikode-Kottayam	297 K.M.	2+2
2. Kozhikode-Kasargode	205 K.M.	1+1
3. Kozhikode-Trichur (via Manjeri)	150 K.M.	2+2
4. Kozhikode-Guruvayoor (via Parakkadavu)	131 K.M.	3+3
5. Kozhikode-Trichur	140 K.M.	2+2
6. Kozhikode-Palghat	136 K.M.	1+1

<i>Service</i>	<i>Distance</i>	<i>No. of trips per day</i>
7. Kozhikode-Mananthody	109 K.M.	3+3
8. KozhikodeGuruvayoor (via Pattambi)	131 K.M.	3+3
9. Kozhikode-Vazhikkadavu	93 K.M.	3+3
10. Trichur-Cannanore.	230 K.M.	3+3
11. Kozhikode-Mysore (inter State)	214 K.M.	1+1
12. Trivandrum-Cannanore (De-luxe)	532 K.M.	2+2
13. Ernakulam-Payyannur	350 K.M.	8+8
14. Palghat-Cannanore	226 K.M.	2+2

The Calicut Corporation also maintains its own city bus service.

Motor services are also run by Private agencies. The major private bus operators were the following.

1. The Malabar Roadways
2. C. C. Transport Company
3. Calicut Wynad Motor Service
4. V. N. P. Motors
5. Ex-service men, Kozhikode
6. Sree Narayana Transport
7. Sankara Narayana Transport
8. Manjeri Motor Service
9. N. V. M. S., Kozhikode
10. Premier transport
11. Modern bus transport.

There are two railway lines traversing the district - Shornur - Mangalore line and Shornur - Nilambur line. Mahe and Pallippuram are the two extreme stations in the district. The total length of railway line in the district is 157 K.M. and there are 24 railway stations in the Mangalore-Shornur line, and three stations in the Nilambur - Shornur line falling within this district (vide-Table 4.3 appended). The important railway stations in the district are Badagara, Quilandy, Calicut, Kallayi, Feroke, Parappanagadi and Kuttippuram. The railway occupies an important place in the transportation system of the district.

Beypore Port is not on the railway route, its rail heads are Kallayi, Calicut and Feroke. But a good road reaches from Beypore to the main Calicut-Shornur road and from Calicut good roads radiate to all parts of the district, State and neighbouring States. Also the Beypore river is connected with Kallayi and Kadalundi rivers by Canals.

The inland navigation system of the district comprises of three sections i.e. Badagara - Kadalundi section, Kadalundi - Kuttiyadi and Kuttiyadi-Ponnani section, and a continuous inland water route connecting Badagara and Ponnani is available. Details of this route are given below.

<i>Water route</i>	<i>Length in K.M.</i>	<i>Length of artificial canal in K.M</i>
1. Badagara to Eringal	0.8	..
2. Eringal to Payyoli	5.2	5.2
3. Payyoli to Panthalayani	8.4	..
4. Panthalayani to Alagapuzha	4.8	4.8
5. Alagapuzha to Elanthur	15.2	..
6. Elanthur to Kallayi	11.2	..
7. Kallayi to Olavana	3.2	..
8. Olavana to Beypore	7.2	7.2
9. Beypore to Kadalundi	16.0	..
10. Kadalundi to Tirur	46.4	46.4

The important landing places are Badagara, Kanayancode, Elathur, Feroke, Kadalundi, Palanthingal, Thalakadathur, Payyoli and Calicut. There are a number of passenger boat services in this section, and the most important among them are:—

<i>Route</i>	<i>Distance (K.M.)</i>
1. Badagara-Kuttiyadi (Murat river)	35
2. Peramambra-Kanayancode (Kanayamcode river)	24
3. Elathur -Madanam (Elathur river)	19
4. Elathur - Nadavannur (Elathur river)	28
5. Feroke - Edavana (Beypore river)	48
6. Tirur -Ponnani (Tirur river)	25

The water route of this district is a part of the west coast canal system connecting Trivandrum in the south to the Malabar region.

An air strip for the Gwalior Rayon Silk Manufacturing Company has been set up at Chelari in Tirur taluk by the Birlas. The strip is connected by road and is about 22 K.M. south east of Calicut town. There has been a proposal for the construction of a civil aerodrome, but it has not materialised so far.

The ports of this district are the intermediate port of Calicut-Beypore and the minor port of Badagara.

Calicut has been an important port from very ancient times. It probably rose to importance by about 11th and 12th century and continued so till the arrival of the portugues by the end of the 15th century. After that it rapidly declined due to the interference of the portuguese with the Arab trade, and it has never since recovered its original position. Cochin port, its major rival

under the patronage of the Portuguese, Dutch, English and recently of the National Government along with its great natural facilities always possessed an advantage over Calicut.

Beypore is a small town formerly known as Vaypura or Vadaparapanad. Tippu Sultan named the town Sultanpattanam and had selected it as the site for his Capital of Malabar. But its importance was short lived. Chaliyam island on the opposite bank of Beypore river was formerly the terminus of the Madras railway. The extension of the railway line to Calicut without touching Beypore inevitably retarded its further development. Beypore lies 9 K.M. south of Calicut and was formerly an important sub-port. But now it is only a declared wharf of Calicut port and is included in it for administrative purposes. Both the ports of Calicut and Beypore are open to foreign trade. The port is open throughout the year, but during monsoon particularly in June and July vessels do not call at the port as it is on the open roadstead. The port is situated at 141 K.M. by sea north of Cochin and about 200 K.M. south of Mangalore. Ships and sailing vessels anchor at a distance and cargo is worked in anchorages using lighters which ply between ships and the port.

Badagara port is 19 K.M. south of Tellicherry. The port is an open roadstead. Only small coasting steamers usually call at the port. Sailing vessels anchor at a distance and cargo is handled in flat bottomed masula boats. This port is conspicuous by the absence of a pier or jetty. Ships usually call at Badagara port mainly for export, and the port handles only coastal imports and exports. No foreign vessel touches this port.

With further road and inland canal developments and construction of railway sidings, the port of Calicut - Beypore will be more easily accessible to every part of the hinterland.

CHAPTER—V

Present pattern and volume of traffic in the Hinterland

Beypore Port is 141 K.M. north of Cochin and 192 K.M. South of Mangalore by sea. There is no pier at the port. It is open throughout the year, but during monsoon period the port activities are slack. The Beypore river enters the sea in a south westerly direction. The Kallai river which is north of Beypore river also faces south, as is the case of Kadalundi river. The celebrated malabar mud banks show up here. Exceptional storms and littoral currents trend to move the mud banks up and down. The bar at the entrance of the port carries about 1.52 metre to 2.44 metres of water at low tide and high tide respectively. The bar is navigable to vessels of 1.30 to 2.00 metre draft. Beypore port is 9 K.M. south of Calicut, and was formerly an important sub port. But it is now only a declared wharf of Calicut and is included in it for administrative purposes.

The cargo is first loaded in to small flat bottomed boats know as 'masula' boats at the wharf by utilising manual labour or by means of cranes fitted on the wharf. The cargo is then transhipped in to the vessels. The same process is adopted for unloading also.

As Beypore port is considered as a wharf and is linked with Calicut port, no separate data relating to the working of the port of Beypore are maintained. Beypore handles mainly the export of tiles and timber. There are no imports coming at Beypore. About 40 per cent of the timber and almost the entire tile traffic goes out from Beypore port.

During 1966-67, 149 steamers and 913 sailing vessels with an aggregate tonnage of about 3.61 lakhs called at the port of Calicut-Beypore. The port registered a traffic of 2,14,601 tonnes consisting of 1,18,952 tonnes of exports and 95,649 tonnes of imports in the same year. Of the total imports coastal trade and foreign trade formed about 25,070 tonnes and 70,579 tonnes respectively, while the coastal exports and foreign exports constituted 107,254 tonnes and 11,698 tonnes respectively during the year.

13 steamers and 21 sailing vessels with a gross tonnage of 12,709 tonnes called at the port of Badagara in the same year. No foreign steamer touched the port.

The details regarding the earnings of the ports of the hinterland since 1961 are furnished in table 1.11 of the appendix referred to earlier.

The imports and exports at the ports in the hinterland during the last few years are indicated below:—

Traffic handled at the ports of the hinterland

(Tonnes)

Year	Calicut including Beypore			Badagara			Total			
	Imports	Exports	Total	Imports	Exports	Total	Imports	Exports	Total	
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
1961-6	..	59899	212804	272703	2532	21988	24520	62431	234792	297223
1962-63	..	73099	180842	253941	2430	18149	20579	75529	198991	274520
1963-64		64853	173925	238778	2208	17235	19443	67061	191160	258221
1964-65		139192	163071	302263	3500	14389	17889	142692	177460	320152
1965-66		79841	184515	264356	1903	6739	8642	81744	191254	272998
1966-67		95649	118952	214601	1527	5233	6765	97176	124190	221366

(Source:—State Port Officer, Government of Kerala.)

The total tonnage of traffic handled at the ports of the hinterland in 1966-67 was of the order of 2.21 lakhs tonnes, of which the share of imports and exports were 0.97 lakh and 1.24 lakhs tonnes respectively.

The export tonnage has, been always much a head of import tonnage. The import tonnage has, however, maintained a steady growth while there was a drop in the export tonnage. The difference between the export and import tonnage have varied in absolute terms between 1.72 lakh tonnes in 1960-61 to 0.27 lakh tonnes in 1966-67.

The pattern of coastal and foreign traffic handled at the ports in the hinterland can be viewed from the following table:—

Coastal and foreign imports and exports of the ports of the hinterland

(Tonnes)

Year	Imports			Exports		
	Coastal	Foreign	Total	Coastal	Foreign	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1961-62	57170	5261	62431	180927	53865	234792
1962-63	51579	23950	75529	158655	40336	198991
1963-64	64056	3005	67061	161488	29672	191160
1964-65	44538	98154	142692	167262	20198	177460
1965-66	34813	46931	81744	176334	14920	191254
1966-67	26597	70579	97176	112492	11698	124190

(Source:—State Port Officer, Government of Kerala)

Coastal exports formed 90.58% of the total exports in 1966-67 as against 77.05% in 1961-62.

The coastal exports tonnage which was 1.81 lakh tonnes in 1961-62 has decreased continuously in subsequent years, except for 1965-66, in which year it has recorded 1.76 lakh tonnes. But in the year 1966-67 it has come down to 1.12 lakh tonnes.

The foreign export which was 0.54 lakh tonnes in 1961-62 has also shown sharp decrease and in 1966-67, it recorded only 0.12 lakh tonnes.

The percentage share of coastal imports to the total imports was 27.36% in 1966-67, compared to 91.57% in 1961-62.

The coastal imports which was 0.57 lakh tonnes in 1961-62 declined to 0.27 lakh tonnes in 1966-67. The foreign imports however showed substantial increase and in 1966-67 it was to the tune of 0.71 lakh tonnes as against 0.05 lakh tonnes in 1961-62.

The annual average traffic handled by all the ports in the hinterland can be reckoned at 2.74 lakh tonnes, of which Calicut Beypore port accounts for 2.57 lakh tonnes and Badagara port the remaining 0.16 lakh tonnes.

The entire traffic, now handled at the port of Calicut and Badagara, can be easily diverted to Beypore port with added advantage of saving a substantial amount of handling expenses and avoiding unnecessary delay in transhipment of goods, provided it is developed into an all-weather, deepwater port.

The hinterland of Beypore port is served by sections of the broad-gauge line of the Southern railway from Cochin to Mangalore. At Shornur, the main line branches of Madras and another line to Nilambur. The important railway stations in the hinterland are Mahe, Badagara, West hill, Calicut, Kallai, Feroke, Parappanangadi, Kuttippuram and Pallipuram in Mangalore Shornur line and Nilambur road, Vaniyambalam, and Tuvvar in Nilambur-Shornur railway line. The distance between Mahe to Pallipuram, the extreme stations is 128 K.M. and Nilambur road to Tuvvar 29 K.M.

The port town of Beypore is not served by any railway line and the nearest rail head is Feroke the distance being about 5 K.M.

Cochin now serves as an entry port of the hinterland also. According to the data available from Cochin harbour terminus railway station about 68,000 tonnes of goods were carried by rail from Cochin harbour terminus railway station to various stations in Kozhikode district during 1966 (excluding petrol, diesel and kerosene) vide table 5.1.

The movement of goods to Cochin by rail from stations of the hinterland was comparatively low in 1966.

Railways also carry substantial quantity of goods from the hinterland to other States in India. Details regarding the movement of certain important commodities between the hinterland and other States in 1966 are given in table

5.2 and 5.3. The important items of export are coconut and its allied products, wood and timber, tapioca flour, bricks and tiles. Imports consist mainly of rice, maida, iron and steel products, chemical manure and salt. During the year 1966, the exports from the railway stations of the hinterland to outside the State was about 2.4 lakh tonnes and the same quantity was reported as import for the same period from outside the State to the railway stations of Kozhikode district. The movement of traffic due for central and eastern India destinations is likely to continue in future also as at present. The traffic due to the western India region can go through the port. The movement of certain important commodities from and to western India region was about 98,000 tonnes in 1966. Eventhough the entire traffic mentioned above will not be available for the port due to various considerations, it can be safely concluded that 80 per cent of the traffic to and from western India region can go through the port.

Thus the traffic now carried on by rail between cochin and the hinterland, and from the hinterland to western India region can be expected to be handled at Beypore Port as and when it is developed, particularly because transport by sea would be more economical in many cases. The total tonnage of important commodities that can be so diverted is likely to be of the order of 1.43 lakh tonnes.

The west coast road connecting Mangalore to Trivandrum enroute Cochin runs through the hinterland. Roads radiate from this highway to regions of the hinterland and to Mysore, Nilgiris, Coimbatore and Palghat (see road map appended)

Road traffic play an important role in the movement of goods within the hinterland and from the hinterland to other parts of India and vice versa. The out ward road traffic of the hinterland consists of plantation products, tiles, timber etc. while the inward traffic is in salt, food grains, cotton, fertilizer etc. Reliable statistics regarding the goods traffic by road are not available.

Some rough estimates have been worked out based on the details available from the few individual traders who have co-operated in furnishing the relevant information and the records in the Sales Tax Office and Check-posts.

Data regarding traffic movements through the check-posts on the borders of the district maintained by the Sales Tax Department were collected. The details gathered for the important commodities are given in table 5.4 and 5.5 of the appendix. Table 5.6 gives the number of vehicles that passed through the check-posts.

In the context of assessing the probable diversion of goods traffic now handled by road to Beypore Port after its development, it is necessary to take into account the movement of goods to western India region. The goods now transported between Cochin and the hinterland by road are also likely to be diverted to Beypore port in view of the economy in the cost of transportation.

Relating to the movements of commodities by road between the hinterland and Cochin and the Western India destinations, the only data that could be gathered were those furnished by a few exporters, importers and traders from the important centres in the hinterland. The major items moved by road from the hinterland to Cochin and Western India regions are pepper, tea, lemongrass oil, ginger, tapioca chips, cocoanuts, cashewnuts etc. while the inward traffic of commodities from these places mainly consists of rice, wheat, textiles, hardware, oil, machinery, fertilizers etc. Nearly 10,000 tonnes of fertilizers has been distributed by the Fertilizers and Chemicals, Travancore Ltd., alone to the hinterland through the central depots located at Calicut, Tirur, Badagara, Malapuram, Nilambur and Kalpatta. Of this, nearly 70 per cent has been moved to the hinterland by lorry traffic.

The quantum of exports and imports by road of some of the important commodities during 1966-67 is estimated as follows:—

Exports from the hinterland of Beypore port to Cochin and western India destinations by road traffic (1966-67).

<i>Commodities</i>	<i>Quantity in tonnes</i>
Tapioca chips	6270
Copra	5372
Cashewnut	4968
Cocoanut	3381
Tea	1800
Coir yarn	1645
Arecanut	1614
Ginger	512
Rubber	345
Total	25907

Imports into the hinterland of Beypore from Cochin and Western India regions by road (1966-67).

<i>Commodities</i>	<i>Tonnes</i>
Fertilizers	7500 (approximate)
Motor parts, hardware, paints, etc.	1702
Cotton goods, provision goods and miscellaneous commodities	634
Total	9836

Total of exports and imports = 25,907 + 9836 = 35743 tonnes

Petrol, diesel oil, kerosene, lubricating oil etc. which are consumed in Malabar area are now imported at Cochin and transported to the hinterland mostly by road. According to the Malabar Chamber of Commerce this important item which is estimated at one lakh tonnes per annum could be diverted to Beypore in case Beypore is developed in to a major harbour, and installations necessary for storage facilities are erected there.

The out put of Gwaliyor Rayons, Mavoor, which is about 60,000 tonnes per annum is now moved mainly by rail, owing to the lack of necessary facilities at the Calicut-Beyppore port.

A developed port will certainly attract this export cargo, and also their imports particularly lime shell which they are consuming at an average of 50,000 tonnes per annum from north malabar region and furnace oil of about 40,000 tonnes from Cochin.

The Malabar Chamber of Commerce has stated that the coal consumption of southern railway between Kasargode and Erode as available from the railway authorities is to the tune of 23,330 tonnes per annum. At present the coal requirement of the railways from Erode to Kasargode is met from the coal landed at Cochin. The railways can as well think of Beyppore port for the import of their requirement of coal for places between Erode and Kasargode and save wagon haulage kilometre tonnes which can be easily diverted to meet other pressing demands.

As mentioned earlier, a vast stretch of iron ore has been found available in the hinterland region within a radius of 15 to 20 miles. The quantum of ore available will depend on the nature and development of iron ore mining. As no schemes have been finalised for its extraction, it will be difficult to anticipate the quantity of iron ore that could be available for export in the coming decades. However, it can be safely concluded that iron ore will form a potential item of export at the port and the traffic thus generated can be estimated at about 2 lakh tonnes per year say from 1975-76. Besides this, ancillary products of about 50,000 tonnes can also be expected to be exported through the port.

Substantial quantities of some commodities are moved by individual goods vehicles for which precise information could not be gathered during the field enquiry. The commodities requiring special attention are cashewnut, timber, and timber products, tapioca and coconut and coconut products as exports and textiles, fertilizers etc. as imports.

Cashewnut is an important crop of the District with scope for further development. The production of cashewnut in the District during 1966-67 was estimated at about 16,000 tonnes. There are only three cashew processing units in the hinterland, and the production in these factories was not appreciable. Most of the raw nuts produced are at present exported to Quilon and Mangalore mostly by road. With the development of Neendakara port as an all weather port, the export in cashewnuts to Quilon can be handled through Beyppore port.

The Government have schemes to expand the cashew cultivation, and as and when the private forests of Malabar are acquired an area of at least 5000 acres can be additionally brought under cashew plantations which may yield an additional quantity of 8,000 tonnes annually. But, for the present and immediate future it can be estimated that 10,000 tonnes of raw cashewnuts may be available for export to Quilon (the important cashew processing centre of the State) and also to Mangalore, through the Beyppore port.

Cocoonut, an important crop of the district accounting for an annual production of 753 million nuts is bound to occupy an important place in the export items of the port. The area under and production of cocoonuts are steadily increasing in the hinterland. Reliable data could not be obtained from the exporters on the present level of exports of cocoonuts. A conservative estimate would be about 40 million nuts or 25,000 tonnes. Cocoonut products like coir fibre, coir and coir ropes also will form another potential item of export from the port. Nearly 10,000 tonnes of these cocoonut products are likely to be exported through the port.

Tapioca chips have of late assumed importance as an item of export from this region to western India destinations, particularly to Gujarat.

The consumption of fertilizers in the hinterland during 1965-66 was estimated at 30,000 M.T. on the basis of the report of the Agricultural Department. This has come from other regions of the State (particularly Alwaye) and from other States. A major part of the fertilizer requirement of the region can be handled at Beypore when it is developed.

The existing potential import traffic available for handling at Beypore port when it is developed into a deep sea port can be estimated in the following manner.

IMPORTS

Rice

It has already been pointed out that the hinterland is deficit in rice. The deficit of cereals is to the extent of about 2 lakh tonnes per year (assuming requirement at 12 oz. per adult per day). Kerala may in the foreseeable future, in spite of her best efforts, continue to remain deficit in rice. The rapid growth of her population coupled with the pronounced bias for cash crops in the agricultural sector, for which the soil and climate are best suited, and from which valuable foreign exchange can increasingly be earned are factors to be reckoned with. Kerala is importing rice from Madras and Andhra. Rice from foreign countries is also supplied to Kerala. In the long run it will be reasonable to anticipate that Kerala may have to go further north in search of her rice requirements. States nearer to Kerala such as Madras and Andhra are exporting less, and will find it increasingly difficult to maintain the present quantum of exports to Kerala as their production is not very elastic. With the growth of rice production in other regions particularly Orissa, a part of the exportable surplus can be shipped to Kerala ports through ports like Para deep. The rice imports from foreign countries may also have to be continued. A part of this foreign import can be handled at Beypore. The total quantity of rice imports from other States of India, and from foreign countries to the hinterland after giving due allowance for rail movements may be to the tune of 40,000 tonnes per annum.

Wheat

Kerala's requirement of wheat are at present met mainly from the imported stock at Cochin. As the consumer preference for wheat is steadily increasing there will be rising demand for the same. The wheat supplies for the hinterland has gone up from 45,000 tonnes in 1966-67 to 94,000 tonnes in 1967-68. The wheat import can be handled at Beypore port.

Salt

According to a rough estimate the consumption of salt in the hinterland is to the tune of 30,000 tonnes. About 50% of this are imported through Calicut-Badagara ports. The balance quantity is also coming from outside the State. A part of this may also form the traffic at Beypore port, and a modest estimate of the quantity of import is about 18,000 tonnes per year.

Timber

Kallai is the biggest centre of timber industry in India, and the timber resources of Wynad forests are not adequate to cater to growing demand of the timber industry of Kallai. During the year 1966 about 13,480 tonnes of timber were imported to the railway stations in the District mainly from Cochin. There are every possibility of the import to go up the future years. Will the development of Beypore port, the timber resources in the Andamans etc. can be extracted economically and brought to Beypore to meet the growing demand. The timber import through the port may be placed at 10,000 tonnes.

Chemical manure

Chemical manure form another important item of import. The annual consumption in the District as pointed out earlier is about 30,000 tonnes, of which, about 1/3 is moved by rail and the rest by road and other means. As there is increasing popularity among the Cultivators for the use of chemical manure this will continue to be an important item of import and at a moderate estimate it may be placed at 15,000 tonnes per annum.

Coal

The coal consumption of southern railway between Erode and Kasargode which is estimated at 23,330 tonnes per annum, at present imported at Cochin, and transported to various railway stations can be imported directly at the port of Beypore.

Petrol

Petrol and petroleum products consumed in Malabar area are now imported at Cochin and transported by rail or road. This important item estimated at 1 lakh tonnes per annum can be diverted to Beypore, in case, Beypore is developed in to a deep sea port and provided with the necessary installations.

Miscellaneous items

The other items to be considered are cement, sugar, hardware, etc. coming from western India region. These items in bags, bundles or rolls may constitute a cargo of about 25,000 tonnes.

EXPORTS

Pepper

In 1966, 3,560 tonnes of pepper were loaded from the various railway stations of the district (of which 1,320 tonnes were to western India region) in addition to 1,268 tonnes directly exported from Calicut-Beyppore port. Data on the quantity moved by road are not available. Due to the keen competition from abroad, and the internal fall in production consequent on the attack of various pests and diseases the prospects of increasing output and export are not very bright. The traffic that will be available under pepper may therefore be placed at 5,000 tonnes.

Ginger

The export of ginger from the port was only 1,154 tonnes in 1966, as against an export of 2,908 tonnes of ginger to various destinations by rail, (of which only a small portion was moved to western India region). The contribution of this item may be estimated at 2,000 tonnes per annum.

Betal nuts

Betal nuts processed in the hinterland are exported to outside the State mainly by rail at present. The deep-water all-weather port of Beyppore can attract an appreciable quantity of this traffic, as a large quantity is destined to western India region. A reasonable estimate of the traffic in this item will be 3,000 tonnes per annum.

Cocoanuts

During the year 1966, 14,303 tonnes of cocoanuts, 4,568 tonnes of Copra, 3,639 tonnes of oil cake, and 4,723 tonnes of coconut oil totalling about 27,233 tonnes were exported to outside the State by rail in addition to the exports handled at the ports.

The traffic from the ports of the hinterland for the same period formed 23,648 tonnes of coconut, copra and oil from Calicut-Beyppore port together with 4,320 tonnes of coconut and copra from Badagara port. The traffic of coconut products for the same period by road as available from the field enquiries was 10,592 tonnes of copra, and 3,381 tonnes of cocoanuts. Thus the total traffic in coconut and its allied products from the hinterland was to the tune of about 70,000 tonnes. A good part of this was destined for Bombay, Saurashtra and other western India destinations. The traffic to the western India destinations can safely be diverted by sea and the deep-sea all-weather port of Beyppore can confidently look for this traffic. The traffic generated is likely to be about 50 per cent of the total traffic that is 35,000 tonnes per annum.

Cashewnut

It has been estimated that the production of cashewnuts in the hinterland is about 16,000 tonnes. The consumption of three cashew factories in the hinterland is very meagre. Even after allowing a quantity of 5,000 tonnes

for these factories, the balance of 11,000 tonnes are available for export. The surplus at present exported to Quilon or Mangalore by road can safely be channelled through Beypore port.

Tapioca

Tapioca chips and its allied products like manioc meal form important items that can be exported from Beypore. The production of tapioca in the hinterland was estimated at 2.9 lakh tonnes in 1966-67. In 1966, 12,130 tonnes of this commodity were exported to outside the State from the various railway stations of the hinterland (of which about 7,628 tonnes were moved to western India region) in addition to 6,453 tonnes moved by sea. - The traffic that can be anticipated from the export of tapioca products may be about 15,000 tonnes per year in case there are no restrictions on the movement of tapioca and its products from the State.

Wood and timber

In addition to the seaborne traffic of 49,163 tonnes in 1966-67, 63,495 tonnes of timber and 3,968 tonnes of timber products were exported from the railway stations of the hinterland. A large quantity of sawn timber and timber products are exported by road, for which no reliable data could be obtained. Even after leaving the export by road aside, and allowing a reasonable margin for Central India destinations, the traffic under this item that can be handled at Beypore may be about 90,000 tonnes per annum.

Coir and Coir Products

The Coir industry though not adequately developed in the hinterland can form another potential item of export. During the year 1966-67, 5,050 tonnes of coir were exported from Calicut-Beypore port. The coir products exported from the railway stations of the hinterland were 13,800 tonnes of coir yarn and fibre and 5,784 tonnes of coir products (of which about 5,000 tonnes were to western India region). A good part of these traffic can be handled at the port of Beypore, and at a moderate estimate it may be round about 10,000 tonnes per annum.

Tiles

The hinterland is famous for its tile industry, and the tiles produced here are exported to the South east countries and even to the far east. During the year 1966-67 11,638 tonnes of tiles were exported from Calicut-Beypore port. The export through railways for the same period was 30,625 tonnes. Most of the tiles are now sent to Nagapattanam and Tuticorin by rail for shipment to Singapore, Ceylon and Malaysia due to lack of necessary facilities at Calicut-Beypore Port. About 60 per cent of this can be diverted to Beypore when it is developed in to an all-weather port, and the traffic that can be expected from the export of tiles may be 30,000 tonnes per annum.

Fish

Even though deep-sea fishing has not been adequately developed in the hinterland, cured fish are at present exported to other ports for re-export to

Burma, Ceylon and Singapore. In 1966, 3,867 tonnes of cured fish were exported by rail for this purpose. Beypore can handle this traffic on its conversion into all-weather deep water port.

Coffee

The hinterland famous for its Coffee plantation has produced about 6,660 tonnes of Coffee during 1966-67. But the export of the same through Calicut-Beypore port for the same period was only 870 tonnes. Even after allowing a part for home consumption the net surplus that can be exported may be about 3,000 tonnes which can be handled through the port of Beypore on its development into a deep-water port.

Rayon industry

Rayon Pulp produced at the Gwalior Rayons and raw materials like lime shell, caustic soda and furnace oil required for the factory will form potential items of traffic at the port. During the year 1966-67 the export of Rayon Pulp from the port was only 1,000 tonnes while the export by rail was about 40,229 tonnes. The requirement of lime shell for the rayon factory is about 50,000 tonnes and furnace oil about 40,000 tonnes. These materials are imported from outside the hinterland by road from north Malabar and Cochin respectively. The all-weather deep-water port of Beypore can very well handle most of this traffic, and a rough estimate of the import-export traffic available for the port from the rayon industry may be one lakh tonnes.

Miscellaneous items

The other important items of export are tea, rubber, cattlefood, tamarind etc. The traffic generated in respect of the miscellaneous items is estimated at about 15,000 tonnes.

Thus the general cargo traffic generated in the hinterland region and which can be handled at a deep-water all-weather port at Calicut-Beypore Port in a year may be estimated at about 5.20 lakh tonnes as follows.

<i>Imports</i>		<i>Quantity</i>
<i>Commodities</i>		<i>(Tonnes)</i>
1.	Rice	40,000
2.	Wheat	45,000
3.	Lime shell	50,000
4.	Furnace oil	40,000
5.	Fertilizers	15,000
6.	Salt	18,000
7.	Coal	23,000
8.	Timber	10,000
9.	Miscellaneous items (hardware, textiles, machinery etc.)	25,000
Total		2,66,000

<i>Exports Commodities</i>		<i>Quantity (Tonnes)</i>
1.	Timber and timber products	90,000
2.	Cocoanuts and its products	35,000
3.	Tiles	30,000
4.	Rayon pulp	25,000
5.	Coir fibre, yarn & Rope	15,000
6.	Tapioca	15,000
7.	Cashewnuts	11,000
8.	Pepper	5,000
9.	Fish	4,000
10.	Coffee	3,000
11.	Ginger	3,000
12.	Betel nuts	3,000
13.	Miscellaneous items (Tea, Rubber etc.)	15,000
Total		2,54,000

Grand Total of traffic 2.54+2.66 lakh tonnes =5.20 lakh tonnes .

CHAPTER VI

The Traffic Potential

An appraisal of the traffic potential of the Port of Beypore is to be based on certain assumptions regarding the extent to which the development programmes in the hinterland region will be achieved, and the degree of orientation that will be displayed by trade and industry in the hinterland to the port in preference to established use of other ports, and other modes of transportation. The traffic which is expected to be handled at Beypore port during the next twenty years would be governed by a number of factors, namely the type of facilities that are to be provided at Beypore, gains from the other minor ports of the hinterland region, redirection of the present traffic of the hinterland which is now routed through Cochin, Mangalore, Madras and Tuticorn ports, or which is at present carried by rail or road to western India destinations.

As pointed out in the previous chapter the basic traffic which the deep water all weather port of Beypore can expect to generate is reckoned at 5.20 lakh tonnes per annum. Projections of traffic for the years to come, based on the existing trend may not be realistic, since the economy and the locational pattern that are likely to prevail in the hinterland region in future would shape the traffic potential of the region and these need not have much relation to the past trends. In a way it is also dependent on the prospects of exports which again will dependent largely on the development of world economy. In arriving at a realistic projection of the traffic of the port for the next two decades it is necessary to keep in view the development envisaged in respect of all

important ports that are in proximity to it, the economic consideration given in allocating traffic between various ports, and the relative cost of transporting goods by road, rail and sea. It is therefore a difficult and complicated task to frame reasonable estimates of the traffic potential of the port. However an attempt is made below to arrive at a rough estimate of the traffic that is likely to be generated in the next twenty years at the port. In regard to agricultural development, significant growth appears to be possible in respect of certain crops like tapioca, cashew, rubber, coffee, tea and coconuts. In the industrial sector, the development prospects seem to be mainly in respect of forest based industries, textiles, cashew processing, tile industry, and marine fishing. In regard to mining, there are immense possibilities in future if the proposed schemes of exploitation of the iron ore deposits are implemented.

Rice

Eventhough the objectives of the Central and State Governments are to augment the internal production of rice, and thereby to reduce the import of rice, it may not be possible to increase considerably the rice production in the hinterland so as to make it self sufficient. The additional land that can be brought under the rice cultivation is limited. The rate of population growth may not fall below two per cent on the average during the next twenty years, and therefore it can reasonably be expected that the deficit in rice in the hinterland may persist for some years. As such, at least the present level of rice supply to the hinterland region from outside is likely to continue.

Wheat

So long as rice is deficit in the hinterland the supply of wheat as a supplement to rice will have to continue. No appreciable change in the quantum of wheat imports need be expected in the next twenty years.

Chemical fertilizers.

The use of chemical fertilizers is becoming more and more popular with the cultivators of the State. The demand for chemical fertilizer in the hinterland region will be definitely on the increase in view of the many ambitious agricultural schemes envisaged in the hinterland region. Based on a moderate estimate, the anticipated demand for fertilizer in the region will be about 50,000 tonnes in 1976 and 70,000 tonnes in 1986 as against the existing consumption of about 30,000 tonnes per annum. With the commissioning of the Urea Plant at Cochin a good part of the fertilizer supply to the hinterland is likely to be shipped from Cochin if the Beyyore port is developed.

Salt

According to the estimates furnished by the fisheries department, the marine fish landings in the hinterland are expected to go up from the present level of 92510 tonnes to 148750 in 1976 and 223100 in 1986. These estimates appear to be on the higher side taking into account of the various administrative and other aspects in respect of the programme of machanisation of fishing operations and provision facilities for processing fish. A more conservative estimate has therefore been adopted namely 125000 tonnes in 1976 and 175000 tonnes in 1986.

The import of salt for home consumption as well as for processing of fish may also go up to about 21600 tonnes in 1976 and 39000 tonnes in 1986.

Petroleum products.—

The present need of petroleum products are met from those imported at Cochin. With the development of Beypore port and provision of necessary installation and storage facilities, petroleum products needed for the hinterland can be discharged at Beypore. The estimated requirement of petroleum products for the hinterland after taking into consideration, the possible increase in the number of vehicles will be about 1.05 lakh tonnes in 1976 and 1.10 lakh tonnes in 1986. This is however not included in the estimates of general cargo.

Coal

The coal consumption of southern railway from Erode to Manglore is estimated at 23330 tonnes per annum and the same is at present landed at Cochin and transported to various storage depots. With Beypore as a major harbour the entire coal requirement of southern railway can be landed at Beypore and thereby the railways can save millions of wagon haulage kilometre tonnes per annum. As the railways have a phased programme of replacing the present steam engines by diesel in stages, the chance of increased consumption of coal in future is very meagre, and so the anticipated increase in 1976 and 1986 is only nominal.

Trading circles in the hinterland expect more than doubling the present import traffic of miscellaneous items like raw timber, cement, hardware, bitumen, textiles, provisions etc., in the next two decades. A modest estimate of the import traffic of these items through the port may be to the tune of 50,000 tonnes in 1976 and 100000 tonnes in 1986.

Exports

The export traffic gains from Badagara the other minor port of the hinterland, the redirection of traffic seeking outlets at the major port of Beypore, the possible increased exports from forests and plantations, the extra traffic generated by the growth of new industrial units, and the expansion of existing ones are likely to add to the ports' future export tonnage. Among the export traffic that the port is expected to handle in the next two decades, timber, tiles, cashewnut, tapioca, fish, coffee, coir and rayon pulp are important.

Cashewnut

The production of cashewnut has been maintaining a steady rising trend over the last few years in the hinterland. The same upward trend may prevail in the next two decades also, as the Government in its anxiety to increase production are giving incentives in the form of subsidies. The annual production of cashewnut is estimated to be 15876 tonnes per annum and about 80 per cent of it are exported to Quilon or Manglore by road and rail. It is expected that the export traffic through the port may be 15,000 tonnes in 1976 and 22,500 tonnes in 1986 and the deep-water all weather port of Beypore can confidently handle the export traffic in cashewnuts.

Timber and timber products

Round log, sawn timber and articles made out of timber will continue to be an outstanding item of export from the port in future also, provided all weather deep water facilities are available.

With the acquisition of the private forests of the hinterland, and with the scientific extraction and utilization of the forest resources, the forests of the hinterland can prove to be an important source of income. The teak and other trees of the hinterland are very popular in the middle eastern countries, and there is every prospect of the export in timber and timber products going up. The export traffic in timber and timber products that can be expected to handle may be about 157,500 tonnes and 236,250 tonnes in 1976 and 1986, after giving the due allowance to rail borne traffic to Central India regions which is likely to continue in future also. Providing adequate facilities for storage etc., of timber in and around Kallai is an important aspect in the context of further development of timber industry in the region.

Pepper

The prospect of exporting pepper to foreign countries is not bright at present due to the keen competition by other countries, as also due to decreasing production in the hinterland consequent on the attack of certain virous diseases. As such, the traffic generated from its export will not increase much and the best that can be expected is to maintain its level of export of 5,000 tonnes per annum.

Coffee

The production of Coffee in the hinterland was on the increase for the last few years, and it recorded 6662 tonnes in 1966-67. At present there is only a nominal export of 870 tonnes through Calicut Beypore port, since all the remaining quantities are exported through ports like Cochin or Madras. The production is likely to go up during the next twenty years and the exportable traffic in coffee may be about 4500 tonnes in 1976 and 6750 tonnes in 1986.

Cocoanut

In view of the proposals to extend the area under cocoanut cultivation in the hinterland, an increase in yield can very well be anticipated even after allowing a reasonable margin for fall in yield rate due to pests and diseases. The estimated traffic in cocoanuts and its allied products through the port will be about 52500 tonnes in 1976 and 75000 tonnes in 1986.

Coir

The Coir industry is of recent origin in the hinterland. Cocoanut husk, the raw material is abundantly available in the hinterland. Though coir fibre, yarn and rope are produced in the coastal region, the manufacturing sector is not very strong in the region. The conservative attitude of the people are changing slowly and there is possibility of the industry gaining strength

in the hinterland. The anticipated export traffic in coir and coir products at the Port of Beypore may be 27000 tonnes in 1976 and 39000 tonnes in 1986.

Tapioca

The prospects of increasing tapioca cultivation are very bright in the hinterland and it is only reasonable to anticipate the tapioca production of three lakh tonnes in 1976 and three and a half lakh tonnes in 1986. Of this 24000 tonnes in 1976 and 48000 tonnes in 1986 can be expected to find outlet through the port.

Tiles

The production capacity of tile factories in the hinterland is 225000 tonnes which is equivalent to 90 million tiles. According to the assessment by the National Council of Applied Economic Research in the "Techno Economic Survey of Kerala" the industry in this region has reached a saturation point, and is not capable of future expansion and output. At present the export go to Singapore, Ceylon, Malaya and East African countries. The foreign market for tiles in Singapore, Ceylon and Malaya are shrinking due to Chinese enterprise in Malaya, and indigenous efforts for local production in Singapore and Ceylon.

It may be possible that the price of tiles to the Oversea buyers can be reduced if handling, transshipment and freight charges are brought down. Direct tranship from shore into ship at Beypore may help in bringing down the price. Even then the prospects of gains in exports are not very bright and the traffic is likely to remain only at the present level.

Rayon

According to the data furnished by the Gwalior Rayon Silk Manufacturing Company at Mavoor, the estimated export of Rayon Pulp from their factory will be 60000 tonnes in 1976 and 75000 tonnes in 1986. Moreover they are prepared to export the whole quantity by sea, provided deep water all weather port facilities are made available at the port of Beypore.

Fish

The estimated marine catch of the hinterland according to State fisheries department is 92510 tonnes in 1966-67. A considerable quantity of this fish after processing is exported to Malaya, Burma, Ceylon and Singapore through Madras and Tuticorin and to European countries through Cochin Port. Calicut-Beypore port is not in the fishing trade now due to lack of adequate and timely steamer services in Calicut-Beypore. Once Beypore is developed into an all weather deep water port, the export in fish can be handled at the port, which is expected to be 7200 tonnes in 1976 and 14400 tonnes in 1986.

Ginger

Ginger production in the hinterland is on the increase, and the exportable surplus after meeting home demand will be 5100 tonnes in 1976 and 7100 tonnes in 1986 and this traffic can be handled through the port.

Betel nut

Another exportable commodity from the hinterland is Betel nuts, the export of which through the port will be about 6000 tonnes in 1976 and 9000 tonnes in 1986.

Miscellaneous items

Among the other items of export traffic where substantial gain may be anticipated are handloom, tea, rubber, turmeric, cattle food, tamarind etc. These miscellaneous items of export may go up to 30000 tonnes in 1976 and 60000 tonnes in 1986.

To sum up the anticipated traffic under general cargo which the developed Bypore port could handle in 1976 and 1986 and can be estimated as 7.63 and 10.54 lakh tonnes respectively as detailed below:—

Anticipated traffic at Bypore Port (Tonnes)

Sl. No.	Item	1966 (existing potential)	1976	1986	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
I. IMPORT					
1	Rice	40000	40000	40000	Constant
2	Wheat	45000	67500	67500	5% increase per annum anticipated and then likely to remain constant from 1976
3	Limeshell	50000	54000	60000	Based on the data furnished by the Gwalior Rayons Ltd., Mavoor
4	Furnace Oil	40000	44000	48000	
5	Fertilizers	15000	22500	30000	5% increase per annum
6	Salt	18000	21600	39000	Based in the estimates of the Director of Fisheries & other estimates on home consumption
7	Coal	23000	27600	32200	2% increase per annum
8	Timber	10000	13000	16000	3% increase per annum
9	Miscellaneous items (hardware textiles, machines etc.)	25000	50000	100000	10% increase per annum based on anticipated rising tempo of industrial activities
Total Imports		266000	340200	432700	

Sl. No.	Item	1966	1976	1986	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
II. EXPORT (Tonnes)					
1	Timber and timber products	90000	157500	236250	7½% increase per annum in the first decade and 5% in the next decade.
2	Cashew	11000	14300	21450	3% increase per annum upto 1976 and then 5% increase upto 1986.
3	Cocoonut & coconut products	35000	52500	70000	5% increase per annum
4	Pepper	5000	5000	5000	Constant
5	Tapioca	15000	24000	48000	6% increase upto 1976 and then 10% upto 1986
6	Tiles	30000	30000	30000	Constant
7	Coir, yarn, fibre, rope etc.	15000	27000	39000	8% increase per annum
8	Rayons	25000	60000	75000	Based on the data furnished by Gwalior Rayons Ltd., Mavoor.
9	Coffee	3000	4500	6000	5% increase per annum
10	Fish	4000	7200	14400	8% increase upto 1976 and then 10% increase upto 1986
11	Ginger	3000	5100	7200	7% increase per annum
12	Betel nuts	3000	6000	9000	10% increase per annum
13	Miscellaneous items (Tea, rubber, etc.)	15000	30000	60000	10% increase per annum
Total Exports		254000	423100	621300	
Grand Total I and II		520000	763300	1054000	

In addition to the above, there is the prospect of iron ore becoming an important item of export from the region as discussed earlier. The estimated quantum of iron that may have to be handled at the port after its proper development for the purpose may be of the order of 20 lakh tonnes in 1976, on the assumption that the scheme for scientific extraction of iron ore will be implemented by that time. By 1986, steel and ancillary products of about 50000 tonnes can also be additionally expected.

An analysis of the potential commodity-wise traffic of the port is presented in the preceding pages. The prospects of the future traffic will be determined as stated earlier by the agricultural and industrial developments in the hinterland. Hence it is likely that the ports traffic anticipated for the next two decades may be subjected to variations envisaged in the contemplated Fourth Plan. However it is hoped that the estimates given in this report provide at least a lower bound below which the traffic at the port of Beypore is unlikely to fall in 1976 and 1986.

An all weather deep water port of Beypore presupposes a well laid out transport system in the hinterland to cater to the additional growth of traffic. It is therefore highly necessary that developments of the main outlets branching off from Beypore port are well planned and implemented side by side with the development of the port. Rail links connecting the port to Feroke Railway Station which is the nearest rail head and suitable sidings near the port are to be provided without delay. Although the existing network of roads in the hinterlands is fairly adequate, there is need for upgrading, widening and bridging at some points. Improvements of the inland waterways which will very well feed the port with important items of traffic such as timber, coconut and other produce will also have to be made simultaneously.

APPENDIX I—TABLES

THE NATIONAL ARCHIVES

TABLE No. 0.1

EXPORT FROM THE PORT OF COCHIN

(Unit in Metric tonnes)

Sl. No.	Commodity	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Bunkers	103418	101548	78768	89592	86713	90699	127120	N S.A.
2	Cement	..	616	1089	1551	2476	2996	17146	15188
3	Coir & Coir products	51283	62962	62566	65276	67169	69025	70907	68448
4	Cashew Kernels	44832	44493	42536	46478	54387	54386	65099	61936
5	Ores	95615	77181	53437	40799	35142	17610	5920	10455
6	Coconut Oil	9976	13324	14874	16250	12296	11296	12445	10064
7	Cashew shell oil	3512	4326	5455	6080	7290	9438	14600	13222
8	Lemongrass oil	1166	3441	3041	2754	3509	3726	3760	4108
9	Piece goods	1710	3441	3041	2754	3509	3726	3760	4108
10	Oil cakes	5312	5770	3896	2505	4116	3428	3476	2885
11	Rubber	23711	20978	23598	23529	26362	28966	33043	41363
12	Spices	19365	24636	25713	27449	27109	26743	26100	34378
13	Tea	41749	39449	39363	38261	47684	46224	41076	48822
14	Timber	2893	4914	6092	5705	8206	7537	8988	11207
15	Betel nuts	5171	4824	9356	12209	13114	16177	11207	7828
16	Chemicals	7044	8337	9722	11675	12168	13241	18214	13112
17	Cocoanuts	21083	31521	20375	25867	20625	15115	22400	18456
18	Copra	10116	13883	9210	16301	1470	11557	20775	29059
19	Coffee	1380	4243	5036	6285	7782	9663	10890	11352
20	Fish	5673	3474	4208	6399	8322	9814	12303	12834
	(Total including others)	556432	529834	466176	497279	489981	512494	578208	541048

N.S.A.—Not Separately available.

TABLE No. 0.2

IMPORTS INTO THE PORT OF COCHIN

(Unit in Metric tonnes)

Sl. No.	Commodity	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Candle, Paraffin wax etc.	1491	1617	2667	2501	2602	3023	3983	9496
2	Chemicals	9535	23163	24362	26261	6674	7358	6975	10310
3	Coal	277636	312995	344820	332956	367843	367385	296154	N.S.A.
4	Cotton	15862	22817	32848	36648	33044	32872	25810	15591
5	Irans	23266	156619	102960	206409	131223	74179	334587	578799
6	Cashewnuts	101788	91384	64566	75231	107281	133612	134028	112567
7	Iron and Steel	23520	14712	17497	15592	21529	23029	40668	26938
8	Metals (other than iron and steel)	5984	4470	5861	7406	17237	15571	15420	13720
9	Tin plate	4632	5642	8788	3188	7707	5031	7291	3552
10	Wire	1717	2995	7286	4063	1065	2307	1736	3348
11	Manure	89471	104344	119329	124612	187697	163137	146666	167594
12	Light distillates	N.S.A.	N.S.A.	N.S.A.	83316	93933	98435	97570	N.S.A.
13	Paper	8571	7720	9226	11923	10259	10851	11000	8521
14	Kerosene	N.S.A.	N.S.A.	N.S.A.	222338	288643	224328	244322	N.S.A.
15	Dresens	N.S.A.	N.S.A.	N.S.A.	214399	227531	266651	210384	N.S.A.
16	Lubricating Oil	N.S.A.	N.S.A.	N.S.A.	12187	14240	17891	19159	N.S.A.
17	Bitumen	N.S.A.	N.S.A.	N.S.A.	47388	29251	26339	31454	33779
18	Heavy ends	N.S.A.	N.S.A.	N.S.A.	236383	243331	316868	420899	N.S.A.
19	Salt	25120	22898	21615	27893	22547	30865	32005	25896
20	Sida	1839	1197	24	1189	10472	9928	7704	6655
21	Sulphur	19130	24167	36271	33238	25614	48636	32512	46704
22	Sugar	17330	10276	234	12277	23158	3706	93	190
23	Copra	28161	24371	19568	18706	19667	5376	5143	11196
24	Total including others	1355271	1549245	1621261	1877591	1959889	2034311	2260527	2412763

Source: Cochlin Chamber of Comm/rcc

N.S.A.—Not s:paratly available.

TABLE No. 1.1

ANNUAL RAINFALL AT RAIN RECORDING STATIONS OF THE HINTERLAND

(In Milli Metres)

Sl. No.	Year	Badagara	Kozhikode	Kuttiyadi	Manjeri	Nilambur	Qutlandi	Tirurangudi	Vybhiri
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	1962	3899.4	Nil.	4636.6	3798.9	1652.9	2261.1	3321.0	4937.7
2	1963	2855.8	Nil.	3452.5	2095.7	N.A.	1912.9	2288.8	3538.7
3	1964	2832.3	1619.0	1940.5	3148.2	N.A.	1056.9	3318.1	4871.1
4	1965	2426.7	2212.6	3197.3	2367.8	2040.2	2402.9	2260.8	3279.1
5	1966	2856.2	2020.0	2939.0	1981.7	1978.4	2223.3	2876.7	2979.1

Source:—Observatory, Trivandrum.

TABLE No. 1.2

AVERAGE ANNUAL RAIN FALL IN KOZHIKODE DISTRICT

(In M. M)

<i>Sl. No.</i>	<i>Year</i>	<i>Annual rainfall in Kozhikode District</i>
1	1960-61	4658.8
2	1961-62	4949.1
3	1962-63	3883.2
4	1963-64	2825.3
5	1964-65	3505.0
6	1965-66	2425.8

TABLE No. 1.3
MEAN WIND SPEED IN K. M. HR. (KOZHIKODE)

<i>Year</i>	<i>January</i>	<i>February</i>	<i>March</i>	<i>April</i>	<i>May</i>	<i>June</i>	<i>July</i>	<i>August</i>	<i>September</i>	<i>October</i>	<i>November</i>	<i>December</i>	<i>Annual</i>
1965	6.3	11.6	13.1	12.2	13.7	9.8	10.1	9.9	9.0	8.8	7.5	9.0	123.5
1966	10.6	11.9	14.0	12.6	12.9	5.4	4.7	5.3	7.2	5.9	6.0	4.7	101.2
1967	6.3	6.4	8.5	8.7	..	7.1	5.7	5.2	5.9	6.0	5.7	6.0	71.5

TABLE No. 1.4

Month	1965				1966				1967			
	Thunder	Hail	Dust	Fog	Thunder	Hail	Dust	Fog	Thunder	Hail	Dust	Fog
	storm	storm	storm	storm	storm	storm	storm	storm	storm	storm	storm	storm
January	..	..	..	..	..	..	..	..	..	..	..	..
February	..	..	..	..	..	..	..	..	..	..	..	..
March	..	..	..	..	4	..	..	..	..	..	..	..
April	5	..	..	..	3	..	..	5	..	..	..	..
May	9	..	..	..	1	..	..	13	..	..	..	..
June	1	..	..	..	6	..	..	5	..	..	..	..
July	..	..	..	..	1	..	..	2	..	..	..	..
August	2	..	..	..	..	..	..	..	..	..	..	..
September	..	..	..	..	..	..	..	..	..	..	..	..
October	2	..	..	..	10	..	..	6	..	..	..	..
November	3	..	..	..	..	..	..	3	..	..	..	..
December	1	..	..	..	2	..	..	..	..	..	..	..
Annual	23	..	..	..	27	..	..	34	..	..	..	..

Source:—Port Officer, Kozhikode.

TABLE No. 1.5
RIVERS IN THE HINTERLAND

No.	Name of River	Place of origin	Length in K. M.	
			Total	Navigable
1	Chaliyar or Beypore River	Elambileri mala	169	71
2	Kabani River	Wynad forest	NA	NA
3	Kadalundi River	Silent valley	130	43
4	Kallayi River	Chankulathur village	23	10
5	Korapuzha River	Arikkankunnu & Kadiyanadumala	40	26
6	Mahe River	Naripatta & Kavilampara	55	24
7	Murat or Kuttiyadi River	Wynad hills	74	10
8	Pooraparamba River	Pooraparambu	8	5
9	Tirur River	Atavanad	48	10

Source:—District census handbook, Kozhikode.

TABLE No. 1.6

NUMBER AND TONNAGE OF STEAMERS AND SAILING VESSELS (FOREIGN AND COASTAL) THAT CALLED AT CALICUT BEYPORE PORT

Sl. No.	Year	Steamers		Sailing vessels		Total	
		No.	Tonnage	No.	Tonnage	No.	Tonnage
1	1961-62	319	534507	1502	131778	1821	666285
2	1962-63	304	535454	1379	126078	1683	661532
3	1963-64	319	482814	1333	124656	1652	607470
4	1964-65	264	459703	1331	122273	1595	581976
5	1965-66	217	383128	1456	128495	1673	511623
6	1966-67	149	273538	913	87888	1062	361426

TABLE No. 1.7
IMPORTS AND EXPORTS FROM THE PORT OF CALCICUT
INCLUDING BEYPORE

(in M. T.)

Sl. No.	Year	Calicut including Bepore		
		Imports	Exports	Total
1	1961-62	59899	212804	272703
2	1962-63	73099	180842	253941
3	1963-64	64853	173925	238778
4	1964-65	139192	163071	302269
5	1965-66	79841	184515	264356
6	1966-67	95649	118952	214601

Source:—State Port Officer, Trivandrum.

TABLE No. 1.8
COASTAL AND FOREIGN IMPORTS AND EXPORTS FROM
CALICUT INCLUDING BEYPORE PORT

(In M. T.)

Sl. No.	Year	Imports			Exports		
		Coastal	Foreign	Total	Coastal	Foreign	Total
1	1961-62	54638	5261	59899	158939	53865	212804
2	1962-63	99149	23950	73099	140506	40336	180842
3	1963-64	61848	3005	64853	144253	29672	173925
4	1964-65	41038	98154	139192	142873	20198	163071
5	1965-66	32910	46931	79841	169595	14920	184515
6	1966-67	25070	70579	95649	107254	11698	118952

Source:—State Port Officer, Trivandrum.

TABLE No. 1.9

HARBOUR CRAFTS REGISTERED AT THE PORTS OF KOZHIKODE DISTRICT
(OWNED BY PRIVATE PARTIES)

Sl. No.	Year	Calicut (including Beypore)			Badagara		
		Cargo boats including barges	Canoes including boats	Total	Cargo boats including barges	Canoes including boats	Total
1	1961-62	135	..	135	23	1	24
2	1962-63	126	..	126	23	1	24
3	1963-64	135	..	135	23	1	24
4	1964-65	98	..	98	23	1	24
5	1965-66	118	..	118	23	1	24
6	1966-67	119	..	119	23	1	24

Source:—State Port Officer, Trivandrum.

TABLE No. 1.10

REVENUE FROM THE PORTS OF KOZHIKODE DISTRICT
(In Rs.)

Sl. No.	Name of Port	Revenue During					
		1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
1	Calicut including Beypore	363375	379071	394689	390551	474465	405447
2	Badagara	50067	26232	35268	30993	17724	11615

Source:—State Port Officer, Trivandrum.

TABLE No. 1.11

NUMBER AND TONNAGE OF STEAMERS AND SAILING VESSELS
(FOREIGN & COASTAL) CALLED AT BADAGARA PORT

Sl. No.	Year	Steamers		Sailing vessels		Total	
		No.	Tonnage	No.	Tonnage	No.	Tonnage
1	1961-62	84	59752	25	2808	109	62560
2	1962-63	70	42053	24	2499	94	44552
3	1963-64	66	40422	24	2444	90	42866
4	1964-65	49	30699	31	3530	80	34229
5	1965-66	37	19064	15	1781	52	20845
6	1966-67	13	9732	21	2977	34	12709

Source:—State Port Officer, Trivandrum.

TABLE No. 1.12

COASTAL AND FOREIGN IMPORTS & EXPORTS FROM
THE PORT OF BADAGARA

(In M. T.)

Sl. No.	Year	Imports			Exports		
		Coastal	Foreign	Total	Coastal	Foreign	Total
1	1961-62	2532	..	2532	21988	..	21988
2	1962-63	2430	..	2430	18149	..	18149
3	1963-64	2208	..	2208	17235	..	17235
4	1964-65	3500	..	3500	14389	..	14389
5	1965-66	1903	..	1903	6739	..	6739
6	1966-67	1527	..	1527	5238	..	5238

Source:—State Port Officer, Trivandrum.

TABLE No. 1.13

COMMODITY-WISE EXPORT HANDLED BY CALICUT BEYPURE (SELECTED COMMODITIES)

(Unit in thousand M. T.)

Sl. No.	Commodities	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
1	Building Materials other than wood and steel	109.183	71.442	65.922	9.559	..	..	..
2	Fruits, vegetables and nuts	33.846	38.707	20.182	13.781	..	..	4.866
3	Food grains	14.697	..	..	..	..	..	1.729
4	Wood & Timber	63.714	60.305	65.259	59.712	61.510	62.365	49.163
5	Coir & Coir products	..	10.635	..	9.251	8.080	9.416	5.050
6	Coconut products	..	..	..	34.286	32.313	31.513	23.648
7	Tapioca flour	..	..	..	14.758	..	..	6.453
8	Tiles	..	..	..	..	24.673	25.815	11.638
9	Miscellaneous	29.175	31.715	29.479	32.578	36.501	55.405	16.405
10	Total	250.615	212.804	180.842	173.925	163.077	184.514	118.952

TABLE No. 1.14
COMMODITY-WISE IMPORT CALCUT BEYPORE PORT (SELECTED COMMODITIES ONLY)

Sl. No.	Commodity	(Unit in thousand M. T.)							
		1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	
1	Food grains, rice, wheat etc.	17.961	13.707	24.775	24.528	95.805	42.113	59.503	
2	Salt	..	14.367	14.193	12.623	15.241	10.414	12.389	
3	Sugar	..	..	5.774	..	..	..	..
4	Seeds	..	..	6.531	5.013	..	4.697	4.836
5	Cotton	..	4.700	..	8.054	..	1.097	2.137	
6	Dates	..	..	..	..	3.326	1.814	2.004
7	Miscellaneous	..	40.990	21.826	14.635	24.820	19.706	14.780	
8	Total	..	58.951	73.099	64.853	139.192	79.841	95.649	

Source:—Bureau of Economics & Statistics.

TABLE No. 1.15

TALUK-WISE AREA POPULATION & DENSITY OF KOZHIKODE DISTRICT (1961 CENSUS)

Sl. No.	Taluk/District	Area in		Population	Density per	
		Sq. Miles	Sq. K.M.		Sq. Miles	Sq. K.M.
1	Kozhikode District	2570.2	6656.8	2617189	1018	393
2	Badagara Taluk	212.3	549.9	319913	1507	582
3	Quilandy Taluk	294.5	762.7	366343	1244	480
4	Kozhikode Taluk	379.1	981.9	660372	1742	673
5	Ernad Taluk	873.3	2261.8	524294	600	432
6	Tirur Taluk	278.4	721.1	561212	2016	778
7	South Wynad Taluk	532.6	1379.4	185055	347	134

Source:—1961 Census.

TABLE No. 1.16

WORKERS BY INDUSTRIAL CATEGORY AND SEX IN THE HINTERLAND (1961 CENSUS)

Sl. No.	Industrial Category	Total		Male		Female	
		Persons	Percentage	No.	Percentage	No.	Percentage
1	Total Workers	..	100.00	612214	100.00	189492	100.00
2	As cultivators	..	15.95	103098	16.84	24746	13.06
3	As agricultural labourers	..	14.10	63013	10.29	50011	26.39
4	In Mining, quarrying, fishing forestry etc.	91433	11.41	77357	12.64	14076	7.43
5	At household Industries	..	6.99	22002	3.59	29990	15.83
6	In manufacture other than household Industry	..	8.35	55116	9.00	11834	6.25
7	In construction	..	0.91	7231	1.18	100	0.05
8	In trade & commerce	..	6.63	52256	8.54	917	0.48
9	In transport, storage and communication	27685	3.45	26452	4.32	1233	0.65
10	In other Services	..	32.71	205689	33.60	56585	29.86

Source:—1961 Census.

TABLE No. 2.1
CLASSIFICATION OF AREA—KOZHIKODE DISTRICT

Sl. No.	Category	Year ending 30-6-1964		Year ending 30-6-1965		Year ending 30-6-1966		Year ending 30-6-1967	
		Area in Hectares	% to the total	Area in Hectares	% to the total	Area in Hectares	% to the total	Area in Hectares	% to the total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Total geographical area according to village papers ..	661586	100.00	661586	100.00	661586	100.00	661586	100.00
2	Forest ..	194048	29.33	193756	29.29	193756	29.29	193756	29.29
3	Land put to non-agricultural uses ..	27481	4.15	28664	4.33	29095	4.38	22523	4.92
4	Barren and uncultivable land ..	14143	2.14	14143	2.14	14040	2.12	15045	2.27
5	Permanent pasture and grazing land ..	2781	0.42	2782	0.42	2700	0.41	2700	0.41
6	Land under miscellaneous crops not included in net area sown ..	40565	6.13	40646	6.14	40075	6.06	29012	4.38
7	Cultivable waste ..	27752	4.20	26908	4.07	23220	3.51	25026	3.78
8	Fallow land other than current fallow ..	7536	1.14	6581	1.00	5795	0.88	6876	1.04
9	Current fallow ..	10792	1.63	8278	1.25	6200	0.93	5044	0.76
10	Net area sown ..	336488	50.86	339828	51.36	344705	52.11	351604	53.15
11	Area sown more than once ..	32183	4.87	31467	4.76	39673	6.00	40295	6.09
12	Total cropped area ..	368671	55.73	371295	56.12	384378	58.10	391899	59.24

Source:—Bureau of Economics and Statistics, Trivandrum.

TABLE No. 2.2

AREA UNDER DIFFERENT CROPS IN KOZHIKODE DISTRICT

(Area in Hec.ares)

Sl. No.	Name of crops	Year ending 30-6-1964	Year ending 30-6-1965	Year ending 30-6-1966	Year ending 30-6-1967
(1)	(2)	(3)	(4)	(4)	(6)
1	Cereals —rice (Au umn)	65 69	64964	65269	64636
2	rice (Winter)	43933	43761	43222	43046
3	rice (Summer)	1238	1119	1102	1124
4	Total rice	111040	109844	110193	108806
5	Other cereals and millets	2801	2788	2773	2773
6	Total cereals and millets	113841	112632	112966	111579
7	Pulses	5484	5484	5484	5589
8	Total foodgrains	119325	118116	118450	117168
9	Sugar crops	791	731	858	1012
10	Pepper	15989	15989	159 9	15989
11	Chillies	672	672	565	655
12	Ginger	4439	4443	4400	4400
13	Turmeric	1236	1236	1236	1236
14	Cardamom	1079	1079	1079	1079
15	Be.el nuts	11364	12004	12607	14389
16	Other condiments & spices	853	902	902	902
17	Total spices and condiments	35632	36325	36778	38650
18	Mangoes	7611	7246	6378	7187
19	Citrus fruits	96	96	96	96
20	Banana including plantain	6647	6694	6118	5800
21	Other fruits	7336	6705	7027	7027
22	Total fruits (fresh)	21690	20741	20289	20110
23	Cashew nut	12274	13238	13885	14162
24	Tapioca	12207	12208	19687	20537
25	Other vegetables	3191	3786	3198	5164
26	Total fruits and vegetables	49362	49965	56959	59973
27	Total food crops	205144	205167	213045	216803
28	Coconut	113875	113642	118332	120698
29	Other oil seeds	644	673	673	725
30	Total oil seeds	114519	114315	119005	121423
31	Cotton	227	749	243	101
32	Tea	3524	3988	3987	4310
33	Coffee	13706	14852	15306	16335
34	Rubber	19333	20190	20159	20294
35	Other Plantation crops	1034	1034	1034	1034
36	Total Plantation crops	38097	40313	40729	41973
37	Other non food crops	10634	10980	11599	11599
38	Total non food crops	163527	166108	171333	175096
39	Total area sown under all crops	368671	371295	384378	391899
40	Area sown more than once	32183	31467	39673	40293
41	Net area sown	336488	339828	344705	351604

Source:—Bureau of Economics and Statistics, Trivandrum.

TABLE No. 2.3

PRODUCTION OF IMPORTANT CROPS IN KOZHIKODE DISTRICT

Sl. No.	Crops	Unit	Year ending 30-6-1964	Year ending 30-6-1965	Year ending 30-6-1966	Year ending 30-6-1967	Average for the last 4 years
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Rice (Autumn, Winter & Summer)	M.T.	121638	123469	107877	111391	116106
2	Ragi	"	2320	2550	2320	2320	2378
3	Other cereals and millets	"	620	620	620	620	620
4	Pulses	"	2361	2344	2341	2355	2350
5	Black pepper	"	2621	2516	2390	2294	2455
6	Dry ginger	"	4268	4315	4238	4196	4254
7	Cured turmeric	"	1108	1108	1108	1108	1108
8	Cured cardamom	"	48	60	60	60	57
9	Betel nuts	Million nuts	1708	2216	2327	2656	2227
10	Banana	M. T.	9432	12437	12867	6506	10311
11	Other Plantain	"	40869	38004	33766	37470	37527
12	Cashew nuts	"	13756	14853	15566	15876	15015
13	Tapioca	"	101141	150158	201595	289572	185617
14	Sesamum	"	170	173	175	175	173
15	Coconuts	Million nuts	682	772	738	753	736
16	Cotton	Bales of 180 Kgms.	190	1383	190	136	475
17	Tea	M. T.	5405	6205	5913	6478	6000
18	Coffee	"	5402	6061	6243	6662	6092
19	Rubber	"	5430	6617	7850	8287	7046
20	Lemongrass oil	"	341	341	341	341	341

Source:—Bureau of Economics and Statistics, Trivandrum.

TABLE No. 2.4

OUT-TURN OF MAJOR FOREST PRODUCE IN KOZHIKODE DISTRICT

Division	Timber								
	Round logs (in C. M.)			Poles (Nos.)					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9)
Kozhikode Division	18207	16834	27026	11096	11332	14800	9039	9634	
Nilambur Division	17049	18420	12160	24031	38736	30589	90793	98581	58
Total	35256	35254	39186	35127	50068	45389	99832	108215	

Source:—Forest Department.

TABLE No. 2.5(a)
MARINE FISH LANDING AT IMPORTANT LANDING CENTRES IN KOZHIKODE DISTRICT DURING 1964-65
(Qty. in M. T.)

Sl. No.	Landing Centre	Oil Sardine	Prawns	Mackerel	Shark	Skate	Siber Bellies	Other Sardine	Ribbon Fish	Horse Mackerel	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Tanur	9115.0	321.1	130.2	38.4	51.0	161.7	..	21.5	342.0	1138.5	11319.4
2	Kadalundi	8025.0	263.0	106.5	..	36.5	88.4	157.4	8.0	120.0	411.3	9216.1
3	Parappanangadi	2993.1	540.9	124.4	51.8	37.3	85.4	19.3	221.6	204.0	1362.9	5640.7
4	Pudlakadapuram	355.4	8.9	6.6	0.3	0.5	42.0	..	5.3	22.5	137.7	579.2
5	Bey pore South	3279.5	52.5	32.4	66.4	6.0	38.0	17.0	..	94.0	230.9	3816.7
6	Bey pore North	165.9	26.3	5.4	0.8	0.4	5.8	..	..	10.0	298.4	513.0
7	Naduvattam	89.4	9.6	1.0	..	..	39.2	..	..	16.0	104.8	260.0
8	Calicut	18043.2	2552.5	915.1	119.0	53.7	284.0	108.8	..	1097.9	2409.1	25583.3
9	Pudiappa	5042.4	226.3	127.3	23.0	23.8	46.2	..	4.0	257.5	1005.8	6756.3
10	Filathur	4171.0	155.4	185.0	101.3	132.6	73.9	..	..	170.0	761.5	5750.7
11	Quilandi	2586.4	61.2	195.8	32.6	29.2	251.0	..	39.0	161.5	369.8	3726.5
12	Melady	3739.1	52.0	143.4	5.5	7.2	92.6	1.5	0.4	115.0	984.3	5141.0
13	Badagara	426.7	107.2	6.5	40.4	..	91.9	..	..	..	40.2	712.9
14	Madapally	12957.0	520.0	79.9	15.7	24.2	303.7	..	88.6	99.8	380.5	14469.4
15	Madakkara	6955.2	423.4	220.4	5.6	45.8	181.9	2.5	62.2	124.5	365.9	8387.4
16	Koottai	2625.3	460.0	52.5	9.7	2.5	250.5	..	10.0	..	314.4	3824.9
17	Paravanna	1916.0	86.5	36.1	..	9.5	20.0	..	20.0	10.0	580.3	2678.4
	Total	82485.6	5966.8	2368.5	510.5	460.2	2056.2	306.5	480.6	2844.7	10896.3	108375.9

Source:—Fisheries Department.

TABLE No. 2.5(b)
MARINE FISH LANDING AT IMPORTANT LANDING CENTRES IN KOZHIKODE DISTRICT DURING 1965-66
(Qty. in M. T.)

Sl. No.	Landing Centre	Oil Sardinie	Prawns	Mackerel	Shark	Skate	Silver Belittes	Other Sardine	Ribbon Fish	Horse Mackerel	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Tanuar	7451.5	306.5	39.0	88.3	..	270.0	..	3.0	89.5	1177.1	9424.9
2	Kadalundi	3383.9	25.0	27.5	..	..	..	..	1.0	54.0	748.8	4240.2
3	Parappanangadi	13354.0	499.9	205.5	405.5	..	50.0	..	..	143.5	1241.5	15899.9
4	Pudiakapuram	493.6	34.0	..	..	..	66.1	..	..	50.0	219.9	863.6
5	Bey pore South	460.0	6.0	7.1	20.3	..	16.0	..	..	..	165.1	674.5
6	Bey pore North	68.7	74.4	0.9	10.6	..	1.7	..	0.5	..	113.8	260.6
7	Naduvattam	22.8	0.4	..	..	..	19.0	..	0.3	..	82.8	125.3
8	Calicut	7198.1	1444.5	60.3	223.1	..	439.6	..	103.5	164.3	5588.1	15221.5
9	Pudiappa	17524.0	10.5	40.0	3.7	0.6	189.3	102.6	100.0	20.0	969.6	18960.3
10	Eliathur	337.2	..	2.4	44.9	..	11.8	..	10.0	..	118.2	524.5
11	Quilandy	1622.2	91.7	28.0	26.5	19.4	71.8	..	..	20.0	611.12	2490.8
12	Melady	235.1	56.0	7.3	0.6	25.9	161.5	514.9	35.0	..	729.2	1765.5
13	Badagara	1113.0	34.1	4.5	48.0	..	80.0	..	60.0	..	566.8	1906.4
14	Madapally	1417.9	255.8	12.9	8.1	35.2	64.1	..	19.0	5.1	704.4	2522.5
15	Madakkara	3077.3	227.2	28.6	5.9	27.4	32.3	..	37.0	14.1	639.7	4089.5
16	Koottai	467.5	160.0	..	..	..	2.5	..	..	..	202.8	832.8
17	Paravanna	359.5	27.8	..	..	..	127.0	..	..	30.0	255.5	799.8
	Total	58586.3	3243.8	464.0	885.5	108.5	1602.7	617.5	369.3	590.5	14134.5	80602.6

Source:—Fisheries Department.

TABLE No. 2.5(c)

MARINE FISH LANDING AT IMPORTANT LANDING CENTRES IN KOZHIKODE DISTRICT DURING 1966-67

(Qty. in M. T.)

Sl. No.	Landing Centre	Oil Prawns Sardine	(3)	(4)	(5)	Shark	Skate	Silver Bellies	Other Sardine	Ribbon Fish	Horse Mackerel	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	Tanur	1871.5	177.3	35.0	27.7	..	87.0	..	198.5	109.0	1027.0	..	3533.0
2	Kadalundi	2068.5	3.4	154.0	..	..	98.5	20.0	26.0	43.0	315.1	..	2728.5
3	Parappanangadi	7568.0	710.4	141.0	341.0	23.0	689.8	14249.8	480.7	680.0	4007.5	..	28891.1
4	Pudlakadapuram	222.5	..	..	..	..	42.0	..	95.0	23.0	418.9	..	801.4
5	Beyyore South	152.7	2.5	49.9	18.3	..	46.6	..	..	..	102.9	..	372.9
6	Beyyore North	29.7	21.4	11.7	4.4	3.0	0.6	..	1.3	1.3	65.2	..	138.6
7	Naduvattam	50.6	..	3.5	..	0.2	14.4	..	..	11.	63.7	..	133.5
8	Calicut	17272.5	2033.8	2821.4	224.3	124.4	1097.4	..	43.9	1057.7	..	..	24675.4
9	Pudiappa	2767.0	365.7	1118.5	5.6	2.4	99.5	..	..	138.0	421.6	..	4918.3
10	Elathur	1283.9	8.8	85.8	64.1	21.1	39.4	..	..	43.0	6307.2	..	7853.3
11	Quilandy	2359.8	241.6	254.0	47.5	46.4	33.9	..	..	52.0	429.0	..	3464.2
12	Melady	514.1	0.4	11.1	..	8.5	..	..	1.9	4.3	678.5	..	1218.8
13	Badagara	5681.5	14.2	149.5	33.5	1.2	91.5	..	232.0	..	180.2	..	6383.6
14	Madapally	2453.7	159.1	117.2	5.4	9.7	82.6	..	937.1	61.0	291.8	..	4117.6
15	Madakkara	1818.1	699.9	115.3	8.8	32.1	282.6	..	162.6	38.3	122.8	..	3280.5
16	Kottai	..	..	..	..	..	..	..	..	..	..	..	N. A.
17	Paravanna	..	..	..	..	..	..	..	..	..	..	..	N. A.
	Total	46114.1	4438.4	5067.9	780.6	272.0	2705.8	14269.8	2179.0	2251.7	14431.4	..	92510.7

Source:—Fisheries Department.

TABLE No. 3.1

DISTRIBUTION OF FACTORIES IN KOZHIKODE DISTRICT

Sl. No.	Industry	Number of factories during the year			
		1963	1964	1965	1966
(1)	(2)	(3)	(4)	(5)	(6)
1	Canning and preservation of fish and other sea foods	2	2	6	5
2	Rice and flour mills	4	5	6	6
3	Oil mills	8	7	7	11
4	Cashew factories	3	3	3	3
5	Tea factories	17	17	17	17
6	Starch and other food articles	9	9	9	12
7	Beedi and cigar	7	7	6	6
8	Cotton textiles	19	19	20	22
9	Coir	13	14	11	11
10	Umbrellas	11	11	11	10
11	Saw mills	64	66	66	65
12	Timber including splints and veneers	26	26	27	27
13	Printing and Binding	24	21	22	23
14	Rubber products including tyre retreading	16	14	17	19
15	Chemicals including matches	2	2	4	3
16	Bricks and tiles	20	21	21	21
17	Pottery—china and earthen ware	3	3	3	3
18	Metal products	1	1	4	3
19	General jobbing and engineering	6	6	8	8
20	Repair of motor vehicles	29	34	35	38
21	Electrical machinery	2	2	2	2
22	Other machinery except electrical machinery	2	2	2	2
23	Soaps	3	3	1	3
24	Artificial manure	1	2	2	2
25	Other industries not classified above	11	14	15	18
Total		303	311	325	340

TABLE No. 3.2

EMPLOYMENT IN FACTORIES OF KOZHIKODE DISTRICT

Sl. No.	Industry	Number of workers during the year			
		1963	1964	1965	1966
(1)	(2)	(3)	(4)	(5)	(6)
1	Canning and preservation of fish and sea foods	103	40	127	127
2	Rice and flour mills	74	85	186	173
3	Oil mills	54	44	41	63
4	Cashew factories	1328	1356	1328	1304
5	Tea factories	835	778	768	804
6	Starch and other food articles	1016	1044	1090	1198
7	Beedi and cigar	185	176	164	152
8	Cotton textiles	1940	1925	2213	2291
9	Coir	975	1022	885	881
10	Umbrellas	427	372	378	357
11	Saw mills	1818	1804	1746	1677
12	Timber including splints and veneers	891	843	904	823
13	Printing and Binding	719	677	739	757
14	Rubber products including tyre retreading	274	251	269	258
5	Chemicals including matches	13	14	253	30
16	Bricks and tiles	4357	4142	4134	4144
17	Pottery—china and earthenware	246	218	123	120
18	Metal products	26	146	321	305
19	General jobbing and engineering	302	278	281	293
20	Repair of motor vehicles	594	784	785	865
21	Electrical machinery	65	59	70	64
22	Other machinery except electrical machinery	102	104	104	94
23	Soaps	244	243	203	248
24	Artificial manure	28	28	45	34
25	Other industries not classified above	1178	1130	977	2158
Total		17794	17580	18123	19208

Source:—Bureau of Economics and Statistics, Kerala.

TABLE No. 4.1

LENGTH OF ROADS—KOZHIKODE DISTRICT 1965-66

District	Under Public Works Department				*Others			Grand Total			
	Cement or concrete	Bituminous or tarred	Water bound maccadam	Lower type	Total	Cement or concrete or tarred	Water bound maccadam		Lower type		
Kozhikode	5	943	296	204	1448	2	71	89	242	404	1852

Source:—1. Public Works Department

2. Irrigation Department

3. Forest Department

4. Municipalities & Corporations

*Includes roads under Forest, Irrigation, Municipalities, and Corporations.

Note—Roads maintained by Panchayats and Kerala State Electricity Board not included.

TABLE No. 4.2

NUMBER OF MOTOR VEHICLES IN THE HINTERLAND (KOZHIKODE DISTRICT)

Sl. No.	Year	Goods vehicles	Stage carriages	Taxi cabs	Cars	Motor cycles	Auto rickshaws	Tractor trailers	Others	Total
1	1961	1104	339	73	1585	300	19	71	68	3559
2	1962	1299	376	94	1817	400	21	72	75	4154
3	1963	1395	408	111	2054	475	25	110	78	4656
4	1964	1471	458	123	2344	502	77	117	113	5205
5	1965	1454	440	249	2376	577	103	109	76	5384
6	1966	1521	453	302	2551	612	127	109	81	5756
7	1967	1623	497	343	2819	744	132	109	79	6346

TABLE No. 4.3
LENGTH OF RAILWAYS—KOZHIKODE DISTRICT

<i>Type of Gauge</i>	<i>Kozhikode District (Length in kilometres)</i>		<i>Kerala State (Length in kilometres)</i>	
	1964-65	1965-66	1964-65	1965-66
Broad gauge	157	157	553	553
Metre gauge	..	..	335	335
Mixed gauge	..	..	..	..
Total	157	157	888	888

Source:—Railway Time table and Statistical Hand Book 65.

TABLE No. 5.1

EXPORTS FROM COCHIN HARBOUR TERMINUS TO RAILWAY STATIONS OF KOZHIKODE
DISTRICT DURING THE YEAR 1966—SOME IMPORTANT COMMODITIES

(Qty. in M. Tonnes)

Commodity	Name of Railway Stations										
	Calicut CLT.	Palayangadi PAZ	Kuttipuram KTU	Tirur TIR	Tanur TA	Parapanangadi PGI	Feroke FK	Kallayi KUL	Kadalundi KN	West Hill WH	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
1. Wheat and Wheat flour	8	..	..	..	..	..	..	..	..	..	15566
2. Lubricating oil	23	N	..	N	..	20	..	..	..	..	78
3. Tar and Coaltar	704	..	..	244	..	..	3	..	..	..	1
4. Other mineral oils	222	..	..	..	..	..	..	..	..	..	..
5. Wood and timber	2	..	..	..	..	..	151	11185	..	..	..
6. Iron and steel, Iron and steel products and other metal products	224	1	N	6	..	N	11	..	..	..	130
7. Chemical manure	1232	..	524	350	1	N	..	..	..	..	530
8. Other manure	131	..	..	..	..	..	..	..	..	..	..
9. Rice	..	..	..	117	..	..	..	..	..	..	35559
10. Others	108	2	2	26	3	9	49	..	1	..	3

TABLE No. 5.1—(Contd.)

Commodity	Name of Railway Stations										Total						
	Elathur ETR (12)	Tikkotti TKT (13)	Poyyoti PIOL (14)	Makhe MHE (15)	Nadapuram Road NAU (16)	Nilambur Road NIL (17)	Vaniyambalam VNB (18)	(19)	(18)	(17)		(16)					
1 Wheat and Wheat flour	15574
2 Lubricating oil	3	..	..	..	..	..	..	..	..	..	..	..	..	124
3 Tar and Coal tar	143	..	..	..	..	..	..	1095
4 Other mineral oils	222
5 Wood and timber	11288
6 Iron and steel, Iron and steel products and other metal products	4	..	..	..	..	..	2	..	..	..	..	..	..	377
7 Chemical manure	1	2	..	..	..	..	..	332	..	..	..	..	..	..	3018
8 Other manure	131
9 Rice	35676
10 Others	N	N	3	59	1	77	9	..	..	..	..	..	..	..	..	..	352
Total	67857

TABLE 5.2

STATEWISE EXPORT OF SOME IMPORTANT COMMODITIES FROM STATION IN
CALICUT DISTRICT BY RAIL (1966)

(Quantity in M. T.)

Sl. No.	Item	Bombay Pradesh	Madhya Pradesh	Orissa	Uttar Pradesh	Rajasthan	Punjab	Mysore	Delhi
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Pepper	961	337	9	788	27	32	22	323
2	Ginger	383	473	..	369	4	21	7	393
3	Betel nuts	399	..	..	1407	..	..	..	48
4	Coconuts	3805	2807	236	1849	382	1540	208	19
5	Copra	1721	345	..	774	443	148	104	112
6	Oil cake	2634	69	..	..	..	197	29	165
7	Coconut oil	3221	24	23	329	..	225	13	..
8	Wood products	523	22	..	23	..	45	269	..
9	Wood and Timber	33211	171	..	829	176	244	507	772
10	Coir yarn and Fibre	2563	356	32	1298	214	493	547	504
11	Coir products	1658	158	11	743	118	386	420	270
12	Wood pulp	7073	22153	..	..	..	..	..	165
13	Tapioca flour	7561	..	808	618	..	809	67	262
14	Raw-Rubber	413	..	..	..	..	..	..	..
15	Fruit	427	93	41	29	4	53	11	269
16	Fish	98	5	4	127	9	7	710	2
17	Bricks & Tiles	76	328	..	..	1524	..	5470	..
18	Rice	..	..	..	..	..	..	398	..
19	Cajjan leaves	..	..	..	..	..	..	1228	..
20	Wheat & Wheat flour	1517	..	..	..	..	..	1818	..
21	Betal leaves	..	..	..	..	..	..	..	..
22	Eggs	114	267	..	135	..	196	40	233
23	Coal & Coke	..	..	..	..	..	..	..	..
24	Others	1218	257	45	181	62	205	2010	173
Total		69596	27865	1209	9499	2979	4601	13878	3710

TABLE 5.2—(Contd.)

Sl. No.	Item	Andhra Pradesh	Bihar	Madras	West Bengal	Assam	Other States	Total
(1)	(2)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	Pepper	21	597	12	218	..	213	3560
2	Ginger	5	621	95	257	..	280	2908
3	Betel nuts	..	260	..	913	..	314	3341
4	Coconuts	475	278	499	536	244	1425	14303
5	Copra	27	187	27	311	..	369	4568
6	Oil cake	26	300	4	188	..	7	3639
7	Coconut oil	..	571	..	140	..	177	4723
8	Wood products	229	..	2647	..	48	162	3968
9	Wood and Timber	2151	57	23327	211	22	1817	63495
10	Coir yarn and Fibre	355	215	6211	222	1	791	13802
11	Coir products	141	3	1357	132	3	384	5784
12	Wood pulp	494	322	4	10449	..	385	40229
13	Tapioca flour	..	..	321	573	..	296	12131
14	Raw-Rubber	..	..	788	..	..	40	1241
15	Fruit	8	2	224	205	..	74	1440
16	Fish	34	9	2715	25	23	99	3867
17	Bricks & Tiles	2714	..	19484	..	..	1024	30625
18	Rice	..	..	..	..	..	707	707
19	Cadian leaves	..	..	19	..	..	..	417
20	Wheat & Wheat flour	..	..	4212	..	..	413	7370
21	Betal leaves	..	..	814	..	..	195	2827
22	Eggs	..	19	164	293	..	33	1510
23	Coal & Coke	22	..	7480	..	..	..	7502
24	Others	1047	14	2588	158	..	2006	9964
	Total	7754	3455	72992	14831	341	11211	243921

Source:—Records in Railway Stations.

TABLE No. 5.3

STATEMENT OF IMPORTS FROM OUTSIDE THE STATE TO KOZHIKODE DISTRICT BY RAIL (1966)

(Weight in M. T.)

Sl. No.	Name of Commodity	Bombay	Madras	Mysore	East Bengal	Madhya Pradesh	Bihar
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Rice	1261	28623	31	272	1442	2686
2	Wheat & Wheat flour	..	4115	..	..	..	..
3	Maida	..	14500	..	..	..	..
4	Sugar	..	496	..	..	..	..
5	Jaggery	..	286	..	..	..	..
6	Oil cake	..	328	..	..	..	..
7	Cotton	420	861	182	..	..	..
8	Coal & Coke	..	..	..	..	..	..
9	Mineral oils	3529	2313	..	2005	..	..
10	Cement	..	3648	..	..	..	..
11	Iron & steel products	4471	1068	119	10118	185	83
12	Chemical manure	..	6010	577	..	..	..
13	Wood & Timber	..	..	2193	..	..	..
14	Salt	28	6820	..	..	..	..
15	Paddy	..	136	..	..	47	..
16	Machinery	65	279	3	..	..	..
17	Cattle food	..	..	434	..	..	..
18	Cashew shell oil	..	..	111	..	..	..
19	Ground nut oil	..	80	..	..	..	..
20	Pulses	..	142	78	32	..	33
21	Others	968	1217	488	49	129	241
Total		10742	70922	4216	12476	1803	3043

TABLE No. 5.3—(Contd.)

Sl. No.	Name of Commodity	Orissa	Andhra Pradesh	Uttar Pradesh	Punjab	Rajasthan	Other States	Total
(1)	(2)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	Rice	980	128610	1442	1525	1118	2485	170475
2	Wheat & Wheat flour	..	..	..	..	..	..	4115
3	Maida	..	328	..	..	..	..	14828
4	Sugar	..	..	..	..	..	..	496
5	Jaggery	..	..	..	..	..	..	286
6	Oil cake	..	21	..	..	..	..	349
7	Cotton	..	..	502	..	..	..	1965
8	Coal & Coke	..	1114	..	..	..	..	1114
9	Mineral oils	..	..	..	..	..	..	7847
10	Cement	..	..	..	..	..	..	3648
11	Iron & Steel products	408	17	..	317	..	803	17589
12	Chemical manure	..	..	..	..	..	..	6587
13	Wood & Timber	..	..	..	..	..	..	2193
14	Salt	..	..	..	..	21	..	6869
15	Paddy	..	..	..	..	..	..	183
16	Machinery	..	..	5	..	..	..	352
17	Cattle food	..	..	..	..	..	..	434
18	Cashew shell oil	..	..	..	..	..	..	111
19	Groundnut oil	..	..	..	..	..	..	80
20	Pulses	..	54	59	..	..	..	348
21	Others	167	115	183	114	21	274	3966
	Total	1555	130209	2191	1956	1160	3562	243835

Source:—Records in Railway Stations.

TABLE No. 5.4 (1)

DETAILS OF OUTWARD TRAFFIC OF MANIMOOLI CHECK-POST
DURING 1967-68

Table No. (a)		(Selected commodities only)			
Sl. No.	Name of commodity	Unit	Quantity	From	To
(1)	(2)	(3)	(4)	(5)	(6)
1	Tiles	No.	517223	Kozhikode	Madras State
2	Tea dust	Quintal	10017	do.	do.
3	Matches	Gross	58228	do.	do.
4	Timber	C. M.	84	do.	do.
5	Manure	Quintal	6930	do.	do.
6	Cocoanut	No.	83650	do.	do.
7	Cement	M. T.	207	do.	Kerala State
8	Amonia	Cylinder No.	54	do.	Madras State
9	Cocoanut oil cake	Bags	110	do.	Kerala State

Note:—As the check post is not on the border, commodities to be distributed in Kerala State will also pass through the Check-post.

TABLE No. 5.4 (2)
**DETAILS OF OUTWARD TRAFFIC OF SULTAN BATTERY CHECK-
 POST DURING 1967-68**

Table No. (b)

(Selected commodities only)

Sl. No.	Name of commodity	Unit	Quantity	From	To
(1)	(2)	(3)	(4)	(5)	(6)
1	Copra	M.T.	3479	Kozhikode	Mysore and Bombay
2	Do.	Bags	6392	do.	do.
3	Cocoanut oil	Tins	29944	do.	do.
4	Do.	M.T.	2297	do.	do.
5	Parcels	do.	628	do.	Various places
6	Timber	do.	106	do.	Mysore State
7	Do.	Logs	65890	do.	do.
8	Arecanut	M.T.	8	do.	Manglore
9	Coffee	Bags	75	do.	Mysore State
10	Do.	M.T.	1505	do.	do.
11	Pepper	Bags	126	do.	do.
12	Do.	M.T.	58	do.	do.
13	Packing cases	No.	11869	do.	do.
14	Do.	Bundle	995	do.	do.
15	Do.	M.T.	88	do.	do.
16	Empty Gunnies	Bundle	2292	do.	Andhra
17	Do.	No.	36250	do.	do.
18	Do.	M.T.	80	do.	do.
19	Brass	do.	1104	do.	Mysore State
20	Steel rod	do.	376	do.	do.
21	Vanaspathy	Tin	2250	do.	To various places
22	Do.	M.T.	87	do.	do.
23	Cocoanut	No.	20000	do.	Mysore & Bombay
24	Do.	Bags	5338	do.	do.
25	Do.	M.T.	137	do.	do.
26	Tapioca and its flour	do.	947	do.	Bombay
27	Charcoal	Bag	800	do.	Mysore State
28	Do.	M.T.	227	do.	do.
29	Green ginger	do.	1410	do.	do.
30	Tiles	M.T.	248	do.	do.
31	Do.	No.	209788	do.	do.
32	Tea	M.T.	1182	do.	do.
33	Kerosene oil	Tin	67550	Cochin	do.
34	Do.	K.G.	16000	do.	do.
35	Do.	Litre	25600	do.	do.
36	Amonia gas	M.T.	201	Kozhikode	do.

TABLE No. 5.4 (3)

DETAILS OF OUTWARD TRAFFIC OF VADUVANCHAL CHECK-POST
DURING 1967-68

Table No. (c)

(Selected commodities only)

Sl. No.	Name of Commodity	Unit	Quantity	From	To
1	Manure	Quintal	19348	Kozhikode	Madras State
2	Timber	C.M.	6831	do.	do.
3	Estate goods	Quintal	1482	Local Factories	Estates of Kozhikode
4	Do.	Cases	2662	do.	do.
5	Beedy	Bundle	1849	Kozhikode and Cannanore	Madras State
6	Tiles and Bricks	No.	138293	Kozhikode	do.
7	Charcoal	M.T.	352	do.	do.
8	Lime	Quintal	584	do.	do.
9	Plywood	Kgms.	7778	do.	do.
10	Do.	Cases	707	do.	do.
11	Diesel oil	Litre	87000	Cochin	do.
12	Cement	M.T.	29	Kozhikode	do.
13	Empty chests	Numbers	2173	do.	do.
14	Cardamom	Quintal	203	do.	do.
15	Machinery	M.T.	1115	do.	do.
16	Oil cake	Quintal	161	do.	do.
17	Cloth	Bundle	363	Cannanore and Kozhikode	do.
18	Coconut	do.	6560	Kozhikode	do.
19	Kerosene oil	Litre	581218	Cochin	do.
20	Tea	Quintal	1990	Kozhikode	do.
21	Tapioca	„	56	do.	do.
22	Ginger	Bag	200	do.	do.
23	Maida	Quintal	34	do.	Kerala State
24	Sooji	do.	18	do.	do.

TABLE No. 5.5 (1)

DETAILS OF INWARD TRAFFIC OF MANIMOOLI CHECK-POST
DURING 1967-68

Table No. (a) (Selected commodities only)

Sl. No.	Name of commodity	Unit	Quantity	From	To
1	Timber	C.M.	10594	Madras and Kozhikode District.	Kozhikode
2	Firewood	M.T.	1921	do.	do.
3	Charcoal	Bags	60870	do.	do.
4	Tea dust	Quintal	38886	Coonur	Cochin
5	Coffee	do.	1278	Madras State	Kozhikode and Cochin
6	Provisions	Bags	2482	do.	Kozhikode and Cochin
7	Cement	M.T.	425	Madukara	do.
8	Paddy	Bags	3085	Kerala State	do.
9	Rice		8793	do.	do.
10	Vegetables	Quintal	12	Madras state	do.
11	Bamboo	M.T.	2063	Kerala and Madras State	do
12	Cashewnut	Bags	566	Kerala	do.

Note:—As the check-post is not in the border, commodities from Kerala State will also pass through the Check-post.

TABLE No. 5.5 (2)

DETAILS OF INWARD TRAFFIC OF SULTAN BATTERY CHECK-POST
DURING 1967-68

Table No. (b)

(Selected commodities only)

Sl. No.	Name of commodity	Unit	Quantity	From	To
1	Sugar	M.T.	1639	Mysore State	Kozhikode
2	Chemical manure	do.	1937	do.	do.
3	Grams	Bag	2126	do.	do.
4	Grams	M.T.	272	do.	do.
5	Tobacco	do.	62	do.	do.
6	Bamboo	do.	4776	do.	do.
7	Empty gunnies	do.	15	do.	do.
8	Do.	Bundle	809	do.	do.
9	Jaggery	M.T.	25	do.	do.
10	Cement	do.	33	Madhukara	do.
11	Cotton	do.	44	Mysore	do.
12	Gingelly seed	do.	496	do.	do.
13	Machinery	do.	107	do.	do.
14	Dhall	do.	13	do.	do.
15	Coffee	do.	30	do.	do.
16	Rose wood	C.M.	533	do.	do.
17	Do.	Logs	543	do.	do.
18	Paper	M.T.	459	do.	do.
19	Do.	Reams	7545	do.	do.
20	Do.	Bales	1303	do.	do.
21	Parcels	M.T.	3088	Various places	do.
22	Timber	do.	522	Mysore State	do.
23	Timber	C.M.	7810	do.	do.

TABLE No. 5.5 (3)

DETAILS OF INWARD TRAFFIC OF VADUVANCHAL CHECK-POST
DURING 1967-68

Table No. (c) (Selected commodities only)

Sl. No.	Name of commodity	Unit	Quantity	From	To
1	Coffee	Quintal	2954	Kerala State	Kozhikode and Cochin
2	Coffee	Litre	90497	do.	do.
3	Tea	Quintal	20407	Coonur	Cochin
4	Timber	C. M.	30040	Madras State	Kozhikode
5	Empty gunnies	No.	11184	do.	do.
6	Cloth	Bales	115	do.	do.
7	Motor parts	Cases	56	do.	do.
8	Tobacco	Quintal	24	do.	do.
9	Matches	do.	81	Sivakasi	do.
10	Do.	Gross	10000	do.	do.
11	Green tea leaves	Quintal	13682	Kerala and Madras estates	do.
12	Vegetables	do.	5361	Madras State	do.
13	Bamboo	No.	154700	do.	do.
14	Stationery	Cases	5408	do.	do.
15	Electrical goods	do.	49	Mysore State	do.
16	Charcoal	Bag	600	Kerala State	do.

TABLE No. 5.6

NUMBER OF VEHICLES PASSED THROUGH THE VARIOUS CHECK-POSTS
OF KOZHIKODE DISTRICT

Sl. No.	Year	<i>Number of vehicles passed through</i>		
		<i>Manimoli</i>	<i>Sultan Battery</i>	<i>Vaduwanchal</i>
1	1964-65	9130	41149	2681
2	1965-66	31707	24649	2929
3	1966-67	32307	44942	2991
5	1967-68	7368	41976	2998

1000

1000

1000

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1000

1000

APPENDIX II—SCHEDULES OF FIELD ENQUIRY



BUREAU OF ECONOMICS AND STATISTICS

GOVERNMENT OF KERALA

DEVELOPMENT OF BEYPORE PORT-TRAFFIC SURVEY
SURVEY OF MANUFACTURING ESTABLISHMENTS

Questionnaire

I. General:

1. Name & address of the Unit:
2. Year of Establishment:
3. Using electric power or not:
4. Number of employees:

II. Installed capacity and production:

PRODUCT*	Unit	Installed capacity during the year 1967 Qty.	Production during the year 1967 Qty. value (Rs.)	Estimated capacity		
				1976 Qty.	1986 Qty.	1996 Qty.

(*New products that are additionally through of may also be included)

III. CONSUMPTION OF FUELS AND RAW MATERIALS AND FUTURE REQUIREMENTS

ITEM	Unit for Qty.		Quantity		Value (Rs.)		Purchased during 1967					Estimated requirements			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
					Of which purchased from other States	Of which purchased from States (Qty.)	Of which purchased from Travancore-Cochin Region (Qty.)	Of which imported from foreign countries (Qty.)	Mode or modes of transport used for movement of the material from source of supply to the factory	Names of Routes used	Name of Ports usually used for import & the relative percentages of quantity imported through each of the Ports	Quantity consumed during 1967	1976 (Qty.)	1987 (Qty.)	1987 (Qty.)

Fuels:

- 1.
- 2.
- 3.
- 4.
- 5.

Raw materials:

- 1.
- 2.
- 3.
- 4.
- 5.

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VI. If ~~Neendakara~~ Port is developed into a deep water all weather port, would you use the facilities for

1. Import of raw materials fuels, machinery and spare parts and, if so, the percentage of quantity likely to be handled at ~~Neendakara~~ Port *Bey pore*

1976 1986 1996

(a) From other States:

(b) From Travancore-Cochin Region.

(c) From Foreign Countries:

2. Export of products and, if so, the percentage of quantity likely to be handled at ~~Neendakara~~ Port.

Bey pore 1976 1986 1996

(a) To other States:

(b) To Travancore-Cochin Region.

(c) To foreign Countries:

VII. REMARKS: (Please indicate the additional lines of production expected to be taken up during the next three decades and the quantum of imports and exports likely to be handled at ~~Neendakara~~ Port for the purpose during the three decades 1966-1976, 1976-1986 and 1986-1996).

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Signature :

Place:

Date:

BUREAU OF ECONOMICS
GOVERNMENT OF
Development of Port-
Questionnaire

Name and address of Exporting Agent/Industrial Unit												
Sl. No.	Name of commodity	Quantity exported to other states and Cochin										
		Cochin				Bombay			Gujarat			
		Road	Rail	Canal	Total	Road	Rail	Total	Road	Rail	Total	
1	2	3	4	5	6	7	8	9	10	11	12	
1	1965 '66 '67											
2												
3												
4												
5												
6												
7												
8												
9												

Contd...

BUREAU OF ECONOMICS
GOVERNMENT OF
Development of Port-
Questionnaire

Name and address of wholesaler (Importer)												
Sl. No.	Name of commodity	Quantity imported from Cochin and other States										
		Cochin				Bombay			Gujarat			
		Road	Rail	Canal	Total	Road	Rail	Total	Road	Rail	Total	
1	2	3	4	5	6	7	8	9	10	11	12	
1	1965 66 67											
2												
3												
4												
5												
6												
7												
8												
9												

Contd...



